# Technical Report on the Roca Honda Project, McKinley County, New Mexico, USA

**Energy Fuels Inc.**

SLR Project No: 138.02544.00006

February 22, 2022

# FINAL

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# 1.0 SUMMARY

## 1.1 Executive Summary

This Technical Report (Technical Report) was prepared by Grant A. Malensek, M.Eng., P.Eng., Mark B. Mathisen, C.P.G., David M. Robson, P.Eng., MBA, Phillip E. Brown, C.P.G., R.P.G., and Jeffrey L. Woods, MMSA QP of SLR International Corporation (SLR) and Daniel Kapostasy, P.G. of Energy Fuels Resources (USA) Inc. (EFR), for Energy Fuels Inc. (Energy Fuels), the parent company of Energy Fuels Resources (USA) Inc., with respect to the Roca Honda Project (Roca Honda or the Project), located in Central New Mexico, USA. EFR owns 100% of the Project.

EFR's parent company, Energy Fuels Inc., is incorporated in Ontario, Canada. EFR is a US-based uranium and vanadium exploration and mine development company with projects located in the states of Colorado, Utah, Arizona, Wyoming, Texas, and New Mexico. EFR is listed on the NYSE American Stock Exchange (symbol: UUUU) and the Toronto Stock Exchange (symbol: EFR).

This Technical Report satisfies the requirements of Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and the United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601 (b)(96) Technical Report Summary. The purpose of this Technical Report is to disclose the results of a Preliminary Economic Assessment (PEA) for the Project. The term PEA is used throughout this Technical Report and is consistent with an Initial Assessment (IA) under S-K 1300. Grant A. Malensek, M.Eng., P. Eng., Mark B. Mathisen, C.P.G., David M. Robson, P.Eng., MBA, Jeffrey L. Woods, MMSA QP, and Phillip E. Brown, C.P.G., R.P.G. are all Qualified Persons (QPs) within the meaning of both S-K 1300 and NI 43-101 (SLR QPs); Daniel Kapostasy is a Qualified Person (QP) within the meaning of both S-K 1300 and NI 43-101 (EFR QP).

The Project includes the proposed Roca Honda Mine (the Mine) near the city of Grants, New Mexico, and the existing White Mesa Mill (the Mill) near the city of Blanding, Utah. The Project is currently in the planning and permitting stages and the Mill is on a reduced operating schedule while processing materials as they become available. When in full operation, the Project is expected to produce four million short tons of uranium ore to be shipped to the White Mesa Mill for processing (to produce concentrate known internationally as yellowcake). A site visit was carried out to the Roca Honda Project on October 19, 2021, and the Mill on November 11, 2021.

The Roca Honda Mine has a long history of exploration and development with a number of owners since its discovery in the mid-1960s by Kerr-McGee Oil Industries (Kerr-McGee). Ownership has since passed from Kerr-McGee, its subsidiaries, and successor (Rio Algom) to Western Nuclear Corporation (Western Nuclear) - Section 16 only, U.S. Conoco Inc. (Conoco) - Section 11 only, Strathmore Resources (Strathmore), and Roca Honda Resources (RHR). Since May 2016, EFR has had a 100% interest in the Mine. The White Mesa uranium/vanadium mill was developed in the late 1970s by Energy Fuels Nuclear, Inc. (EFNI) as a processing option for the many small mines that are located in the Colorado Plateau region. After approximately two and a half years, the Mill ceased ore processing operations altogether due to low uranium prices. Since 1984, majority ownership interest has alternated between EFNI, Union Carbide Corporation, and Denison Mines Corporation (Denison, previously International Uranium Corporation). Since August 2012, EFR has controlled 100% of the Mill's assets and liabilities.

It is anticipated the Mine will be developed as an underground operation with an expected 11year mine life. The mining rate is nominally 400,000 short tons (ton) of mill feed per year, which will be trucked 272 mi to the Mill and produce 28 million pounds (Mlb) of $U_3O_8$ (2.5 Mlb of $U_3O_8$ annually) for delivery to end-users.

### 1.1.1 Conclusions

The SLR QPs offer the following conclusions by area.

#### 1.1.1.1 Geology and Mineral Resources

- The Roca Honda Mine is a significant high grade uranium deposit.
- Drilling to date has intersected localized, high-grade mineralized zones contained within five sandstone units of the Westwater Canyon Member of the Morrison Formation.
- The sampling, sample preparation, and sample analysis programs are appropriate and to industry standards for the style of mineralization.
- Although continuity of mineralization is variable, drilling to date confirms that local continuity exists within individual sandstone units.
- No significant discrepancies were identified with the survey location, lithology, and electric and gamma log interpretations data in historical holes.
- No significant discrepancies were identified with the lithology and electric and gamma log data interpretations in RHR holes.
- Descriptions of recent drilling programs, logging, and sampling procedures have been well documented by RHR, with no significant discrepancies identified.
- There is a low risk of depletion of chemical uranium compared to radiometrically determined uranium in the Roca Honda deposit.
- The sample security, analytical procedures, and QA/QC procedures used by EFR meet industry best practices and are adequate to estimate Mineral Resources.
- The resource database is valid and suitable for Mineral Resource estimation under S-K 1300.
- The assumptions, parameters, and methodology used for the Roca Honda Mineral Resource estimate is appropriate for the style of mineralization and mining methods
- The SLR QP is not aware of any environmental, permitting, legal, title, taxation, socioeconomic, marketing, political, or other relevant factors that could materially affect the current resource estimate.

#### 1.1.1.2 Mining

- The proposed Mine is currently in the planning and permitting stages.
- The mineralization is relatively flat-lying and will be mined with a combination of step room-and-pillar (SRP) and drift-and-fill (DF) extraction methods.
- In the development of the Mineral Resource estimate for this PEA, the SLR QP used a diluted cut-off grade of 0.110% $U_3O_8$, a minimum mining thickness of six feet, and the historical mining recovery of 85% for the SRP mining method and 90% recovery for the DF mining method.
- The PEA is based on mining a total of 4.02 million tons of mineralized material, at a grade of 0.36% $U_3O_8$, containing 28.994 Mlb of $U_3O_8$.

- The Mine will be accessed from two shafts, one located in Section 16, and the other located in Section 17. The shaft on Section 17 has been partially developed.
- Mining is partially dependent upon the use of a suitable cemented backfill. Test work to demonstrate that a suitable backfill will be generated before and during the mine development period needs to be completed.

### 1.1.1.3 Hydrogeology

- The 2016 groundwater model results demonstrate that, over the projected 11 year mine life, the average annual inflow rates of all the mine workings will range from approximately 2,170 gpm to approximately 5,920 gpm with an average of nearly 4,700 gpm. Steinhaus (2014) has estimated the median flow rate extracted from the Wastewater Canyon Formation near the proposed Mine to range from 9 $m^3$/min (2,380 gpm) to 19 $m^3$/min (5,020 gpm) using an analytical model (Theis equation's Copper Jacob straight-line approximation method).
- The permit granted by the New Mexico State Engineer's office to RHR in 2012 for Sections 16, 10, and 9 allows dewatering at a rate of 4,500 gpm. This permit does not include Section 17.
- Dewatering from the underground mine will cause declines (depressurizing) within the confined aquifer systems of the Westwater Canyon Member (Westwater) of the Morrison Formation, where the mine workings will be developed. The New Mexico Office of the State Engineer determined that the dewatering of the Westwater Canyon Member would impact some domestic wells (RPA, 2015). The maximum drawdown of 10 ft in the Gallup Sandstone is not expected to extend past site boundaries. A 10 ft drawdown in the Dakota Sandstone may occur within a 2,000 ft radius around the shaft. Aquifers overlying and/or underlying the Westwater may be affected insignificantly due to confining units that separate the aquifers. The groundwater flow model simulated that the impact of depressurizing on area streams would be negligible (RPA, 2015).
- Per the court settlement reached between Pueblo of Acoma and RHR, the treated mine water will be piped to the community of Milan to assist in recharging the Rio San Jose. The parties acknowledge that up to 430 gpm may be used for mining operations and retained in the Rio San Jose Basin. The water produced from depressurizing activities will be treated to state and federal water discharge standards before delivering to users in the Rio San Jose Basin through the pipeline. An influx of this quantity of water into the overlying soil/alluvium found in the irrigated area will likely raise the water table; however, no adverse impact on the water quality of the underlying alluvial Westwater Canyon Member of the Morrison Formation aquifer is expected (NM-MEJDC, 2015).
- Because Mine water will be piped to Milan, treated, and used for aquifer recharge, local shallow aquifers will not be affected. Such aquifers that could otherwise be vulnerable to potential accidental impacts from facility activity or discharged water, include the alluvium, the Point Lookout Sandstone, and the Dalton Sandstone Member of the Crevasse Canyon Formation.

### 1.1.1.4 Mineral Processing

- The Mill has been in operation since 1981 and is equipped with the required equipment using a proven process for the production of uranium oxide ($U_3O_8$) product, called "yellowcake". In addition, although it is not part of the production schedule in this Technical Report, the Mill also has the capacity to produce vanadium pentoxide ($V_2O_5$).
- Mill operations can receive run-of-mine (ROM) material from the Roca Honda Mine and various other mines. Material will be dumped from trucks on an ore pad at the Mill and stockpiled by type

to be blended as needed. Material will be weighed, sampled, and probed for uranium grade. The ore pad area has an approximate capacity of 450,000 tons.

- The Mill utilizes agitated hot acid leach and solvent extraction to recover uranium. Historical metallurgical tests and Mill production records on similar mineralized material confirm this processing method will recover 95% of the contained uranium.
- The Mill is currently on a reduced operating schedule processing materials as they become available.

#### 1.1.1.5 Infrastructure

- The Roca Honda Mine and White Mesa Mill are in historically important, uranium-producing regions of central New Mexico and southeastern Utah. All the regional infrastructure necessary to mine and process commercial quantities of $U_3O_8$ is in place.
- EFR has been operating the White Mesa tailings cells since 1981, which is currently operating under the requirements of the Utah Department of Environmental Quality Radioactive Materials License (RML).

#### 1.1.1.6 Environment

- Extensive baseline studies have been completed for the Roca Honda Mine site area.
- Rock characterization studies indicate that waste rock from the Mine will not be acid generating.
- The Draft Environmental Impact Statement (DEIS) for the Mine was published by the U.S. Forest Service (USFS) in February 2013. A Supplement to the DEIS is expected to be completed in late 2022 or early 2023 with an expected RoD and Final EIS anticipated in 2023. A mine permit is expected to be issued following the RoD and Final EIS.
- Environmental considerations are typical of underground mining and processing facilities and are being addressed in a manner that is reasonable and appropriate for the stage of the Project.
- All required permits for the White Mesa Mill to operate are in place.
- There are no violations or regulatory matters of any significance or that are not being addressed under normal regulatory procedures.
- The EFR QP is not aware of any environmental, permitting, legal, title, taxation, socioeconomic, marketing, political, or other relevant factors that could materially affect the current resource estimate.

### 1.1.2 Recommendations

The SLR QPs offer the following recommendations by area:

#### 1.1.2.1 Geology and Mineral Resources

The SLR QP makes the following recommendations regarding advancing the Project forward in a non-phased and independent approach. The proposed work (Table 1-1) would be completed during the four years of preproduction, followed by a final investment decision from Energy Fuels.

**Table 1-1: Roca Honda Four-Year Estimated Budget**
**Energy Fuels Inc. – Roca Honda Project**

| Item | Cost (US$) |
|---|---|
| Drilling to increase measured and indicated resources (208 Holes) | $7,930,000 |
| Geophysical Logging and Assay | $218,000 |
| Pre-Feasibility Study | $300,000 |
| **Total** | **$8,448,000** |

In addition, the SLR QPs recommend the following which are independent of the proposed budget:

1. Although there is a relatively low risk in assuming that density of mineralized zones is similar to that reported in mining operations east and west of the Roca Honda property, conduct additional density determinations, particularly in the mineralized zones, to confirm and support future resource estimates.
2. Although there is a low risk of depletion of chemical uranium compared to radiometrically determined uranium in the Roca Honda mineralization, complete additional sampling and analyses to supplement results of the limited disequilibrium testing to date.
3. Modify the sample analysis QA/QC protocol to include the regular submission of blanks and standards for future drill programs.
4. Prepare fault modeling once additional data have been obtained to support future mine design work.
5. Digitize historical drilling logs for Sections 9, 10, and 16 at 0.5 ft intervals, similar to the work completed on Section 17 for any future Mineral Resource estimates.
6. Complete additional confirmation drilling at the earliest opportunity to confirm historical drillhole data on all zones.
7. Use a secondary alternative estimation method ($ID^2$, $ID^3$, or Ordinary Kriging) as an additional check for the block model validation.

### 1.1.2.2 Mining and Mineral Reserves

1. Implement a program of additional sampling and laboratory testing concurrently with the definition drilling program to support the geotechnical designs which are based on a limited number of core samples. Boreholes should be located on the centerline of the various proposed ventilation shafts. The cores from these holes will define the different lithologies to be encountered and provide samples for rock strength testing and other needed geotechnical design information. The geotechnical study on the proposed Section 16 shaft core hole was completed in 2012. More detailed geotechnical designs and cost estimates for shaft construction should be completed.
2. Continue to evaluate the feasibility of starting access to the mine operations in Section 17 by way of the existing 1,478 ft deep (14 ft diameter) shaft.
3. Investigate more thoroughly the applicability of using roadheaders, and other selective mining methods that may reduce dilution for development and stope mining. This will reduce the tonnage and increase the grade of mineralized material shipped and processed at the Mill.

#### 1.1.2.3 Hydrogeology

1. Consistent with state and federal regulations requirements, implement environmental monitoring and analysis programs to collect water level and water quality data when the mine site becomes fully operational.
2. Update on an annual basis the numerical groundwater model based on mine inflows and drawdowns in monitoring wells.
3. Expand the well distribution to confirm the predicted cone of depression.
4. Develop specific plans for future monitoring of springs, both flow and quality, similar to previous monitoring programs completed on site.

#### 1.1.2.4 Mineral Processing

1. Continue the White Mesa Mill intermittent operations with maintenance program.
2. Evaluate historical operating data to determine possible flowsheet improvements or modifications to improve the mill production rate/economics and make these changes before commencing production.

## 1.2 Economic Analysis

An economic analysis was performed using the cost estimates presented in this Technical Report. It is important to note that, unlike Mineral Reserves, Mineral Resources do not have demonstrated economic viability. The PEA is preliminary in nature, and it includes Inferred Mineral Resources that are considered too speculative geologically to have modifying factors applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this economic assessment will be realized.

The Roca Honda base case cash flow is based on Measured, Indicated, and Inferred Mineral Resources (the latter being 45% of the total). An alternative case with only Measured and Indicated Mineral Resources is also presented in this Technical Report.

### 1.2.1 Base Case (Measured, Indicated, and Inferred Mineral Resources)

#### 1.2.1.1 Economic Criteria

An after-tax cash flow projection for the base case has been generated from the life-of-mine (LOM) schedule and capital and operating cost estimates in this Technical Report, and is summarized in the Cash Flow Analysis (Section 19.2). A summary of the key criteria is provided below.

##### 1.2.1.1.1 Revenue

- Total mill feed processed: 4.020 million short tons
- Percent of Inferred Mineral Resource tonnage in LOM: 45%
- Average processing rate: 1,150 stpd
- $U_3O_8$ head grade: 0.36%
- Average mill recovery: 95%
- Recovered $U_3O_8$: 27.5 Mlb
- Average annual $U_3O_8$ sales: 2.5 Mlb/y

- Metal price: US$65.00/lb $U_3O_8$
- Concentrate shipping cost from the Mill to customer: $683/ton $U_3O_8$ or $0.34/lb $U_3O_8$

#### 1.2.1.1.2 Capital and Operating Costs

- Preproduction period of 54 months
- Mine life of 11 years
- LOM capital costs of $482.3 million on first quarter (Q1) 2021 US dollar basis
- LOM operating cost (excluding offsite costs, royalties, and severance taxes) of $945.9 million or $235.29/ton milled on Q1 2021 US dollar basis
- Capital and operating costs are at a AACE International Class 4 accuracy level (-15% to -30% to +20% to 50%).

#### 1.2.1.1.3 Royalties and Severance Taxes

New Mexico mining and private royalties on the value of special minerals extracted were applied as shown below:

- Landowner Gross Royalty (1%)
- Section 9 Gross Royalty (1%)
- Section 16 New Mexico State Lease Royalty (5% of gross less transportation and milling costs)
- New Mexico mining severance tax of 3.5% payable on the “value” of mineral production for New Mexico state leases. The severance tax is currently 3.5% of 50% (net 1.75%) of the taxable value of $U_3O_8$ produced. The taxable value is based upon the operating cash flow less a development allowance, depreciation, and a processing allowance

#### 1.2.1.1.4 Income Taxes

The economic analysis includes the following assumptions for corporate income taxes (CIT):

- Unit of Production depreciation method was used with total allowance of $475.4 million taken during LOM
- Percentage depletion method was used with total allowance of $136.5 million taken during LOM
- Loss Carry Forwards - Income tax losses may be carried forward indefinitely but may not be used for prior tax years
- Federal tax rate of 21%
- State tax rate of 5.9% (4.66% after federal benefit)

### 1.2.1.2 Cash Flow Analysis

Table 1-2 presents a summary of the Roca Honda Project base case economics at a $U_3O_8$ price of $65.00/lb and a production schedule that includes 45% Inferred Mineral Resources and 55% combined Measured and Indicated Mineral Resources.  It is important to note that, unlike Mineral Reserves, Mineral Resources do not have demonstrated economic viability. The economic analysis for the base case contained in this Technical Report is based, in part, on Inferred Resources, and is preliminary in nature.  Inferred Resources are considered too geologically speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that economic forecasts on which this Preliminary Economic Assessment is based will be realized.

On an after-tax basis, the undiscounted cash flow for the base case totals $253.7 million over the mine life. The after-tax Net Present Value (NPV) at 5% discount rate is $55.9 million and the Internal Rate of Return (IRR) is 7.6%, with simple payback (PB) from start of commercial production (CP) occurring in 8.1 years.

**Table 1-2: Base Case After-Tax Cash Flow Summary**
**Energy Fuels Inc. – Roca Honda Project**

| Item | Unit | Value |
|---|---|---|
| $U_3O_8$ Price | $/lb | $65.00 |
| $U_3O_8$ Sales | Mlb | 27.5 |
| **Total Gross Revenue ($M)** | **US$ M** | **1,790** |
| Mining Cost | US$ M | (446) |
| Mill Feed Transport Cost | US$ M | (208) |
| Process Cost | US$ M | (251) |
| Maintenance Cost | US$ M | (5) |
| G & A Cost | US$ M | (36) |
| Product Transport to Market | US$ M | (9) |
| Royalties | US$ M | (26) |
| Severance Tax | US$ M | (31) |
| **Total Operating Costs ($M)** | **US$ M** | **(1,012)** |
| Operating Margin ($M) | US$ M | 778 |
| Operating Margin | % | 43% |
| Corporate Income Tax ($M) | US$ M | (42) |
| Working Capital | US$ M | 0 |
| **Operating Cash Flow ($M)** | **US$ M** | **736** |
| Development Capital | US$ M | (414) |
| Exploration | US$ M | (3) |
| Sustaining Capital | US$ M | (61) |
| Closure/Reclamation Capital | US$ M | (4) |
| **Total Capital** | **US$ M** | **(482)** |
| | | |
| Pre-tax Free Cash Flow | US$ M | 295.9 |
| Pre-tax NPV @ 5% | US$ M | 81.2 |
| Pre-tax NPV @ 8% | US$ M | 11.8 |

| Item | Unit | Value |
|---|---|---|
| Pre-tax NPV @ 12% | US$ M | (42.4) |
| Pre-tax IRR | % | 8.7% |
| Pre-tax Undiscounted PB from Start of CP | Years | 7.8 |
| | | |
| After-tax Free Cash Flow | US$ M | 253.7 |
| After-tax NPV @ 5% | US$ M | 55.9 |
| After-tax NPV @ 8% | US$ M | (7.3) |
| After-tax NPV @ 12% | US$ M | (55.7) |
| After-tax IRR | % | 7.6% |
| After-tax Undiscounted PB from Start of CP | Years | 8.1 |

The average annual $U_3O_8$ sales for the base case during the 11 years of operation is 2.5 Mlb per year at an average All-in Sustaining Cost (AISC) of $39.12/lb $U_3O_8$.

#### 1.2.1.3 Sensitivity Analysis

The Project is most sensitive to head grade, uranium price, and recovery, and only less sensitive to operating cost and capital cost. The sensitivities to metallurgical recovery, head grade, pounds of $U_3O_8$, and metal price are nearly identical.

### 1.2.2 Alternate Case (Measured and Indicated Mineral Resources Only)

The SLR QP also completed a high level analysis of a scenario (the alternate case) with a production schedule that included only Measured and Indicated Mineral Resources, i.e., excluding Inferred Mineral Resources, which comprised 45% of the tons in the base case. Using the same mining and processing assumptions and operating cost parameters as the base case, the alternate case production schedule has 1.79 million tons at 0.41% $U_3O_8$ generating 14.0 Mlb $U_3O_8$ over the same 11 year mine life but at a milling rate of 490 tpd compared to 1,150 tpd in the base case.

As part of the alternate case analysis, it was necessary to scale the base case capital cost estimate (completed for a milling rate of 1,150 tpd) down to the 490 tpd rate in the alternate case. The SLR QP used the 0.6 capital cost rule as follows:

Alternate Case capital cost = $482 M*(490/1,150)^0.6

Thus, the alternate case capital cost estimate at a milling rate of 490 tpd is $289 million, a reduction of $193 million, or 40%, compared to the base case capital cost estimate.

Table 1-3 presents a summary of the Roca Honda alternate case economics at an $U_3O_8$ price of $65.00/lb. On a pre-tax basis, the undiscounted cash flow totals $170 million over the mine life. The pre-tax NPV at a 5% discount rate is $46.0 million with pre-tax IRR of 8.6%. On an after-tax basis, the undiscounted cash flow totals $130 million over the mine life. The after-tax NPV at 5% discount rate is $22.0 million with after-tax IRR of 6.8%.

## Table 1-3: Alternate Case After-Tax Cash Flow Summary
## Energy Fuels Inc. – Roca Honda Project

| Item | Unit | Value |
|---|---|---|
| $U_3O_8$ Price | $/lb | $65.00 |
| $U_3O_8$ Sales | Mlb | 14.0 |
| **Total Gross Revenue ($M)** | **US$ M** | **912** |
| Mining Cost | US$ M | (198) |
| Mill Feed Transport Cost | US$ M | (92) |
| Process Cost | US$ M | (111) |
| Maintenance Cost | US$ M | (2) |
| G & A Cost | US$ M | (16) |
| Product Transport to Market | US$ M | (5) |
| Royalties | US$ M | (12) |
| Severance Tax | US$ M | (16) |
| **Total Operating Costs ($M)** | **US$ M** | **(453)** |
| Operating Margin ($M) | US$ M | 459 |
| Operating Margin | % | 50% |
| Corporate Income Tax ($M) | US$ M | (40) |
| Working Capital | US$ M | (0) |
| **Operating Cash Flow ($M)** | **US$ M** | 419 |
| Development Capital | US$ M | (248) |
| Exploration | US$ M | (2) |
| Sustaining Capital | US$ M | (37) |
| Closure/Reclamation | US$ M | (2) |
| **Total Capital** | **US$ M** | (289) |
| | | |
| **Pre-tax Free Cash Flow** | **US$ M** | 170.0 |
| **Pre-tax NPV @ 5%** | **US$ M** | 46.0 |
| Pre-tax NPV @ 8% | US$ M | 6.1 |
| Pre-tax NPV @ 12% | US$ M | (24.9) |
| **Pre-tax IRR** | **%** | 8.6% |
| **Pre-tax Undiscounted PB from Start of CP** | **Years** | 8.1 |
| | | |
| **After-tax Free Cash Flow** | **US$ M** | 130.4 |

| Item | Unit | Value |
|---|---|---|
| **After-tax NPV @ 5%** | **US$ M** | 22.0 |
| After-tax NPV @ 8% | US$ M | (12.0) |
| After-tax NPV @ 12% | US$ M | (37.7) |
| **After-tax IRR** | **%** | 6.8% |
| **After-tax Undiscounted PB from Start of CP** | **Years** | 8.5 |

The average annual $U_3O_8$ sales for the alternate case during the 11 years of operation are 1.3 Mlb per year at an average AISC of $35.07/lb $U_3O_8$

The after-tax cash flow sensitivities for the alternate case are similar in magnitude to the base case with the Project being most sensitive to head grade, uranium price, and recovery, and only slightly less sensitive to operating cost and capital cost at a AACE International Class 4 accuracy level.

## 1.3 Technical Summary

### 1.3.1 Property Description and Location

The Roca Honda Project is located in McKinley County, in Central New Mexico, USA, in the Ambrosia Lake subdistrict, immediately northeast of the city of Grants, New Mexico. The geographic coordinates for the approximate center of the Project are located at latitude 35°22'4.23" N and longitude 107°41'56.62".. The White Mesa Mill is located in San Juan County, in southeastern Utah, USA, immediately south of the town of Blanding, Utah. The Mill is located at latitude 37°32'10.49" N and longitude 109°30'11.94" W. The Project will have the capacity to produce approximately 2.5 Mlb of $U_3O_8$ annually.

EFR owns 100% interest in the Project comprising of Roca Honda project land holdings totaling 4,440 acres and White Mesa Mill land holdings totalling 5,389 acres.

The Mine is located approximately three miles northwest of the community of San Mateo, New Mexico, in McKinley County, and approximately 22 miles by road northeast of Grants, New Mexico, via State Highway NM 605. The Mill is located approximately six miles south of Blanding, Utah, along US Highway 191 and 290 miles by highway northwest of the Mine.

Climate in the Mine area may be classified as arid to semi-arid continental, characterized by cool, dry winters, and warm, dry summers. Grants has an annual average temperature of 50°F, with an average summer high of 87°F and low of 52°F, and average winter high of 47°F and low of 18°F. In the Mill area, the climate of southeastern Utah is classified as dry to arid continental. Although varying somewhat with elevation and terrain, the climate in the vicinity of the Mill can be considered as semi-arid and typified by warm summers and cold winters. Blanding has an annual average temperature of 50°F. July is usually the warmest month with an average high of 91°F and low of 61°F, and January is usually the coldest month with an average high of 42°F and low of 22°F.

The Mine would employ 257 personnel who would be based around the town of Grants, Cibola County, New Mexico, which is the largest community near the Mine area. As of the 2020 census, Cibola County has a population of 27,172 people of which 8,866 people reside in Grants. Additionally, the city of Albuquerque, New Mexico is located approximately 100 miles east of the Mine area and could be a source of most materials and technical support needed for the Project.

To process mill feed from the Mine for the 11 year mine life, the Mill would employ 75 personnel who would be mostly based in the town of Blanding, San Juan County, Utah, and environs.

The Mine and Mill are located in historically important uranium-producing regions of central New Mexico and southeastern Utah, respectively. All the infrastructure necessary to mine and process significant commercial quantities of $U_3O_8$ currently exists. Infrastructure items include high voltage electrical supplies, water sources, paved roads and highways for transporting ROM mill feed crude ore and finished products, and accommodations for employees. Local and State infrastructure also includes hospitals, schools, airports, equipment suppliers, fuel suppliers, and communication systems.

The Mine is located at elevations ranging from 7,100 ft above sea level (ft ASL) to 7,680 ft ASL with easterly and southerly dipping slopes. The Mine area is sparsely populated, rural, and largely undeveloped. The predominant land uses include low-density livestock grazing, hay cultivation, and recreational activities such as hiking, sightseeing, picnicking, and seasonal hunting. Vegetation in the Mine area consists mainly of grasses, pinyon pine, and juniper trees.

Material mined at Roca Honda will be trucked 272 mi to EFR’s White Mesa Mill in Blanding, Utah for processing. The Mill is located at elevations ranging from about 5,550 ft ASL to 5,650 ft ASL. It is located near the center of White Mesa, one of the many finger-like north-south trending mesas that make up the Great Sage Plain located in Utah. The nearly flat upland surface of White Mesa is underlain by resistant sandstone caprock, which forms steep prominent cliffs separating the upland from deeply entrenched intermittent stream courses on the east, south and west.

### 1.3.2 Land Tenure

EFR owns 100% interest in the Project comprising of Roca Honda project land holdings totaling 4,440 acres and White Mesa Mill land holdings totalling 5,389 acres.

### 1.3.3 Existing Infrastructure

The Roca Honda project and White Mesa Mill are in historically important, uranium-producing regions of central New Mexico and southeastern Utah. All the infrastructure necessary to mine and process significant commercial quantities of $U_3O_8$ is in place.

Infrastructure items include:

- Roca Honda Mine and White Mesa Mill near Grants, New Mexico and Blanding, Utah, respectively
- Power for the Mine will be available at the substation with power coming from the New Mexico Energy grid. The operating load at the Mine and Mill is 1.6 MW and 1.5 MW, respectively.
- Water supply for both the Mine and Mill consists of a combination of potable water, and water from wells on site.
- Paved roads and highways
- Finished $U_3O_8$ yellowcake can be transported by truck to customer facilities nationwide
- Cells 1, 2, 3, 4A and 4B at the White Mesa Mill
- Accommodations for employees

Local and State infrastructure such as hospitals, schools, airports, equipment suppliers, fuel suppliers, and communication systems

### 1.3.4 History

The Roca Honda Mine has a long history of exploration and development with a number of owners. Kerr-McGee Oil Industries (Kerr-McGee), its subsidiaries, and successor (Rio Algom) completed significant work in from the mid-1960s until 1982 succeeded by Western Nuclear, Conoco, and Strathmore. Roca Honda Resources (RHR) was established on July 26, 2007, when Strathmore (60%) formed a limited liability company with Sumitomo Corporation (40%) and transferred the property to RHR. In August 2013, EFR acquired a 100% interest in Strathmore, and assumed Strathmore's 60% ownership interest in RHR. In June 2015, EFR acquired a 100% interest in the mineral properties controlled by Uranium Resource Incorporated (URI). In May 2016, EFR completed the purchase of Sumitomo Corporation's 40% interest in RHR and, since then, has a 100% interest in the Property.

Material mined at Roca Honda will be trucked to EFR's White Mesa Mill in Blanding, Utah for processing. The White Mesa uranium/vanadium mill was developed in the late 1970s by Energy Fuels Nuclear, Inc. (EFNI) as a processing option for the many small mines that are located in the Colorado Plateau region. After approximately two and one-half years, the Mill ceased ore processing operations altogether due to low uranium prices. Since 1984 the Mill has run on selected campaign basis, with majority ownership interest alternating between EFNI, Union Carbide Corporation, and Denison. Since August 2012, EFR has controlled 100% of the Mill's assets and liabilities.

### 1.3.5 Geology and Mineralization

More than 340 Mlb of $U_3O_8$ have been produced from the Grants uranium deposits in New Mexico between 1948 and 2002. The Grants uranium district is one of the largest uranium provinces in the world. The Grants uranium district extends from east of Laguna to west of Gallup in the San Juan Basin of New Mexico. Three types of sandstone uranium deposits are recognized: tabular, redistributed (roll-front, fault-related), and remnant-primary.

Rocks exposed in the Ambrosia Lake subdistrict of the Grants uranium district, which includes the Project area, include marine and non-marine sediments of Late Cretaceous age, unconformably overlying the uranium-bearing Upper Jurassic Morrison Formation. The uppermost sequence of conformable strata consists of the Mesaverde Group, Mancos Shale, and Dakota Sandstone. All rocks that outcrop at the Project area are of Late Cretaceous age; these rocks and the Quaternary Period deposits that cover them in some places.

The uranium mineralization found in the Mine area is contained within five sandstone units of the Westwater Canyon Member. Zones of mineralization vary from approximately one foot to 30 ft thick, 100 ft to 600 ft wide, and 200 ft to 3,000 ft in length in elongated pods. Uranium mineralization in the Mine area west to east, and northwest to southeast depending on general area within the Mine area, consistent with trends of the fluvial sedimentary structures of the Westwater Canyon Member, and the general trend of mineralization across the Ambrosia Lake subdistrict.

Uranium mineralization in the Mine area is believed to be predominantly primary ("trend") mineralization, with some secondary mineralization due to oxidation and mobilization of uranium near permeable geologic structures. Uranium mineralization consists of dark organic-uranium oxide complexes. The uranium in the Mine area is dark grey to black in color and is found between depths of approximately 1,380 ft to 2,600 ft below the surface.

Primary mineralization pre-dates the formation of the Laramide aged structures in the Mine area, with a small amount of vertical offset of mineralization present across the local faults. There is a possibility of some redistribution and stack ore along faults, however, it appears that most of the Roca Honda mineralization is primary. Paleochannels that contain quartz-rich, arkosic, fluvial sandstones are the primary mineralization control associated with this trend.

### 1.3.6 Exploration Status

No exploration or drilling work has been conducted at the Mine since EFR acquired it in August 2013.

EFR is planning a large infill-drilling program of approximately 200 surface drillholes prior to any mining operations taking place at the Mine. Core recovered from this program will be used for assay checks of geophysical probes, disequilibrium and metallurgical studies, and geotechnical and hydrologic studies to refine mine plans. This program is being permitted as part of the overall mine permitting process and no timeframe for this drilling has been set.

### 1.3.7 Mineral Resources

Mineral Resources have been classified in accordance with the definitions for Mineral Resources in S-K 1300, which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM, 2014) definitions which are incorporated by reference in NI 43-101. The Mineral Resource estimate is summarized in Table 1-4.

**Table 1-4: Attributable Mineral Resource Estimate for Roca Honda - Effective Date December 31, 2021**
**Energy Fuels Inc. – Roca Honda Project**

| Classification | Area | Tonnage (000 ton) | Grade (% $U_3O_8$) | Contained Metal (000 lb $U_3O_8$) | Recovery (%) |
|---|---|---|---|---|---|
| Measured | Sec. 9, 10 &16 | 208 | 0.477 | 1,984 | 95 |
| | Sec. 17 | - | - | - | |
| Indicated | Sec. 9, 10 &16 | 1,303 | 0.483 | 12,580 | 95 |
| | Sec. 17 | 336 | 0.454 | 3,058 | 95 |
| **Total Measured + Indicated** | **Sec. 9, 10, 16 & 17** | **1,847** | **0.477** | **17,622** | **95** |
| Inferred | Sec. 9, 10 &16 | 1,198 | 0.468 | 11,206 | 95 |
| | Sec. 17 | 315 | 0.419 | 2,636 | 95 |
| **Total Inferred** | **Sec. 9, 10, 16 & 17** | **1,513** | **0.457** | **13,842** | **95** |

Notes:

1. SEC S-K definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.
2. Mineral Resources are estimated at a $U_3O_8$ cut-off grade of 0.19% $U_3O_8$.
3. A minimum mining thickness of six feet was used, along with $241/ton operating costs, $65/lb $U_3O_8$ price, and 95% recovery.
4. Bulk density is 0.067 ton/ft$^3$ (15.0 ft$^3$/ton or 2.14 t/m$^3$).
5. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
6. Mineral Resources are 100% attributable to EFR and are in situ.
7. Numbers may not add due to rounding.

The EFR QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

### 1.3.8 Mineral Reserves

There are no current Mineral Reserves at the Roca Honda Project.

### 1.3.9 Mining Method

This Technical Report includes 4.02 million tons of mineralized material at a diluted grade of 0.36% $U_3O_8$ containing 28.994 Mlb $U_3O_8$. To arrive at this estimate, the SLR QP used a diluted cut-off grade of 0.110% $U_3O_8$, a minimum mining thickness of six feet, and the historical mining recovery of 85% for the SRP mining method and 90% recovery for the DF mining method. The SLR QP notes that Inferred Resources are considered too geologically speculative to have mining and economic considerations applied to them to be categorized as Mineral Reserves.

Dilution is estimated to average 17.1% at a grade of 0.030% $U_3O_8$. This includes both low grade and waste material. Dilution estimates are based on one foot of overbreak in the roof and six inches in the floor of all single lift stopes. In the case of multi-lift stopes, the initial cuts include only six inches of dilution from the floor of the drift. The final cut includes both floor dilution and roof dilution. Average minimum stope height is six feet.

The mineralization is relatively flat-lying and will be mined using both SRP stoping in the lower grade zones and DF stoping in the higher grade zones. The transition grade was calculated at 0.265% $U_3O_8$. Stopes with average diluted grades of less than 0.265% $U_3O_8$ will be mined using the SRP method. Stopes with average diluted grades higher than 0.265% $U_3O_8$ will be mined using the DF method. With the SRP method, permanent pillars will be left in a pre-designed pattern and low-strength cemented rockfill (CRF) will be placed in mined-out areas as backfill. For the DF method, a high-strength CRF will be placed in the mined-out areas. The mineralized zones range in thickness from 6 ft to 21 ft. Zones in the 6 ft to 12 ft thickness range will be mined in one pass. Mineralized zones exceeding 12 ft in thickness will be mined in two sequential overhand cuts with each cut being approximately one half of the overall zone thickness.

The LOM schedule is based on initiating development from the production shafts located in Section 16 and Section 17. The mining areas in the Southwest mining area will be connected to the Northeast mining area via a 3,600 ft twin decline. Primary development connecting the shaft to the various mineralized zones (including the twin decline) will be driven 10 ft wide by 12 ft high to allow for infrastructure. Stope access development connecting the primary development to the individual stopes will be driven 10 ft wide by 10 ft high.

The mining sequence in each area is dependent upon the development schedule, but in general, prioritizes the mining of the largest and highest grade zones in each area of the mine. There is also a requirement to sequence the mining of any stacked zones from top down.

Stope mining begins approximately four years after the start of construction and the operating mine life spans eleven years. The production rate averages approximately 1,030 stpd during the time that mining occurs in Sections 9 and 16 only, increasing to 1,200 stpd when mining in Sections 9, 16, and 10 simultaneously and dropping to 1,020 stpd when mining from Section 10 only.

Depressurization of the three main aquifers in the Project area will be accomplished using depressurization wells and underground long holes that supply water to underground pumping stations that ultimately feed water to the Section 16 shaft sump pumps, and three discharge pump stations located in the shaft. It has been estimated that the mine will discharge a nominal 2,500 gpm of water at temperatures between 90°F and 95°F.

The deposit will be developed and mined based on single-pass ventilation using a series of separate and independent intake and exhaust networks. The design requires a total of 12 ventilation raises (five in Section 17, three in Section 16, two in Section 9, and three in Section 10). Two of the ventilation raises, one in Section 16 and one in Section 10, will be equipped with emergency evacuation hoisting equipment.

### 1.3.10 Mineral Processing

The White Mesa Mill is currently on a reduced operating schedule processing materials as they become available. The Mill is in the process of processing Rare Earth materials in part of the circuit, functioning essentially as a pilot plant. Owing to the work, the facility is sufficiently staffed to initiate production relatively quickly.

The Mill uses a Semi Autogenous (SAG) mill operating in closed circuit with vibratory screens for comminution. Mill feed is fed to the communication circuit via front end loader. Nameplate production rate for the circuit is 150 short tons per hour (stph).

The Mill uses an atmospheric hot acid leach followed by counter current decantation (CCD) and a clarifier stage to remove suspended solids. Clarified pregnant leach solution (PLS) reports to the solvent extraction (SX) circuit where uranium and vanadium are extracted from the aqueous solution to an organic phase. Salt and sulfuric acid are then used to strip the uranium from the organic phase.

After stripping of the uranium from the organic in SX, uranium is precipitated with anhydrous ammonia, dissolved, and re-precipitated to improve product quality. The resulting precipitate is then washed and dewatered using centrifuges to produce a final $U_3O_8$ product called "yellowcake”. The yellowcake is dried in a multiple hearth dryer and packaged in drums weighing approximately 800 lb to 1,000 lb for shipping to uranium converters.

Tailings from the acid leach plant are stored in permitted 40 acre tailing cells located in the southwest and southern portion of the mill site. Spent process solutions are stored in the evaporation cells for reuse with excess solutions allowed to evaporate.

### 1.3.11 Market Studies

The majority of uranium is traded via long-term supply contracts, negotiated privately without disclosing prices and terms. Spot prices are generally driven by current inventories and speculative short-term buying. Monthly long-term industry average uranium prices based on the month-end prices are published by Ux Consulting, LLC, and Trade Tech, LLC. An accepted mining industry practice is to use "Consensus Forecast Prices" obtained by collating commodity price forecasts from credible sources, with the long-term forecast price used for estimating Mineral Reserves, and 10% to 20% higher prices used for estimating Mineral Resources.

For Mineral Resource estimation and cash flow projections, EFR selected a $U_3O_8$ price of $65.00/lb, on a Cost, Insurance, and Freight (CIF) basis to customer facility, based on independent forecasts showing long-term prices of approximately $55.00/lb. The SLR QP considers the selected price to be reasonable and consistent with industry practice.

### 1.3.12 Environmental, Permitting and Social Considerations

A number of permits are required for the operation of Roca Honda Mine to be issued by local, state, and federal agencies including:

- Mine Operations Plan for the Roca Honda Mine, Record of Decision (RoD) from the U.S. Forest Service (USFS)
- A mine dewatering permit from the State of New Mexico
- A discharge permit from the New Mexico Environment Department (NMED)
- A National Pollutant Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection Agency (EPA)
- A Nationwide 404 permit from the Army Corps of Engineers
- A National Emission Standards for Hazardous Air Pollutants (NESHAP) permit from the EPA

Roca Honda is in an advanced stage of permitting and EFR is anticipating a RoD in 2023 which will be followed by the issuance of other state and federal permits.

The White Mesa Mill is permitted to operate and does so on an intermittent basis when sufficient feed is obtained and market factors warrant.

There are no violations or regulatory matters of any significance or that are not being addressed under normal regulatory procedures.

### 1.3.13 Capital and Operating Cost Estimates

The base case capital cost estimate summarized in Table 1-5 covers the life of the Project and includes initial capital costs, expansion capital, and end-of-mine-life recovery of working capital. The Project capital costs are based on 2015 US dollars, based on the previous technical report authored by SLR's predecessor RPA. For this Technical Report, the SLR QP escalated these costs to Q1 2021 US dollar basis using subscription-based Mining Cost Services (MCS) cost indexes (Infomine, 2021). In the SLR QP's opinion, inflationary indices since Q1 2021 are too volatile to apply against a long lived asset. The escalation effect during the five year period (2016 to 2021) is estimated to be 16.3% or $67.4 million over 2015 estimates.

**Table 1-5: Capital Cost Estimate**
**Energy Fuels Inc. – Roca Honda Project**

| Capital Cost Area | Units | Project Capital Totals | Preproduction (Years -4 to 1) | Production (Years 2 to 11) |
|---|---|---|---|---|
| Total Development Capital | US$ (000) | 414,038 | 316,373 | 97,665 |
| Working Capital | US$ (000) | - | 16,622 | (16,622) |
| Exploration | US$ (000) | 2,926 | 2,926 | - |
| Sustaining Capital | US$ (000) | 61,403 | - | 61,403 |
| Closure & Reclamation | US$ (000) | 3,952 | - | 3,952 |
| **Total Capital Costs** | **US$ (000)** | **482,319** | **335,921** | **146,399** |

The average LOM operating costs and unit rates are shown in Table 1-6. The Project operating costs are based on 2015 US dollars, based on the previous technical report authored by SLR's predecessor RPA. For this Technical Report, the SLR QP escalated these costs to Q1 2021 US dollar basis using MCS cost indexes. The escalation effect during this five year period (2016 to 2021) is estimated to be 10.3% or $89.0 million for an increase of $21.77/ton milled over 2015 estimates.

**Table 1-6: Operating Cost Estimate**
**Energy Fuels Inc. – Roca Honda Project**

| Operating Cost Summary | US$ (000) | $/ton milled |
|---|---|---|
| Mining | 445,896 | 110.91 |
| Mill Feed Transport | 207,660 | 51.65 |
| Processing | 250,642 | 62.35 |
| Surface Facility Maintenance | 5,353 | 1.33 |
| G & A | 36,327 | 9.04 |
| **Total Site Operating Costs** | **945,877** | **235.28** |
| Product Transport to Market | 9,401 | 2.34 |
| **Total Production Costs** | **955,278** | **237.63** |
| Royalties | 25,993 | 6.47 |
| Severance Taxes | 30,877 | 7.68 |
| **Total Operating Costs** | **1,012,148** | **251.78** |

# 2.0 INTRODUCTION

SLR International Corporation (SLR) was retained by Energy Fuels Resources (USA) Inc. (EFR) to prepare a Technical Report on Roca Honda Project (Roca Honda or the Project), located in Central New Mexico, USA, for EFR's parent company, Energy Fuels Inc. EFR owns 100% of the Project.

This Technical Report satisfies the requirements of Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and the United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601 (b)(96) Technical Report Summary. This Technical Report is considered by the SLR QPs to meet the requirements of a Preliminary Economic Assessment (PEA) as defined in Canadian NI 43-101 regulations. The term PEA is used throughout this Technical Report and is consistent with an Initial Assessment (IA) under S-K 1300.

EFR's parent company, Energy Fuels Inc., is incorporated in Ontario, Canada. EFR is a US-based uranium and vanadium exploration and mine development company with projects located in the states of Colorado, Utah, Arizona, Wyoming, Texas, and New Mexico. EFR is listed on the NYSE American Stock Exchange (symbol: UUUU) and the Toronto Stock Exchange (symbol: EFR).

The Project includes the proposed Roca Honda Mine (the Mine) near the city of Grants, New Mexico, and the existing White Mesa Mill (the Mill) near the city of Blanding, Utah. The Project is currently in the planning and permitting stages and the Mill is on a reduced operating schedule while processing materials as they become available. When in full operation, the Project is expected to produce uranium concentrate known internationally as yellowcake.

The Roca Honda area has a long history of exploration and development with a number of owners since its first discovery in the mid-1960s by Kerr-McGee Oil Industries (Kerr-McGee). Ownership has since passed from Kerr-McGee, its subsidiaries, and successor (Rio Algom Mining LLC) to Western Nuclear Corporation (Western Nuclear) -Section 16 only, U.S. Conoco Inc. (Conoco) -Section 11 only, Strathmore Resources (Strathmore), and Roca Honda Resources (RHR). Since May 2016, EFR has had a 100% interest in the Mine. The White Mesa uranium/vanadium mill was developed in the late 1970s by Energy Fuels Nuclear, Inc. (EFNI) as a processing option for the many small mines that are located in the Colorado Plateau region. After approximately two and a half years, the Mill ceased ore processing operations altogether due to low uranium prices. Since 1984, majority ownership interest has alternated between EFNI, Union Carbide Corporation, and Denison Mines Corporation (Denison, previously International Uranium Corporation). Since August 2012, EFR has controlled 100% of the Mill's assets and liabilities.

The proposed Roca Honda Mine underground operation is expected to have a mine life of 11 years with a mining rate of approximately 400 thousand tons of mill feed per year, which will be trucked 272 mi to the Mill which would produce 28 million pounds (Mlb) of $U_3O_8$ (2.5 Mlb of $U_3O_8$ annually), for delivery to end-users.

The economic analysis contained in this Technical Report is based, in part, on Inferred Resources, and is preliminary in nature. Inferred Resources are considered too geologically speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that economic forecasts on which this Preliminary Economic Assessment is based will be realized.

## 2.1 Sources of Information

Sources of information and data contained in this Technical Report or used in its preparation are from publicly available sources in addition to private information owned by EFR, including that of past property owners.

The QPs, Messers. Malensek, Mathisen, and Kapostasy visited Roca Honda on October 19, 2021, and inspected various parts of the property, however, did not inspect the existing Section 17 infrastructure which was inaccessible at the time of the visit as surface access agreements are still being negotiated by EFR and current landowner. The SLR QPs, Messers. Malensek and Woods visited the Mill on November 11, 2021, and toured the operational areas, mill offices, and tailings storage facility (TSF). The EFR QP Mr. Kapostasy last visited the White Mesa Mill on September 16 to 17, 2021.

Table 2-1 presents a summary of the QP responsibilities for this Technical Report.

**Table 2-1: Summary of QP Responsibilities**
**Energy Fuels Inc. – Roca Honda Project**

| Qualified Person | Company | Title/Position | Section |
|---|---|---|---|
| Grant A. Malensek, M.Eng., P. Eng. | SLR | Senior Principal Mining Engineer | 1.2, 1.3.11, 1.3.13, 19, 21, 22, 30 |
| Mark B. Mathisen, C.P.G. | SLR | Principal Geologist | 1.1.1.1, 1.1.2.1, 1.3.1, 1.3.2, 1.3.4, 1.3.5, 1.3.6, 1.3.7, 1.3.8, 2, 3, 4.1, 4.2, 4.4, 4.5, 5.1, 5.2, 5.3, 5.4, 5.6, 6, 7, 8, 9.1, 9.2, 10, 11, 12, 14, 15, 23, 24, 25.1, 26.1 |
| David M. Robson, P.Eng. MBA | SLR | Principal Mining Engineer | 1.1.1.2, 1.1.2.2, 1.3.9, 16.1 to 16.5, 16.7 to 16.10, 25.2, 26.2 |
| Jeffrey L. Woods, MMSA QP | Woods Process Services | Principal Consulting Metallurgist | 1.1.1.4, 1.1.1.5, 1.1.2.4, 1.3.3, 1.3.10, 5.5, 13, 17, 18.1 to 18.8, 18.9.1, 18.10, 18.11, 25.4, 25.5, 26.4 |
| Phillip E. Brown, C.P.G., R.P.G. | Consultants in Hydrogeology | Principal Consulting Hydrogeologist | 1.1.1.3, 1.1.2.3, 16.6, 25.3, 26.3 |
| Daniel Kapostasy, P.G. | EFR | Director of Technical Services | 1.1.1.6, 1.3.12, 4.3, 18.9.2, 20, 25.6 |
| All | - | - | 27 |

During the preparation of this Technical Report, discussions were held with personnel from EFR:

- Gordon Sobering, PE, QP, Senior Mine Engineer
- Dan Kapostasy, P.G., Director of Technical Services
- Timo Groves, PE, Process Engineering, White Mesa Mill
- Steve Snyder, Mill Engineer, White Mesa Mill
- Scott Bakken, P.G., Vice President, Regulatory Affairs

This Technical Report supersedes the previous NI 43-101 Technical Report completed by SLR, as the former Roscoe Postle Associates Inc (RPA), dated October 27, 2016.

The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Section 27 References.

## 2.2 List of Abbreviations

The U.S. System for weights and units has been used throughout this Technical Report. Tons are reported in short tons (ton) of 2,000 lb unless otherwise noted. All currency in this Technical Report is US dollars (US$) unless otherwise noted.

Abbreviations and acronyms used in this Technical Report are listed below.

| Unit Abbreviation | Definition | Unit Abbreviation | Definition |
|---|---|---|---|
| µ | micron | L | liter |
| a | annum | lb | pound |
| A | ampere | m | meter |
| bbl | barrels | $m^3$ | meter cubed |
| Btu | British thermal units | M | mega (million); molar |
| °C | degree Celsius | Ma | one million years |
| cm | centimeter | MBtu | thousand British thermal units |
| $cm^3$ | centimeter cubed | MCF | million cubic feet |
| d | day | MCF/h | million cubic feet per hour |
| °F | degree Fahrenheit | mi | mile |
| ft ASL | feet above sea level | min | minute |
| ft | foot | MPa | megapascal |
| $ft^2$ | square foot | mph | miles per hour |
| $ft^3$ | cubic foot | MVA | megavolt-amperes |
| ft/s | foot per second | MW | megawatt |
| g | gram | MWh | megawatt-hour |
| G | giga (billion) | ppb | part per billion |
| Ga | one billion years | ppm | part per million |
| gal | gallon | psia | pound per square inch absolute |
| gal/d | gallon per day | psig | pound per square inch gauge |
| g/L | gram per liter | rpm | revolutions per minute |
| g/y | gallon per year | RL | relative elevation |
| gpm | gallons per minute | s | second |
| hp | horsepower | ton | short ton |
| h | hour | stpa | short ton per year |
| Hz | hertz | stpd | short ton per day |
| in. | inch | t | metric tonne |
| $in^2$ | square inch | US$ | United States dollar |
| J | joule | V | volt |
| k | kilo (thousand) | W | watt |
| $kg/m^3$ | kilogram per cubic meter | wt% | weight percent |
| kVA | kilovolt-amperes | WLT | wet long ton |
| kW | kilowatt | y | year |
| kWh | kilowatt-hour | $yd^3$ | cubic yard |

# 3.0 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by the SLR QPs for EFR. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to the SLR QPs at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by EFR and other third party sources.

## 3.1 Reliance on Information Provided by the Registrant

For the purpose of this Technical Report, the SLR QP has relied on ownership information provided by Energy Fuels Resources (USA) Inc. in a legal opinion by Haynes and Boon dated February 15, 2022, entitled *Limited Review of Grants Uranium District Properties located in McKinley County, New Mexico (Roca Honda Claims and Section 17 Mineral Estate, Exhibits A through F*. The opinion was relied on in Section 4 Property Description and Location and the Summary of this Technical Report. The SLR QP has not researched property title or mineral rights for the Roca Honda Project as it is considered reasonable to rely on EFR's legal counsel who is responsible for maintaining this information.

The SLR QP has relied on EFR for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from Roca Honda in the Summary and Section 22. The taxation calculations in the cash flow model presented in this Technical Report were reviewed and approved by Kara. P. Beck, EFR Tax Manager, in an email dated December 14, 2021, and the SLR QP considers it reasonable to rely on EFR's in house tax manager who deals regularly with the applicable taxes.

The Qualified Persons have taken all appropriate steps, in their professional opinion, to ensure that the above information from Energy Fuels Inc. is sound. Except as provided by applicable laws, any use of this Technical Report by any third party is at that party's sole risk.

# 4.0 PROPERTY DESCRIPTION AND LOCATION

## 4.1 Location

### 4.1.1 Roca Honda Mine

The Roca Honda Mine is located approximately three miles northwest of the community of San Mateo, New Mexico, in McKinley County, and approximately 22 miles by road northeast of Grants, New Mexico (Figure 4-1).

The property is in the east part of the Ambrosia Lake subdistrict of the Grants uranium district in northwest New Mexico. The Project comprises nearly all of Sections 5, 6, 8, 9, 10, and a narrow strip of Section 11; the New Mexico State Lease, consisting of Section 16; and the fee mineral in Section 17, all in Township 13 North, Range 8 West, New Mexico Principal Meridian (Figure 4-1).

The geographic coordinates for the approximate center of the Project are located at latitude 35°22'4.23" N and longitude 107°41'56.62" W. All surface data coordinates are NAD 1983 State Plane New Mexico West FIPS 3003 (US feet) system.

### 4.1.2 White Mesa Mill

The White Mesa Mill is located on 4,816 acres of private land owned by EFR. This land is located in Township 37 South and 38 South, Range 22 East, Salt Lake Principal Meridian. The Mill is located approximately six miles south of Blanding, Utah, along US Highway 191. EFR also holds 253 acres of mill site claims and a 320 acre Utah state lease. No facilities are planned on the claims or leased land, which will be used as a buffer surrounding the operations (Figure 4-2).

Figure 4-3 shows the relative locations of the Roca Honda Mine and the White Mesa Mill, and the proposed haul route for the Roca Honda mineralized material to the Mill. The Mine and the Mill are located approximately 290 road miles apart. Each operation would be considered as a “stand-alone” operation, i.e., each would have its own administration, warehouse, accounting, environmental, and safety staff.

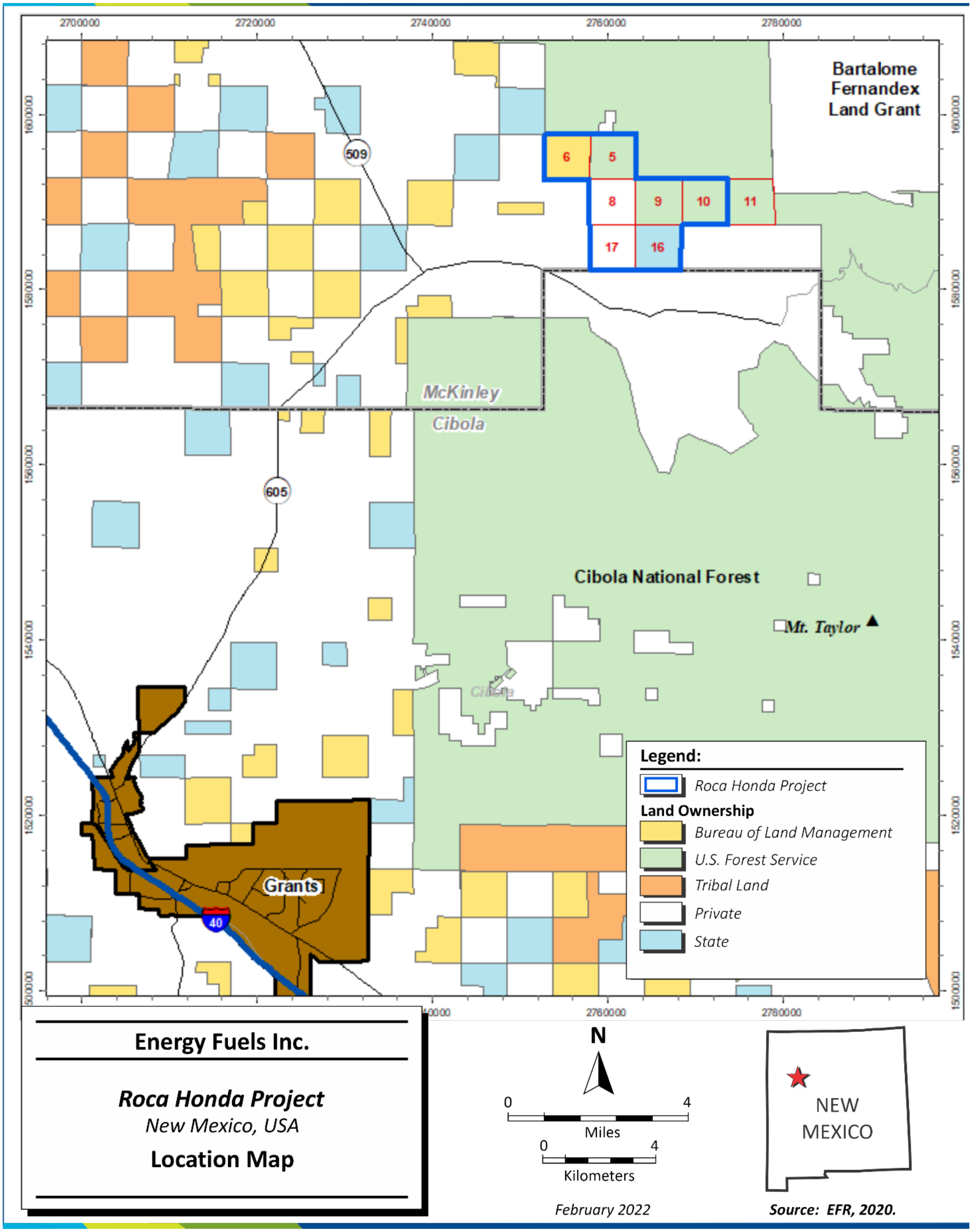
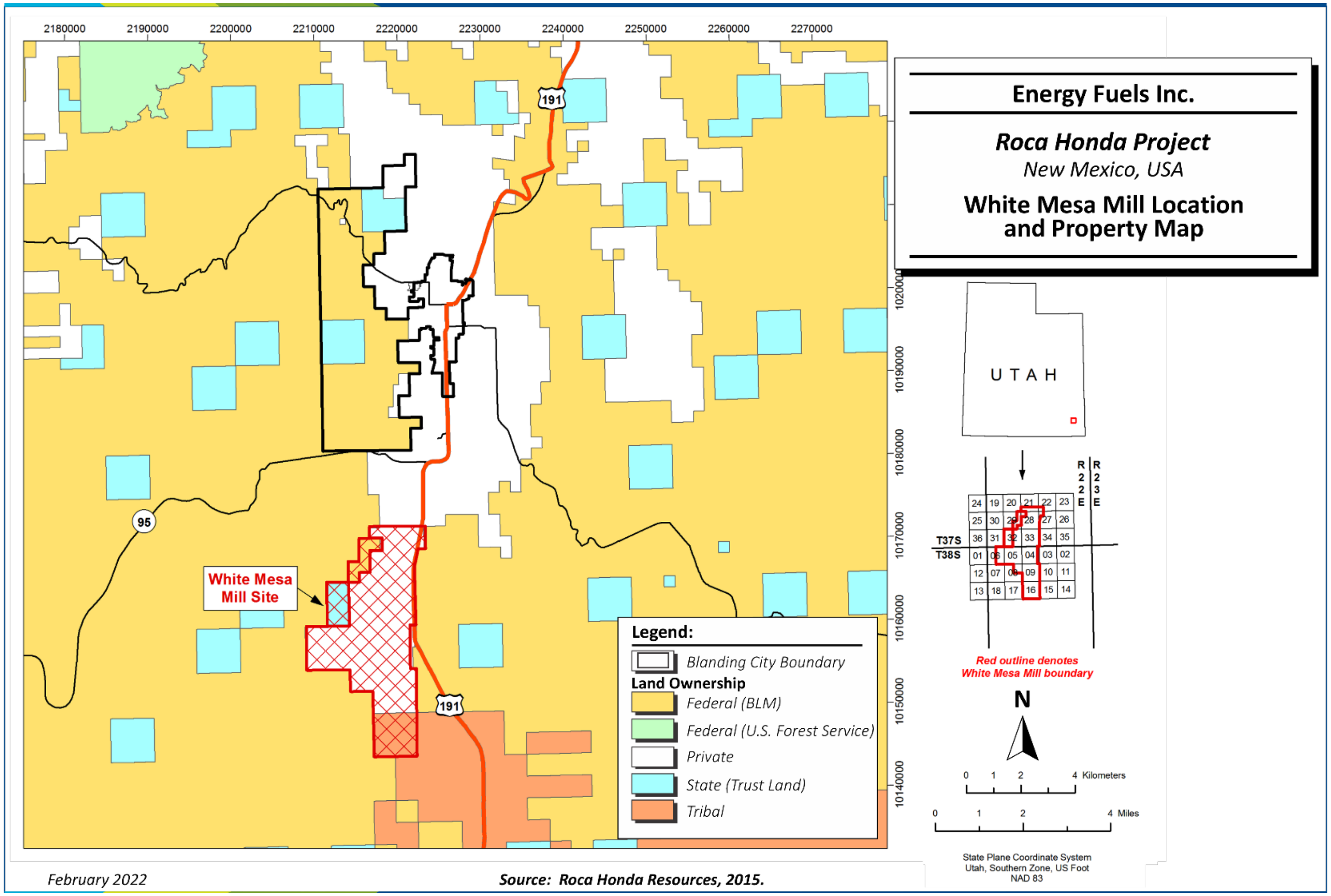


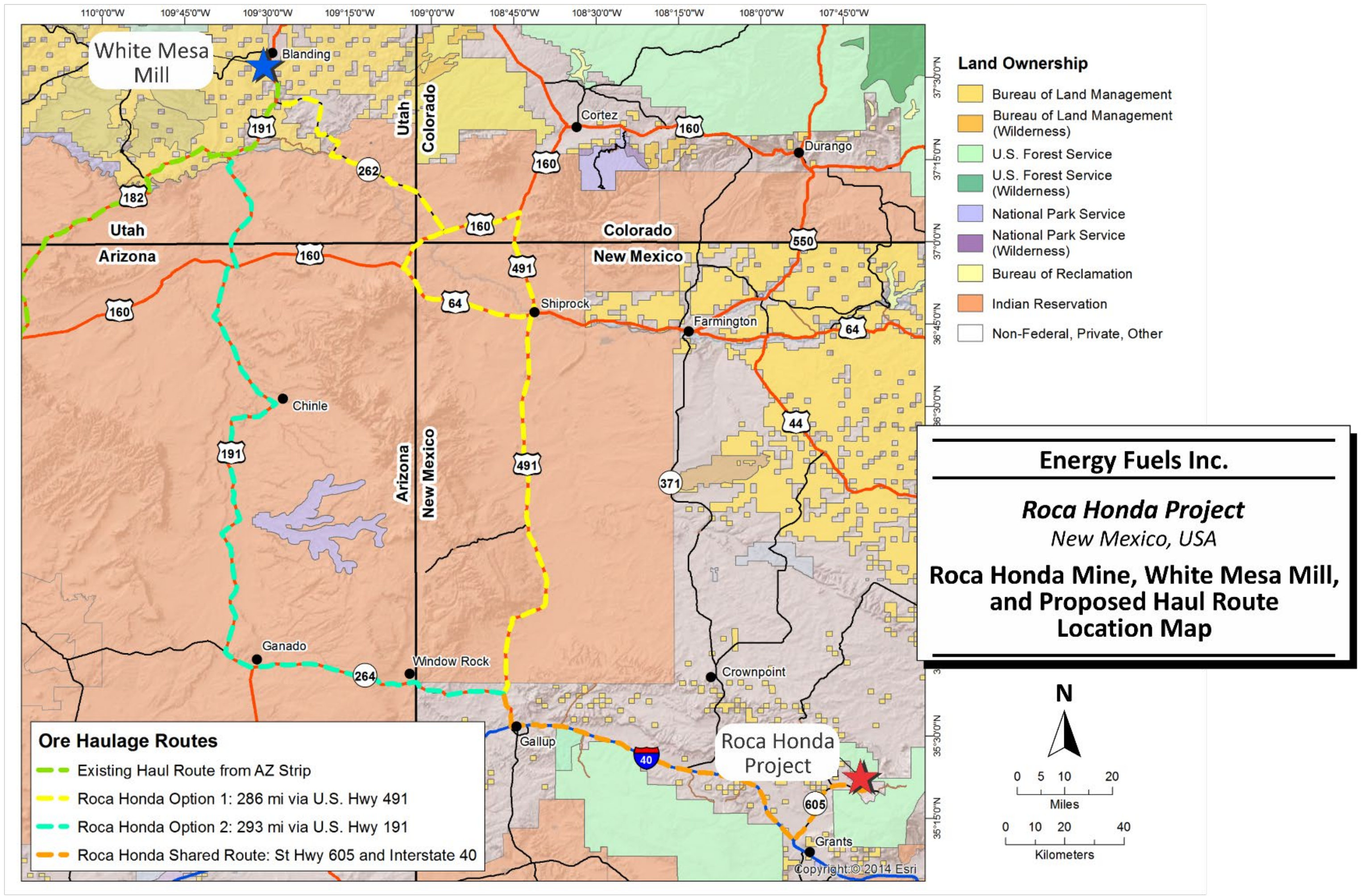
Figure 4-1: Location Map



February 2022

**Source: Roca Honda Resources, 2015.**

Figure 4-2: White Mesa Mill Location and Property Map



*February 2022*

***Source: EFR, 2016.***

**Figure 4-3: Roca Honda Mine, White Mesa Mill, and Proposed Haul Route Location Map**

## 4.2 Land Tenure

### 4.2.1 Roca Honda Mine

Since May 27, 2016, the Mine has been held solely by Strathmore Resources (US) Ltd (Strathmore), which is a wholly owned subsidiary of Energy Fuels Inc. Strathmore acquired the initial portion of the property on March 12, 2004, from Rio Algom Mining LLC (Rio Algom), a successor to Kerr-McGee Corporation (Kerr-McGee), which had staked the claims in 1965 and had continuously maintained them. Roca Honda Resources LLC (RHR) was established on July 26, 2007, when Strathmore formed a limited liability company with Sumitomo Corporation of Japan and transferred the property to RHR. Energy Fuels Inc. acquired a 100% interest in Strathmore in August 2013 and assumed Strathmore's 60% ownership interest in RHR. Energy Fuels Inc. acquired the remaining 40% ownership interest in RHR in May 2016 and is now 100% owner of the Mine.

The Mine covers an area of 4,440 acres and includes 63 unpatented lode-mining claims in Sections 9, 10 and 11; 64 unpatented claims in Sections 5 and 6; 36 unpatented claims in Section 8; one adjoining New Mexico State General Mining Lease in Section 16; and the fee mineral interest in all of Section 17 (Figure 4-4). The mining claims also extend onto a 9.4 acre narrow strip of Section 11. The New Mexico State Lease was acquired by David Miller (former Strathmore CEO) on November 30, 2004, and subsequently transferred to Strathmore. Strathmore subsequently relinquished the lease and acquired it again in December 2015 (HG-0133) for a new 15-year term expiring on December 14, 2030. The "Rocca Honda" Claims in Sections 5 and 6 were staked by Miller and Associates in September 2004 and assigned to RHR on August 28, 2013. Strathmore acquired the "Roca Honda" claims in Section 8 and the fee mineral interest in Section 17 on June 26, 2015, from Uranium Resource Incorporated (URI).

Mining claim numbers RH 252, RH 279, RH 306, and RH 333, located in the southern part of Section 10, overlap into the northern part of Section 15, which is privately owned land, therefore, the overlapping portion of these claims is not valid. The Roca Honda property extends only to the Section 15 boundary.

Mining claim numbers RH 325 to RH 333 are located along the eastern boundary of Section 10, extending west across the Section 11 line by approximately 150 ft.

The initial 63 unpatented, contiguous mining claims (the Roca Honda group), covering an area of approximately 1,248.5 acres, are located on Sections 9, 10, and 11, which are federally owned lands within the Cibola National Forest administered by the U.S. Forest Service (USFS). Section 5 is also administered by the USFS while claims in Section 6 are located on U.S. Bureau of Land Management (BLM) land. Section 8 is split estate, the private surface belonging to Fernandez Ranch. Sections 5, 6, 9, 10, and 11 are open to the public, with the land used for a variety of purposes including grazing, mineral extraction, hunting, hiking, and other outdoor recreation activities. All claims are listed in the U.S. BLM Mining Claim Geographic Index Report Mineral and Land Record System (MLRS). The claims covering Section 9, 10, and part of 11 have a location date of June 29 and 30, 1965. The claims in Section 8 have location dates of September 10, 1997. The Roca Honda claims in Sections 5 and 6 were located on September 6, 2004. The latest assessment year shown in MLRS is 2021 and the claims are shown as "Active".

There is a 1% gross revenue, no deduction royalty payable to the original claim holders for the claims on Section 9. There are no royalties associated with the claims on Sections 5, 6, 8, 10, or 11.

All claims, which are renewed annually in September of each year, are in good standing until September 1, 2022 (at which time they will be renewed for the following year as a matter of course). All unpatented mining claims are subject to an annual federal mining claim maintenance fee of $165 per claim payable to the BLM and recording an affidavit and Notice of Intent to hold with the McKinley County Clerk, New Mexico. County recording fees for the claims are approximately $425 per year.

New Mexico General Mining Lease number HG-0133, located on Section 16, covers an area of 638 acres. The mining lease has a primary, secondary, tertiary, and quaternary term, each with annual rentals to be paid in advance. Strathmore first acquired a lease on Section 16 in November 2004 (Lease number HG-0036-002). As there was no provision to extend the lease past 2019 other than by production, Strathmore dropped the lease as its payment came due in December 2015. The New Mexico Land Office held an auction of the lease parcel that same month. Strathmore was the successful bidder, paying a $100,000 bonus. The new lease has a primary term of three years, and the annual rental is $1.00/acre ($640). The secondary term for years 4 and 5 will require a payment of $10/acre each year, and the tertiary term, years 6 through 10, will cost $3.00/acre each year. The lease will have a quaternary term for years 11 through 15 requiring an annual rental of $10.00 per acre plus an escalating advanced royalty of $10.00 per acre per year. By acquiring the new lease, Strathmore may now hold the land until production can begin up to December 14, 2030. At the end of the quaternary term, the lease may be automatically extended if production has begun. The lease stipulates a 5% of gross returns royalty to the State of New Mexico “less actual and reasonable transportation and smelting or reduction costs, up to 50% of the gross returns” for production of uranium, which is designated a “special mineral” in the lease.

The surface of Section 17, also referred to as the Lee Ranch, is leased to Fernandez Company, Ltd. (Fernandez) as rangeland for grazing. Table 4-1 lists the mineral claims covering the Roca Honda Project. Figure 4-4 shows the Roca Honda land holdings.

## Table 4-1: List of Claims held by Energy Fuels
## Energy Fuels Inc. – Roca Honda Project

| Claim Name | ¼ Sec | Sec-Twp-Rng | BLM Serial No | County | Location Date (DD-MM-YY) | In Good Standing To (DD-MM-YY) |
|---|---|---|---|---|---|---|
| ROCA HONDA #163 | NW | 9-13N-8W | NM101334915 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #164 | NW | 9-13N-8W | NM101336426 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #165 | NW | 9-13N-8W | NM101435023 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #166 | NW | 9-13N-8W | NM101332645 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #167 | NW,SW | 9-13N-8W | NM101431944 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #168 | SW | 9-13N-8W | NM101375805 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #169 | SW | 9-13N-8W | NM101482787 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #170 | SW | 9-13N-8W | NM101485222 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #171 | SW | 9-13N-8W | NM101379368 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #190 | NE,NW | 9-13N-8W | NM101481302 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #191 | NE,NW | 9-13N-8W | NM101481597 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #192 | NE,NW | 9-13N-8W | NM101333452 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #193 | NE,NW | 9-13N-8W | NM101431602 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #194 | NE,NW,SE,SW | 9-13N-8W | NM101484159 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #195 | SE,SW | 9-13N-8W | NM101338428 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #196 | SE,SW | 9-13N-8W | NM101433748 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #197 | SE,SW | 9-13N-8W | NM101484015 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #198 | SE,SW | 9-13N-8W | NM101484975 | McKinley | 29-Jun-65 | 31-Aug-22 |
| ROCA HONDA #217 | NE | 9-13N-8W | NM101431408 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #218 | NE | 9-13N-8W | NM101484151 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #219 | NE | 9-13N-8W | NM101485066 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #220 | NE | 9-13N-8W | NM101338911 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #221 | NE,SE | 9-13N-8W | NM101339063 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #222 | SE | 9-13N-8W | NM101432015 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #223 | SE | 9-13N-8W | NM101484967 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #224 | SE | 9-13N-8W | NM101484601 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #225 | SE | 9-13N-8W | NM101337639 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #244 | NE<br>NW | 9-13N-8W<br>10-13N-8W | NM101434515 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #245 | NE | 9-13N-8W | NM101482706 | McKinley | 30-Jun-65 | 31-Aug-22 |

| Claim Name | ¼ Sec | Sec-Twp-Rng | BLM Serial No | County | Location Date (DD-MM-YY) | In Good Standing To (DD-MM-YY) |
|---|---|---|---|---|---|---|
| ROCA HONDA #246 | NW | 10-13N-8W | NM101379274 | McKinley | 30-Jun-65 | 31-Aug-22 |
| | NE | 9-13N-8W | | | | |
| | NW | 10-13N-8W | | | | |
| ROCA HONDA #247 | NE | 9-13N-8W | NM101378276 | McKinley | 30-Jun-65 | 31-Aug-22 |
| | NW | 10-13N-8W | | | | |
| ROCA HONDA #248 | NE,SE | 9-13N-8W | NM101336452 | McKinley | 30-Jun-65 | 31-Aug-22 |
| | NW,SW | 10-13N-8W | | | | |
| ROCA HONDA #249 | SE | 9-13N-8W | NM101432406 | McKinley | 30-Jun-65 | 31-Aug-22 |
| | SW | 10-13N-8W | | | | |
| ROCA HONDA #250 | SE | 9-13N-8W | NM101482102 | McKinley | 30-Jun-65 | 31-Aug-22 |
| | SW | 10-13N-8W | | | | |
| ROCA HONDA #251 | SE | 9-13N-8W | NM101334819 | McKinley | 30-Jun-65 | 31-Aug-22 |
| | SW | 10-13N-8W | | | | |
| ROCA HONDA #252 | SE | 9-13N-8W | NM101333461 | McKinley | 30-Jun-65 | 31-Aug-22 |
| | SW | 10-13N-8W | | | | |
| ROCA HONDA #271 | NW | 10-13N-8W | NM101481347 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #272 | NW | 10-13N-8W | NM101480569 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #273 | NW | 10-13N-8W | NM101484570 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #274 | NW | 10-13N-8W | NM101333411 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #275 | NW,SW | 10-13N-8W | NM101379361 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #276 | SW | 10-13N-8W | NM101431523 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #277 | SW | 10-13N-8W | NM101372205 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #278 | SW | 10-13N-8W | NM101379226 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #279 | SW | 10-13N-8W | NM101336273 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #298 | NE,NW | 10-13N-8W | NM101480402 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #299 | NE,NW | 10-13N-8W | NM101333224 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #300 | NE,NW | 10-13N-8W | NM101338876 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #301 | NE,NW | 10-13N-8W | NM101484199 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #302 | NE,NW,SE,SW | 10-13N-8W | NM101379288 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #303 | SE,SW | 10-13N-8W | NM101377506 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #304 | SE,SW | 10-13N-8W | NM101335760 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #305 | SE,SW | 10-13N-8W | NM101433626 | McKinley | 30-Jun-65 | 31-Aug-22 |

| Claim Name | ¼ Sec | Sec-Twp-Rng | BLM Serial No | County | Location Date (DD-MM-YY) | In Good Standing To (DD-MM-YY) |
|---|---|---|---|---|---|---|
| ROCA HONDA #306 | SE,SW | 10-13N-8W | NM101481490 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #325 | NE | 10-13N-8W | NM101434814 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #326 | NE | 10-13N-8W | NM101434021 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #327 | NE | 10-13N-8W | NM101485234 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #328 | NE | 10-13N-8W | NM101335611 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #329 | NE,SE | 10-13N-8W | NM101334244 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #330 | SE | 10-13N-8W | NM101482069 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #331 | SE | 10-13N-8W | NM101337707 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #332 | SE | 10-13N-8W | NM101334957 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA #333 | SE | 10-13N-8W | NM101483670 | McKinley | 30-Jun-65 | 31-Aug-22 |
| ROCA HONDA 55 | NW | 8-13N-8W | NM101337609 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 56 | NW | 8-13N-8W | NM101481229 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 57 | NW | 8-13N-8W | NM101432731 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 58 | NW | 8-13N-8W | NM101338298 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 59 | NW,SW | 8-13N-8W | NM101333255 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 60 | SW | 8-13N-8W | NM101482685 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 61 | SW | 8-13N-8W | NM101434717 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 62 | SW | 8-13N-8W | NM101484019 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 63 | SW | 8-13N-8W | NM101434121 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 82 | NW | 8-13N-8W | NM101339095 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 83 | NW | 8-13N-8W | NM101337675 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 84 | NW | 8-13N-8W | NM101337615 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 85 | NW | 8-13N-8W | NM101481610 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 86 | NW,SW | 8-13N-8W | NM101432736 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 87 | SW | 8-13N-8W | NM101378404 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 88 | SW | 8-13N-8W | NM101333259 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 89 | SW | 8-13N-8W | NM101482688 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 90 | SW | 8-13N-8W | NM101483901 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 109 | NE,NW | 8-13N-8W | NM101431405 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 110 | NE,NW | 8-13N-8W | NM101379367 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 111 | NE,NW | 8-13N-8W | NM101481536 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 112 | NE,NW | 8-13N-8W | NM101481299 | McKinley | 10-Sep-97 | 31-Aug-22 |

| Claim Name | ¼ Sec | Sec-Twp-Rng | BLM Serial No | County | Location Date (DD-MM-YY) | In Good Standing To (DD-MM-YY) |
|---|---|---|---|---|---|---|
| ROCA HONDA 113 | NE,NW,SE,SW | 8-13N-8W | NM101431639 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 114 | SE,SW | 8-13N-8W | NM101337126 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 115 | SE,SW | 8-13N-8W | NM101337076 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 116 | SE,SW | 8-13N-8W | NM101485060 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 117 | SE,SW | 8-13N-8W | NM101484150 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 136 | NE | 8-13N-8W | NM101484982 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 137 | NE | 8-13N-8W | NM101483906 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 138 | NE | 8-13N-8W | NM101335002 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 139 | NE | 8-13N-8W | NM101380232 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 140 | NE,SE | 8-13N-8W | NM101481594 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 141 | SE | 8-13N-8W | NM101481306 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 142 | SE | 8-13N-8W | NM101431142 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 143 | SE | 8-13N-8W | NM101337131 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCA HONDA 144 | SE | 8-13N-8W | NM101337084 | McKinley | 10-Sep-97 | 31-Aug-22 |
| ROCCA HONDA 1 | NW | 6-13N-8W | NM101675210 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 2 | NW | 6-13N-8W | NM101675211 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 3 | NW | 6-13N-8W | NM101675212 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 4 | NW | 6-13N-8W | NM101675213 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 5 | NW | 6-13N-8W | NM101675214 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 6 | NW | 6-13N-8W | NM101675215 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 7 | NW | 6-13N-8W | NM101675216 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 8 | NW | 6-13N-8W | NM101675217 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 9 | NW | 6-13N-8W | NM101675218 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 10 | NW | 6-13N-8W | NM101675219 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 11 | SW | 6-13N-8W | NM101651088 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 12 | SW | 6-13N-8W | NM101651089 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 13 | SW | 6-13N-8W | NM101651090 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 14 | SW | 6-13N-8W | NM101651091 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 15 | SW | 6-13N-8W | NM101651092 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 16 | SW | 6-13N-8W | NM101651093 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 17 | NE | 6-13N-8W | NM101651094 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 18 | NE | 6-13N-8W | NM101651095 | McKinley | 6-Sep-04 | 31-Aug-22 |

| Claim Name | ¼ Sec | Sec-Twp-Rng | BLM Serial No | County | Location Date (DD-MM-YY) | In Good Standing To (DD-MM-YY) |
|---|---|---|---|---|---|---|
| ROCCA HONDA 19 | NE | 6-13N-8W | NM101651096 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 20 | NE | 6-13N-8W | NM101651097 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 21 | NE | 6-13N-8W | NM101652080 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 22 | NE | 6-13N-8W | NM101652081 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 23 | NE | 6-13N-8W | NM101652082 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 24 | NE | 6-13N-8W | NM101652083 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 25 | NE | 6-13N-8W | NM101652084 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 26 | NE | 6-13N-8W | NM101652085 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 27 | SE | 6-13N-8W | NM101652086 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 28 | SE | 6-13N-8W | NM101652087 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 29 | SE | 6-13N-8W | NM101652088 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 30 | SE | 6-13N-8W | NM101652089 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 31 | SE | 6-13N-8W | NM101652090 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 32 | SE | 6-13N-8W | NM101652091 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 33 | NW | 5-13N-8W | NM101652092 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 34 | NW | 5-13N-8W | NM101652093 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 35 | NW | 5-13N-8W | NM101652094 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 36 | NW | 5-13N-8W | NM101652095 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 37 | NW | 5-13N-8W | NM101652096 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 38 | NW | 5-13N-8W | NM101652097 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 39 | NW | 5-13N-8W | NM101652098 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 40 | NW | 5-13N-8W | NM101652952 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 41 | NW | 5-13N-8W | NM101652953 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 42 | NW | 5-13N-8W | NM101652954 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 43 | SW | 5-13N-8W | NM101652955 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 44 | SW | 5-13N-8W | NM101652956 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 45 | SW | 5-13N-8W | NM101652957 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 46 | SW | 5-13N-8W | NM101652958 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 47 | SW | 5-13N-8W | NM101652959 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 48 | SW | 5-13N-8W | NM101652960 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 49 | NE | 5-13N-8W | NM101652961 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 50 | NE | 5-13N-8W | NM101652962 | McKinley | 6-Sep-04 | 31-Aug-22 |

| Claim Name | ¼ Sec | Sec-Twp-Rng | BLM Serial No | County | Location Date (DD-MM-YY) | In Good Standing To (DD-MM-YY) |
|---|---|---|---|---|---|---|
| ROCCA HONDA 51 | NE | 5-13N-8W | NM101652963 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 52 | NE | 5-13N-8W | NM101652964 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 53 | NE | 5-13N-8W | NM101652965 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 54 | NE | 5-13N-8W | NM101652966 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 55 | NE | 5-13N-8W | NM101652967 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 56 | NE | 5-13N-8W | NM101652968 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 57 | NE | 5-13N-8W | NM101652969 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 58 | NE | 5-13N-8W | NM101652970 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 59 | SE | 5-13N-8W | NM101651101 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 60 | SE | 5-13N-8W | NM101652078 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 61 | SE | 5-13N-8W | NM101652079 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 62 | SE | 5-13N-8W | NM101651098 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 63 | SE | 5-13N-8W | NM101651099 | McKinley | 6-Sep-04 | 31-Aug-22 |
| ROCCA HONDA 64 | SE | 5-13N-8W | NM101651100 | McKinley | 6-Sep-04 | 31-Aug-22 |

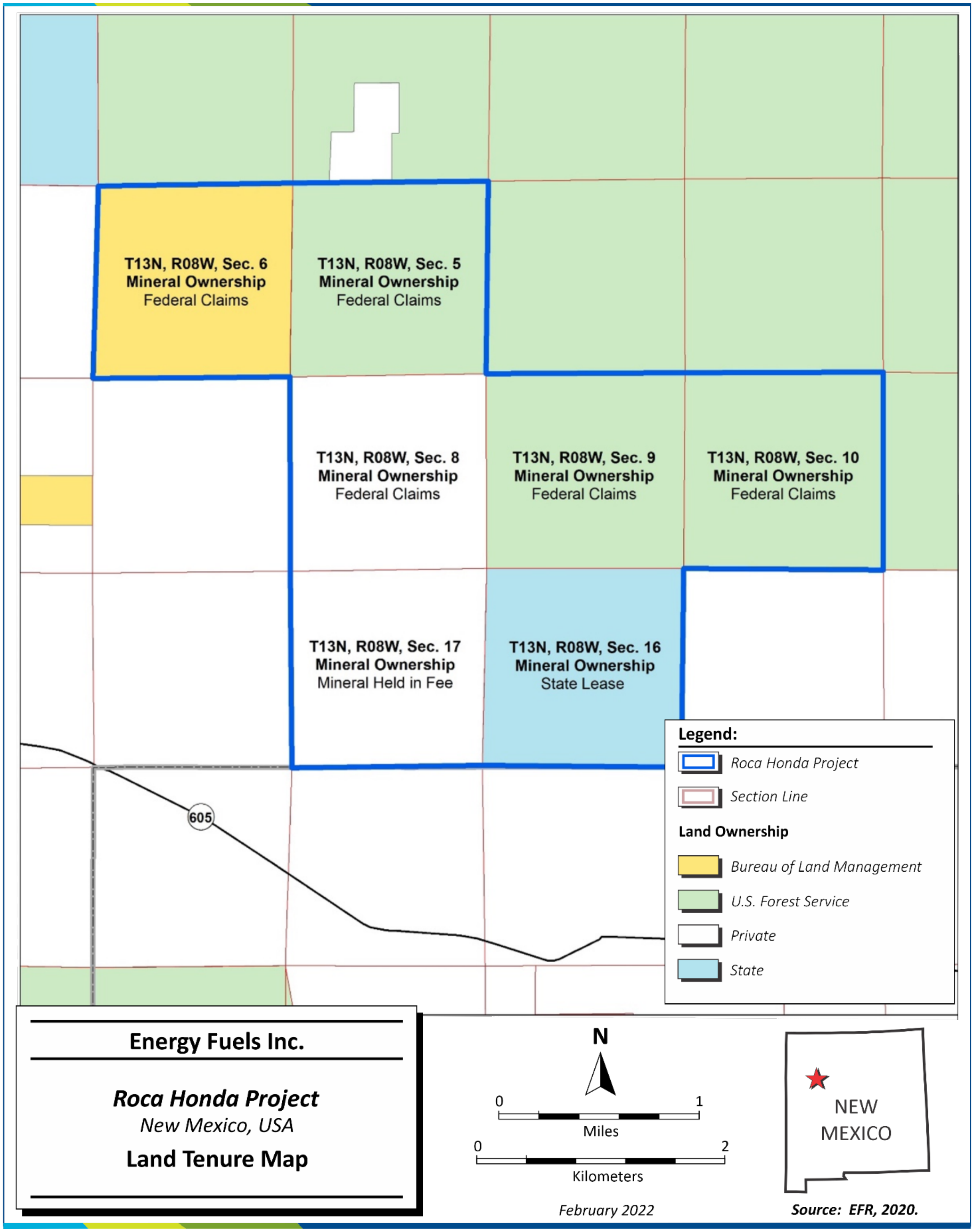


Figure 4-4: Land Tenure Map

### 4.2.2 White Mesa Mill

The Mill is located approximately six miles south of Blanding, Utah, on US Highway 191 on a parcel of land, owned by EFR, encompassing all or part of Sections 21, 22, 27, 28, 29, 32, and 33 of Township 37 South, Range 22 East, and Sections 4, 5, 6, 8, 9, and 16 of Township 38 South, Range 22 East, Salt Lake Base and Meridian, shown in Figure 4-2 and described as follows:

- In Township 37 South, Range 22 East, Salt Lake Base and Meridian:
    - the south half of the south half of Section 21
    - the southeast quarter of the southeast quarter of Section 22
    - the northwest quarter of the northwest quarter and lots 1 and 4 of Section 27, all that part of the southwest quarter of the northwest quarter and the northwest quarter of the southwest quarter of Section 27 lying west of Utah State Highway 163
    - the northeast quarter of the northwest quarter, the south half of the northwest quarter, the northeast quarter and the south half of Section 28
    - the southeast quarter of the southeast quarter of Section 29
    - the east half of Section 32 and all of Section 33
- In Township 38 South, Range 22 East, Salt Lake Base and Meridian:
    - lots 1 through 4, inclusive, the south half of the north half, the southwest quarter, the west half of the southeast quarter, the west half of the east half of the southeast quarter and the west half of the east half of the east half of the southeast quarter of Section 4
    - lots 1 through 4, inclusive, the south half of the north half and the south half of Section 5 (all)
    - lots 1 and 2, the south half of the northeast quarter and the south half of Section 6 (E1/2)
    - the northeast quarter of Section 8
    - all of Section 9
    - all of Section 16

Additional land is controlled by 46 mill site claims, which are active for the 2021 assessment year. Total White Mesa Mill land holdings cover approximately 5,389 acres. Holding costs for the 46 claims include a claim maintenance fee of $165.00 per claim payable to the BLM before September 1 of each calendar year. All claims are in good standing until September 1, 2022 (Table 4-2).

### Table 4-2: List of White Mesa Mill Claims held by Energy Fuels
### Energy Fuels Inc. – Roca Honda Project

| Claim Name | ¼ Sec | Sec-Twp-Rng | BLM Serial No | County | Location Date (DD-MM-YY) | In Good Standing To (DD-MM-YY) |
|---|---|---|---|---|---|---|
| WHITE MESA MS # 1 | NW | 28-37S-22E | UT101404934 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 10 | NE | 29-37S-22E | UT101421406 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 11 | NE | 29-37S-22E | UT101405798 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 12 | NE | 29-37S-22E | UT101406980 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 13 | NE | 29-37S-22E | UT101404616 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 14 | NE | 29-37S-22E | UT101300937 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 15 | NE | 29-37S-22E | UT101401744 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 16 | NE | 29-37S-22E | UT101459559 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 17 | NE | 29-37S-22E | UT101494043 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 18 | NE | 29-37S-22E | UT101500939 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 19 | NE | 29-37S-22E | UT101401966 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 2 | NW | 28-37S-22E | UT101421175 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 20 | NE | 29-37S-22E | UT101402907 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 21 | NE | 29-37S-22E | UT101424110 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 22 | NE | 29-37S-22E | UT101600530 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 23 | NE | 29-37S-22E | UT101604881 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 24 | NE | 29-37S-22E | UT101404900 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 25 | SE | 29-37S-22E | UT101422624 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 26 | SE | 29-37S-22E | UT101407386 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 27 | SE | 29-37S-22E | UT101401670 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 28 | SE | 29-37S-22E | UT101401413 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 29 | SE | 29-37S-22E | UT101339263 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 3 | NW | 28-37S-22E | UT101423609 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 30 | SE | 29-37S-22E | UT101403753 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 4 | NW | 28-37S-22E | UT101404369 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 5 | NW | 28-37S-22E | UT101339278 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 57 | SE | 29-37S-22E | UT101490658 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 58 | SE | 29-37S-22E | UT101403003 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 59 | SE | 29-37S-22E | UT101423620 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 6 | NW | 28-37S-22E | UT101403782 | San Juan | 03-Aug-78 | 31-Aug-22 |

| Claim Name | ¼ Sec | Sec-Twp-Rng | BLM Serial No | County | Location Date (DD-MM-YY) | In Good Standing To (DD-MM-YY) |
|---|---|---|---|---|---|---|
| WHITE MESA MS # 60 | SE | 29-37S-22E | UT101403751 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 61 | SE | 29-37S-22E | UT101402599 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 62 | SE | 29-37S-22E | UT101759473 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 63 | SE | 29-37S-22E | UT101424484 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 64 | SE | 29-37S-22E | UT101477271 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 65 | SE | 29-37S-22E | UT101402875 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 66 | SE | 29-37S-22E | UT101349156 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 67 | SE | 29-37S-22E | UT101403399 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 68 | SE | 29-37S-22E | UT101456709 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 69 | SE | 29-37S-22E | UT101408276 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 7 | NW | 28-37S-22E | UT101404956 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 70 | SE | 29-37S-22E | UT101423217 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 71 | SE | 29-37S-22E | UT101402395 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 72 | SE | 29-37S-22E | UT101405575 | San Juan | 08-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 8 | NW | 28-37S-22E | UT101402114 | San Juan | 03-Aug-78 | 31-Aug-22 |
| WHITE MESA MS # 9 | NE | 29-37S-22E | UT101492702 | San Juan | 08-Aug-78 | 31-Aug-22 |

## 4.3 Required Permits and Status

A permit application was submitted in October 2009 to the State of New Mexico Mining and Minerals Division of the Energy, Minerals and Natural Resources Department. The permit application included:

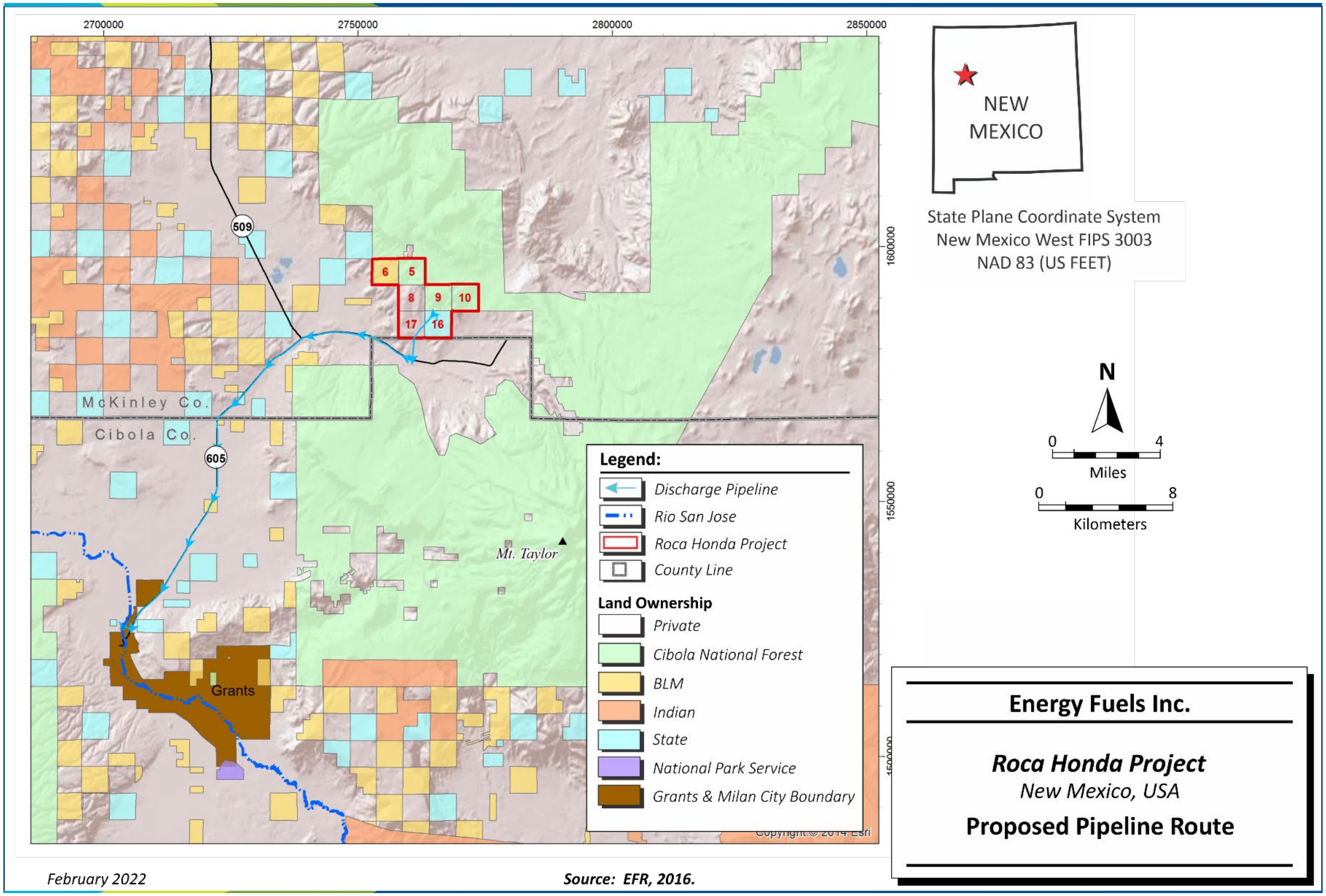
- Baseline Data Report and Supplements
- Mine Operations Plan
- Reclamation Plan
- Sampling and Analysis Plan

A Plan of Operations (PoO), which addresses various aspects of environmental assessment, protection, and analysis related to the Project, was submitted to the U.S. Forest Service, Cibola National Forest, at the same time. Details regarding these permits can be found in Section 20.0 of this report.

Additionally, in order to construct and operate the Roca Honda Mine, the following permits are required from various state and federal agencies:

- A mine dewatering permit from the New Mexico State Engineer's Office (issued December 2013)
- A discharge permit from the New Mexico Environment Department (NMED)
- A National Pollutant Discharge Elimination System (NPDES) permit from Region 6 of the U.S. Environmental Protection Agency (EPA)

- A Nationwide 404 permit from the Army Corps of Engineers to modify the Rio San Jose at the discharge point of the dewatering pipeline (Figure 4-5)
- A National Emission Standards for Hazardous Air Pollutants (NESHAP) permit from the EPA.



February 2022

Source: EFR, 2016.

Figure 4-5: Proposed Pipeline Route

## 4.4 Royalties

Royalties are described in Section 3.2. Table 4-3 details the royalties below.

**Table 4-3: Roca Honda Project Royalty Summary**
**Energy Fuels Inc. – Roca Honda Project**

| Section[1] | Surface Owner | Royalty (%) | Payee |
|---|---|---|---|
| 9 | U.S. Forest Service | 1 | Unknown |
| 16 | State of New Mexico | 5 | State of New Mexico |

Notes:

1. All sections are in Township 13 North, Range 8 West, New Mexico Principal Meridian.

## 4.5 Other Significant Factors and Risks

The EFR QP is not aware of any environmental liabilities on the property. The Roca Honda Mine is in an advanced stage of permitting and has yet to obtain the permits necessary to operate the Mine.

There are no violations or regulatory matters of any significance or that are not being addressed under normal regulatory procedures.

# 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Roca Honda Mine is located approximately 17 mi (22 mi by road) northeast of Grants, New Mexico. The southern part of the property, located on Sections 16 and 17, can be reached by travelling north from Milan, New Mexico, on State Highway 605 toward the town of San Mateo to mile marker 18 and then north on a private gravel road.

When mining commences, it is proposed that mill feed produced at the Mine will be shipped to EFR's fully licensed and operating White Mesa Mill in Blanding, Utah. The haulage distance from the Mine to the Mill is approximately 250 mi.

## 5.1 Accessibility

### 5.1.1 Roca Honda Mine

Access rights from Highway 605 onto Section 16 have been subject to temporary agreements with the surface owner, Fernandez, the latest of which expired on December 31, 2015. When Strathmore acquired the mineral rights to Section 17 in the URI transaction, it understood it acquired surface access rights to Section 17 and Section 16, which would provide all necessary access. EFR is in discussions with Fernandez to determine whether any further access rights may be required.

The north part of the Roca Honda property can be reached by travelling 23.5 miles from Milan, New Mexico, on paved public Highway 605, and then west on USFS dirt roads to the southeast corner of Section 10 (Figure 4-1). There are numerous drill roads that provide access to different parts of Sections 9 and 10, many of which require maintenance.

### 5.1.2 White Mesa Mill

The White Mesa Mill is accessed by US Highway 191. The majority of mill employees live in Blanding, Utah, and surrounding communities. The Mill is serviced by commercial line power, and all other supplies are trucked to the site. Ranching is the primary land use surrounding the Mill and tourism is the primary economy of Blanding, Utah, excluding uranium processing and State and Federal government services.

## 5.2 Vegetation

### 5.2.1 Roca Honda Mine

Vegetation in the Roca Honda Project area consists of grasses, piñon pine and juniper trees.

### 5.2.2 White Mesa Mill

The natural vegetation presently occurring within a 25-mile (40-km) radius of the Mill site is very similar to that of the region, characterized by pinyon-juniper woodland integrating with big sagebrush (Artemisia tridentata) communities.

## 5.3 Climate

### 5.3.1 Roca Honda Mine

Climate in the Project area may be classified as arid to semi-arid continental, characterized by cool, dry winters, and warm, dry summers. The area is in the north end of Climate Division 4 (Southwestern Mountains) for New Mexico (Sheppard et al., 1999). Abundant sunshine, low relative humidity, and large annual and diurnal ranges in temperature are characteristics of this climate division, which is a significant distance from any source of oceanic moisture (600 mi from the Pacific Ocean and 800 mi from the Gulf of Mexico).

On average, the Project area receives approximately 11 in. of precipitation annually, the majority occurring with thunderstorms in July and August. Winter is the driest season, with an average of approximately 13 in. of snow falling annually, mostly during December through February. Snow is light on the valley floors and increases at higher elevations on the nearby mesas and mountains.

Grants, New Mexico, has an annual average temperature of 50°F, with an average summer high of 87°F and low of 52°F, and average winter high of 47°F and low of 18°F. Operations may be conducted throughout the year.

### 5.3.2 White Mesa Mill

The climate of southeastern Utah is classified as dry to arid continental. Although varying somewhat with elevation and terrain, the climate in the vicinity of the Mill can be considered as semi-arid with normal annual precipitation of about 13.3 in. Most precipitation is in the form of rain with snowfall accounting for about 29% of the annual total precipitation. There are two separate rainfall seasons in the region, the first in late summer and early autumn (August to October) and the second during the winter months (December to March). The mean annual relative humidity is about 44% and is normally highest in January and lowest in July.

The weather in the Blanding, Utah, area is typified by warm summers and cold winters. The National Weather Service Station in Blanding, Utah, is located about 6.25 mi north of the Mill. Data from the station is considered representative of the local weather conditions.

The mean annual temperature in Blanding was 50.3°F, based on the current Period of Record Summary (1904 to 2006). January is usually the coldest month, and July is usually the warmest month. The town of Blanding, Utah, has an approximate area of 2.4 mi.$^2$, temperatures average 53°F, and it has a precipitation average of 14 in. Operations at White Mesa Mill can be conducted throughout the year.

## 5.4 Local Resources

### 5.4.1 Roca Honda Mine

The community of Grants, located in Cibola County, is the largest community near the Mine area. As of the 2020 census, there are 8,866 people residing in Grants, New Mexico, where personnel experienced in open pit and underground mining, construction, and mineral processing are available. Additionally, the city of Albuquerque is located approximately 100 mi east of the Project area and could be a source of most materials and technical support needed for the Project.

### 5.4.2 White Mesa Mill

The Mill is the only fully licensed and operating conventional uranium mill in the United States, and only one of three fully licensed mills and the only operating conventional uranium mill in North America. The facility has a licensed capacity of 2,000 stpd and can produce up to eight million pounds of uranium per year. The Mill also has a co-recovery circuit to produce vanadium from Colorado Plateau ores, and an alternate feed circuit to process other uranium-bearing materials, such as those derived from uranium conversion and other metal processing.

The Mill is strategically located in Blanding, Utah, central to the uranium mines of the Four Corners region of the United States. The Mill was constructed in 1980 by EFNI. In 2007, a $31 million refurbishment of the facility was completed. To extract uranium ($U_3O_8$) and vanadium ($V_2O_5$), the Mill utilizes sulfuric acid leaching and a solvent extraction recovery process. The uranium is purchased by utility companies and shipped to conversion facilities as the next step in the production of fuel for nuclear power. The vanadium is shipped mostly to steel and alloy manufacturers.

In full operation, the Mill employs about 150 people. Blanding is a town in San Juan County, Utah, United States, where personnel experienced in mill operations are available. The population was approximately 3,500 in 2020, making it the most populated town in San Juan County.

## 5.5 Infrastructure

### 5.5.1 Roca Honda Project Site

There is limited infrastructure related to historical operations within the Roca Honda project area. A partially completed shaft (completed to a depth of 1,478 ft) and shop buildings exist in the northeast quarter of Section 17. The remaining infrastructure is limited to a very good gravel access road and existing drill roads of varying quality. High voltage power lines run across the northern extent of the Project area and low voltage lines cross through Section 17. Water for drilling is generally sourced either from the town of Milan, or from local ranch wells. Dewatering for any future mine development will source a greater quantity of water than is required for ongoing operations.

A monitoring well network composed of three wells, completed in the Westwater Canyon Member of the Morrison Formation (Westwater), was installed in 2007 to 2008 by RHR.

### 5.5.2 White Mesa Mill

The Mill was constructed from 1979 to 1980 and is a fully functioning uranium/vanadium mill. The Mill is capable of functioning independent of off-site support except for commercial power from Rocky Mountain Power and supplemental water supply from the City of Blanding and the San Juan Water Conservancy District. Off-site infrastructure includes paved highway access from US Highway 191, and rights-of-way for commercial power and a water supply pipeline from Recapture Reservoir, which brings up to 1,000 acre-feet of water per year to the mill site. The mill also has four deep (+2,000 ft) water supply wells which supply process water during normal operations. In addition to the mill processing equipment, which includes the grinding and leaching circuits, counter current decantation (CCD), solvent extraction, and precipitation and drying circuits, the mill has several days' reagent storage for sulfuric acid, ammonia, salt, soda ash, caustic soda, ammonium sulfate, flocculants, kerosene, amines, and Liquified Natural Gas (LNG). The on-site infrastructure also includes an ore stockpile area and existing TSF.

## 5.6 Physiography

### 5.6.1 Roca Honda Project Site

The Mine area is sparsely populated, rural, and largely undeveloped. The predominant land uses include low-density livestock grazing, hay cultivation, and recreational activities such as hiking, sightseeing, and seasonal hunting.

The proposed Mine area has moderately rough topography in Sections 9 and 10 and consists of shale slopes below ledge-forming sandstone beds, forming mesas that dip 7° to 11° northeast. Section 9 consists mostly of steep slopes in the west and south, with a large sandstone mesa, named Jesus Mesa, in the north-central part. Section 10 consists mostly of the dip-slope of a sandstone bed that dips from 8° to 11° due east. Sections 16 and 17 have less topographic relief because they lie mainly below the mesas. Surface elevations range from 7,100 ft to 7,680 ft and with easterly and southerly dipping slopes (Fitch, 2010).

Jesus Mesa occupies approximately half of Section 9 and slopes into Section 10. The top and upper portion of the mesa is sparsely vegetated, with the slopes along the southern perimeter of the mesa consisting of sandstone ledges with areas of exposed shale. The landscape along the southwest, north, and southeast perimeters of the mesa are moderately vegetated, with the slopes dissected by drainages ranging from a few feet to 40 ft deep.

The rough topography is not expected to adversely impact mining operation activities.

### 5.6.2 White Mesa Mill

The Mill site is located near the center of White Mesa, one of the many finger-like north-south trending mesas that make up the Great Sage Plain located in Utah. The nearly flat upland surface of White Mesa is underlain by resistant sandstone caprock, which forms steep prominent cliffs separating the upland from deeply entrenched intermittent stream courses on the east, south and west.

Surface elevations across the Mill site range from about 5,550 ft ASL to 5,650 ft ASL and the gently rolling surface slopes to the south at a rate of approximately 60 feet per mile.

Maximum relief between the mesa's surface and Cottonwood Canyon on the west is approximately 750 ft where Westwater Creek joins Cottonwood Wash. These two streams and their tributaries drain the west and south sides of White Mesa. Drainage on the east is provided by Recapture Creek and its tributaries. Both Cottonwood Wash and Recapture Creeks are normally intermittent streams and flow south to the San Juan River, however, Cottonwood Wash has been known to flow perennially in the vicinity during wet years.

# 6.0 HISTORY

## 6.1 Prior Ownership

Kerr-McGee staked the Roca Honda unpatented mining claims in Sections 9 and 10 on June 29 and 30, 1965. Kerr-McGee, its subsidiaries, and successor (Rio Algom) completed significant exploration and development work in Sections 3, 4, 5, 6, 8, 9, 10, 16, and 17, T13N, R8W, from the mid-1960s until 1982 and held the claims on Sections 9, 10, and 16 until the properties were acquired by Strathmore on March 12, 2004.

Section 16, T13N, R8W, is owned by the State of New Mexico. State Mining Leases for Section 16 were issued to various companies over the years. Rare Metals Corporation (Rare Metals) held a State Mining Lease in the 1950s and performed the first exploration drilling on the Section. Subsequently, Western Nuclear Corporation (Western Nuclear) held a State Mining Lease during the period 1968 to lease expiration on May 21, 1971. Reserve Oil and Minerals Corporation (Reserve) owned a 25% carried interest in the lease at that time. Western Nuclear and Reserve acquired another lease on Section 16 in October 1979 with a 15-year expiration date of October 2, 1994. During the lease period, an assignment was made to a company named U.Q.I.T.U., and further, the lease was cancelled or relinquished on February 15, 1990, before its expiration date (New Mexico State Land Office form, March 20, 2006). Quivira Mining Company (Quivira), a wholly owned subsidiary of Kerr-McGee, acquired lease number Q-1414 effective July 1, 1990, with a 15-year term expiration date of July 1, 2005 (signed New Mexico State Lease Document). Kerr-McGee cancelled or relinquished the lease on November 11, 2000, before the date of expiration. David Miller (former CEO of Strathmore) acquired a new State Mining Lease for Section 16, Lease Number HG 0036-002 in November 2004 and subsequently assigned the lease to Strathmore. Strathmore dropped that lease in December 2015. A new 15-year lease on the parcel, HG-0133, was acquired that same month by Strathmore.

RHR was established on July 26, 2007, when Strathmore (60%) formed a limited liability company with Sumitomo Corporation (40%) and transferred the lease to RHR.

Conoco purchased Sections 11 and 12 on the property from the Homestake Mining Company (Homestake) in the early 1970s and explored them until 1981. Other historical drilling activity within the Project area or off trend has been done in the past but cannot be attributed to a specific operator at this time due to a lack of records.

URI gained control of Sections 13, 15 and 17, T13N, R8W, in 1997 as part of the acquisition of the Uranco Inc. properties in New Mexico. Section 8 was procured through staking of new claims (Roca Honda Claims) in 1997. This was the extent of the land position that URI held in the Project area from 1996 through 2012, for a total at the time of 2,560 non-contiguous acres.

URI obtained control of the rest of the Mine area (positions in Sections 2, 3, 4, 5, 6, 11, and 12, T13N, R8W; Sections 31 and 32, T14N, R8W) through the acquisition of Neutron Energy Inc. (NEI) in 2012. The NEI land position in the Project area consisted of leased claims from Enerdyne Endy Claims LLC, which were acquired by NEI in February 2006. In 2014, URI divested itself of the Section 13 and 15 properties through a land trade with Rio Grande Resources Corp. in exchange for other property assets in Texas.

In August 2013, EFR acquired a 100% interest in Strathmore and assumed Strathmore’s 60% ownership interest in RHR. In June 2015, EFR acquired a 100% interest in the mineral properties controlled by URI. In May 2016, EFR completed the purchase of Sumitomo Corporation’s 40% interest in RHR.

The White Mesa uranium/vanadium mill was developed in the late 1970s by ENFI as a processing option for the many small mines that are located in the Colorado Plateau region. At the time of its construction, it was anticipated that high uranium prices would stimulate ore production, however, prices started to decline about the same time as mill operations commenced in the late 1970s.

As uranium prices fell, mines near the White Mesa Mill region were affected, and mine output declined. After approximately two and one-half years, the Mill ceased ore processing operations altogether, began to recycle solution, and entered a total shutdown phase. In 1984, a majority ownership interest was acquired by Union Carbide Corporation's (UCC) Metals Division, which later became Umetco Minerals Corporation (Umetco), a wholly- owned subsidiary of UCC. This partnership continued until May 26, 1994, when EFNI reassumed complete ownership. In May 1997, Denison and its affiliates purchased the assets of EFNI, and Denison was the owner of the White Mesa Mill facility until 2012. In August 2012, EFR purchased all of White Mesa Mill's assets and liabilities.

## 6.2 Exploration and Development History

Most of the historical exploration at the Mine area was completed by four separate companies: Kerr-McGee, Western Nuclear, Conoco, and Strathmore. Exploration by the four companies is discussed below. A fifth company, Rare Metals, did some exploration work on Section 16, but that data has not been found.

### 6.2.1 Kerr-McGee

Kerr-McGee completed significant exploration and development work on Sections 3, 4, 5, 6, 8, 9, 10, 16, and 17, T13N, R8W, from the mid-1960s until 1992. The land position on Section 17 was leased from Santa Fe at the time. During its work program, Kerr-McGee drilled approximately 1,200 drillholes across the 3,840 acres it controlled on Sections 5, 6, 8, 9, 10, 16, and 17, and an unknown number of drillholes on Sections 3 and 4.

In July of 1966, the first drillhole was completed on Section 9 of the Mine property. Discovery was made in drillhole number 7 completed on August 2, 1970, which encountered mineralization at a depth of 1,900 ft. From 1966 to 1982, 188 drillholes were completed for a total of 389,736 ft. In Section 10, the first hole was drilled in October 1967. Discovery was made in drillhole number 6 completed on March 19, 1974, which encountered mineralization at a depth of 2,318 ft. From 1967 to 1985, 178 drillholes were completed for a total of 429,215 ft.

Kerr-McGee advanced the project, named the Lee Mine, to a feasibility level study. In 1981, Kerr-McGee began construction of the Lee Mine with the development of a 14 ft diameter shaft in the northeast quarter of Section 17. In 1982, the project was abandoned prior to completion of the shaft due to soft uranium market conditions. The shaft penetrated the Westwater of the Morrison Formation to a total depth of 1,478 ft; the shaft's planned depth was 1,655 ft. The shaft was sealed at surface and no further work was completed.

### 6.2.2 Western Nuclear

The first drilling on Section 16 was in the 1950s by Rare Metals, which drilled 13 holes, including two that intercepted high-grade uranium mineralization at depths of 1,531 ft and 1,566 ft. No records of the total drilled footage can be located. Subsequently, Western Nuclear acquired a mining lease for Section 16 from the State and began drilling in 1968, with the first drillhole completed on August 17, 1968. The second drillhole intercepted high-grade uranium mineralization at a depth of 1,587 ft. From 1968 through September 1970, Western Nuclear drilled 70 holes totaling 115,455 ft, including 10 abandoned holes that did not reach the target bed (Recapture Member). Two of the drillholes reported cored intervals, but the cores and analyses are not available.

### 6.2.3 Conoco

In the early 1970s, Conoco acquired land in the area including Sections 2, 11, and 12, T13N, R8W, a portion of which was purchased from Homestake. Initial exploration was completed by drilling north-south fences on Section 2 and into Section 11. Activities were limited to minimal assessment drilling until 1979, when the major discovery and development work by Kerr-McGee was ongoing at the Lee Mine, directly to the west of Conoco's land position. Conoco then refocused drilling on the western half of Section 11, intercepting uranium mineralization of significant grade and thickness. Drilling continued until 1981, extending the mineralization trend from Section 10 across the southwest quarter of Section 11.

Although Conoco did not feel it had the success it had hoped for, it remained optimistic about the local area as stated in an internal Conoco report from that time (Wentworth, 1982):

> *Despite previous disappointments, our Roca Honda and Jan claim blocks are believed to represent one of the better uranium prospects left in the Grants Mineral Belt. The property is well situated along the projected Westwater mineral trend in an area of interpreted favorable stratigraphy where the potential exists for large rich tabular ore bodies…*

### 6.2.4 Strathmore Resources

From June to November 2007, RHR, 60% owned by Strathmore, drilled four pilot holes on Section 16. Three holes were completed as monitoring wells totalling 8,050 ft for environmental baseline and monitoring purposes. One drillhole was located outside of the known mineralization and three holes were located within mineralized areas. Drill sites were chosen based on their proximity to existing roads to limit disturbance. Drilling was conducted by Stewart Brothers Drilling, based in Grants, New Mexico.

When completing the four pilot holes, RHR cored the Westwater Sandstone in each of the holes.

The cored holes were PQ-diameter (3.345 in.) and had samples taken principally for laboratory testing of hydraulic conductivity, effective porosity, density, and chemical analysis.

The four pilot holes were logged by Jet West Geophysical Services, LLC (Jet West) of Farmington, New Mexico, for gamma, resistivity, deviation, standard potential, and temperature.

In November 2011, a core hole (S14-Jmw-CH-11) was drilled at the Section 16 shaft location to a depth of 2,053 ft. Core was tested at Advanced Terra Testing for numerous geotechnical properties and a geotechnical report was issued by URS in June 2012.

## 6.3 Past Production

No production from uranium mineralization has taken place at the Project.

# 7.0 GEOLOGICAL SETTING AND MINERALIZATION

## 7.1 Regional Geology

The Project is located in the southeast part of the Ambrosia Lake subdistrict of the Grants uranium district (McLemore and Chenoweth, 1989) and is near the boundary between the Chaco slope and the Acoma sag tectonic features. This subdistrict is in the southeastern part of the Colorado Plateau physiographic province and is mostly on the south flank (referred to as the Chaco slope) of the San Juan Basin. Figure 7-1 presents the regional geology of the Project.

Bounding the San Juan Basin to the south-southwest is the Zuni uplift, where rocks as old as Precambrian are exposed 25 mi to 30 mi southwest of the Project area. Less than five miles to the east and south of the Project area, Neogene volcanic rocks of the Mount Taylor volcanic field cap Horace Mesa and Mesa Chivato. On the Chaco slope, sedimentary strata mainly of Mesozoic age dip gently northeast into the central part of the San Juan Basin. The Project area is structurally complex and is included in the part of the subdistrict that is described as the most folded and faulted part of the Chaco slope.

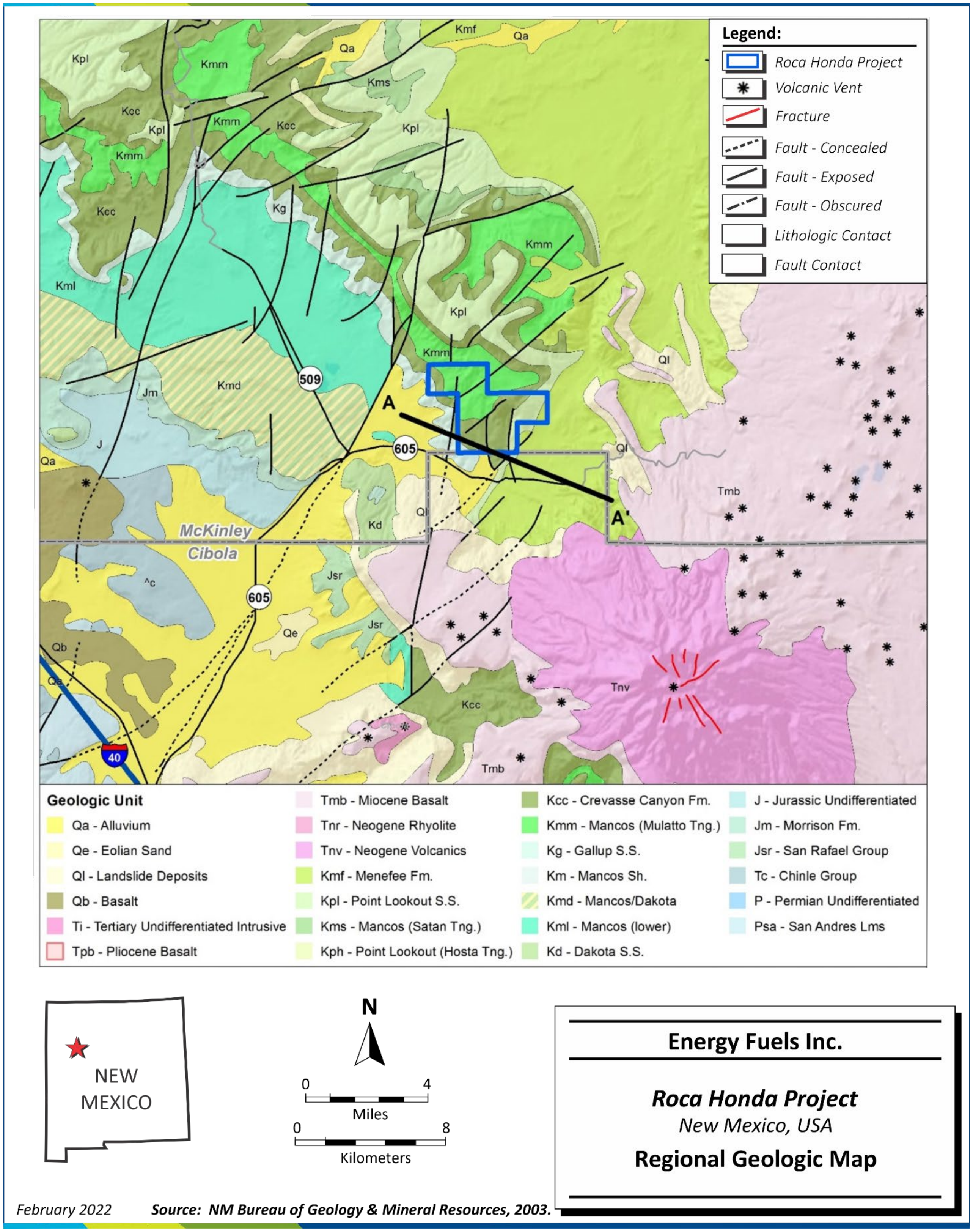
The San Juan Basin and bounding structures were largely formed during the Laramide orogeny near the end of the Late Cretaceous through Eocene Period (Lorenz and Cooper 2003). This Laramide tectonism produced compression of the San Juan Basin between the San Juan and Zuni uplifts, resulting in faults and fold axes oriented north to north-northeast. The more intensively faulted east part of the Chaco slope may be related to the development of the McCarty's syncline, which lies just east of the faulted Fernandez monocline (Kirk and Condon, 1986).

The San Rafael fault zone cuts the Fernandez monocline and has right-lateral displacement as evidence of shear near the San Juan Basin margin. Other faults in or near the Project area are mostly normal with dip-slip displacement and vertical movement less than 40 ft. The large, northeast-striking San Mateo normal fault about two miles west of the Project area has vertical displacement of as much as 450 ft (Santos, 1970). Strata in the Project area along the Fernandez monocline dip east to southeast at four to eight degrees toward the McCarty's syncline, an expression of the Acoma sag (Santos, 1966a and 1966b).

The Morrison Formation outcrops near the south edge of the San Juan Basin and dips gently northward into the basin. Formations of Late Cretaceous age that overlie the Morrison Formation, in ascending order, are Dakota Sandstone, Mancos Shale, Gallup Sandstone, Crevasse Canyon Formation, Point Lookout Sandstone, and Menefee Formation. The Gallup Sandstone, Crevasse Canyon Formation, Point Lookout Sandstone, and Menefee Formation compose the Mesaverde Group. Figure 7-2 presents the regional stratigraphy. Figure 7-3 is a cross section of the geology pertaining to the property.

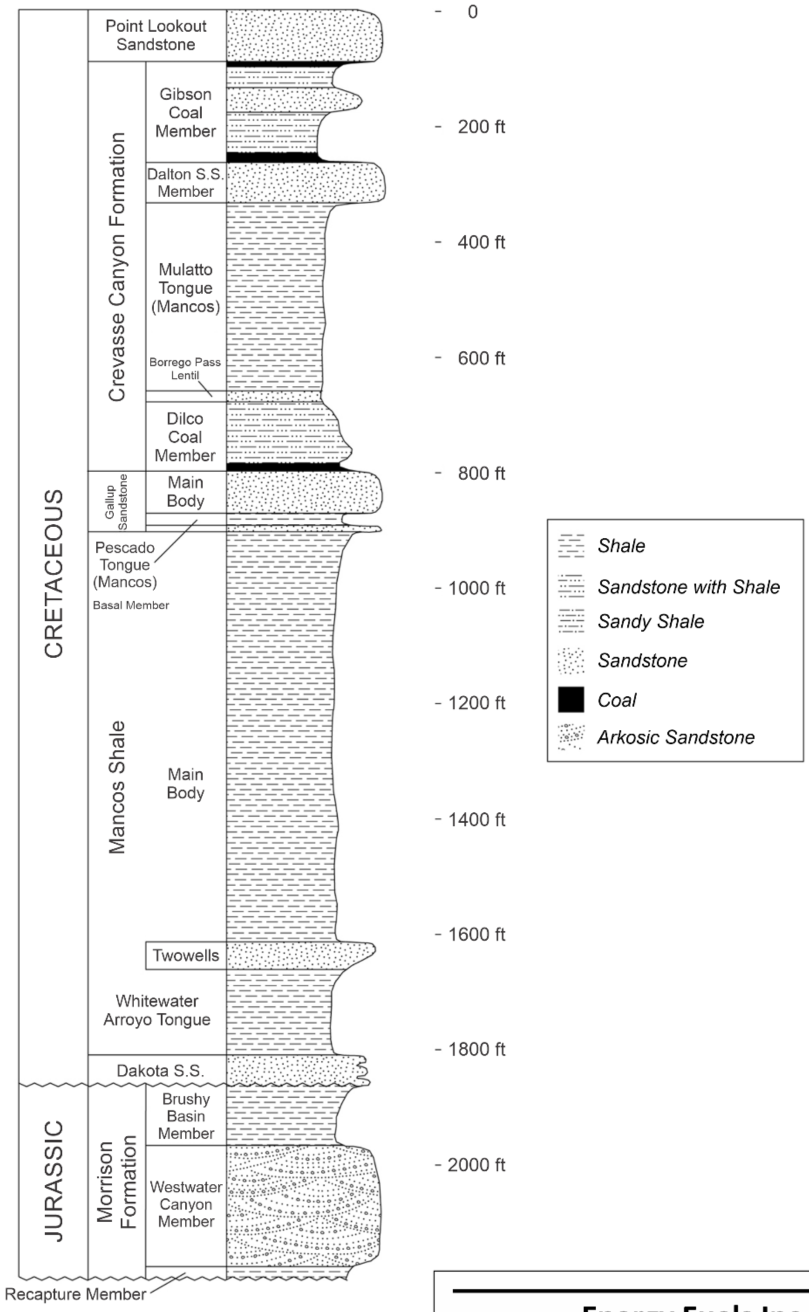
The Morrison Formation was deposited in a continental environment, mainly under fluvial conditions. These deposits were derived from an uplifted arc terrane to the west and locally from the Mogollon highlands to the south (Lucas, 2004). The Zuni uplift, currently bordering the San Juan Basin to the southwest, did not exist in Late Jurassic time and therefore was not a source for Morrison Formation sediments.

Formations of Late Cretaceous age were deposited in or on the margin of the Western Interior Seaway, a shallow continental sea, and the formations represent transgressive or regressive episodes of the Seaway. The Mancos Shale and its several tongues were deposited on the shallow marine sea bottom, and the formations of the Mesaverde Group were deposited along the western shoreline of the Seaway.



February 2022 *Source: NM Bureau of Geology & Mineral Resources, 2003.*

Figure 7-1: Regional Geologic Map

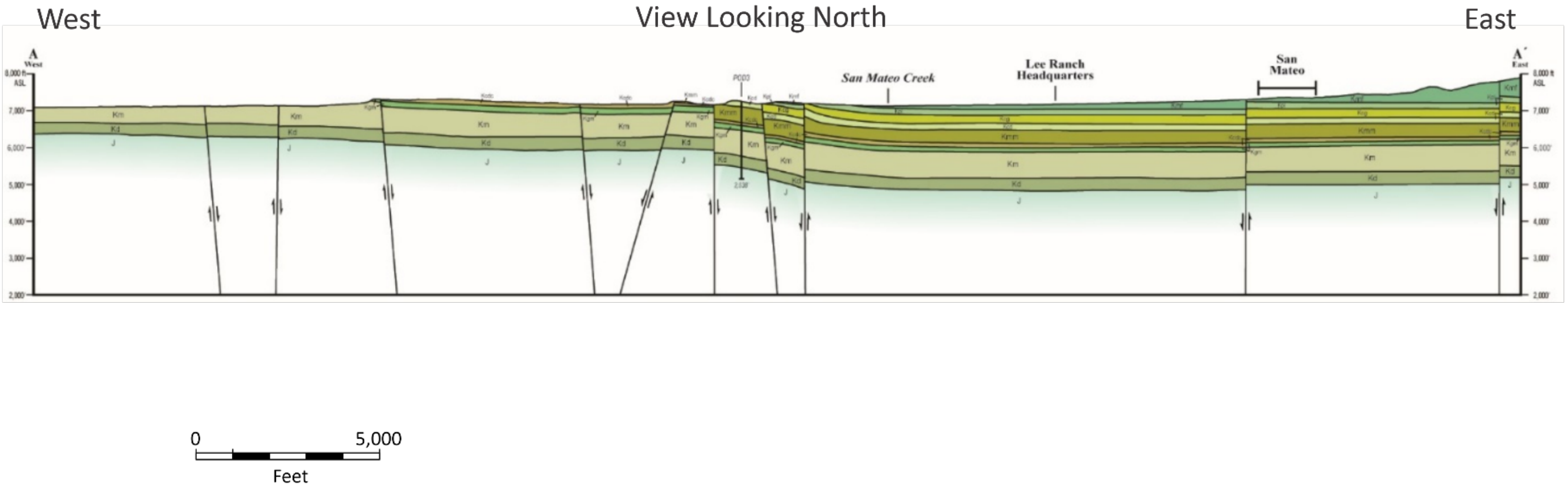


**Energy Fuels Inc.**

***Roca Honda Project***
*New Mexico, USA*
**Regional Stratigraphic Column**

*February 2022* ***Source: Roca Honda Resorces, 2015.***

Figure 7-2: Regional Stratigraphic Column



**Energy Fuels Inc.**

***Roca Honda Project***

*New Mexico, USA*

**Cross Section of Local Geology**

*February 2022*

***Source: McCraw et al., 2009.***

Figure 7-3: Cross Section of Local Geology

## 7.2 Local Geology

### 7.2.1 Stratigraphy

Rocks exposed in the Ambrosia Lake subdistrict of the Grants uranium district, which includes the Project area, include marine and non-marine sediments of Late Cretaceous age, unconformably overlying the uranium-bearing Upper Jurassic Morrison Formation. In this section, geologic units are discussed from youngest to oldest. The uppermost sequence of conformable strata consists of the Mesaverde Group, Mancos Shale, and Dakota Sandstone. All rocks that outcrop at the Project area are of Late Cretaceous age; these rocks and the Quaternary Period deposits that cover them in some places are shown in the geologic map in Figure 7-1.

The formations and members and their approximate depth from the surface are shown in the stratigraphic section in Figure 7-2, which is based on historical drilling in the area. The Menefee Formation does not outcrop in the Project area, but a partial thickness of it is below Quaternary colluvium as sub-crop in the southeast quarter of Section 10. Due to the inter-tonguing nature of some of the Cretaceous units in the area, some members or tongues of the Mancos Shale and Dakota Sandstone are included in sequence within the dominant formation in the discussion below.

Approximate thicknesses for the formations and members are provided in Table 7-1. These thicknesses were determined from geologic mapping by Santos (1966a and 1966b), borehole data from 2007 drilling by RHR in Section 16, and borehole data from historical drilling by Kerr-McGee and Western Nuclear.

**Table 7-1: Stratigraphy found at the Roca Honda Project**
**Energy Fuels Inc. – Roca Honda Project**

| Formation | Unit Symbol | Unit Name | Avg. Thickness (ft) | Max. Thickness (ft) | Min. Thickness (ft) | Data Source |
|---|---|---|---|---|---|---|
| N/A | Qal | Alluvium | - | Varies | - | 2007 Sec. 16 Drilling |
| Menefee | Kmf | Menefee Fm. | Not Present at Project Area | | | |
| Point Lookout Sandstone | Kp | Point Lookout Sandstone | - | 120 | - | Geo. Maps (Santos 1966a and 1966b) |
| Crevasse Canyon | Kcg | Gibson Coal Member | - | 240 | - | Geo. Maps (Santos 1966a and 1966b) |
| Crevasse Canyon | Kcda | Dalton Sandstone Member | - | 100 | - | Geo. Maps (Santos 1966a and 1966b) |
| Mancos Shale | Kmm | Mulatto Tongue | 305 | 318 | 292 | |
| Crevasse Canyon | Kcbp | Borrego Pass Lentil | 40 | - | -- | |
| Crevasse Canyon | Kcdi | Dilco Coal Member | 120 | 128 | 108 | 2007 Sec. 16 Drilling |
| Gallup Sandstone | Kg | Gallup Sandstone | 73 | 76 | 68 | 2007 Sec. 16 Drilling |

| Formation | Unit Symbol | Unit Name | Avg. Thickness (ft) | Max. Thickness (ft) | Min. Thickness (ft) | Data Source |
|---|---|---|---|---|---|---|
| Mancos Shale | Kmp | Pescado Tongue | 21 | 22 | 20 | 2007 Sec. 16 Drilling |
| Gallup Sandstone | Kgb | Gallup Sandstone (basal unit) | 11 | 16 | 8 | 2007 Sec. 16 Drilling |
| Mancos Shale | Km | Mancos Shale | 710 | 720 | 702 | 2007 Sec. 16 Drilling |
| Dakota Sandstone | Kdt | Twowells Sandstone | 49 | 52 | 46 | 2007 Sec. 16 Drilling |
| Mancos Shale | Kmw | Whitewater Arroyo Tongue | 148 | 150 | 146 | 2007 Sec. 16 Drilling |
| Dakota Sandstone | Kd | Dakota Sandstone | 52 | 68 | 19 | Historical Data |
| Morrison | Jmb | Brushy Basin Member | 105 | 269 | 22 | Historical Data |
| Morrison | Jmw | Westwater Canyon Member | Broken into sub-units and detailed below | | | |
| Morrison | Jmw A | A Sandstone | 34 | 59 | - | Historical Data |
| Morrison | Jmw Aob | A-B1 Shale | 16 | 100 | - | Historical Data |
| Morrison | Jmw B1 | B1 Sandstone | 33 | 56 | - | Historical Data |
| Morrison | Jmw B1ob | B1-B2 Shale | 10 | 37 | - | Historical Data |
| Morrison | Jmw B2 | B2 Sandstone | 27 | 56 | 6 | Historical Data |
| Morrison | Jmw B2ob | B2-C Shale | 13 | 39 | - | Historical Data |
| Morrison | Jmw C | C Sandstone | 48 | 90 | 5 | Historical Data |
| Morrison | Jmw Cob | C-D Shale | 15 | 39 | - | Historical Data |
| Morrison | Jmw D | D Sandstone | 17 | 45 | 2 | Historical Data |
| Morrison | Jmr | Recapture Member | - | - | - | |

### 7.2.1.1 Alluvium

Quaternary alluvial material overlies bedrock throughout the San Mateo Creek valley, and although it probably accepts and transmits groundwater from precipitation to underlying bedrock units, it is most likely unsaturated except near San Mateo Creek. San Mateo Creek alluvial materials consist of unconsolidated sands and silts. Well logs indicate this material is from 10 ft to 80 ft thick, although it may be significantly thicker in some areas (OSE, 2008).

### 7.2.1.2 Menefee Formation

The Menefee Formation, an upper unit of the Mesaverde Group, consists of two members, the Allison Member and the Cleary Coal Member, which underlies the Allison Member. The formation consists of thin to thick sandstone beds interbedded with shale and coal seams. Geophysical logs from the San Juan Basin indicate that the formation typically consists of approximately 30% sandstone, 65% shale, and less than 5% coal (Brod and Stone, 1981). Beds of the Allison Member do not outcrop in the Project area, but are farther to the north, in the central San Juan Basin. Beds of the Cleary Coal Member outcrop east and south of the Roca Honda area on the east flank of the Fernandez monocline. In the Project area, this member occurs as sub-crop beneath Quaternary colluvium in the southeast quarter of Section 10.

### 7.2.1.3 Point Lookout Sandstone

The Point Lookout Sandstone is a regressive marine beach sandstone in the middle of the Mesaverde Group. The Point Lookout Sandstone generally consists of light grey, thick bedded, very fine to medium grained, locally cross-bedded sandstone. This unit is as much as 120 ft thick in the Project area. A resistant cap of Point Lookout Sandstone forms the top of Jesus Mesa in the Project area and represents the dip slope. Just east of Jesus Mesa, the steeper slope that dips to the southeast in Section 10 represents the dip slope of the Point Lookout Sandstone along the Fernandez Monocline.

### 7.2.1.4 Crevasse Canyon Formation

The Crevasse Canyon Formation is a lower unit of the Mesaverde Group that outcrops through much of the west part of the Roca Honda Project area. The unit consists of the following members (from youngest to oldest): the Gibson Coal Member, Dalton Sandstone Member, Borrego Pass Lentil, and the Dilco Coal Member. The Mulatto Tongue of the Mancos Shale is below the Dalton Sandstone Member and above the Borrego Pass Lentil. The Mulatto Tongue is approximately 300 ft thick in the Project area and is a marine deposit representing a transgression of the Western Interior Seaway.

The Gibson Coal Member Is as much as 240 ft thick in the area of interest and outcrops mainly on the steep slopes of the Jesus Mesa. The Dalton Sandstone Member, a regressive marine beach sandstone, is as much as 100 ft thick.

Shale and silty sandstone of the Mulatto Tongue of the Mancos Shale outcrop on gentle slopes and are covered in places by Quaternary alluvium and colluvium in the southwest part of the Roca Honda area. Below the Mulatto Tongue is the Borrego Pass Lentil, a transgressive marine sandstone that was previously referred to as the Stray sandstone of local usage (Santos, 1966a). Boreholes drilled in 2007 in the Project area indicate that the Borrego Pass Lentil is about 40 ft thick. The entire thickness of the Mulatto Tongue is not exposed in the western part of the Project area because several normal faults disrupt the sequence. Therefore, it is not known whether the Borrego Pass Lentil, which lies just below the Mulatto Tongue, outcrops in that area.

The Dilco Coal Member has an average thickness of about 120 ft and outcrops in Section 17. The member contains thin sandstone, shale, and discontinuous coal beds representative of a backshore swamp environment associated with a regression of the Western Interior Seaway (Fassett, 1989).

### 7.2.1.5 Gallup Sandstone

The lowest formation of the Mesaverde Group is the Gallup Sandstone, which is solely in the subsurface in the Roca Honda Project area and is separated into two units by the thin Pescado Tongue of the Mancos Shale. The upper unit (or main body) of the Gallup Sandstone is a regressive marine beach sandstone that is fine to medium grained and is about 75 ft thick. The Pescado Tongue, approximately 20 ft thick, consists of thin alternating and interfingering beds of sandstone, siltstone, and shale. A thin, fine to coarse grained sandstone (average thickness of approximately 10 ft) forms the basal bed of the Gallup Sandstone and marks a brief regression of the Western Interior Seaway. The upper Gallup sandstone is a regional aquifer with good water quality water.

### 7.2.1.6 Mancos Shale

The main body of Mancos Shale represents the full transgression of the Western Interior Seaway and, in the Roca Honda area, its subsurface thickness averages approximately 710 ft. The marine deposits of this formation consist mainly of dark grey to black silty shale with minor interbedded sandstone. In the southern San Juan Basin, the lower part of the Mancos Shale is intertongued with the underlying upper part of the Dakota Sandstone. The intertongued units generally represent a transgressive rock sequence (Landis et al., 1973).

In the subsurface of the Project area, the main body of Mancos Shale is underlain by the Twowells Sandstone Tongue of the Dakota Sandstone (Pike 1947), which is about 50 ft thick. Underlying the Twowells Sandstone Tongue is the Whitewater Arroyo Shale Tongue of the Mancos Shale (Owen, 1966), which is about 150 ft thick. In the Project area, the base of the Mancos Shale is considered to be the base of the Whitewater Arroyo Shale Tongue.

### 7.2.1.7 Dakota Sandstone

Marine shoreface deposits of Dakota Sandstone are composed mainly of fine-grained gray sandstone. In the subsurface in the Project area, the Dakota Sandstone is approximately 50 ft thick. In the main Ambrosia Lake subdistrict about five miles northwest of the Roca Honda area, the Dakota Sandstone is composed of four members (Landis et al., 1973). For ease of presentation, the four members are not shown in Figure 7-2. The four members are in descending stratigraphic order: Paguate Sandstone Tongue of the Dakota Sandstone, Clay Mesa Shale Tongue of the Mancos Shale, Cubero Sandstone Tongue of the Dakota Sandstone, and Oak Canyon Member of the Dakota Sandstone. The Dakota Sandstone is the lowermost Upper Cretaceous formation, unconformably overlies the Upper Jurassic Morrison Formation, and is a regional aquifer with poor quality water from the overlying Gallup Sandstone.

### 7.2.1.8 Morrison Formation

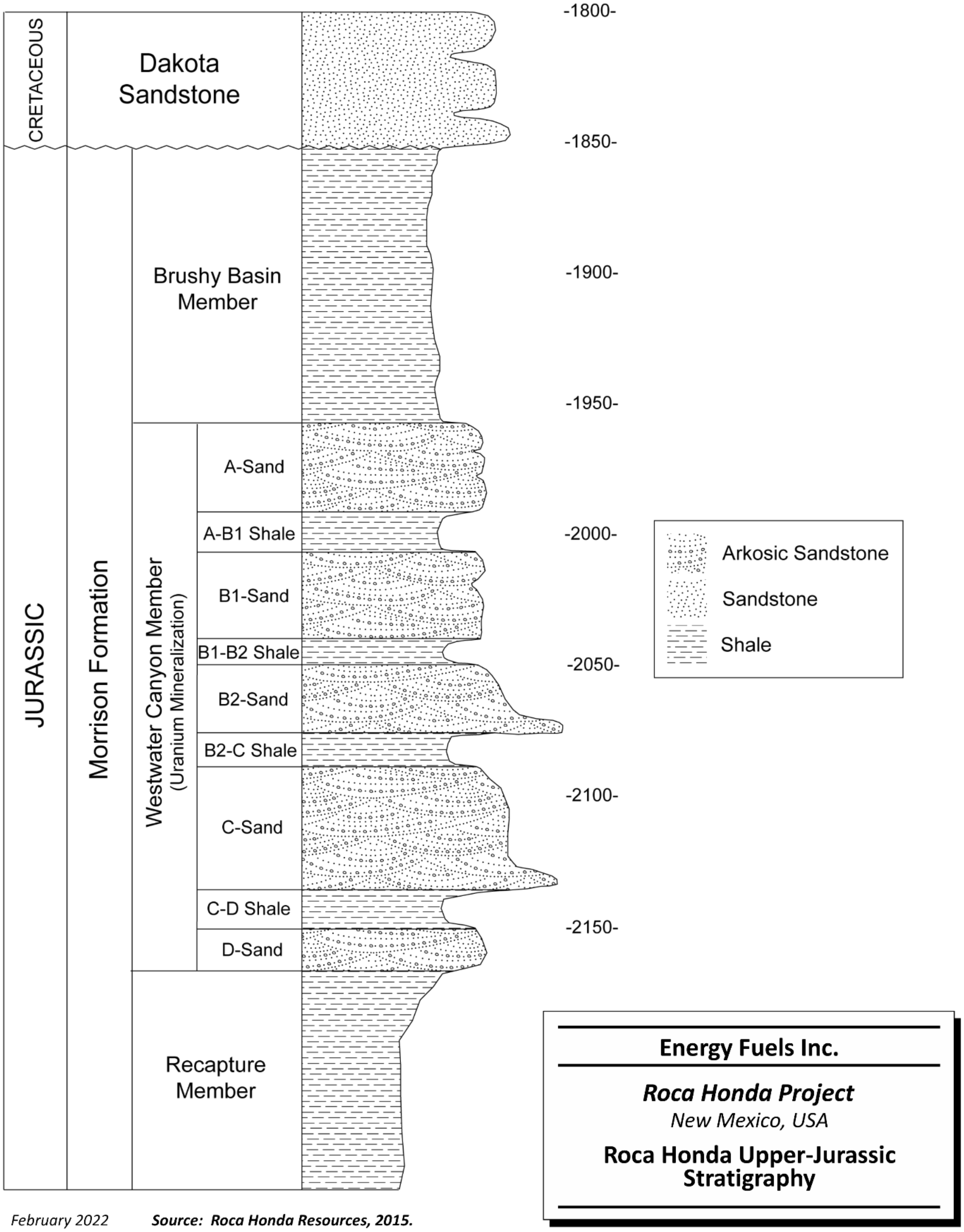
The Upper Jurassic Morrison Formation is comprised of four members that are recognized by the U. S. Geologic Survey (USGS) in the Grants uranium district. These members are, in descending order, Jackpile Sandstone Member, Brushy Basin Member, Westwater Canyon Member, and Recapture Member. The Jackpile Sandstone Member, the uppermost fluvial sandstone in the formation, was not deposited in the

Ambrosia Lake subdistrict, but was deposited east of Mount Taylor, where it hosts uranium mineralization in the Laguna subdistrict.

The uppermost member of the Morrison Formation in the roca Honda area is the Brushy Basin Member. The mostly greenish-grey, mudstone-dominated Brushy Basin Member is variable in thickness (22 ft to 269 ft), but the average thickness is approximately 105 ft, based on historical drilling in the area.

The fluvial/lacustrine deposits of the Brushy Basin Member are underlain by the Westwater Canyon Member, which hosts the uranium deposits in the Roca Honda area. The fluvial, sandstone dominated Westwater Canyon Member is approximately 100 ft to 250 ft thick under the Mine area, and consists of grey, light yellow-brown and reddish grey arkosic sandstone (Fitch, 2006). The Westwater Canyon Member is informally subdivided into sandstone and shale units. The sandstone units, which contain the uranium mineralization, have grains composed of quartz (~61%), feldspar (~35%), chert (~3%), and heavy minerals (<1%). The Recapture Member is composed of greyish-red siltstone and claystone.

Figure 7-4 is a detailed stratigraphic section of the Upper Jurassic Stratigraphy of the Roca Honda Mine.



*February 2022* ***Source: Roca Honda Resources, 2015.***

Figure 7-4: Roca Honda Upper-Jurassic Stratigraphy

### 7.2.2 Structural Geology

Regional structures in the Grants uranium district, specifically the Ambrosia Lake subdistrict west of the Property, formed during the Mesozoic and continued developing into the Tertiary. This period of deformation is coincident with the formation of the San Juan Basin. Most of these structures are related to the uplift of the Zuni Mountains, which has been periodically active since Pennsylvanian time (Santos, 1970). Structures associated with this period of Mesozoic-Tertiary deformation include normal faults; transform faults, as well as pre- and post-Dakota Sandstone folds. The regional trend of the major structures throughout the Grants uranium district is to the north-northeast but varies widely.

There are four major fault systems in the Ambrosia Lake subdistrict. The two nearest the Roca Honda project, the San Mateo and San Rafael fault zones, are located to the west and south of the project respectively. The San Mateo fault zone is composed of normal faults with throw down to the east, and has a maximum vertical offset of 450 ft. Additionally, thinning of the Brushy Basin Member on opposite sides of this zone suggest that there is some lateral movement associated with this fault zone as well. This would suggest this overall fault zone is a right-lateral oblique fault zone with large components of both horizontal and vertical motion. The San Rafael fault zone, the largest in the region, differs in that most if not all movement is horizontal, with up to 20,000 ft of right-lateral displacement (Santos, 1970).

Pre-Dakota folding is not present in the Ambrosia Lake subdistrict, but is common in the Laguna Sub-district, approximately 30 mi to the southeast. There pre-Dakota folds have a maximum amplitude greater than 100 ft (Santos, 1970). Within the Ambrosia Lake subdistrict, the major period of folding occurred following deposition of the Late Cretaceous Dakota Sandstone. The two largest folds in the region, the McCartys Syncline and the Ambrosia Dome, formed during this period of deformation, and have structural relief greater than 1,000 ft (Santos, 1970). A third smaller fold, the San Mateo Dome, is located north of the Roca Honda project and dips east-southeast into the McCartys Syncline, giving local bedding a 7° to 11° dip (Falk, 1978).

Geologic structures at the Mine are associated with regional deformation, which occurred during the late Cretaceous, following deposition of the geologic strata seen at the Mine. There is no evidence of recent activity. The primary structures are high angle, north to northeast trending normal faults that cut across the western portion of Sections 9 and 16, with no major faults evident on Section 10.

Maximum offset along these faults is approximately 150 ft and has been estimated from the location of lithological contacts along a north-trending fault in Section 17 and adjacent borehole data. Down dip offsets to the west and northwest have been interpreted for all faults at the Mine.

The dip along the Fernandez Monocline varies from approximately 3° to 4° in the western portion of the property, to as much as 20° in Section 10. Possible minor accommodation faults related to the monocline may be encountered in the subsurface on Section 10, however, offsets should be minor.

Previous detailed structural geology work by Kerr-McGee on Section 17 indicates complex normal fault geometry, with the potential for some apparent structures to have formed as stress relief and in strike slip duplexes along bends in transform faults when reviewed at a larger scale (Carter, 2016).

## 7.3 Mineralization

The uranium mineralization found in the Mine area is contained within five sandstone units of the Westwater Canyon Member. Zones of mineralization vary from approximately one foot to 30 ft thick, 100 ft to 600 ft wide, and 200 ft to 3,000 ft in length in elongated pods. Uranium mineralization in the Mine area west to east, and northwest to southeast depending on general area within the Mine area, consistent with trends of the fluvial sedimentary structures of the Westwater Canyon Member, and the general trend of mineralization across the Ambrosia Lake subdistrict.

Core recovery from the 2007 drilling program indicates that uranium occurs in sandstones with large amounts of organic/high carbon material. Non-mineralized host rock is much lighter (light brown to light grey,) and it has background to slightly elevated radiometric readings.

Uranium mineralization in the Mine area is believed to be predominantly primary ("trend") mineralization, with some secondary mineralization due to oxidation and mobilization of uranium near permeable geologic structures. Uranium mineralization consists of dark organic-uranium oxide complexes. The uranium in the Mine area is dark grey to black in color and is found between depths of approximately 1,380 ft to 2,600 ft below the surface. Although coffinite and uraninite have been identified in the Grants uranium district, their abundance is not sufficient to account for the total uranium content in a mineralized sample. Admixed and associated with the uranium are enriched amounts of vanadium, molybdenum, copper, selenium, and arsenic, in order of decreasing abundance.

The primary mineralization pre-dates the formation of the Laramide aged structures in the Mine area, with a small amount of vertical offset of mineralization present across the local faults. There is a possibility of some redistribution and stack ore along faults, however, it appears that most of the Roca Honda mineralization is primary. Redistributed, post-fault, or stack mineralization occurs in the Ambrosia Lake subdistrict of the Grants uranium district, but is not apparent in the Roca Honda area.

### 7.3.1 Mineralization Controls

Paleochannels that contain quartz-rich, arkosic, fluvial sandstones are the primary mineralization control associated with this trend. Previous mining operations within the immediate area suggest that faults in the Roca Honda area associated with the San Mateo fault zone post-date the emplacement of uranium, therefore, it may be expected that mineralized zones in the Roca Honda area are offset by faults.

Mineralization is generally confined to the fluvial sandstones of the Westwater Canyon Member and the Poison Canyon Sandstone of the Brushy Basin Member, though there may be some localized seepage into the under/overlying shales and mudstones, as well as some minor extension (less than 10 ft) of mineralization into the underlying Recapture Member. Within the Mine area, the Westwater Canyon Member contains as many as seven individual sandstones, which the uranium mineralization is spread across. In Sections 9 and 16, the mineralization is typically found in the upper sandstones (A, B1, and B2). In the north-central portion of the Mine area (Section 10 and 11), the mineralization is concentrated in the lower sandstone units (C and D) due to a pinching out of the upper sands and a thickening of the Brushy Basin Member. In the far western area of the project (Section 17), the uranium mineralization is generally in the upper two to three sandstones (A, B1 and B2), with very few mineralized occurrences in the lower half of the Westwater Canyon Member. To the east of the Mine area, the mineralization is spread across all of the sandstone units (including the Poison Canyon Sandstone); this area also appears to be in a region of overall mineral convergence at multiple horizons within the Westwater Canyon Member and observed within the Mount Taylor Mine (Riese, 1977).

Sedimentary features may exhibit control on a small scale. At the nearby Johnny M mine, a sandstone scour feature truncates underlying black mineralization, indicating nearly syngenetic deposition of uranium mineralization with the sandstone beds. In places, uranium mineralization is related to clay-gall (cobbles) layers within the host sandstone.

Geochemical environments in the host sandstone also play an important role in controlling the location of the uranium mineralization. Historical mining operations at both the Johnny M Mine and the Mount

Taylor Mine indicate that the uranium mineralization is generally located within a “halo” of reduced (“bleached”) ground. This reduced ground is reflected by light grey sandstone hues and blue-green reduced rims on clay-galls containing ferric iron.

# 8.0 DEPOSIT TYPES

More than 340 Mlb of $U_3O_8$ have been produced from the Grants uranium deposits in New Mexico between 1948 and 2002. The Grants uranium district is one of the largest uranium provinces in the world. The Grants uranium district extends from east of Laguna to west of Gallup in the San Juan Basin of New Mexico. Three types of sandstone uranium deposits are recognized: tabular, redistributed (roll-front, fault-related), and remnant-primary. The tabular deposits formed during the Jurassic Westwater Canyon time period. Subsequently, oxidizing solutions moved down dip, modifying tabular deposits into redistributed roll-front and fault-related deposits. Evidence, including age dates and geochemistry of the uranium deposits, suggests that redistributed deposits could have been formed shortly after deposition in the early Cretaceous Period and from a second oxidation front during the mid-Tertiary Period (McLemore, 2010)

Primary mineralization deposits are generally irregular, tabular, flat-lying bodies elongated along an east to southeast direction, ranging from thin pods a few feet in thickness and length to bodies several tens or hundreds of feet long. The deposits are roughly parallel to the enclosing beds but may form rolls (tabular lenses) that cut across bedding. The deposits may occur in more than one layer, form distinct trends, commonly parallel to depositional trends, and occur in clusters. Primary mineralization in the Ambrosia Lake subdistrict consists mostly of uranium-enriched humic matter that coats sand grains and impregnates the sandstone, imparting a dark color to the rock. The uranium mineralization consists largely of unidentifiable organic-uranium oxide complexes that are light grey-brown to black. A direct correlation exists between uranium content and organic-carbon content by weight percent in the "ores" (Squyres, 1970; Kendall, 1972).

# 9.0 EXPLORATION

## 9.1 Exploration

EFR has not conducted any exploration activities on the Project since acquiring the properties in August 2013.

## 9.2 Geotechnical and Hydrogeology

Geotechnical designs for the Mine are based on the laboratory testing of a limited number of core samples. Section 16.3 Mine Design and Section 16.5 Geotechnical Parameters provide additional information.

Hydrogeologic studies are discussed in Section 16.6.

# 10.0 DRILLING

No exploration or drilling work has been conducted at the Mine since EFR acquired it in August 2013.

EFR is planning a large infill-drilling program of approximately 200 surface drillholes prior to any mining operations taking place at the Mine. Core recovered from this planned program will be used for assay checks of geophysical probes, disequilibrium and metallurgical studies, and geotechnical and hydrologic studies to refine mine plans. This program is being permitted as part of the overall mine permitting process and no timeframe for this drilling has been set.

Drillhole collar locations are recorded on the original drill logs and radiometric logs created at the time of drilling, including easting and northing coordinates in local grid or modified NAD 1983 New Mexico West State Plane FIBPS 3003 (US feet) and elevation of collar in feet above sea level. The SLR QP is not aware of any drillhole orientation surveys as downhole deviation surveys are not typically conducted as all drillholes are vertical.

## 10.1 Historic Drilling

Historical exploration drilling within the project area generally utilized truck mounted mud rotary drills with holes 4 ¾ in. in diameter. The holes were drilled through the Westwater Canyon Member and several feet into the underlying non-hosting Recapture Member of the Morrison Formation. Sample cuttings were typically taken at five-foot intervals by the driller and laid out on the ground in piles for each interval in rows of 20 samples, or 100 ft. Upon completion of a drillhole, the hole was logged using natural gamma log, determining uranium grade through industry standard grade calculation methods (equivalent uranium = $eU_3O_8$), and verifying with laboratory assays (chemical uranium = $cU_3O_8$).

Drilling on the Roca Honda property has been conducted in phases by Rare Metals, Kerr-McGee, Western Nuclear, and RHR from 1950 to 2011, and consists of 1,450 surface drillholes totalling more than 2,312,000 ft. EFR holds a large database of historical data from the various operators of the Mine area, including those listed in Table 10-1 by Section. In total, there are 1,790 originals or copies of drill logs for the Mine area in the database. Many of the remaining drill logs, and specifically those from Sections 5, 6, and 8, are still held by EFR as part of the historical Kerr-McGee database acquired by the company.

EFR holds the gamma-ray logging calibration data for the Kerr-McGee drilling in the San Mateo Valley. Kerr-McGee did not place the calibration data on each individual drillhole log header, but rather listed the probe identification number, which could be traced back to a calibration log that contained all pertinent data on that probe to determine $eU_3O_8$. A discussion of gamma-logging and calibration data is described in Section 11.1.1 of this Technical Report.

In addition to the historical exploration drilling data, EFR holds numerous internal reports, resource estimates, geologic maps, and mine planning documents prepared by multiple companies and their consultants across the project area. The SLR QP is not aware of any drilling or sampling errors that could materially impact the accuracy and reliability of the mineral resource estimate but does recommend completing additional confirmation drilling at the earliest opportunity to confirm historical drillhole data on all zones.

A drill summary table by Section is included in Table 10-2. Figure 10-1 shows the locations of drillholes by Section for the Mine.

### Table 10-1: Drilling at and Near the Roca Honda Mine by Section
### Energy Fuels Inc. – Roca Honda Project

| Township | Range | Section | # of Drillholes | Total Depth (ft) |
|---|---|---|---|---|
| T13N | R08W | 3[1] | 36 | 80,661 |
| | | 4[1] | 41 | 81,470 |
| | | 5 | 93 | 168,629 |
| | | 6 | 171 | Unknown |
| | | 8 | 231 | 389,050 |
| | | 9 | 188 | 377,428 |
| | | 10 | 178 | 429,215 |
| | | 11 | 4 | 10,848 |
| | | 15 | 1 | 2,896 |
| | | 16 | 75 | 123,667 |
| | | 17 | 518 | 841,952 |
| T14N | R08W | 31[1] | 184 | Unknown |
| | | 32[1] | 70 | Unknown |
| **Total** | | | **1,790** | **2,505,816+** |

Notes:

1. Portions of Sections 3 & 4, T13N, R08W and Sections 31 & 32, T14N, R08W, are no longer controlled by EFR

### Table 10-2: Summary of Exploration Drilling Completed at Roca Honda
### Energy Fuels Inc. – Roca Honda Project

| Township, Range, Section | Year | Company | # of Drillholes (Cum. Total) | Total Depth (ft) |
|---|---|---|---|---|
| T13N, R08W, 5 | 1957 | Rare Metals | 11 (11) | 20,493 |
| | 1958 | Rare Metals | 7 (18) | 11,122 |
| | 1966 | Kerr-McGee | 3 (21) | 5,485 |
| | 1967 | Kerr-McGee | 1 (22) | 1,730 |
| | 1969 | Kerr-McGee | 1 (23) | 1,761 |
| | 1972 | Kerr-McGee | 4 (27) | 7,547 |
| | 1975 | Kerr-McGee | 14 (41) | 24,243 |
| | 1976 | Kerr-McGee | 13 (54) | 23,442 |
| | 1977 | Kerr-McGee | 20 (74) | 39,602 |
| | 1979 | Kerr-McGee | 1 (75) | 1,775 |

| Township, Range, Section | Year | Company | # of Drillholes (Cum. Total) | Total Depth (ft) |
|---|---|---|---|---|
| | 1980 | Kerr-McGee | 1 (76) | 1,760 |
| T13N, R08W, 6 | Unknown | Kerr-McGee | 171 (171) | Unknown |
| T13N, R08W, 8 | 1967 | Kerr-McGee | 16 (16) | 27,001 |
| | 1969 | Kerr-McGee | 1 (17) | 1,816 |
| | 1970 | Kerr-McGee | 28 (45) | 44,573 |
| | 1972 | Kerr-McGee | 6 (51) | 7,071 |
| | 1973 | Kerr-McGee | 64 (115) | 115,442 |
| | 1974 | Kerr-McGee | 24 (139) | 43,274 |
| | 1975 | Kerr-McGee | 77 (216) | 130,250 |
| | 1977 | Kerr-McGee | 1 (217) | 1,652 |
| | 1978 | Kerr-McGee | 7 (224) | 12,501 |
| | 1979 | Kerr-McGee | 2 (226) | 1,880 |
| | 1980 | Kerr-McGee | 1 (227) | 1,860 |
| | 1985 | Kerr-McGee | 4 (231) | 1,730 |
| T13N, R08W, 9 | 1966 | Kerr-McGee | 1 (1) | 1,940 |
| | 1967 | Kerr-McGee | 1 (2) | 1,790 |
| | 1970 | Kerr-McGee | 8 (10) | 15,467 |
| | 1971 | Kerr-McGee | 3 (13) | 6,634 |
| | 1972 | Kerr-McGee | 12 (25) | 22,824 |
| | 1973 | Kerr-McGee | 71 (96) | 144,530 |
| | 1974 | Kerr-McGee | 27 (123) | 59,786 |
| | 1975 | Kerr-McGee | 18 (141) | 37,684 |
| | 1977 | Kerr-McGee | 43 (184) | 88,587 |
| | 1979 | Kerr-McGee | 1 (185) | 2,018 |
| | 1980 | Kerr-McGee | 1 (186) | 2,414 |
| | 1981 | Kerr-McGee | 1 (187) | 2,200 |
| | 1982 | Kerr-McGee | 1 (188) | 2,500 |
| T13N, R08W, 10 | 1967 | Kerr-McGee | 1 (1) | |
| | 1970 | Kerr-McGee | 1 (2) | |
| | 1971 | Kerr-McGee | 1 (3) | 2,233 |
| | 1972 | Kerr-McGee | 2 (5) | 5,240 |
| | 1974 | Kerr-McGee | 37 (42) | 89,155 |
| | 1975 | Kerr-McGee | 20 (62) | 51,823 |

| Township, Range, Section | Year | Company | # of Drillholes (Cum. Total) | Total Depth (ft) |
|---|---|---|---|---|
| | 1976 | Kerr-McGee | 33 (95) | 85,232 |
| | 1977 | Kerr-McGee | 75 (170) | 185,752 |
| | 1979 | Kerr-McGee | 1 (171) | 2,528 |
| | 1980 | Kerr-McGee | 1 (172) | 2,522 |
| | 1981 | Kerr-McGee | 1 (173) | 2,530 |
| | 1982 | Kerr-McGee | 1 (174) | 2,200 |
| | 1983 | Kerr-McGee | 1 (175) | |
| | 1984 | Kerr-McGee | 2 (177) | |
| | 1985 | Kerr-McGee | 1 (178) | |
| T13N, R08W, 16 | 1950 | Rare Metals | 13 (13) | |
| | 1967 | Western Nuclear | 1 (14) | |
| | 1968 | Western Nuclear | 9 (23) | 16,790 |
| | 1969 | Western Nuclear | 18 (41) | 27,250 |
| | 1970 | Western Nuclear | 42 (83) | 71,415 |
| | 2007 | Strathmore – RHR | 4 (87) | 6,159 |
| | 2011 | Strathmore – RHR | 1 (88) | 2,053 |
| T13N, R08W, 16 | 1969 | Kerr-McGee | 2 (2) | 4,109 |
| | 1970 | Kerr-McGee | 24 (26) | 40,129 |
| | 1972 | Kerr-McGee | 21 (47) | 33,758 |
| | 1973 | Kerr-McGee | 101 (148) | 163,552 |
| | 1974 | Kerr-McGee | 235 (383) | 379,983 |
| | 1975 | Kerr-McGee | 99 (482) | 161,510 |
| | 1977 | Kerr-McGee | 6 (488) | 9,885 |
| | 1978 | Kerr-McGee | 30 (518) | 49,026 |
| Total | | | 1,450 | 2,311,218+ |

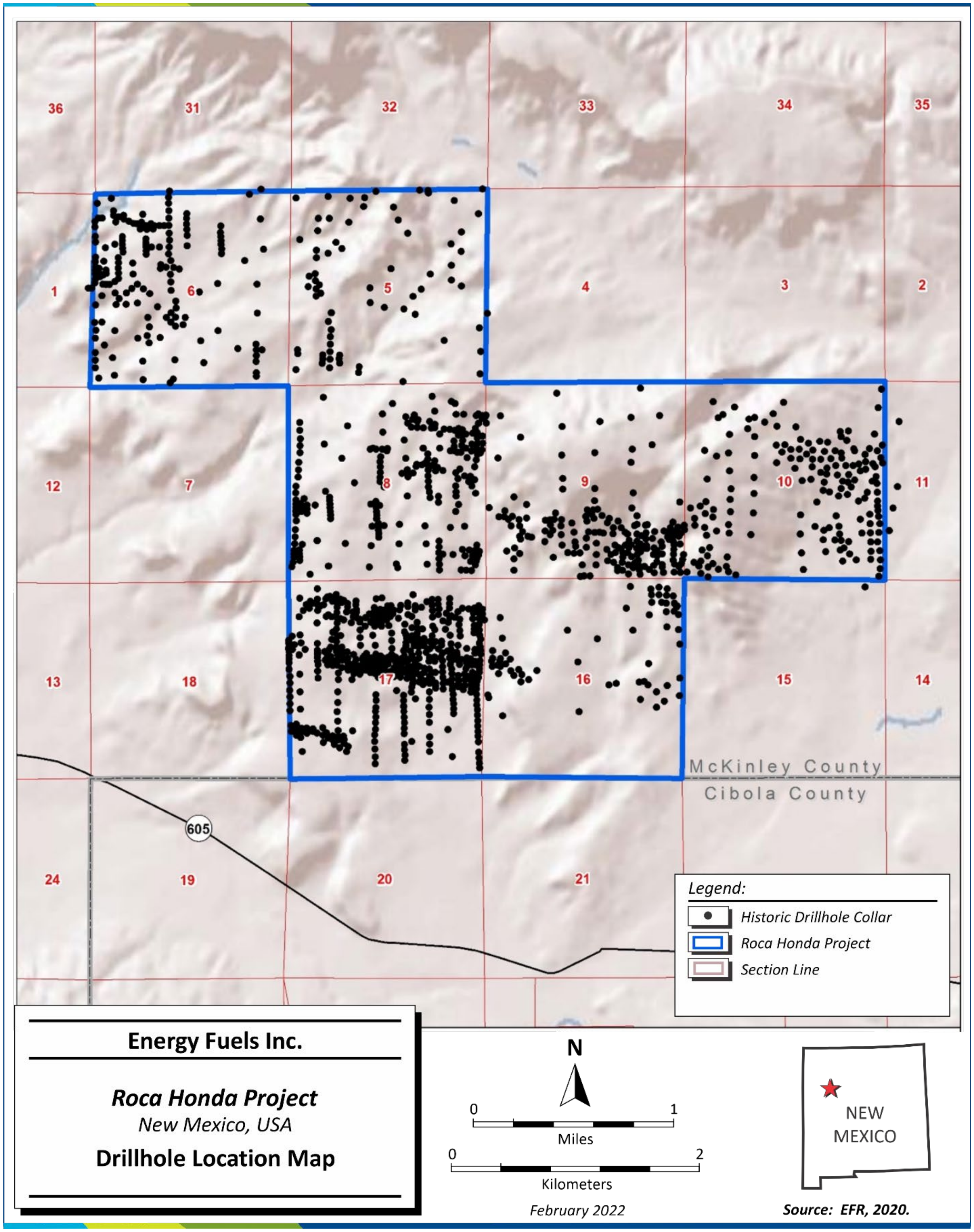


Figure 10-1: Drillhole Location Map

# 11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

## 11.1 Sample Preparation and Analysis

### 11.1.1 Gamma Logging

The standard procedure for sampling uranium deposits in the United States involves drilling a hole and running a gamma probe down hole to produce a gamma log. The data gained from the gamma log, typically counts per second (cps), can be converted to a percent equivalent $U_3O_8$ (%e$U_3O_8$) using calibration data specific to each probe. This method limits the amount of core needed to evaluate a uranium deposit. It is common practice to use this data in place of core assay data for Mineral Resource estimates. Typically, core is only collected to validate gamma log data, determine disequilibrium, or for use in amenability or geotechnical studies. As mentioned in Sections 9.0 and 10.0, EFR has not conducted any exploration work at the Roca Honda Mine, however drilling and coring completed by Strathmore Resources/RHR is addressed in this Section, as well as discussions on procedures and methods used to estimate the Mineral Resource.

Drilling for uranium is unique in that core does not need to be recovered from a hole to determine the metal content. Due to the radioactive nature of uranium, probes that measure the decay products or “daughters” can be read with a downhole gamma probe, a process referred to as gamma logging. While gamma probes do not measure the direct uranium content, the data collected (in cps) can be used along with probe calibration data to determine an equivalent $U_3O_8$ grade in percent (%e$U_3O_8$). These grades are very reliable as long as there is not a disequilibrium problem in the area. Gamma logging is common in non-uranium drilling and is typically used to discern rock types.

#### 11.1.1.1 Calibration

For the gamma probes to report accurate %e$U_3O_8$ values the gamma probes must be calibrated regularly. The probes are calibrated by running the probes in test pits maintained historically by the U.S. Atomic Energy Commission (AEC) and currently by the U.S. Department of Energy (DOE). Test pits are in Grand Junction, Colorado, Grants, New Mexico, and Casper, Wyoming. The test pits have known %$U_3O_8$ values, which are measured by the probes. A dead time (DT) and K-factor can be calculated based on running the probes in the test pits. These values are necessary to convert cps to %e$U_3O_8$. The DT accounts for the size of the hole and the decay that occurs in the space between the probe and the wall rock. DT is measured in microseconds (µsec) while the K-factor is simply a calibration coefficient used to convert the DT corrected cps to %e$U_3O_8$.

Quarterly or semi-annual calibration of a gamma probe is usually sufficient; however, calibration should be done more frequently if variations in data are observed or if the probe is damaged.

#### 11.1.1.2 Method

Following the completion of a rotary hole, a geophysical logging truck will be positioned over the open hole and a probe will be lowered to the hole’s total depth. In uranium deposits, these probes take different readings, including gamma, resistivity, standard potential, and hole deviation. Only gamma is used in grade calculation. Once the probe is at the bottom of the hole, the probe begins recording as it raised. The quality of the data is impacted by the speed the probe is removed from the hole. Experience shows a speed of 20 feet per minute (ft/min) is adequate to obtain data for resource modeling. Data is recorded in cps, which is a measurement of uranium decay of uranium daughter products, specifically Bismuth-24. That data is then processed using the calibration factors to calculate a $eU_3O_8$ grade. Historically, $eU_3O_8$ grades were calculated using the AEC half amplitude method, which gives a grade over a thickness. Currently, the $eU_3O_8$ grades tend to be calculated on 0.5-foot intervals by software. Depending on the manufacturer of the probe truck and instrumentation, different methods are used to calculate the $eU_3O_8$ grade, however all, including the AEC method are based on two equations:

- The first equation calculated the DT corrected cps (N) from the dead time determined as part of the calibration process

$$DT\ Corrected\ CPS\ (N) = CPS/(1-(CPS*DT))$$

- The second equation converts the DT Corrected CPS (N) to $\%eU_3O_8$ utilizing the K-factor (K)

$$\%eU3O8 = 2KN$$

Depending on the drilling and logging environment, additional multipliers can be added to correct for various environmental factors. Typically, these include a water factor for drillhole mud, a pipe factor if the logging is done in the drill steel, and a disequilibrium factor if the deposit is known to be in disequilibrium. Tables for water and pipe factors are readily available.

The equivalent $U_3O_8$ ($eU_3O_8$) content was calculated by Kerr-McGee following the industry-standard method developed originally by the AEC (Kerr-McGee manual, undated). For mineralized zones greater than two feet thick, an upper and lower boundary was initially determined by choosing a point approximately one-half of the height from background to peak of the anomaly. The cps were determined for each one-foot interval and then divided by the number of intervals to calculate an average cps for the anomaly. The cps were converted to percent $eU_3O_8$ using the appropriate Kerr-McGee charts for the specific logging unit used. This was the same method used by Western Nuclear for drillholes on Section 16. This method was an industry accepted practice at the time of drilling and results give a composite grade over a given thickness. As the thickness is not standard, data is for various lengths.

As part of an effort to update the data at the Mine, all the Kerr-McGee logs for Section 17 were scanned and the gamma logs were digitized at 0.5 ft intervals. This standardized the data to a set length (0.5 ft) and allowed the mineralized zones to be defined at a higher level of detail. The logs for the five holes drilled by RHR were also calculated at 0.5 ft intervals.

### 11.1.2 Core Sampling

RHR developed and implemented stringent standard operating procedures for lithologic logging of cuttings and core, and core handling (Strathmore, 2008).

The standard operating procedures provide guidance for proper and consistent core collection practices, and to ensure that proper core handling procedures, quality control, and required documentation are undertaken. The RHR Lead Geologist was responsible for implementing the core handling and sampling procedures.

The RHR field geologist was responsible for ensuring that all standard operating procedures were conducted in accordance with Strathmore standards, under the direction of the RHR Lead Geologist.

The field geologist observed the core from the time it was pulled from the hole until it was transported to a locked storage facility adjoining RHR's geology office located in Grants, New Mexico.

Core intervals selected for sampling were split in half lengthwise with a hydraulic splitter. One half was sent for analysis, with the other half logged and archived with the remaining core. Core samples were inserted into sample bags labelled with the well identification and core run.

Core recovery measurements were taken following the core logging procedure and recorded on the lithologic log. Core recoveries within the RHR drillholes are as follows:

- S1-Jmw-CH-07: Over the interval from 1880 ft to 2,092 ft, core recovery varied locally from approximately 62% to 100% in the Upper Jurassic Morrison Formation Westwater Canyon Member (Jmw) A sand, exclusive of two intervals (1,909.4 ft to 1,916 ft and 2,005.6 ft to 2,007 ft) that had 0% recovery. Below the Jmw A, core recoveries in the A-B1 shale to Jmw B sand range from 77% to 100%.
- S2-Jmw-CH-07: Over the interval from 1,651 ft to 1,855 ft, core recoveries within the Jmw A sand varied from 55% to 97%, with 0% recovery from 1,743 ft to 1,756 ft, 1,774 ft to 1,778 ft, 1,809.9 ft to 1,814 ft, 1,818.5 ft to 1,834 ft, 1,835.1 ft to 1,836.5 ft, and 1,848 ft to 1,855 ft. Below the Jmw A sand, 0% to 50% recovery was recorded down to the B1-B2 shale.
- S3-Jmw-CH-07: Recoveries of 91% to 93% were recorded in the Jmw A sand and 98% to 100% below in the A-B1 shale and Jmw B2 sand. Recovery was not recorded below Jmw B2. No recovery of core from 1,840 ft to 1,942 ft
- S4-Jmw-CH-07: Over the interval from 1,775 ft to 2,004.9 ft, no recovery from 1,812.0 ft to 1,825.0 ft, 1,860.0 ft to 1,861.0 ft, 1,886.3 ft to 1,902.5 ft, 1,921.7 ft to 1,922.5 ft, and 1,961.0 ft to 1,975.0 ft. Recoveries of 50% to 100% were recorded in the A-B1 shale to Jmw D sand. Jmw A sand was not recorded on the lithologic log.

#### 11.1.2.1 RHR Core Sampling Results

RHR completed four pilot holes for monitor wells and cored the Westwater Sandstone in each of the holes. RHR also completed a geotechnical hole in 2011 that is not included in the resource database.

Selected intervals of core were split and sampled for multi-element chemical analysis (uranium, vanadium, organic carbon) by inductively coupled plasma mass spectrometry (ICP-MS) and atomic emission spectrometry (ICP-AES) or for hydrologic studies. Chemical analyses were performed by independent laboratories: Energy Laboratories, Inc. (ELI), located in Casper, Wyoming, by ICP-MS and ICP-AES methods, and by the Mineral Lab, Inc., located in Lakewood, Colorado, using X-ray fluorescence methods (XRF). Uranium was reported as U (ppm) and converted to %$U_3O_8$ (ppm U* 1.17924/10,000).

Additional sampling continued in 2008. Samples were taken adjacent to the 2007 core samples. Chemical analysis results from the 2007 and 2008 sampling programs are listed in Table 11-1.

**Table 11-1: Strathmore Core Assay Results**
**Energy Fuels Inc. – Roca Honda Project**

| Hole ID | Sample ID | From (ft) | To (ft) | ICP (%$U_3O_8$) | XRF (%$U_3O_8$) | Closed Can (%$U_3O_8$) | ICP/Closed Can | XRF/Closed Can |
|---|---|---|---|---|---|---|---|---|
| S1a-Jmw-CH-07 | RH07-0020 | 1884.00 | 1885.00 | 0.0001 | 0.0024 | | | |
| | RH07-0021 | 1896.00 | 1897.00 | 1.2028 | 0.9434 | | | |
| | RH07-0022a | 1895.00 | 1905.00 | 0.6792 | 0.5896 | 0.647 | 105.0% | 91.1% |

| Hole ID | Sample ID | From (ft) | To (ft) | ICP ($\%U_3O_8$) | XRF ($\%U_3O_8$) | Closed Can ($\%U_3O_8$) | ICP/Closed Can | XRF/Closed Can |
|---|---|---|---|---|---|---|---|---|
| | RH07-0022b | 1895.00 | 1905.00 | 0.6780 | 0.5896 | 0.654 | 103.7% | 90.2% |
| | RH07-0023 | 1918.30 | 1919.10 | 0.0067 | 0.0050 | | | |
| | RH07-0024 | 1948.40 | 1949.50 | 0.0054 | 0.0090 | | | |
| | RH07-0025 | 1981.00 | 1982.00 | 0.0016 | 0.0041 | | | |
| | RH07-0026 | 1983.50 | 1984.50 | 1.0247 | 1.4150 | 0.595 | 172.2% | 237.8% |
| | RH07-0027 | 2047.00 | 2048.00 | 0.0020 | 0.0019 | | | |
| | RH07-0028 | 2090.40 | 2091.40 | 0.0007 | 0.0025 | | | |
| | RH07-0029 | 1925.50 | 1926.20 | 0.0015 | 0.0050 | | | |
| | RH07-0030 | 1958.50 | 1959.00 | 0.0002 | 0.0046 | | | |
| | RH07-0031 | 2013.50 | 2014.00 | 0.0014 | 0.0045 | | | |
| S2-Jmw-07 | RH08-0008 | 1734.80 | 1734.90 | 0.0088 | | | | |
| | RH08-0009 | 1735.30 | 1735.40 | 0.0292 | | | | |
| | RH07-0011 | 1735.80 | 1736.80 | 0.3762 | 0.4599 | | | |
| | RH08-0010 | 1737.30 | 1737.40 | 0.4493 | | | | |
| | RH08-0011 | 1737.80 | 1737.90 | 0.0973 | | | | |
| | RH08-0012 | 1738.30 | 1738.40 | 0.0075 | | | | |
| | RH08-0013 | 1738.80 | 1738.90 | 0.0077 | | | | |
| | RH07-0012 | 1759.00 | 1761.00 | 1.1910 | 1.5330 | | | |
| | RH08-0014 | 1761.40 | 1761.50 | 0.7464 | | | | |
| | RH08-0015 | 1761.90 | 1762.00 | 1.0047 | | | | |
| | RH08-0016 | 1796.50 | 1796.60 | 0.0054 | | | | |
| | RH08-0017 | 1797.00 | 1797.10 | 0.0057 | | | | |
| | RH08-0018 | 1797.50 | 1797.60 | 0.0010 | | | | |
| | RH07-0013 | 1798.00 | 1799.30 | 0.1863 | 0.2476 | | | |
| | RH08-0019 | 1799.50 | 1799.60 | 0.0028 | | | | |
| | RH07-0034a | 1756.00 | 1761.00 | 0.6745 | 0.8254 | 0.583 | 115.7% | 141.6% |
| | RH07-0034b | 1756.00 | 1761.00 | 0.7052 | 0.8254 | 0.702 | 100.5% | 117.6% |
| S3-Jmw-CH-07 | RH08-0020 | 1916.00 | 1916.10 | 0.0039 | | | | |
| | RH08-0021 | 1916.50 | 1916.60 | 0.0053 | | | | |
| | RH08-0022 | 1917.00 | 1917.10 | 0.0046 | | | | |
| | RH08-0023 | 1917.50 | 1917.60 | 0.0058 | | | | |
| | RH08-0024 | 1918.00 | 1918.10 | 0.0074 | | | | |
| | RH08-0025 | 1918.50 | 1918.60 | 0.0068 | | | | |

| Hole ID | Sample ID | From (ft) | To (ft) | ICP (%$U_3O_8$) | XRF (%$U_3O_8$) | Closed Can (%$U_3O_8$) | ICP/Closed Can | XRF/Closed Can |
|---|---|---|---|---|---|---|---|---|
| | RH08-0026 | 1919.00 | 1919.10 | 0.0125 | | | | |
| | RH08-0027 | 1919.50 | 1919.60 | 0.0111 | | | | |
| | RH08-0028 | 1920.00 | 1920.10 | 0.0084 | | | | |
| | RH07-0032 | 1920.50 | 1921.50 | 0.0798 | 0.0909 | 0.0369 | 216.3% | 246.4% |
| | RH08-0029 | 1922.00 | 1922.10 | 0.0288 | | | | |
| | RH08-0030 | 1922.50 | 1922.60 | 0.0300 | | | | |
| | RH08-0031 | 1923.00 | 1923.10 | 0.0179 | | | | |
| | RH08-0032 | 1923.50 | 1923.60 | 0.0180 | | | | |
| | RH08-0033 | 1924.00 | 1924.10 | 0.0222 | | | | |
| | RH08-0034 | 1924.50 | 1924.60 | 0.0131 | | | | |
| | RH08-0035 | 1925.00 | 1925.10 | 0.0136 | | | | |
| | RH08-0036 | 1925.50 | 1925.60 | 0.0132 | | | | |
| | RH08-0037 | 1926.00 | 1926.10 | 0.0182 | | | | |
| | RH08-0038 | 1926.50 | 1926.60 | 0.0137 | | | | |
| | RH08-0039 | 1927.00 | 1927.10 | 0.0099 | | | | |
| | RH08-0040 | 1927.50 | 1927.60 | 0.0037 | | | | |
| | RH08-0042 | 1937.00 | 1937.10 | 0.0006 | | | | |
| | RH08-0044 | 1938.00 | 1938.10 | 0.0010 | | | | |
| | RH08-0045 | 1938.50 | 1938.60 | 0.0015 | | | | |
| | RH08-0046 | 1939.00 | 1939.10 | 0.0017 | | | | |
| | RH08-0047 | 1939.50 | 1939.60 | 0.0044 | | | | |
| | RH08-0048 | 1940.00 | 1940.10 | 0.0037 | | | | |
| | RH08-0049 | 1940.50 | 1940.60 | 0.0033 | | | | |
| | RH07-0033 | 1941.00 | 1942.00 | 0.0238 | 0.0282 | | | |
| S4-Jmw-CH-07 | RH07-0005 | 1787.20 | 1788.00 | 0.0013 | | | | |
| | RH07-0006 | 1807.20 | 1805.50 | 0.0002 | | | | |
| | RH07-0007 | 1847.60 | 1848.80 | 0.0001 | | | | |
| | RH07-0008 | 1882.90 | 1884.30 | 0.0001 | | | | |

### 11.1.2.2 Sample Preparation, Analysis, and Security

RHR implemented and followed strict standard operating procedures as documented in Standard Operation Procedure 006 “Sample handling, packaging, shipping, and chain of custody” (2008). The Standard Operating Procedure (SOP) outlines the preparation of environmental and waste characterization samples for shipment to the off-site analytical laboratory, and the chain of custody (CHC) procedures to follow from the sample collection stage to the entry of results into the RHR database.

An RHR or contract geologist monitored removal of core from the core barrel to transportation of core to the locked storage facility adjoining RHR's geology office in Grants. Sampling was done at this facility. All logging, sampling, and handling of core was supervised by the RHR Senior Development Geologist and performed by RHR contract geologists.

All samples were collected, packaged, sealed, and labelled according to the SOP. All sample containers used for transport were checked for the existence of external contamination. If contamination was identified, the container was decontaminated in accordance with the applicable SOP.

All samples were packaged to minimize the possibility of breakage during shipment. The shipping package was sealed with tape or locked, so that tampering could be readily detected.

Prior to transporting the samples to the analytical laboratory for analysis, the field geologist checked each sample for proper containment, preservatives, if required, and labels, and verified that the correct information was recorded on the COC form and seals. If discrepancies were noted, the sample documentation was corrected. Samples were then packaged and shipped to the designated analytical laboratories. All sample information was recorded in a sample logbook, including date and time of sample collection, sampler name, sample location and depth interval, sample number, sample type, and observations during sampling (e.g., temperature, wind).

The sampler attached a unique sample label to each sample with the date and time of sample collection, sample location and depth interval, sample number and sample type.

A COC/analytical request form was completed and accompanied all sample shipments from the field to the laboratory. Samples were shipped via a commercial carrier or transported to the analytical laboratory under COC procedures.

Upon receipt of samples, laboratory personnel confirmed that the contents of the shipment were accurately recorded by the COC, then signed and dated the COC, indicating receipt of the samples. After the samples had been verified with the COC documentation, custody of the samples was relinquished to the laboratory personnel.

In the SLR QP's opinion, past records indicate that RHR followed industry best practices in the sample preparation, analysis, and security procedures at Roca Honda, and the data are adequate for use in the estimation of Mineral Resources.

#### 11.1.2.3 Assaying and Analytical Procedure

Closed can analyses were also conducted on samples for comparison with ICP and XRF results. The closed can method involves calculating the "radiometric assay" of the sample by determining the amount of gamma radiation given off by the daughter products of natural uranium radioactive decay. The difference between the "radiometric assay" and the chemical assay determined using ICP and XRF is what is referred to as disequilibrium.

### 11.1.3 Radiometric Equilibrium

Uranium grade is determined by measuring the radioactivity levels of certain daughter products formed during radioactive decay of uranium atoms. Most of the gamma radiation emitted by nuclides in the uranium decay series is not from uranium, but from daughters in the series.

Where daughter products are in equilibrium with the parent uranium atoms, the gamma-ray logging method will provide an accurate measure of the amount of parent uranium that is present. A state of disequilibrium may exist where uranium has been remobilized and daughter products remain after the uranium has been depleted, or where uranium occurs and no daughter products are present. Where disequilibrium exists, the amount of parent uranium present can be either underestimated or overestimated. It is important to obtain representative samples of the uranium mineralization to confirm the radiometric estimate by chemical methods.

Core is sampled over mineralized intervals as determined by a hand-held Geiger counter or scintillometer to define mineralized boundaries. Core intervals are split and sampled. Each sample is crushed and pulverized, and then two, separate assays are made of the same pulps. One assay is a scaler-radiometric or closed can radiometric log; the other is a chemical assay. The disequilibrium factor is the ratio of the actual amount of uranium (measured by chemical assay) to the calculated amount (based on the gamma-ray activity of daughters). If the quantities are equal, there is no disequilibrium. If the ratio is less than one, some uranium has been lost and the calculated values are overestimating the quantity of uranium.

The degree of disequilibrium will vary with the mineralogy of the radioactive elements and their surroundings (which may create a reducing or oxidizing environment), climate, topography, and surface hydrology.

The sample volume will also affect the determination of disequilibrium, as a small core sample is more likely to show extreme disequilibrium than a larger bulk sample. In some cases, the parents and daughters may have moved apart over the length of a sample, but not over a larger scale, such as the mineralized interval.

Generally, checks are made for disequilibrium when drilled resources reach approximately 100,000 lb to 500,000 lb of contained $U_3O_8$ (Fitch, 1990). In new areas, disequilibrium is checked after the first few core holes. For large uranium producers with years of operating experience in well-known districts, such as the Ambrosia Lake subdistrict, and with extensions on-trend with mined deposits, it was common to drill out most of the resources and obtain several core hole intercepts of selected mineralized zones for logging, assaying, and metallurgical checks prior to large capital expenditures such as shaft-sinking and underground development.

Analysis of chemical equilibrium of uranium for the Grants uranium district indicates that various relationships are present. In most areas and deposits, uranium is in equilibrium, or is slightly enriched relative to gamma determinations, i.e., $chemU_3O_8$ is greater than $eU_3O_8$.

There is no report of core holes or core assays for the drilling performed by Kerr-McGee on Sections 9 and 10. Western Nuclear reports cored intervals on Section 16 for Hole 68 and Hole 69, however, no logging and/or assay data are available (Fitch, 2010). Kerr-McGee reports include information for holes 17-514-C through 17-518-C in Section 17, however, assay data are only available for holes 17-516-C and 17-517-C.

Based on Kerr-McGee's extensive operating experience in the Ambrosia Lake subdistrict of the Grants uranium district there were no historical concerns regarding disequilibrium for gamma-ray results (Fitch, 2010). Additionally, RHR core showed no major negative disequilibrium. Therefore, based on this information, no disequilibrium factor has been applied to the Mine $eU_3O_8$ gamma logs and/or assays.

RHR has results of analyses of chemical equilibrium in four samples from three core holes (totalling 17 ft of mineralized core) located in Section 16. Results indicate positive average equilibrium ($chemU_3O_8/eU_3O_8$) for the four samples.

Based on a review of available reports describing the state of chemical equilibrium for uranium in the vicinity of the Roca Honda deposit and in similar deposits with primary-type uranium mineralization, EFR and the SLR QP consider it possible that the Roca Honda deposit, taken as a whole, will have an average state of equilibrium that is slightly favorable with regard to chemical uranium versus $eU_3O_8$.

EFR is of the opinion that there is a low risk of negative equilibrium, i.e., chemical uranium lower than radiometrically determined uranium, in the Roca Honda deposit. Additional sampling and analyses are recommended by the SLR QP to supplement results of the limited disequilibrium testing conducted by RHR.

## 11.2 Sample Security

EFR has conducted no core sampling since acquiring the properties. All reported core sampling was performed by previous operators RHR. The reported sample preparation, handling of the historic coring, and sample security cannot be confirmed.

## 11.3 Quality Assurance and Quality Control

Quality assurance (QA) consists of evidence to demonstrate that the gamma logging and assay data has precision and accuracy within generally accepted limits for the sampling and analytical method(s) used in order to have confidence in a resource estimate. Quality control (QC) consists of procedures used to ensure that an adequate level of quality is maintained in the process of collecting, preparing, and assaying the exploration drilling samples. In general, QA/QC programs are designed to prevent or detect contamination and allow assaying (analytical), precision (repeatability), and accuracy to be quantified. In addition, a QA/QC program can disclose the overall sampling-assaying variability of the sampling method itself.

### 11.3.1 Kerr-McGee

Gamma-ray logs were run by Kerr-McGee and Century Geophysical for Sections 9, 10, and 17 and by Geoscience Associates logging trucks and Century Geophysical for Section 16. The radiometric probe method of analysis provides a continuous record of mineralization with depth. The probe is calibrated with a known radioactive source, is lowered to the bottom of the drillhole, and processes and records a continuous gamma-log while being lifted. When a mineralized interval is encountered, the probe is pulled up through the zone to determine the upper limit, lowered again, and the mineralized zone is run a second time at a less sensitive scale to better fit the plot on the log paper. All information of the second run is recorded on the log for later computation of grade.

Each logging truck periodically made logging runs of the Atomic Energy Commission (AEC) test pit, a set of shallow holes with known concentrations and thickness of uranium. In addition to the gamma log, plots are made of the resistivity and spontaneous potential (SP). The resistivity and SP generate a continuous strip chart of the lithologies as the probe is removed from the drillholes. The log plot records gamma anomalies correlated to specific footages and lithologic units directly at the source, so there is no possibility of a later mix-up of data.

The probe 11-8stimate11-8onn procedure with the AEC test pit is the standard by which the uranium industry operated. The test pits were designed with similar grade and uranium mineralization common to the Grants uranium district. EFR has a record of probe calibration dates and data for Kerr-McGee log trucks.

### 11.3.2 RHR

The four RHR pilot holes and the geotechnical hole were probed by Jet West. Jet West maintains a policy of regularly calibrating gamma-ray probes, to determine instrument K-factor, using the five calibration pits (cased holes) in Grand Junction that owned by the DOE and maintained by Navarro Research and Engineering, Inc. Jet West provides a digital and graphic log with cps as well as %e$U_3O_8$ computed by the K-factor and other recorded calibration factors.

The QA/QC procedures undertaken by Jet West for geophysical logging of holes have been reviewed by the SLR QP and meet industry best practices.

All sample preparation, ICP-MS, ICP-AES, and radiometric analysis of the core samples was performed by ELI. All analysis was performed in compliance with National Environmental Laboratory Accreditation Conference (NELAC) and ELI is certified in the NELAC program. Further, ELI practices rigorous internal COC and QA/QC processes (www.energylab.com).

RHR did not submit blanks or standard reference samples. All QA/QC work was completed internally by the respective third-party laboratories.

Duplicate samples were submitted for analysis in 2007 and are listed in Table 11-1. Two duplicate samples are insufficient to make statistical comparisons, however, the duplicate ICP sample results are within 4% of the original results and considered acceptable.

## 11.4 Conclusions

The SLR QP is of the opinion that the sample security, analytical procedures, and QA/QC procedures used by EFR meet industry best practices and are adequate to estimate Mineral Resources.

The SLR QP recommends modifying the sample analysis QA/QC protocol to include the regular submission of blanks and standards for future drill programs.

# 12.0 DATA VERIFICATION

Data verification is the process of confirming that data has been generated with proper procedures, is transcribed accurately from its original source into the project database and is suitable for use as described in this Technical Report.

As part of the resource estimation procedure drill data is spot checked by EFR personnel and audited by the SLR QP for completeness and validity.

The data used to support this current Mineral Resource estimate has been reviewed and disclosed previously in Canadian NI 43-101 Technical Reports. Those data verification efforts carried out by the same SLR QP in 2011, 2016, and 2021 are summarized in this Section. Additionally, EFR hired Amec Foster Wheeler (Amec), now Wood, in 2016 to review the drillhole data as part of a drill spacing study. The findings of that study are also provided.

## 12.1 David Fitch Data Verification (2004 to 2008)

The initial NI 43-101 compliant Technical Reports for Sections 9, 10, and 16 of the Project were authored by David Fitch, an independent qualified person.

Fitch conducted a detailed review of the extensive files in Strathmore's warehouse in Riverton, Wyoming, from October 14 to 15, 2004, and visited the property on October 16, 2004 (Fitch, 2008). Over 300 boxes, file cabinets, and map files covering the Roca Honda property as well as other projects were available for review. The files were generally complete and contained original data consisting of gamma-ray logs, mini logs, drillhole summaries, resource estimation sheets, copies of drillhole maps, "mine estimation" maps, reports of mine plans, survey documents, logging truck calibration records, and a few representative cross-sections. During the site visit, a number of drillhole locations, claim posts, and the US Mineral Survey monuments for MS2292 were examined.

A detailed review of Section 16 data continued in February and March 2006. This included drillhole maps by Rare Metals, Western Nuclear, and Kerr-McGee, reduced gamma-ray logs (scale of 1 in. = 50 ft), drill data summary sheets with depths, thickness, grade and horizon of uranium mineralization, drift survey results, and color of host rock. The dataset also included a set of drillhole data sheets prepared by Kerr-McGee for Section 16 that summarized the mineralized intercepts by drillhole, together with a rough calculation of "ore reserves" with the initials "JWS" and dated 9-25-79. These notes did not have supportive maps with block outlines and may have been preliminary evaluation notes.

Items not recovered for review, but listed in the data list, are mylar cross-sections, lithological logs, and AEC test pit logging files, which are stored at RHR field offices.

Fitch conducted a site visit from November 18 to 19, 2007, to examine core from the pilot holes and review additional files, maps, and data in the field and in the RHR regional office in Santa Fe, New Mexico. Several mineralized intervals of core from RHR holes drilled in 2007 were examined by Fitch, who concluded that there was no apparent contamination or disturbance of core.

Additional analytical data for the RHR pilot holes drilled on Section 16 were received and reviewed in February 2008.

Fitch concluded that the data collected by Kerr-McGee and Western Nuclear was of high quality and prepared in a reliable manner.

## 12.2 Roscoe Postle Associates Data Verification (2010 to 2011)

In 2010, SLR, formerly Roscoe Postle Associates Inc. (RPA), was hired by Strathmore to complete a NI 43-101 Preliminary Economic Assessment on Sections 9, 10, and 16 of the Project.

SLR QPs visited the Strathmore office in Riverton, Wyoming, from March 1 to 5, 2010. During the visit, the SLR QP reviewed historical plans and sections, geological reports, historical and recent drillhole logs, digital drillhole database, historical drillhole summary radiometric logs and survey records, property boundary surveys, and previous resource estimates for the Project. Discussions were also held with Strathmore personnel involved in the Project.

The SLR QP data review included a discussion between SLR and David Fitch, author of the 2006, 2008, and 2010 NI 43-101 Technical Reports.

The SLR QP visited the Roca Honda property, the Grants office, and the Santa Fe office in May 2011. During the visit, the SLR QP examined plans and sections, reviewed core logging and sampling procedures, and checked a few property boundary markers and drillhole collar locations. As part of the data verification process, the SLR QP independently measured cps of selected drill core samples using a handheld scintillometer, and checked a few drillhole collars and section boundaries on the property using a handheld GPS. Results are presented in Table 12-1 and Table 12-2. A few independent checks are insufficient to make statistical comparisons, however, the SLR QP's checks confirm the RHR drillhole locations and presence of uranium mineralization.

No significant discrepancies were identified during the verification process or the independent field data verification.

**Table 12-1: SLR Survey Check**
**Energy Fuels Inc. – Roca Honda Project**

| Surveyed Point | Location | UTM NAD 83 SLR GPS | | TRMann State Plane SLR GPS | | TRMann State Plane RHR Coordinates | |
|---|---|---|---|---|---|---|---|
| | | Easting | Northing | Easting | Northing | Easting | Northing |
| Hole 16-011 | Sec. 16 | 256,220 | 3,916,432 | 2,769,084 | 1,587,580 | 2,769,092 | 1,587,588 |
| Hole 16-040 | Sec. 16 | 256,272 | 3,916,432 | 2,769,255 | 1,587,585 | 2,769,267 | 1,587,572 |
| Sec. Corner | Sec. 9 SE Corner | 256,367 | 3,916,566 | 2,769,554 | 1,588,034 | 2,769,553 | 1,588,037 |
| Hole 10-096 | Sec. 10 | 257,518 | 3,917,310 | 2,773,259 | 1,590,582 | 2,773,263 | 1,590,582 |
| Claim Corner | 303, 330, 304, 331 | 257,571 | 3,917,021 | 2,773,460 | 1,589,639 | 2,773,452 | 1,589,642 |

**Table 12-2: SLR Core Gamma-Ray Check**
**Energy Fuels Inc. – Roca Honda Project**

| Hole ID | From (ft) | To (ft) | CPS (RHR) | CPS (SLR Check) |
|---|---|---|---|---|
| S2-Jmw-CH-07 | 1,758.0 | 1,758.3 | 100 | 60 |
| S1-Jmw-CH-07 | 1,898.0 | 1,898.3 | 210-220 | 111 |
| S1-Jmw-CH-07 | 1,898.0 | 1,901.0 | 110-220 | 105-162 |

| | | | | |
|---|---|---|---|---|
| S1-Jmw-CH-07 | 1,901.0 | 1,905.0 | 85-220 | 25-109 |

### 12.2.1 RHR Database Revisions

All Kerr-McGee drillhole collar locations were originally surveyed in a historical local grid coordinate system. In 2008, Thomas R. Mann and Associates (TRMann) surveyed the Roca Honda property, which included a limited ground survey of control points and an aerial survey, which produced aerial imagery and surface contours. All surface data were converted into the TRMann coordinate system, which is a modified NAD 83 State Plane New Mexico Western Zone system (Surveying Control Inc., 2008).

Available historical records for Section 16 contained discrepancies or had data missing for drillhole collar locations. RHR reviewed all database records and historical aerial photographs from 1978 and determined an appropriate location for each collar. Some Section 16 holes had recorded “no drift” records and were therefore assigned no drift in the RHR database.

Some holes were removed from the RHR digital database as the drillhole records were determined to be unreliable, either due to missing survey data or missing geophysical log.

In August 2010, a resurvey of the property was conducted by Land Survey Company LLC, to collect data on the Section corners, mineral surveys, Section 11 drillhole collars, and RHR wells.

All Section corners and mineral survey markers that were located in the field and determined to be reliable, were surveyed. Section 11 collars marked either by a collar casing or drillhole cuttings were surveyed. RHR wells drilled in 2007 were resurveyed.

There were 11 collars, marked by wooden posts or pipes, within Section 16, determined to be reliable and surveyed. Collar locations for the remaining Section 16 holes were calculated based on the locations of the surveyed holes.

A detailed description of the 2010 field survey and resultant plan map are included in the memorandum titled “August 3 Field Survey” (Kapostasy, 2010).

### 12.2.2 Database Verification 2011

The SLR QP checked the Vulcan digital drillhole database against available historical records, including Kerr-McGee drillhole summary sheets, drillhole plan maps, historical collar survey summaries, and gamma logs. Drillhole collar locations and downhole drift were checked for all holes drilled on Sections 9, 10, and 16. The SLR QP checked approximately 10% of historical drillhole records for discrepancies in lithology and radiometric log records in the areas of the interpreted mineralized zones. Drill logs and associated data sheets also include K-factors, dead time, hole size, date drilled, and date logged.

The SLR QP did not encounter any significant discrepancies with the Sections 9 and 10 drillholes in the vicinity of modeled mineralized zones.

The SLR QP reviewed the revised Section 16 collar locations and is of the opinion that the surveyed drill locations are accurate. The remaining locations were located based on an origin calculated using the surveyed holes and coordinates given by Western Nuclear. These locations have a small level of uncertainty associated with them as the origin used is an average and has an error of ± 3 ft. In the SLR QP’s opinion this uncertainty is insignificant and does not affect the calculated resource.

The SLR QP recommends removing the Section 16 drillholes with no recorded drift from the drillhole database in the future. Drillholes in Sections 9 and 10 with no recorded drift were removed from the database, and it is unlikely that the Section 16 holes would not deviate. Only a few Section 16 drillholes have no recorded drift, and as they are located away from mineralized models, they do not have an impact on the current resource model.

No significant discrepancies were identified with the lithology and assay data in the Section 16 drillholes.

The SLR QP also checked the 2007 RHR drillhole data in the digital database against original records. No significant discrepancies were encountered. The 2011 geotechnical hole is accurately located.

Downhole gamma-ray, SP, and resistivity logs generated on the RHR drillholes were analyzed by RHR for lithology and uranium grades. Interpreted lithology and measured uranium grades were entered and compiled with all historical drillholes in MS Excel spreadsheets, and later imported into a Vulcan database. RHR geologists also recorded detailed descriptions of logged lithology based on visual inspection of recovered core; however, this information was not entered into the database and was used for comparative purposes.

The SLR QP reviewed the conversion of drillhole collar coordinates from historical to TRMann coordinates. No significant discrepancies were identified.

The SLR QP notes that descriptions of recent drilling programs, logging and sampling procedures have been well documented by RHR. No significant discrepancies were identified.

In 2012, the SLR QP reviewed RHR original lithology logs, gamma-ray, SP, and resistivity logs. All data corresponded with respect to lithology intervals and $\%U_3O_8$ grades and disequilibrium analysis, as presented in Table 12-3. A detail description of the lithology can be found in Section 7 and is presented in the stratigraphic column in Figure 7-4. The data presented in Table 12-3 and Table 12-4 include a comparison between two different holes, S1-Jmw-CH-007 and S1a-Jmw-CH-007, drilled 30 ft apart.

**Table 12-3: Lithology: Radiometric Log vs Core Log**
**Energy Fuels Inc. – Roca Honda Project**

| Drillhole | Vulcan Database (Radiometric Log) | | | Core Lithology | | |
|---|---|---|---|---|---|---|
| | From (ft) | To (ft) | Lithology | From (ft) | To (ft) | Lithology |
| S1-Jmw-CH-07 (compared to S1a-Jmw-CH-07) | 1,904.0 | 1,927.0 | A | 1,896.0 | 1,924.5 | A |
| | 1,927.0 | 1,940.0 | Aob | 1,924.5 | 1,943.1 | Aob |
| | 1,940.0 | 1,957.0 | B1 | 1,943.1 | 1,956.4 | B1 |
| | 1,957.0 | 1,968.0 | B1ob | 1,956.4 | 1,964.0 | B1ob |
| | 1,968.0 | 1,997.0 | B2 | 1,964.0 | 2,004.0 | B2 |
| | 1,997.0 | 2,016.0 | B2ob | 2,004.0 | 2,018.6 | B2ob |
| | 2,016.0 | 2,064.0 | C | 2,018.6 | 2,078.9 | C |
| | 2,064.0 | 2,070.0 | Cob | 2,078.9 | 2,086.3 | Cob |
| | 2,070.0 | 2,084.0 | D | 2,086.3 | N/A | D |
| S2-Jmw-CH-07 | 1,731.0 | 1,760.0 | A | 1,728.0 | 1,757.0 | A |
| | 1,760.0 | 1,792.0 | Aob | 1,757.0 | 1,789.0 | Aob |

| Drillhole | Vulcan Database (Radiometric Log) | | | Core Lithology | | |
|---|---|---|---|---|---|---|
| | From (ft) | To (ft) | Lithology | From (ft) | To (ft) | Lithology |
| | 1,792.0 | 1,825.0 | B1 | 1,789.0 | N/A | B1 |
| | 1,825.0 | 1,830.0 | B1ob | N/A | N/A | B1ob |
| | 1,830.0 | 1,844.0 | B2 | N/A | 1,841.0 | B2 |
| | 1,844.0 | 1,865.0 | B2ob | 1,841.0 | N/A | B2ob |
| | 1,865.0 | 1,894.0 | C | N/A | N/A | C |
| | 1,894.0 | 1,896.0 | Cob | N/A | N/A | Cob |
| | 1,896.0 | 1,910.0 | D | N/A | N/A | D |
| S3-Jmw-CH-07 | 1,862.0 | 1,885.0 | A | 1,858.7 | 1,881.7 | A |
| | 1,885.0 | 1,915.0 | Aob | 1,881.7 | 1,910.4 | Aob |
| | 1,915.0 | 1,942.0 | B1 | 1,910.4 | 1,938.6 | B1 |
| | 1,942.0 | 1,962.0 | B1ob | 1,938.6 | N/A | B1ob |
| | 1,962.0 | 1,970.0 | B2 | N/A | N/A | B2 |
| | 1,970.0 | 1,976.0 | B2ob | N/A | N/A | B2ob |
| | 1,976.0 | 2,014.0 | C | N/A | N/A | C |
| | 2,014.0 | 2,016.0 | Cob | N/A | N/A | Cob |
| | 2,016.0 | 2,022.0 | D | N/A | N/A | D |
| S4-Jmw-CH-07 | 1,708.0 | 1,752.0 | A | N/A | N/A | A |
| | 1,752.0 | 1,779.0 | Aob | N/A | N/A | Aob |
| | 1,779.0 | 1,794.0 | B1 | 1,779.0 | 1,796.0 | B1 |
| | 1,794.0 | 1,796.0 | B1ob | 1,796.0 | 1,796.5 | B1ob |
| | 1,796.0 | 1,812.0 | B2 | 1,796.5 | 1,816.3 | B2 |
| | 1,812.0 | 1,832.0 | B2ob | 1,816.3 | 1,841.3 | B2ob |
| | 1,832.0 | 1,898.0 | C | 1,841.3 | 1,898.0 | C |
| | 1,898.0 | 1,932.0 | Cob | 1,898.0 | 1,932.0 | Cob |
| | 1,932.0 | 1,948.0 | D | 1,932.0 | 1953.0 | D |

## Table 12-4: %$U_3O_8$ Grade: Gamma Log vs Core Assay
## Energy Fuels Inc. – Roca Honda Project

| Drillhole | Vulcan Database (Gamma-Ray Logs) | | | Core Assay | | |
|---|---|---|---|---|---|---|
| | From (ft) | To (ft) | %$U_3O_8$ (Gamma-ray) | From (ft) | To (ft) | %$U_3O_8$ (calc from ICP) |
| Jmw-CH-007/S1-Jmw-Ch-007[1] | | | | 1,884.0 | 1,885.0 | 0.000130 |
| | | | | 1,896.0 | 1,897.0 | 1.203 |
| | 1,904.3 | 1,910.8 | 0.37 | 1,895.0 | 1,905.0 | 0.679 |
| | 1,910.8 | 1,915.8 | 0 | | | |
| | 1,915.8 | 1,917.3 | 0.06 | | | |
| | 1,917.3 | 1,953.8 | 0 | 1,918.3 | 1,919.1 | 0.007 |
| | | | | 1,925.5 | 1,926.2 | 0.002 |
| | | | | 1,948.4 | 1,949.5 | 0.005 |
| | 1,953.8 | 1,957.3 | 0.48 | | | |
| | 1,957.3 | 1,971.5 | 0 | 1,958.5 | 1,959.0 | 0.000165 |
| | 1,971.5 | 1,981.0 | 0.16 | | | |
| | 1,981.0 | 1,983.0 | 0 | 1,981.0 | 1,982.0 | 0.002 |
| | 1,983.0 | 1,984.5 | 0.08 | 1,983.5 | 1,984.5 | 1.025 |
| | 1,984.5 | 1,987.8 | 0 | | | |
| | 1,987.8 | 1,989.8 | 0.06 | | | |
| | 1,989.8 | 2,073.0 | 0 | 2,013.5 | 2,014.0 | 0.001 |
| | | | | 2,047.0 | 2,048.0 | 0.002 |
| | 2,073.0 | 2,074.5 | 0.09 | | | |
| | 2,074.5 | 2,108.0 | 0 | 2,090.4 | 2,091.4 | 0.001 |
| S2-Jmw-CH-007 | 1,628.0 | 1,731.0 | 0 | | | |
| | 1,731.0 | 1,734.0 | 0.16 | 1,731.0 | 1,732.0 | 0.376 |
| | 1,734.0 | 1,748.0 | 0 | | | |
| | 1,748.0 | 1,757.0 | 0.56 | 1,750.0 | 1,755.0 | 0.675 |
| | 1,757.0 | 1,792.0 | 0 | 1,753.8 | 1,755.0 | 1.191 |
| | 1,792.0 | 1,793.5 | 0.2 | | | |
| | 1,793.5 | 2,010.0 | 0 | 1,792.0 | 1,793.3 | 0.186 |
| S3-Jmw-CH-007 | 1,795.0 | 1,925.5 | 0 | | | |
| | 1,925.5 | 1,932.5 | 0.02 | 1,925.5 | 1,926.6 | 0.08 |

| Drillhole | Vulcan Database (Gamma-Ray Logs) | | | Core Assay | | |
|---|---|---|---|---|---|---|
| | From (ft) | To (ft) | %$U_3O_8$ (Gamma-ray) | From (ft) | To (ft) | %$U_3O_8$ (calc from ICP) |
| | 1,932.5 | 1,942.5 | 0 | | | |
| | 1,942.5 | 1,944.5 | 0.07 | 1,942.5 | 1,944.5 | 0.024 |
| | 1,944.5 | 2,068.0 | 0 | | | |
| S4-Jmw-CH-007 | 1,600.0 | 1,777.5 | 0 | | | |
| | 1,777.5 | 1,781.5 | 0.02 | | | |
| | 1,781.5 | 2,006.0 | 0 | 1,787.2 | 1,788.0 | 0.001 |
| | | | | 1,807.2 | 1,808.5 | 0.000153 |
| | | | | 1,847.6 | 1,848.8 | 0.0000708 |
| | | | | 1,882.9 | 1,884.3 | 0.0000708 |

Notes:

1. Gamma-ray results taken from S1-Jmw-CH-007, core samples taken from S1a-Jmw-CH-007

### 12.2.3 K-Factors

The SLR QP reviewed the logs and related information for 10 drillholes to confirm the interpretation and calculation of grade and thickness recorded by RHR in the resource database. The review was limited by the availability of probe logs in the full size format, and only included holes from Section 10. The holes were drilled by Kerr-McGee over the period from 1958 to 1979. K-factors and the identification numbers of the units and probes used for surveying were recorded on the logs and drill summary reports. RHR provided K-factors with corresponding probe numbers from historical Kerr-McGee documents.

The SLR QP did not identify any significant problems with the interpretations and calculations and is of the opinion that the historical K-factors are acceptable.

The SLR QP is of the opinion that the database issues will not significantly affect the current resource model, and that the database is valid and suitable to estimate Mineral Resources at the Project.

### 12.2.4 Continuity of Mineralization

The SLR QP conducted a preliminary review of grade continuity for each mineralized sandstone unit. Results indicate continuity of mineralization within each sandstone unit in both plan and section in elongate tabular or irregular shapes. Mineralization also occurs in various horizons within the sandstone units. Based on a minimum cut-off of 0.1% U and six-foot thickness, in general for each mineralized sandstone unit (A, B1, B2, C, and D), 3% of the mineralization is located adjacent to the upper sandstone boundary, 83% is located within the unit, and 14% is located adjacent to the lower boundary. Although the majority of this high-grade mineralization is located mid unit, continuity is variable perhaps due to local controlling sedimentary features or structures. This will affect the interpretation of continuity between holes.

Mineralization intersected in recent RHR holes aligns with and confirms mineralization trends based on historical holes. In addition, recent holes barren of mineralization are located in areas of barren historical holes. Grades intersected in recent holes are comparable to, or are higher than, grades in adjacent mineralized historical holes. Although this comparison is limited to areas local to recent drilling, it provides additional support for the use of historical holes for resource estimation.

The SLR QP is of the opinion that although continuity of mineralization is variable, drilling confirms that local continuity exists within individual sandstone units.

## 12.3 Roscoe Postle Associates Data Verification (2016)

### 12.3.1 Database

In 2010, SLR, formerly RPA, was hired by Strathmore to complete a NI 43-101 Preliminary Economic Assessment on Sections 9, 10, and 16 of the Project.

In June 2015, the SLR QP conducted a series of verification tests on the drillhole database provided by Strathmore for the properties acquired from URI This database contained drillhole collar, deviation, lithology, and assay tables. The SLR QP's tests included a search for unique, missing, and overlapping intervals, a total depth comparison, duplicate holes, property boundary limits, and a visual search for extreme or deviant survey values. A limited number of holes were identified which lacked coordinates, drill depth, lithological, or geotechnical information. No other errors were encountered, and no significant issues were identified

The SLR QP did not perform an independent verification of the laboratory chemical assays for the historical drilling in Section 17 due to the unavailability of the data.

### 12.3.2 Radiometric Data vs. Historical GT Plan Maps

The SLR QP reviewed 0.5 ft natural gamma radiometric (probe) data and related information from Section 17 to validate the reported grade and grade times thickness (GT) values shown on the drillhole intercept map in Figure 10-1. The review included holes from Section 17 only. The holes were drilled by Kerr-McGee and Western Nuclear over the period from 1969 to 1978. Kerr-McGee did not place the calibration data on each individual drillhole log header, but rather listed the probe identification number, which could be traced back to a calibration log that contained all pertinent data on that probe to determine $eU_3O_8$. Strathmore provided calibration factors and estimated grades with corresponding probe numbers from historical Kerr-McGee documents.

The SLR QP did not identify any significant problems with the interpretations and calculations (Figure 12-1).

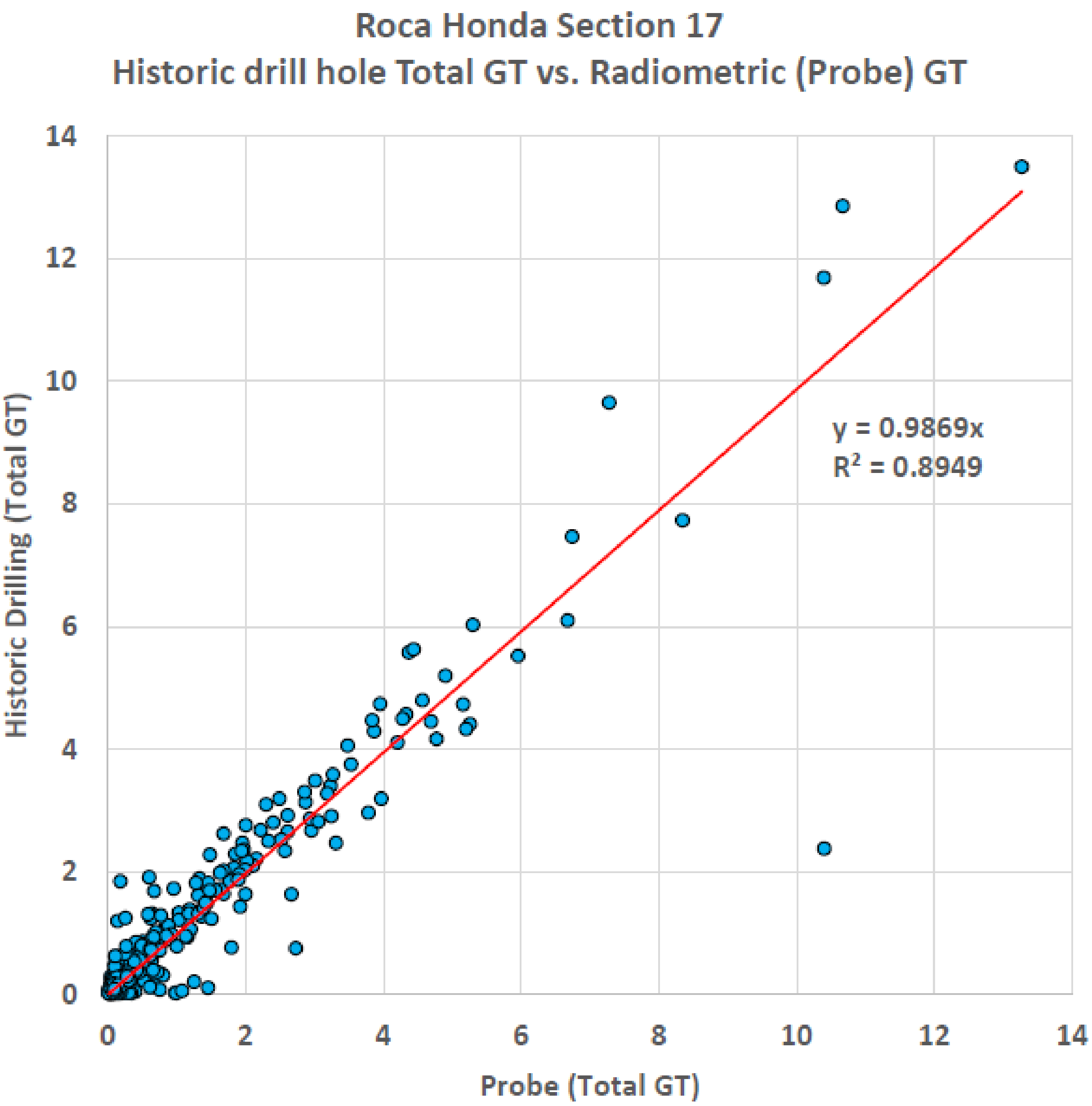


Figure 12-1: Historical Drillhole Mineralized Total GT Intercepts vs. Radiometric Data for Section 17

### 12.3.3 Continuity of Mineralization

The SLR QP conducted a preliminary review of grade continuity for the A, B1, and B2 mineralized sandstone units within Section 17. The SLR QP has carried out check estimates of the historical polygonal models using the GT drill intercept contour method. The contour method has been described by Agnerian and Roscoe (2002) and has been used for many decades for estimation of uranium resources particularly in the western U.S.

Total GT values for each drillhole intercept within the A, B1, and B2 sandstones (domains) were plotted on plans and contoured. The areas between the contours were measured and multiplied by the GT geometric mean in the contour interval. The GT values are proportional to pounds of $U_3O_8$ per square foot and the sum of these values times area are converted to total pounds of $U_3O_8$ for each domain.

Results indicate that although continuity of mineralization is variable, local continuity exists within each sandstone unit in both plan and section as elongate tabular or irregular shapes. Mineralization also occurs in various horizons within the sandstone domains. The contained pounds of $U_3O_8$ estimated by the contour method are in the same general range as the historical polygon estimate.

## 12.4 Amec Foster Wheeler Data Verification (2016)

Amec Foster Wheeler (Amec), now Wood, reviewed the drillhole data associated with the Project as part of a drill spacing study for EFR. The review included looking at cross-sections, the drillhole database, conversion of coordinates, and geologic surfaces. Overall, the findings were that the current database and interpretations are adequate for the level of study (NI 43-101 Preliminary Economic Assessment) being completed. Recommendations were made for future studies. The conclusions and recommendations from Amec are summarized below.

### 12.4.1 Conclusions

- EFR and SLR appear to have done a thorough verification of drilling data. The data are typical of exploration done in the district during the 1970s.
- The amount of core drilling is limited, and the available disequilibrium analysis information is inadequate, however, disequilibrium has not been reported to be an issue in mines located east or west of Roca Honda.
- The database was spot-checked against primary documents and found to be correct. This includes comparison of digitized logs versus original strip logs.
- EFR has been converting its digitized logs to $eU_3O_8$ without the consideration of tail factors. Kerr-McGee's intercepts (that use tail factors) are 10% higher in grade.

### 12.4.2 Recommendations to Upgrade Report

Since the previous Mineral Resource estimate was completed, EFR has conducted no additional drilling on the Project and the SLR QP's review of the data for this Technical Report found no differences in the drilling database that were not already identified in the previous sections. To advance the Project, the SLR QP recommends the following:

- Drill at least 10 holes on each section and obtain cores from the mineralized zones.
- Conduct a thorough disequilibrium analysis using chemical analyses at a reputable laboratory with blind submittal of certified reference materials. Obtain closed-can gamma readings on pulps. Possibly determine $eU_3O_8$ using a prompt fission neutron (PFN).
- Conduct drilling programs to achieve a nominal 100 ft spacing in areas targeted for conversion to reserves.

## 12.5 Limitations

There were no limitations in place restricting the ability to perform an independent verification of the Project drillhole database.

### 12.5.1 Conclusion

The SLR QP is of the opinion that database verification procedures for the Project comply with industry standards and are adequate for the purposes of Mineral Resource estimation.

# 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

## 13.1 Introduction

There is no metallurgical testing or operational experience that is specific to the Roca Honda Mine, however, the nature of the Grants uranium district is that the Westwater Canyon uranium mineralized sand zones occur, throughout the Ambrosia Lake subdistrict, and have yielded millions of pounds that were locally milled using conventional uranium leaching technology in the past. For this reason, one can draw some conclusions regarding mineral processing at Roca Honda.

Historical production and milling experience for mineralization from the Ambrosia Lake subdistrict was incorporated into the milling assumptions for Roca Honda, which EFR and the SLR QP considers appropriate for a PEA to NI 43-101 standards.

RHR, a previous property owner, began preliminary metallurgical test work on Roca Honda material, but this test work was stopped when the company was acquired by EFR.

Future exploration drill plans by EFR will include collecting a sufficient amount of mineralized material to resume metallurgical test work on Roca Honda mineralization.

All metallurgical work done by previous owners on the Mine is summarized below.

## 13.2 Mineralized Sand Zones

There are four mineralized sand zones on the Roca Honda property: A, B, C, and D. Table 13-1 presents the metallurgical recovery for the four mineralized domains, which are based on discounted, historical process recoveries from different mills located in the Grants uranium district. The expected metallurgical recovery presented below is +/- 1% of the initial 95% overall recovery calculation.

Table 13-1: Metallurgical Recovery by Zone
Energy Fuels Inc. – Roca Honda Project

| Sand Domain | Tonnage (000 ton) | % of Resource | Grade (% $eU_3O_8$) | Metallurgical Recovery (%) | Production (lb $U_3O_8$) | % of Resource Produced |
|---|---|---|---|---|---|---|
| A | 615 | 23.6 | 0.377 | 92.2 | 8,557 | 18.9 |
| B | 1,160 | 34.5 | 0.430 | 90.0 | 8,974 | 30.7 |
| C | 1,132 | 33.7 | 0.611 | 95.7 | 13,240 | 45.3 |
| D | 275 | 8.2 | 0.303 | 90.0 | 1,500 | 5.1 |
| SW Deposit | 1,301 | 38.7 | 0.395 | 90.7 | 9,316 | 31.9 |
| NE Deposit | 1,407 | 41.9 | 0.551 | 94.6 | 14,661 | 50.3 |
| Sec. 17 Deposit | 651 | 19.4 | 0.437 | 91.2 | 5,193 | 17.8 |
| **Grand Total** | **3,360** | **100.0** | **0.468** | **92.7** | **29,170** | **100** |

Notes:

1. The breakdown of the resource uses a 0.19% $eU_3O_8$ cut-off grade.

2. Values in the table are based on RPA's 2012 Technical Report. The SLR QP did not update the mine design and production schedule, which was developed using a cut-off grade of 0.13% $U_3O_8$. The previous work was reviewed, and it was determined that stopes remain above the updated cut-off grade of 0.19% $U_3O_8$. Some material below 0.19% $U_3O_8$ is included within the stope designs and should be considered incremental material.
3. Recovery percentage is assumed.
4. Numbers may not add due to rounding.

## 13.3 Historical Metallurgical Testing

As part of the technical back-up for the 2016 Preliminary Economic Assessment (PEA) completed by RPA, RHR provided two reports of metallurgical test work by Kerr-McGee regarding the Lee Ranch mine and the Marquez project. The first is a Technical Center Memorandum (TCM) No. 80011, titled "Characterization of Uranium Ore from the Lee Mine, McKinley County, New Mexico" and dated August 28, 1980. This TCM deals exclusively with the uranium mineralization in Section 17. The other document is TCM-82007, dated June 30, 1982, and titled "Marquez Uranium Ore Characterization – Interim Report," This document addresses the uranium recovery from the A and B Westwater Canyon sand zones with particular emphasis on the "refractory ores" in the B zone of the Marquez properties.

It was reported that the Marquez mill also completed metallurgical testing of mineralized material from throughout the Grants uranium district as the Marquez mill was being designed to be used as a toll mill, though it was never operational. EFR is unaware of any publicly available test data that included mineralized material from Roca Honda. The Juan Tafoya mill was built on the border between Section 31 and 32, Township 13 N, Range 4 W, Sandoval County, in the late 1970s. The Juan Tafoya mill was designed to process 2,200 stpd as a uranium processing mill with conventional acid leach solvent extraction (SX) circuit, primarily for Westwater member mineralized material from the Marquez deposit. A 1,842 ft shaft was sunk to develop the Marquez deposit. Both mine and mill were closed in 2001 and dismantled without any mining of the deposit.

### 13.3.1 TCM-82007

The Kerr-McGee report TCM-82007 addresses the A zone "ores" and the "refractory" ore in the B zone of the Marquez project, both from the Westwater Canyon A and B sands. The Marquez deposits are 20.6 mi east of the Mine on the eastern side of the Mount Taylor Volcanic Field. Similar horizons of the Westwater are planned for development in the proposed EFR plan.

### 13.3.2 Mount Taylor

Lyntek in 2011 received information from John Litz regarding his experience with the Mount Taylor ore. It is understood that Mount Taylor was mining primarily C sand zone ore of the Westwater Canyon Member of the Morrison Formation. The Mount Taylor mine is approximately five miles to the southeast of the proposed Roca Honda Section 16 shaft location. It should be noted that the sedimentary lithologic strata appear to be consistent between the Mount Taylor mine and the Roca Honda project.

Table 13-2 provides a summary of the general operating parameters of the Mount Taylor mine and an associated uranium mill that operated in the Grants, New Mexico area, up to 1988.

### Table 13-2: Mount Taylor Processing Data
### Energy Fuels Inc. – Roca Honda Project

| Conditions | Temp °C | Leach Time | $H_2SO_4$ Consumption lb/ton | $NaClO_3$ (lb/ton) | Extraction (%) |
|---|---|---|---|---|---|
| Kerr-McGee processing Conventional Agitated Leach | 54 | 3 h | 130 | 3.2 | 95.7 |
| Heap Leach Column Leach Test Results[1] | Ambient | 51 days | 123 | 6-9 | 95-98 |
| Severe Leach Conditions Laboratory Agitated Leach Test[2] | 85 | 16 h | 150 | 6 | 98-99 |

Notes:

1. The sample was cured overnight with 80 lb/ton $H_2SO_4$, 30 g/L $H_2SO_4$ lixiviant, added NaClO3 to SX raffinate to maintain oxidizing conditions. Lixiviant rate 12 gpm/ft$^2$. Uranium extraction: 95% to 98% at 51 days.
2. The procedure included an acid kill at 65°C for one hour.

The Homestake Mill, also in the Grants New Mexico area, was used to process the Mount Taylor ore and used a pressurized alkaline leach circuit as compared to the acid leach at the other mills. The recovery reported at the Homestake Mill was 95%, while the other mills reported higher recoveries.

### 13.3.3 Lee Ranch mine

A historic mine plan for Sections 9 and 10 reported no concerns of metallurgical problems in the original Roca Honda mine, now known as the Lee Ranch mine (Falk, 1978). Kerr-McGee operated an acid leach mill, processing over 7,000 stpd from the Ambrosia Lake subdistrict, with typical recoveries of 94% to 97%.

In 1980 and 1982, Kerr-McGee prepared two reports on metallurgical test work that discuss uranium recovery from the A and B sand zones on the Lee Ranch mine (located on Section 17) and the Marquez Project (approximately 15 mi east of Section 16), with particular emphasis on the “refractory” ores in the B zone.

The 1980 report concedes that the results are at best qualitative and not definitive and therefore are weighted appropriately in the historical results for the Grants Uranium District.

The 1982 Kerr-McGee report addresses the A zone “ores” and the “refractory ore” in the B zone of the Marquez project. The Marquez project was at the east end of the district, well away from the proposed Roca Honda shaft. The work reported is more comprehensive than the 1980 report and is somewhat academic. The report results are also weighted appropriately in the historical results for the District.

Metallurgical test work was completed for Mount Taylor ore by Mr. John Litz, a metallurgical engineer with extensive uranium experience. The Mount Taylor mine is approximately five miles to the southeast of Section 16. Mount Taylor was mining primarily C zone sands.

## 13.4 Conclusions

Kerr-McGee metallurgical test results were completed on A and B sand zones at its Grants facility (Kerr-McGee Corp, 1980). The A and B zone mineralization represent 58.1% of the Roca Honda mineralization. Operational experience from Mount Taylor is from unspecified sand zones, but is believed to be from C zone sands and represent 33.7% of the Roca Honda mineralization. There is no data available regarding the D zone sands, but they represent only 8.2% of the Roca Honda mineralization.

The SLR QP supports the conclusions of the metallurgical test work on the basis of Kerr-McGee test reports and historical metallurgical data as modified with current technology, namely:

- Grind to 28 mesh
- Agitated leach at 60°C for three hours with 130 lb/ton of $H_2SO_4$ and 3.5 lb/ton of $NaClO_3$
- Uranium precipitation using ammonia

RHR completed some initial metallurgical work in late 2012 to early 2013 on mineralized material from the 2007 core program and compared it with Mount Taylor ore. The purpose was to see if the chemistry of the two deposits was similar enough to use Mount Taylor ore, which is readily available, in place of Roca Honda mineralization for future Strathmore metallurgical work. Once Strathmore was acquired by EFR, that work ceased. Future exploration drill plans will include collecting a sufficient amount of mineralized material to begin metallurgical test work on Roca Honda mineralization. Deleterious elements have not been commonly observed to date although they may be detected with additional metallurgical testing.

For this Technical Report a uranium recovery of 95% will be used in the processing of Roca Honda mineralized material at the White Mesa Mill. Additional site specific metallurgical samples are required for testing in order to validate the mill recoveries. For this Preliminary Economic Assessment report, the White Mesa Mill process and costs are based on historical processing results and methods. It should be noted that the specific origins of historical mill feed cannot be readily identified to date although they most undoubtably come from the uranium mining districts in the western USA, most notably in the Colorado Plateau region.

## 13.5 Opinion of Adequacy

The SLR QP is of the opinion that the metallurgical data used for the Mineral Resource estimate and Preliminary Economic Assessment is adequate for these purposes.

# 14.0 MINERAL RESOURCE ESTIMATE

## 14.1 Summary

Mineral Resources have been classified in accordance with the definitions for Mineral Resources in S-K 1300, which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM, 2014) definitions.

The Mineral Resource estimate for the Project is divided into a Section 9, 10, and 16 Mineral Resource (Northeast and Southwest deposits) and a Section 17 Mineral Resource. The Section 9, 10, and 16 Mineral Resource estimate was completed by SLR, formerly RPA, for a NI 43-101 Preliminary Economic Assessment (PEA) on the Project in 2011 (with revisions to the cut-off grade in the 2016 revised report). SLR's 2016 Mineral Resource estimate was reviewed by the SLR QP for inclusion in this PEA and is still considered valid, as no material changes have been made at the Project since that time. EFR acquired Section 17 in 2015 and estimated a Mineral Resource on that portion of the Project in 2017, which the SLR QP reviewed and endorses. Mineral Resources estimated by the SLR QP (Sections 9, 10 and 16) in addition to that calculated by EFR (Section 17) meet the definition of a Mineral Resource as stated in the SEC's S-K 1300 regulations. In both cases, Mineral Resources were constrained by wireframes generated around individual mineralized zones. The Section 17 Mineral Resource includes some Mineral Resources in Section 16, which were not previously estimated due to a lack of data. The proximity of drillholes in Section 17 allowed this portion of the Mineral Resource to be estimated and included in this Technical Report. The effective date of this Mineral Resource estimate is December 31, 2021. The Roca Honda Mineral Resource estimate is summarized in Table 14-1.

**Table 14-1: Mineral Resource Estimate for Roca Honda – Effective Date December 31, 2021**
**Energy Fuels Inc. – Roca Honda Project**

| Classification | Area | Tonnage (000 ton) | Grade (% $U_3O_8$) | Contained Metal (000 lb $U_3O_8$) | Recovery (%) |
|---|---|---|---|---|---|
| Measured | Sec. 9, 10 &16 | 208 | 0.477 | 1,984 | 95 |
| | Sec. 17 | - | - | - | |
| Indicated | Sec. 9, 10 &16 | 1,303 | 0.483 | 12,580 | 95 |
| | Sec. 17 | 336 | 0.454 | 3,058 | 95 |
| **Total Measured + Indicated** | **Sec. 9, 10, 16 & 17** | **1,847** | **0.477** | **17,622** | **95** |
| Inferred | Sec. 9, 10 &16 | 1,198 | 0.468 | 11,206 | 95 |
| | Sec. 17 | 315 | 0.419 | 2,636 | 95 |
| **Total Inferred** | **Sec. 9, 10, 16 & 17** | **1,513** | **0.457** | **13,842** | **95** |

Notes:

1. SEC S-K definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.

2. Mineral Resources are estimated at a $U_3O_8$ cut-off grade of 0.19% $U_3O_8$.
3. A minimum mining thickness of six feet was used, along with $241/ton operating costs, $65/lb $U_3O_8$ price, and 95% recovery.
4. Bulk density is 0.067 ton/ft$^3$ (15.0 ft$^3$/ton or 2.14 t/m$^3$).
5. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
6. Mineral Resources are 100% attributable to EFR and are in situ.
7. Numbers may not add due to rounding.

The EFR QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

## 14.2 Resource Database

The Roca Honda drillhole database is maintained in a Microsoft Access database and a Vulcan Isis database. The databases include tables for collar, survey, lithology, and mineral grades. The RHR database includes drilling from 1957 to 2011, comprising a total of 1,532 drillholes with 2,487,093 ft of drilling at an average hole length of 1,895 ft, of which five drillholes totalling 13,161 ft at an average hole length of 2,193 ft were drilled by RHR in 2007 (four holes) and 2011 (one hole).

Of the 1,532 surface holes, only 924 drillholes totaling 1,767,372 ft of drilling were used for resource estimation as some holes are located outside of the bounds of the current Mineral Resource estimate and/or have unreliable and/or unconfirmed drillhole collar coordinates. Table 14-2 lists the number of holes and corresponding Sections included in the final resource database.

**Table 14-2: Roca Honda Resource Drillhole Database**
**Energy Fuels Inc. – Roca Honda Project**

| Section | Company(s) | # of Drillholes | Total Footage |
|---|---|---|---|
| Sec. 9, T13N, R08W | Kerr-McGee | 182 | 377,428 |
| Sec. 10, T13N, R08W | Kerr-McGee | 167 | 429,215 |
| Sec. 11, T13N, R08W | Conoco | 4 | 10,848 |
| Sec. 16, T13N, R08W | Western Nuclear/Strathmore | 65 | 125,720 |
| Sec. 17, T13N, R08W | Kerr-McGee | 506 | 824,161 |
| **Total** | | **924** | **1,767,372** |

The drillhole database has been audited by various groups over the last 10 years. Details regarding these audits can be found in Section 9.0 (Data Verification).

The database used in this Mineral Resource estimation is considered by the SLR QP to be sufficiently reliable for grade modeling and use in a Mineral Resource estimation.

## 14.3 Geological Interpretation

### 14.3.1 Lithology Wireframe Models

EFR generated lithology wireframe models for the hanging wall and footwall of the Jmw A, Jmw B1, Jmw B2, Jmw C, and Jmw D sandstone units across the Mine. Integrated stratigraphic grid models based on modeling algorithms were generated in Vulcan for lithology surface wireframes using the drillhole intervals corresponding to the respective sand unit horizons.

The SLR QP reviewed the lithology surfaces and noted that the modeling algorithms do not always adhere to the sand unit intervals in the drillholes. Although there are no overall significant discrepancies between the models and the logged lithology intervals, for this Technical Report, the SLR QP revised the lithology surfaces using Leapfrog software to include the interbedded clay units separating the individual A through D sands. This new modeling shows that the previously reported mineralization that is located adjacent to, but outside, the major sand units exist across the contacts between the interbedded clays and overlying sand units.

### 14.3.2 Mineralization Wireframe Models

The Mine was subdivided into three modeling zones based on sand units and mineralization extents. The Northeast zone includes mineralization in the C and D sands in Section 10. The Southwest zone includes mineralization in the A and B sand units crossing the Section 9, 10, and 16 boundaries. Section 17 included mineralization in the A and B sand units primarily in Section 17, but also part of the western edge of Section 16. Block model and modeling boundaries are shown in Figure 14-1.

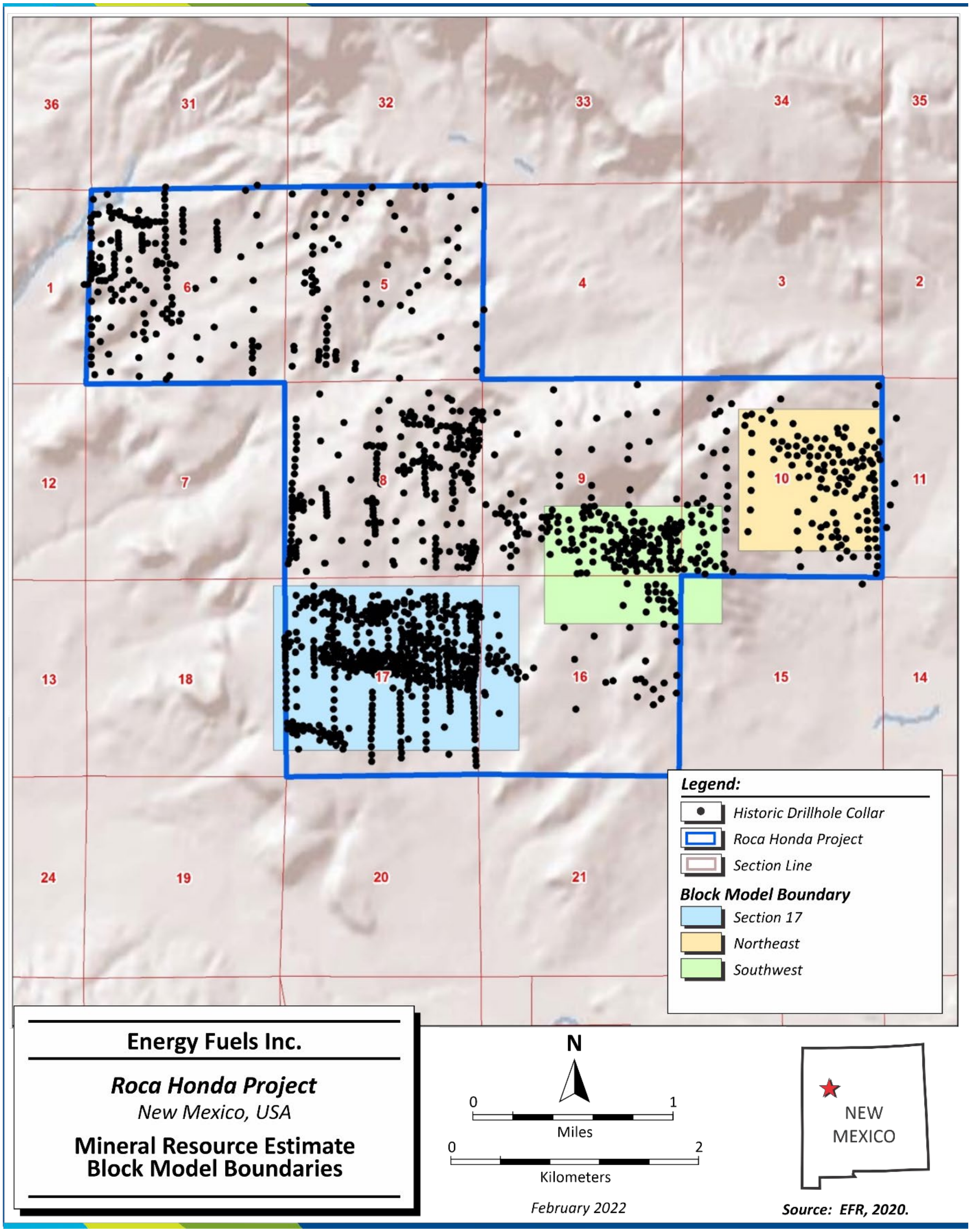


Figure 14-1: Mineral Resource Estimate Block Model Boundaries

#### 14.3.2.1 Sections 9, 10 and 16

All mineralization surfaces for sections 9, 10, and 16 were generated by SLR in ARANZ Geo Limited's Leapfrog version 2.1.1.209. Mineralized drillhole intervals were selected by sand unit, with a minimum thickness of six feet, a minimum grade of 0.1% $U_3O_8$, and minimum grade x thickness of 0.6. Additional intervals below the minimum thickness and grade were selected in holes adjacent to the mineralized holes to restrict the extent of the wireframe models.

Surfaces were generated for the hanging wall and footwall of mineralized zones within each sand unit. These surfaces were used to create solids for each mineralized zone.

A 0.10% $eU_3O_8$ grade contour was created around mineralized intervals with a minimum thickness of six feet in plan view. Solids were generated from the grade contours and used as boundaries to "cookie cut" individual mineralization solids.

The SLR QP conducted audits of the wireframes to ensure that the wireframes used in preparing their resource estimate correspond to the reported mineralization. The quality control measures, and the data verification procedures included the following:

- Checked for overlapping wireframes to determine possible double counting.
- Checked mineralization/wireframe extensions beyond last holes to determine if they are reasonable and consistent.
- Compared basic statistics of assays within wireframes with basic statistics of composites within wireframes for both uncut and cut values.
- Checked for capping of extreme values and effect of coefficient of variation.
- Checked for reasonable compositing intervals.
- Checked that composite intervals start and stop at wireframe boundaries.
- Checked that assigned composite rock type coding is consistent with intersected wireframe coding.
- Checked that blocks were classified as Measured, Indicated, and Inferred.
- Validated the solids for closure and consistent topology and checked that the triangles intersect properly (crossing).

Any issues found were corrected with the appropriate Vulcan utility to ensure accurate volume and grade calculations.

The wireframes in Section 9, 10 and 16 are considered by the SLR QP to be sufficiently reliable for grade modeling and use for Mineral Resource estimation.

#### 14.3.2.2 Section 17

Mineralized wireframes generated for Section 17 were created by EFR using a combination of ArcGIS and Maptek's Vulcan software. Historically, resources for tabular uranium deposits, similar to the one found at the Mine, were estimated using either the polygonal or the circle-tangent method. A combination of those two methods was used to determine the plan view extent of the wireframes. Mineralized intercepts were loaded into ArcGIS and grouped by sand (A, B1 or B2). Theissen polygons were generated around each of the points to determine an Area of Influence (AOI) for each intercept. Additionally, circles with radii of 100 ft and 150 ft were created for each point to give a maximum AOI for each point. If the distance between two intercepts was less than 100 ft, the Theissen polygon was used as the maximum bounding AOI. If the distance between two intercepts was greater than or equal to 100 ft, but not on trend, the 100 ft radius circle was used. If the distance between intercepts was greater than or equal to 150 ft and on trend, the 150 ft radius circle was used.

Theissen polygons were grouped if they were continuous (i.e., adjacent) and contained an intercept of a minimum 3 ft of 0.10% $U_3O_8$. For continuity purposes, a few holes below this cut-off were included. A final boundary was constructed around these grouped polygons (pods) and exported for use in triangulating the wireframes in Vulcan.

Wireframes were created for all areas utilizing Maptek's Vulcan software. Once all the data was grouped by sand unit and into plan-view pods utilizing the method described above, the intercepts within those pods were connected in cross-section view to create mineralized wireframes. While the plan view shapes grouped adjacent intercepts, the mineralized zones in those holes do not necessarily relate to each other. Within a given sand unit, the mineralization tends to be at the very top or bottom of the sand. Less commonly, the mineralization is in the middle of the sand unit or is the thickness of the sand unit. If two adjacent holes within the same pod have mineralization at two different levels, those intercepts are probably not related. Every mineralized intercept within a pod needed to be identified and connected with matching intercepts. The result of this is that a single pod that was identified in plan view may turn into multiple pods after studying the intercepts.

A series of rules were created for linking intercepts in cross section. Those details are given below:

- A minimum two-foot thickness at a nominal 0.2% $U_3O_8$ cut-off was used to select intercepts.
- Holes that did not meet these criteria, but had some mineralization, were allowed to be included for continuity. These holes were limited to a two-foot thickness.
- In thicker zones, the outer (top or bottom) 1.5 ft needed to meet a composited grade of 0.2% $U_3O_8$.
- A thick intercept was split into two or more intercepts if it contained internal low-grade material that was thicker than three feet and below the 0.2% $U_3O_8$ cut-off.
- If a drillhole was included that did not contain 0.5 ft intercept data, but contained material of grade, the whole intercept was taken. This pertains to drillholes where the original Kerr-McGee intercept was used.

This method resulted in 14 mineralized wireframes for the A-Sand, two for the B-sand (where the B1 and B2 sands could not be differentiated), four for the B1-Sand, and five for the B2-Sand.

## 14.4 Resource Assays

### 14.4.1 Sections 9, 10, and 16

Roca Honda mineralization wireframes contain a total of 270 mineralization intercepts from 103 drillholes. Grade statistics are shown in Table 14-3.

**Table 14-3: General Grade Statistics for Sections 9, 10, and 16**
**Energy Fuels Inc. – Roca Honda Project**

| Statistic | A-Sand | B1-Sand | B2-Sand | C-Sand | D-Sand |
|---|---|---|---|---|---|
| No. of Samples | 39 | 57 | 90 | 55 | 29 |

| Statistic | A-Sand | B1-Sand | B2-Sand | C-Sand | D-Sand |
|---|---|---|---|---|---|
| Min. Grade (%$U_3O_8$) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 25th Percentile (%$U_3O_8$) | 0.000 | 0.000 | 0.000 | 0.020 | 0.050 |
| Median Grade (%$U_3O_8$) | 0.170 | 0.159 | 0.203 | 0.170 | 0.160 |
| 75th Percentile (%$U_3O_8$) | 0.500 | 0.420 | 0.440 | 0.440 | 0.250 |
| Max. Grade (%$U_3O_8$) | 0.950 | 0.910 | 1.240 | 2.350 | 0.550 |
| Avg. Grade (%$U_3O_8$) | 0.303 | 0.215 | 0.269 | 0.487 | 0.202 |
| Std. Deviation (%$U_3O_8$) | 0.257 | 0.258 | 0.297 | 0.456 | 0.136 |

### 14.4.2 Section 17

Mineralization wireframes for the three mineralized sands in Section 17 contain 1,266 mineralized intercepts. The two mineralized solids that contain both the B1 and B2 sands contained intercepts that were anomalously high. Statistics for this zone (B-Sand high-grade) were interpreted differently than statistics for the rest of the B-Sand (B-Sand low-grade) and were therefore broken out as their own group. Grade statistics for the Section 17 model zone is shown in Table 14-4.

**Table 14-4: General Grade Statistics for Section 17**
**Energy Fuels Inc. – Roca Honda Project**

| Statistic | A-Sand | B-Sand (Low Grade) | B-Sand (High Grade) |
|---|---|---|---|
| No. of Samples | 697 | 345 | 159 |
| Min. Grade (%$U_3O_8$) | 0.001 | 0.001 | 0.001 |
| 25th Percentile (%$U_3O_8$) | 0.216 | 0.227 | 0.08 |
| Median Grade (%$U_3O_8$) | 0.316 | 0.417 | 0.357 |
| 75th Percentile (%$U_3O_8$) | 0.474 | 0.607 | 0.767 |
| Max. Grade (%$U_3O_8$) | 1.602 | 2.702 | 5.884 |
| Avg. Grade (%$U_3O_8$) | 0.365 | 0.501 | 0.665 |
| Std. Deviation (%$U_3O_8$) | 0.231 | 0.427 | 0.901 |

## 14.5 Treatment of High Grade Assays

### 14.5.1 Capping

#### 14.5.1.1 Sections 9, 10, and 16

All mineralization intercepts located inside the mineralization wireframes were used together to determine an appropriate capping level for all mineralized zones. Mineralization intercept data were analyzed using a combination of histogram, probability, percentile, and cutting curve plots. All mineralization intercepts flagged inside the mineralization wireframes are plotted in Figure 14-2 through Figure 14-4.

The assay data used in the Section 9, 10, and 16 Mineral Resource was calculated using the industry standard AEC ½ amplitude method used throughout the U.S. uranium mining industry during the time the Roca Honda data was collected (1960s and 1970s). This method estimated a mineralized zone assigning a single grade and thickness to that zone. Modern data is usually calculated on standard 0.5 ft intervals. To determine any capping needed for the Section 9, 10, and 16 resource the original gamma logs would need to be scanned and digitized to provide the 0.5 ft data. It is recommended that for any future Mineral Resource estimates, that this work be done to update the drillhole database.

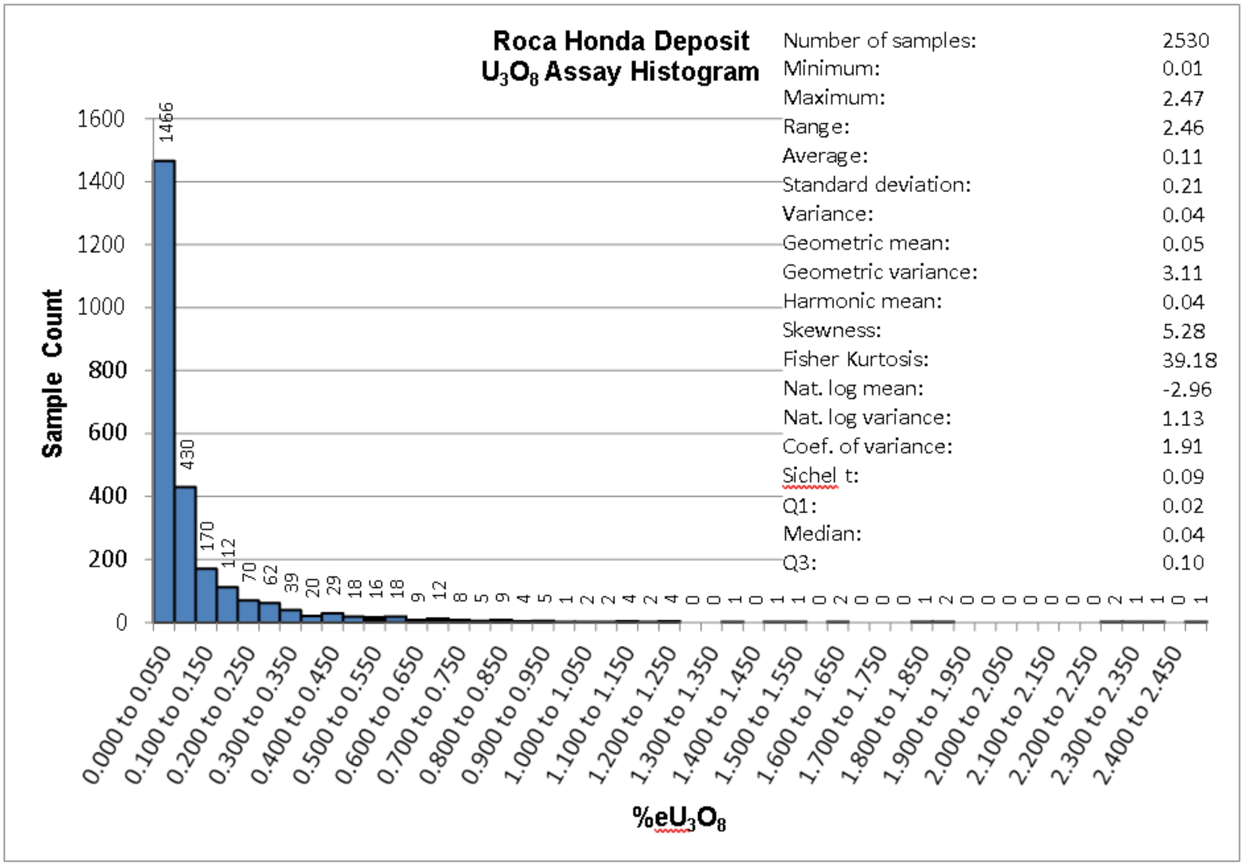


**Figure 14-2: Histogram Plot of Roca Honda Sections 9, 10 and 16**

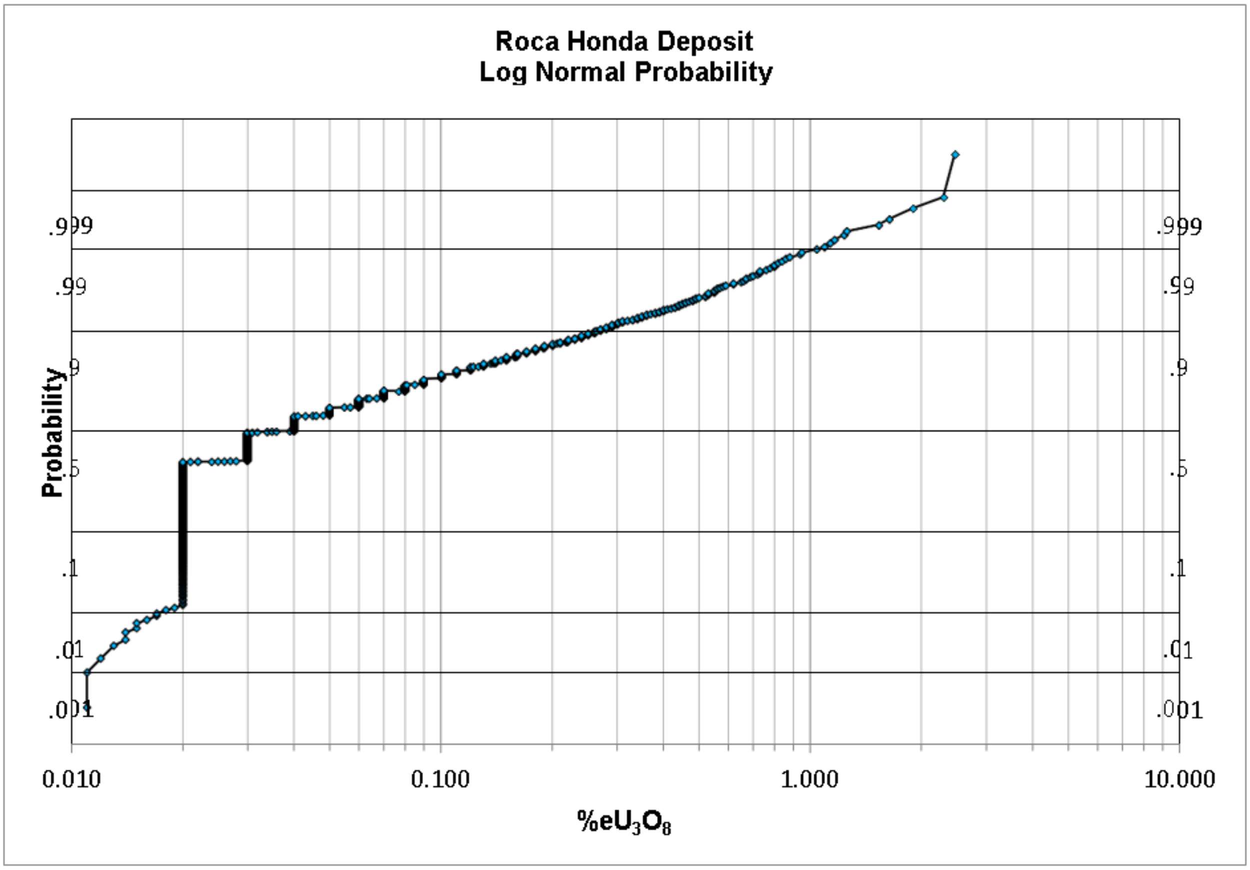


Figure 14-3: Log Normal Probability Plot of Roca Honda Sections 9, 10 and 16

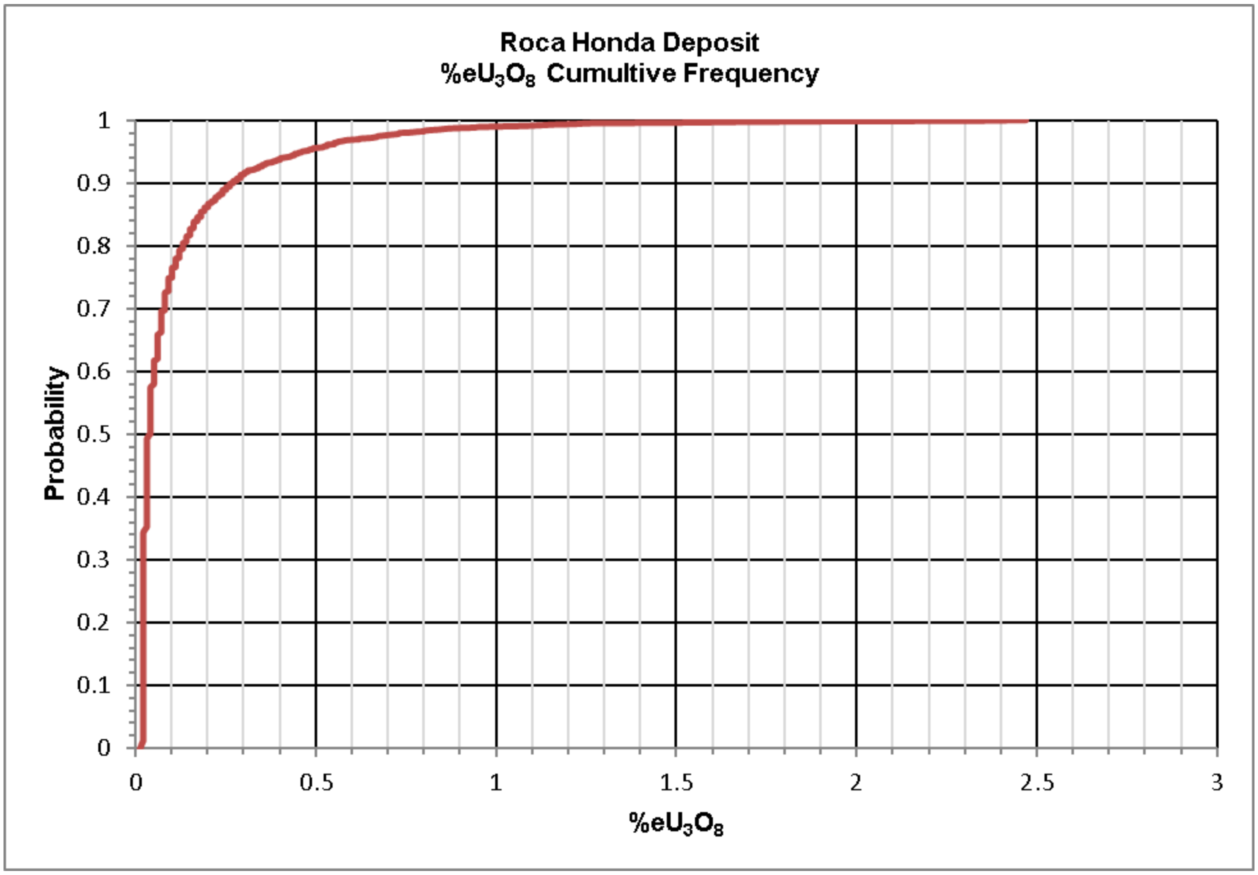


Figure 14-4: Cumulative Frequency Plot of Roca Honda Sections 9, 10 and 16

#### 14.5.1.2 Section 17

Unlike the data used for the Sections 9, 10, and 16 Mineral Resource, the data used for the Section 17 resource was digitized and reported on 0.5 ft intervals. Using this data, histograms, and log-normal probability plots (Figure 14-5 to Figure 14-7) were created to determine grade caps for the A-Sand, B-Sand (low-grade), and B-Sand (high-grade) zones (Table 14-5).

Table 14-5: Section 17 Statistics after Capping
Energy Fuels Inc. – Roca Honda Project

| Statistic | A-Sand | B-Sand (Low Grade) | B-Sand (High Grade) |
|---|---|---|---|
| Cap Grade (%$U_3O_8$) | 0.748 | 1.574 | 2.333 |
| No. of Capped Samples | 37 | 12 | 9 |
| Min. Grade (%$U_3O_8$) | 0.001 | 0.001 | 0.001 |
| 25th Percentile (%$U_3O_8$) | 0.216 | 0.227 | 0.080 |
| Median Grade (%$U_3O_8$) | 0.316 | 0.417 | 0.357 |
| 75th Percentile (%$U_3O_8$) | 0.474 | 0.607 | 0.767 |

| Statistic | A-Sand | B-Sand (Low Grade) | B-Sand (High Grade) |
|---|---|---|---|
| Max. Grade (%$U_3O_8$) | 0.748 | 1.574 | 2.333 |
| Avg. Grade (%$U_3O_8$) | 0.350 | 0.483 | 0.602 |
| Std. Deviation (%$U_3O_8$) | 0.187 | 0.364 | 0.684 |

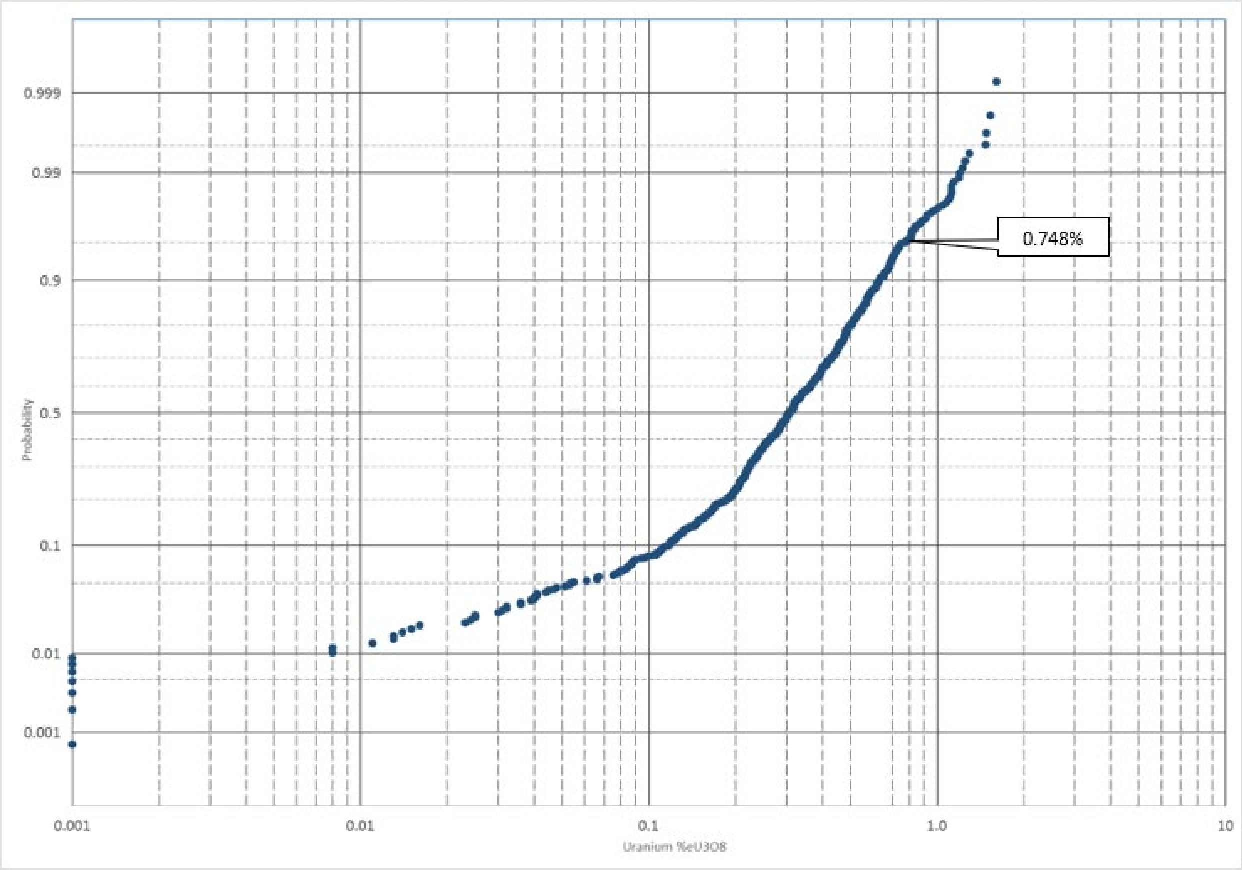


Figure 14-5: A-Sand Log-Normal Probability Plot

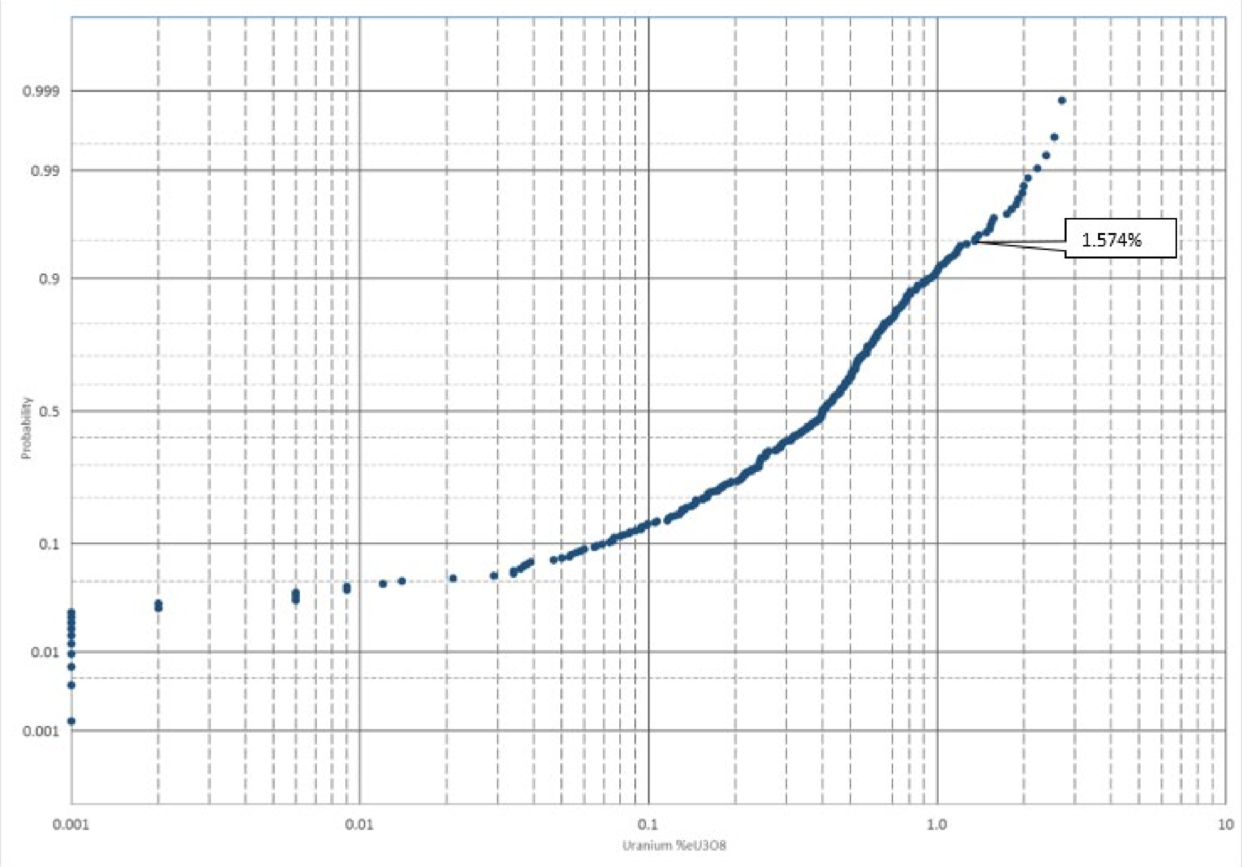


Figure 14-6: B-Sand (Low Grade) Log-Normal Probability Plot

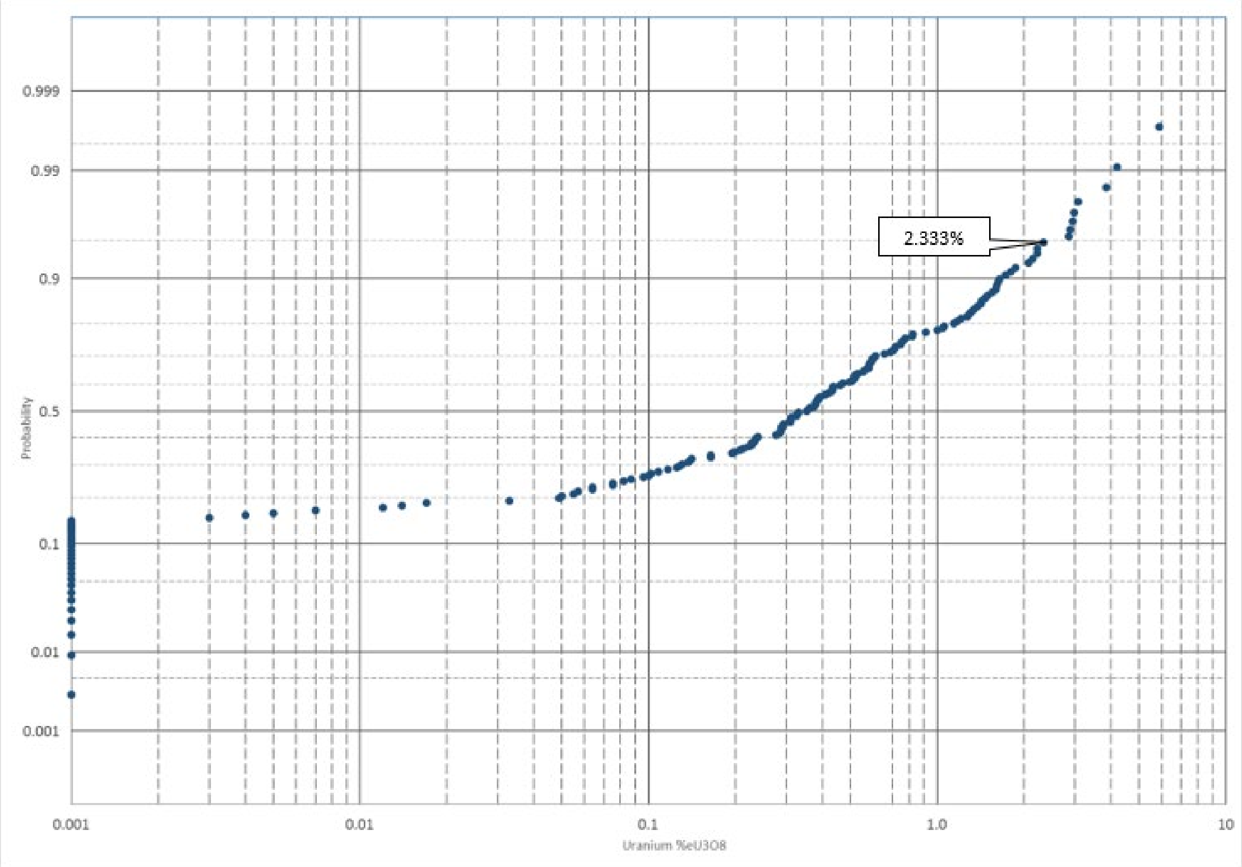


Figure 14-7: B-Sand (High Grade) Log-Normal Probability Plot

### 14.5.2 High Grade Restriction

In addition to capping thresholds, a secondary approach to reducing the influence of high-grade composites is to restrict the search ellipse dimension (high yield restriction) during the estimation process. The threshold grade levels, chosen from the basic statistics and from visual inspection of the apparent continuity of very high grades within each estimation domain, may indicate the need to further limit their influence by restricting the range of their influence, which is generally set to approximately half the distance of the main search.

Upon review of the capped assays, the SLR QP agrees with EFR's approach that no high-grade restrictions are required for a Mineral Resource estimation.

## 14.6 Compositing

### 14.6.1 Sections 9, 10 and 16

Run-length composites were generated at six-foot lengths inside the domain wireframes and flagged by mineralization domain. Nine composites had lengths of 0.5 ft or less. These accounted for a small percentage of the total composites and will not significantly affect the resource estimate. The SLR QP recommends reviewing and removing all small length composites in future resource composite databases.

Two composite databases were generated for resource estimation, rhr_sw_6ft.cmp.isis for the A and B zones and rhr_ne_6ft_.cmp.isis for the C and D zones. Detailed statistics for the final composite database are presented in Table 14-6.

**Table 14-6: Sections 9, 10 and 16 Mineralized Wireframe Composites**
**Energy Fuels Inc. – Roca Honda Project**

| Wireframe | No. Samples | Min. Grade % $U_3O_8$ | Lower Quartile % $U_3O_8$ | Median Grade % $U_3O_8$ | Upper Quartile % $U_3O_8$ | Max. Grade % $U_3O_8$ | Mean Grade % $U_3O_8$ | SD | CV |
|---|---|---|---|---|---|---|---|---|---|
| A1_04 | 1 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | | |
| A1_03 | 24 | 0.00 | 0.00 | 0.26 | 0.56 | 0.95 | 0.31 | 0.28 | 0.91 |
| A1_02 | 1 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | | |
| A1_01 | 4 | 0.16 | 0.23 | 0.34 | 0.41 | 0.44 | 0.32 | 0.10 | 0.32 |
| A1_05 | 1 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | | |
| A1_06 | 1 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | |
| B1_05 | 8 | 0.00 | 0.29 | 0.48 | 0.55 | 0.85 | 0.43 | 0.24 | 0.56 |
| B1_04 | 10 | 0.00 | 0.03 | 0.16 | 0.22 | 0.30 | 0.15 | 0.09 | 0.65 |
| B1_06_S-01-03 | 6 | 0.00 | 0.00 | 0.19 | 0.70 | 0.73 | 0.30 | 0.31 | 1.02 |
| B1_08 | 1 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | | |
| B1_07_S_01 | 2 | 0.13 | 0.13 | 0.52 | 0.96 | 0.91 | 0.52 | 0.39 | 0.75 |
| B1_02 | 4 | 0.00 | 0.20 | 0.39 | 0.44 | 0.49 | 0.32 | 0.19 | 0.59 |
| B1_01_S | 1 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | | |
| B1_10 | 1 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | | |
| B1_09_S_01-02 | 3 | 0.00 | 0.07 | 0.29 | 0.60 | 0.70 | 0.33 | 0.29 | 0.87 |
| B1_05_0 | 6 | 0.12 | 0.12 | 0.22 | 0.28 | 0.48 | 0.24 | 0.12 | 0.51 |
| B1_11 | 1 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | | |
| B2_04 | 44 | 0.00 | 0.09 | 0.37 | 0.55 | 1.18 | 0.38 | 0.32 | 0.83 |
| B2_09 | 3 | 0.00 | 0.03 | 0.10 | 0.24 | 0.28 | 0.13 | 0.12 | 0.91 |
| B2_01 | 3 | 0.02 | 0.13 | 0.44 | 0.63 | 0.69 | 0.38 | 0.28 | 0.72 |
| B2_03 | 1 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | | |
| B2_02 | 6 | 0.16 | 0.21 | 0.26 | 0.31 | 0.36 | 0.26 | 0.06 | 0.25 |
| B2_05 | 2 | 0.36 | 0.36 | 0.80 | 1.24 | 1.24 | 0.80 | 0.44 | 0.55 |
| B2_06 | 8 | 0.00 | 0.10 | 0.21 | 0.32 | 0.42 | 0.21 | 0.14 | 0.65 |
| B2_10 | 3 | 0.00 | 0.05 | 0.18 | 0.38 | 0.44 | 0.21 | 0.18 | 0.87 |
| B2_08 | 1 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | | |

| Wireframe | No. Samples | Min. Grade % $U_3O_8$ | Lower Quartile % $U_3O_8$ | Median Grade % $U_3O_8$ | Upper Quartile % $U_3O_8$ | Max. Grade % $U_3O_8$ | Mean Grade % $U_3O_8$ | SD | CV |
|---|---|---|---|---|---|---|---|---|---|
| C1 | 7 | 0.00 | 0.05 | 0.28 | 0.67 | 1.62 | 0.47 | 0.53 | 1.13 |
| C2 | 3 | 0.28 | 0.43 | 0.88 | 1.98 | 2.35 | 1.17 | 0.87 | 0.74 |
| C3 | 12 | 0.00 | 0.10 | 0.14 | 0.17 | 1.03 | 0.19 | 0.26 | 1.35 |
| C4 | 20 | 0.00 | 0.19 | 0.32 | 0.60 | 1.47 | 0.43 | 0.37 | 0.85 |
| C5 | 3 | 0.06 | 0.07 | 0.11 | 0.16 | 0.18 | 0.12 | 0.05 | 0.42 |
| C2_2_1 | 3 | 0.08 | 0.09 | 0.11 | 0.11 | 0.11 | 0.10 | 0.01 | 0.14 |
| C2_2_2 | 1 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | |
| C2_2_3 | 2 | 0.00 | 0.00 | 0.12 | 0.24 | 0.24 | 0.12 | 0.12 | 1.00 |
| D1_03 | 2 | 0.14 | 0.14 | 0.20 | 0.26 | 0.26 | 0.20 | 0.06 | 0.30 |
| D1_01-02 | 13 | 0.05 | 0.12 | 0.19 | 0.29 | 0.55 | 0.22 | 0.13 | 0.60 |
| D1_04 | 3 | 0.16 | 0.17 | 0.20 | 0.23 | 0.24 | 0.20 | 0.03 | 0.16 |
| D1_05 | 6 | 0.00 | 0.11 | 0.14 | 0.16 | 0.49 | 0.17 | 0.15 | 0.88 |

Notes:

1. SD = Standard Deviation
2. CV = Coefficient of variation

### 14.6.2 Section 17

Run-length composites were generated at 0.5 ft lengths inside the domain wireframes and flagged by mineralization domain. Three composite databases were generated for resource estimation, rhlr_a_sand_rlc_half_ft.cmp.isis, rhlr_b_sand_hg_rlc_half_ft.cmp.isis, and rhlr_b_sand_lg_rlc_half_ft .cmp.isis. Detailed statistics for the final composite database are presented in Table 14-7.

**Table 14-7: Section 17 Mineralized Wireframe Composites**
**Energy Fuels Inc. – Roca Honda Project**

| Wireframe | No. Samples | Min. Grade % $U_3O_8$ | Lower Quartile % $U_3O_8$ | Median Grade % $U_3O_8$ | Upper Quartile % $U_3O_8$ | Max. Grade % $U_3O_8$ | Mean Grade % $U_3O_8$ | SD | CV |
|---|---|---|---|---|---|---|---|---|---|
| a_210_l | 302 | 0.001 | 0.217 | 0.317 | 0.472 | 0.748 | 0.347 | 0.176 | 0.51 |
| a_210_u1 | 24 | 0.154 | 0.233 | 0.261 | 0.386 | 0.572 | 0.314 | 0.118 | 0.38 |
| a_210_u2 | 27 | 0.026 | 0.189 | 0.291 | 0.56 | 0.748 | 0.385 | 0.236 | 0.61 |
| a_220_u | 60 | 0.047 | 0.198 | 0.298 | 0.482 | 0.748 | 0.358 | 0.195 | 0.54 |
| a_310_l1 | 89 | 0.036 | 0.266 | 0.389 | 0.555 | 0.748 | 0.414 | 0.197 | 0.48 |
| a_310_l2a | 89 | 0.006 | 0.225 | 0.295 | 0.376 | 0.748 | 0.33 | 0.168 | 0.51 |
| a_310_l2b | 4 | 0.175 | 0.175 | 0.239 | 0.31 | 0.337 | 0.265 | 0.073 | 0.28 |
| a_310_l3 | 10 | 0.024 | 0.191 | 0.341 | 0.548 | 0.748 | 0.395 | 0.253 | 0.64 |

| Wireframe | No. Samples | Min. Grade % $U_3O_8$ | Lower Quartile % $U_3O_8$ | Median Grade % $U_3O_8$ | Upper Quartile % $U_3O_8$ | Max. Grade % $U_3O_8$ | Mean Grade % $U_3O_8$ | SD | CV |
|---|---|---|---|---|---|---|---|---|---|
| a_310_l4 | 15 | 0.416 | 0.453 | 0.537 | 0.587 | 0.748 | 0.543 | 0.098 | 0.18 |
| a_310_u | 4 | 0.013 | 0.013 | 0.287 | 0.427 | 0.449 | 0.294 | 0.201 | 0.68 |
| a_410_l | 8 | 0.078 | 0.087 | 0.109 | 0.191 | 0.318 | 0.152 | 0.082 | 0.54 |
| a_410_m | 29 | 0.032 | 0.122 | 0.239 | 0.359 | 0.747 | 0.258 | 0.16 | 0.62 |
| a_410_u1 | 29 | 0.001 | 0.111 | 0.24 | 0.389 | 0.748 | 0.27 | 0.208 | 0.77 |
| a_410_u2 | 9 | 0.001 | 0.16 | 0.212 | 0.415 | 0.748 | 0.329 | 0.267 | 0.81 |
| b_120 | 147 | 0.001 | 0.075 | 0.367 | 0.788 | 2.338 | 0.62 | 0.7 | 1.13 |
| b_120_l | 12 | 0.014 | 0.096 | 0.223 | 0.382 | 1.427 | 0.389 | 0.432 | 1.11 |
| b1_110_l | 13 | 0.001 | 0.073 | 0.253 | 0.394 | 1.574 | 0.451 | 0.526 | 1.17 |
| b1_310_l | 17 | 0.001 | 0.079 | 0.349 | 1.316 | 1.574 | 0.659 | 0.632 | 0.96 |
| b1_310_u | 4 | 0.154 | 0.154 | 0.241 | 0.522 | 0.645 | 0.391 | 0.231 | 0.59 |
| b1_510_u | 202 | 0.001 | 0.279 | 0.47 | 0.633 | 1.574 | 0.505 | 0.326 | 0.64 |
| b2_110_u | 22 | 0.001 | 0.152 | 0.242 | 0.507 | 1.574 | 0.407 | 0.426 | 1.05 |
| b2_310_l | 18 | 0.001 | 0.138 | 0.374 | 0.843 | 1.574 | 0.641 | 0.572 | 0.89 |
| b2_310_u | 4 | 0.076 | 0.076 | 0.219 | 0.243 | 0.49 | 0.257 | 0.172 | 0.67 |
| b2_610_u | 28 | 0.05 | 0.227 | 0.367 | 0.409 | 0.895 | 0.363 | 0.181 | 0.5 |
| b2_620_u | 37 | 0.001 | 0.218 | 0.382 | 0.509 | 0.987 | 0.39 | 0.232 | 0.6 |

Notes:

1. SD = Standard Deviation
2. CV = Coefficient of variation

## 14.7 Trend Analysis

### 14.7.1 Variography

#### 14.7.1.1 Sections 9, 10, and 16

Suitable variograms could not be generated for individual or combined domain models due to the small number of contained composite samples. Search ranges were determined visually based on continuity of mineralization and drillhole spacing.

#### 14.7.1.2 Section 17

A single variogram for the A-sand was calculated using all the samples contained in the mineralized domains for the A-sand. Two variograms were calculated for the B-sands, one for the high-grade mineralized domains and one for the low-grade mineralized domains. Table 14-8 details the variogram models used for OK.

Table 14-8: Ordinary Kriging Parameters
Energy Fuels Inc. – Roca Honda Project

| Domain | Nugget | No. Structure | Structure | Sil Differential | Azimuth (°) | Major Axis | Semi-Major Axis | Minor Axis |
|---|---|---|---|---|---|---|---|---|
| A-Sand | 0.50 | 1 | Spherical | 0.50 | 120.0 | 195.0 | 110.0 | 8.5 |
| B-Sand (High-Grade) | 0.45 | 1 | Spherical | 0.55 | 40.0 | 270.0 | 175.0 | 6.0 |
| B-Sand (Low-Grade) | 0.40 | 1 | Spherical | 0.60 | 140.0 | 315.0 | 205.0 | 3.5 |

## 14.8 Search Strategy and Grade Interpolation Parameters

Grade interpolation for all three zones were completed using Maptek's Vulcan software. Grades were assigned to blocks based on two primary modeling algorithms, Inverse Distance and Ordinary Kriging.

### 14.8.1 Sections 9, 10, and 16

Block grades were estimated using the Inverse Distance Cubed ($ID^3$) method. Domain models were used as hard boundaries to limit the extent of influence of composite grades within the domains.

Search directions were determined visually for each domain. Isotropic search ranges in the major and semi-major directions following the trend of individual domain models were applied. Minor search ranges were also determined visually and were shorter. Search directions and trends are listed in Table 14-9.

Two grade estimation passes were run with the major, semi-major, and minor search ranges increased by a factor of 1.5 in the second estimation run. Estimation flags were stored for each estimation run based on increasing search distances. The number of samples and holes were stored in separate block variables for use in determining resource classification.

Octant restrictions were not enforced to preserve local grades. Only the closest composites to block centroids (adhering to defined trends) were used. Grade estimation parameters are listed in Table 14-10.

Table 14-9: Vulcan Domain Search Parameter
Energy Fuels Inc. – Roca Honda Project

| Domain Model | General Trend | | Vulcan Rotation | | |
|---|---|---|---|---|---|
| | Azimuth (°) | Dip (°) | Z Rotation | Y Rotation | X Rotation |
| A1 | 10 | -5.5E | 100 | -5.5 | 0 |
| A2 | 10 | -4.0E | 100 | -4.0 | 0 |
| A3 | 10 | -4.5E | 100 | -4.5 | 0 |
| A4 | 10 | -7.0E | 100 | -7.0 | 0 |

| Domain Model | General Trend | | Vulcan Rotation | | |
|---|---|---|---|---|---|
| | Azimuth (°) | Dip (°) | Z Rotation | Y Rotation | X Rotation |
| A5 | 10 | -11.0E | 100 | -11.0 | 0 |
| A6 | 10 | -15.0E | 100 | -15.0 | 0 |
| B1_1 | 10 | -8.0E | 100 | -8.0 | 0 |
| B1_2 | 10 | -5.0E | 100 | -5.0 | 0 |
| B1_3 | 10 | -5.0E | 100 | -5.0 | 0 |
| B1_4 | 10 | -3.5E | 100 | -3.5 | 0 |
| B1_5 | 10 | -2.5E | 100 | -2.5 | 0 |
| B1_6 | 10 | -7.5E | 100 | -7.5 | 0 |
| B1_7 | 10 | -16.0E | 100 | -16.0 | 0 |
| B1_8 | 10 | -5.0E | 100 | -5.0 | 0 |
| B1_9 | 10 | -15.0E | 100 | -15.0 | 0 |
| B1_10 | 10 | -7.0E | 100 | -7.0 | 0 |
| B1_11 | 10 | -10.0E | 100 | -10.0 | 0 |
| B2_1 | 10 | -6.0E | 100 | -6.0 | 0 |
| B2_2 | 10 | -7.0E | 100 | -7.0 | 0 |
| B2_3 | 10 | -7.0E | 100 | -7.0 | 0 |
| B2_4 | 10 | -6.5E | 100 | -6.5 | 0 |
| B2_5 | 10 | -4.5E | 100 | -4.5 | 0 |
| B2_6 | 10 | -2.0W | 100 | 2.0 | 0 |
| B2_7 | 10 | -4.0E | 100 | -4.0 | 0 |
| B2_8 | 10 | -3.0E | 100 | -3.0 | 0 |
| B2_2_1 | 10 | -16.0E | 100 | -16.0 | 0 |
| C1 | 15 | -9.0E | 105 | -9.0 | 0 |
| C2 | 40 | -12.0E | 130 | -120 | 0 |
| C3 | 10 | -7.0E | 100 | -7.0 | 0 |
| C4 | 40 | -10.0E | 130 | -10.0 | 0 |
| C5 | 40 | -8.0E | 130 | -8.0 | 0 |
| C2_2_1 | 10 | -9.0E | 100 | -9.0 | 0 |
| C2_2_2 | 40 | -13.0E | 130 | -13.0 | 0 |
| C2_2_3 | 40 | -9.0E | 130 | -9.0 | 0 |
| D1 | 10 | -7.0E | 100 | -7.0 | 0 |
| D2 | 40 | -7.0E | 100 | -7.0 | 0 |

| Domain Model | General Trend<br>Azimuth (°) | <br>Dip (°) | Vulcan Rotation<br>Z Rotation | <br>Y Rotation | <br>X Rotation |
|---|---|---|---|---|---|
| D3 | 10 | -8.0E | 100 | -8.0 | 0 |
| D4 | 40 | -7.0E | 130 | -7.0 | 0 |

**Table 14-10: Section 9, 10, and 16 Grade Estimation Parameters**
**Energy Fuels Inc. – Roca Honda Project**

| Estimation Run | Wireframe Domain | Search Ranges<br>Major Axis (ft) | <br>Semi-Major Axis (ft) | <br>Minor Axis (ft) | Number of Samples per Estimate<br>Min. Samples /Estimate | <br>Max. Samples /Estimate | <br>Max. Samples /Drillhole |
|---|---|---|---|---|---|---|---|
| 1 | All C & D | 600 | 200 | 50.0 | 1 | 3 | 1 |
| 1 | All A, B1 & B2 | 600 | 200 | 25.0 | 1 | 3 | 1 |
| 2 | All C & D | 900 | 300 | 75.0 | 1 | 3 | 1 |
| 2 | All A, B1 & B2 | 900 | 300 | 37.5 | 1 | 3 | 1 |
| 3 | A1, B1_1 & C1 | 1,350 | 450 | 112.5 | 1 | 3 | 1 |

### 14.8.2 Section 17

Block grades were estimated using the Inverse Distance Squared (ID$^2$), Ordinary Kriging (OK), or Nearest Neighbor (NN) methods. Domain models were used as hard boundaries to limit the extent of influence of composite grades within the domains.

Where wireframes contained only a single drillhole, the NN method was used; in cases where there was enough data to generate variograms, OK was used; and in all other cases, ID$^2$ was used. ID$^2$ was used in Section 17 instead of ID$^3$ because the drill spacing is much tighter than in Sections 9, 10, and 16 and nearby drillholes were determined to have better grade continuity, and therefore more holes should have a greater influence on a block estimate than the nearest drillhole.

Search directions were determined visually for each domain. Anisotropic search ranges were used oriented along the major trend of the mineralized zones. As the mineralization tends to be tabular in nature, tops and bottoms of the mineralization were modeled as part of the wireframe process. Those top and bottom surfaces were used to generate unfolding models that were used in place of dip and plunge (Y Rotation and X Rotation), as given in Table 14-11.

Up to three grade estimation passes were run with the major, semi-major, and minor search ranges increased by a factor of 2.0 in the second and third estimation runs. Estimation flags were stored for each estimation run based on increasing search distances. The number of samples and holes were stored in separate block variables for use in determining resource classification.

Octant restrictions were not enforced to preserve local grades. Only the closest composites to block centroids (adhering to defined trends) were used. Grade estimation parameters are listed in Table 14-12.

**Table 14-11: Section 17 Vulcan Estimation Method and Ellipsoid Rotation**
**Energy Fuels Inc. – Roca Honda Project**

| Domain Model | Estimation Method | Vulcan Rotation | | |
|---|---|---|---|---|
| | | Z Rotation | Y Rotation | X Rotation |
| A1 | OK | 90 | Unfolding | |
| A2 | $ID^2$ | 110 | Unfolding | |
| A3 | $ID^2$ | 15 | Unfolding | |
| A4 | $ID^2$ | 180 | 0.0 | 0.0 |
| A5 | OK | 90 | Unfolding | |
| A6 | OK | 90 | Unfolding | |
| A7 | NN | 90 | -2.0 | 0.0 |
| A8 | $ID^2$ | 5 | 1.0 | 0.0 |
| A9 | NN | 90 | -2.0 | 0.0 |
| A10 | NN | 90 | -2.0 | 0.0 |
| A11 | NN | 0 | 0.0 | 0.0 |
| A12 | OK | 90 | Unfolding | |
| A13 | $ID^2$ | 70 | Unfolding | |
| A14 | $ID^2$ | 11 | 3.0 | 0.0 |
| B1_1 | OK | 140 | 0.0 | 0.0 |
| B1_2 | $ID^2$ | 125 | Unfolding | |
| B1_3 | $ID^2$ | 100 | -3 | -0.5 |
| B1_4 | NN | 0 | 0.0 | 0.0 |
| B2_1 | $ID^2$ | 100 | Unfolding | |
| B2_2 | $ID^2$ | 120 | Unfolding | |
| B2_3 | NN | 0 | 0.0 | 0.0 |
| B2_4 | $ID^2$ | 90 | Unfolding | |
| B2_5 | $ID^2$ | 100 | Unfolding | |
| Bh_1 | OK | 40 | 0.0 | 0.0 |
| Bh_2 | $ID^2$ | 75 | Unfolding | |

Table 14-12: Section 17 Grade Estimation Parameters
Energy Fuels Inc. – Roca Honda Project

| Estimation Run | Wireframe Domain | Search Ranges Major Axis (ft) | Semi-Major Axis (ft) | Minor Axis (ft) | Number of Samples per Estimate Min. Samples /Estimate | Max. Samples /Estimate | Max. Samples /Drillhole |
|---|---|---|---|---|---|---|---|
| 1 | All A | 156.0 | 88.0 | 0.8 | 4 | 24 | 2 |
| 1 | All B1 & B2 | 200.0 | 100 | 2.0 | 4 | 24 | 2 |
| 2 | All A | 312.0 | 176.0 | 1.6 | 4 | 24 | 2 |
| 2 | All B1 & B2 | 400.0 | 200.0 | 4.0 | 4 | 24 | 2 |
| 3 | All A | 624.0 | 352.0 | 3.2 | 4 | 24 | 2 |
| 3 | All B1 & B2 | 800.0 | 400.0 | 8.0 | 4 | 24 | 2 |

Note:

1. Blocks estimated using the Nearest Neighbor method were estimated using an isotropic search radius of 1,000 ft in all directions to select a single nearest sample.

## 14.9 Bulk Density

No records of sampling for bulk density determinations were found from work performed prior to Strathmore's 2007 core drilling project. The Mineral Resources estimated in this Preliminary Economic Assessment uses a tonnage factor of 15 ft$^3$/ton. This is the typical tonnage factor used by most operators, including Kerr-McGee in the Ambrosia Lake subdistrict and the Mount Taylor deposit, for mineralized intervals in the Westwater Canyon Member sandstone unit. This tonnage factor was derived by the AEC and the major operators from years of actual mining and milling based on over 300 Mlb of $U_3O_8$ that was produced in the Ambrosia Lake subdistrict.

The completed density determinations by RHR of 11 core samples from the four pilot holes S1-Jmw-CH-07, S2, S3, and S4 yield an average tonnage factor of 15.9 ft$^3$/ton for mostly barren sandstone of the Westwater unit (Table 14-13). One sample, RH07-0009, is from a mineralized interval and has a tonnage factor less than (i.e., density greater than) 15 ft$^3$/ton. Additional mineralized core samples would be required to justify using a tonnage factor other than 15 ft$^3$/ton.

Although the SLR QP is of the opinion that there is a relatively low risk in assuming that density of mineralized zones is similar to that reported in mining operations east and west of the Roca Honda property, additional density determinations, particularly in the mineralized zones, should be carried out to confirm and support future resource estimates.

Table 14-13: Density Determination of Core Samples
Energy Fuels Inc. – Roca Honda Project

| Sample ID | Drillhole | From (ft) | To (ft) | Thickness (ft) | Lab | Sand Unit | Dry Bulk Density (g/cm$^3$) | Tonnage Factor[2] (ft$^3$/ton) | Wet Bulk Density (g/cm$^3$) |
|---|---|---|---|---|---|---|---|---|---|
| RH07-0017 | S1-Jmw-CH-07 | 1,919.1 | 1,919.9 | 0.8 | DBS&A[1] | A | 1.81 | 17.7 | 2.05 |
| RH07-0018 | S1-Jmw-CH-07 | 1,947.5 | 1,948.4 | 0.9 | DBS&A[1] | B1 | 1.88 | 17.0 | 2.12 |
| RH07-0019 | S1-Jmw-CH-07 | 2,089.3 | 2,090.4 | 1.1 | DBS&A[1] | D | 2.04 | 15.7 | 2.23 |
| RH07-0009[3] | S2-Jmw-CH-07 | 1,762.0 | 1,762.8 | 0.8 | DBS&A[1] | A | 2.52 | 12.7 | 2.56 |
| RH07-0010 | S2-Jmw-CH-07 | 1,801.0 | 1,802.0 | 1.0 | DBS&A[1] | B1 | 2.04 | 15.7 | 2.26 |
| RH07-0015 | S3-Jmw-CH-07 | 1,928.3 | 1,929.3 | 1.0 | DBS&A[1] | B2 | 2.01 | 15.9 | 2.25 |
| RH07-0016 | S3-Jmw-CH-07 | 2,025.4 | 2,026.3 | 0.9 | DBS&A[1] | D | 1.89 | 16.9 | 2.15 |
| RH07-0001 | S4-Jmw-CH-07 | 1,808.9 | 1,809.7 | 0.8 | DBS&A[1] | B2 | 2.09 | 15.3 | 2.27 |
| RH07-0002 | S4-Jmw-CH-07 | 1,840.0 | 1,841.0 | 1.0 | DBS&A[1] | C | 2.04 | 15.7 | 2.22 |
| RH07-0003 | S4-Jmw-CH-07 | 1,858.3 | 1,859.1 | 0.8 | DBS&A[1] | C | 1.84 | 17.4 | 2.13 |
| RH07-0004 | S4-Jmw-CH-07 | 1,871.0 | 1,872.0 | 1.0 | DBS&A[1] | D | 2.17 | 14.7 | 2.33 |
| **Average** | | | | | | | **2.03** | **15.9** | **2.23** |

Notes:

1. Analysis by Daniel B. Stephens and Associates, Inc., Albuquerque, New Mexico
2. Tonnage Factor (cubic feet/short ton) calculated from 2,000 lb/(specific gravity x 62.43 lb/ft$^3$)
3. Sample RH07-0009 is from a mineralized interval corresponding to a grade of 1% $U_3O_8$

## 14.10 Block Models

### 14.10.1 Sections 9, 10 and 16

Two Roca Honda non-rotated block models were generated in Vulcan. The NE_Ore_Body.bmf includes mineralization in the C and D sand units. The SW_Ore_Body.bmf includes mineralization in the A, B1, and B2 sand units.

Parent blocks are 50 ft (x) by 50 ft (y) by 30 ft (z) in size. Blocks inside mineralization wireframes were limited to a maximum of 10 ft (x) by 10 ft (y) by 6 ft (z) with one foot by one foot by one-foot sub-blocks generated along mineralization domain wireframe boundaries. Block model extents are listed in Table 14-14.

Table 14-14: Section 9, 10 and 16 Block Model Extents
Energy Fuels Inc. – Roca Honda Project

| Block Model | Min. Easting | Max. Easting | Min. Northing | Max. Northing | Min. Elevation | Max. Elevation |
|---|---|---|---|---|---|---|
| NE_Ore_Body | 2,771,110 | 2,774,960 | 1,588,750 | 1,592,500 | 4,480 | 5,230 |
| SW_Ore_Body | 2,765,970 | 2,770,670 | 1,586,830 | 1,589,930 | 5,060 | 5,540 |

Resource model boundaries extend beyond the Roca Honda property in order to include data in drillholes located outside the property boundaries, however, only Mineral Resources located within the property are reported.

### 14.10.2 Section 17

A single non-rotated block model was generated in Vulcan for Section 17. The Lee_Ranch_2018.bmf includes mineralization in the A, B1 and B2 sand units.

Parent Blocks are 25 ft (x) by 25 ft (y) by 1 ft (z) in size with 5 ft (x) by 5 ft (y) by 0.5 ft (z) sub-blocks generated along mineralization domain wireframe boundaries. Block model extents are listed in Table 14-15.

**Table 14-15: Section 17 Block Model Extents**
**Energy Fuels Inc. – Roca Honda Project**

| Block Model | Min. Easting | Max. Easting | Min. Northing | Max. Northing | Min. Elevation | Max. Elevation |
|---|---|---|---|---|---|---|
| Lee_Ranch_2018 | 2,758,800 | 2,765,300 | 1,583,475 | 1,587,825 | 5,570 | 5,870 |

## 14.11 Cut-off Grade

The Roca Honda Mineral Resource estimate is summarized in Table 14-1 by block model area at a 0.19% $U_3O_8$ cut-off grade.

Assumptions used in the determination of a 0.19% $U_3O_8$ cut-off grade are:

- Total operating cost (mining, G&A, processing) of US$241 per ton
- Royalty cost of 5% (only on Section 16)
- Process recovery of 95%
- Uranium price of US$65.00/lb.
- The uranium prices used in the PEA are higher than the current spot uranium price (as of the date of this Technical Report) of approximately US$46 per pound. The prices are based on independent, third-party and market analysts' average forecasts as of 2021, and the supply and demand projections are for the period 2021 to 2035 (Section 16). In QP's opinion, these long-term price forecasts are a reasonable basis for estimation of Mineral Resources.

## 14.12 Classification

Classification of Mineral Resources as defined in SEC Regulation S-K subpart 229.1300 were followed for classification of Mineral Resources. The Canadian Institute of Mining, Metallurgy and Petroleum definition Standards for Mineral Resources and Mineral Reserves (CIM 2014) are consistent with these definitions.

A Mineral Resource is defined as a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.

Based on this definition of Mineral Resources, the Mineral Resources estimated in this Preliminary Economic Assessment have been classified according to the definitions below based on geology, grade continuity, and drillhole spacing.

**Measured mineral resource** is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a measured mineral resource has a higher level of confidence than the level of confidence of either an indicated mineral resource or an inferred mineral resource, a measured mineral resource may be converted to a proven mineral reserve or to a probable mineral reserve.

**Indicated mineral resource** is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource, an indicated mineral resource may only be converted to a probable mineral reserve.

**Inferred mineral resource** is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an inferred mineral resource may not be considered when assessing the economic viability of a mining project and may not be converted to a mineral reserve.

The SLR QP has considered the following factors that can affect the uncertainty associated with the class of Mineral Resources:

- Reliability of sampling data:
  - Drilling, sampling, sample preparation, and assay procedures follow industry standards.
  - Data verification and validation work confirm drill hole sample databases are reliable.
  - No significant biases were observed in the QA/QC analysis results.
- Confidence in interpretation and modelling of geological and estimation domains:
  - Mineralization domains are interpreted manually in cross-sections and refined in longitudinal sections by an experienced resource geologist.
  - There is good agreement between the drill holes, open pit sampling, and mineralization wireframe shapes.

  - The mineralization wireframe shapes are well defined by sample data in areas classified as Measured and Indicated.
- Confidence in block grade estimates:
  - Measured and Indicated block grades correlate well with composite data, statistically and spatially and locally and globally, as well as with production reconciliation.

Mineral Resources for the Project were classified as either Measured, Indicated or Inferred Mineral Resources as follows:

### 14.12.1 Section 9, 10 and 16

Classification of the Mineral Resource in Sections 9, 10 and 16 and within the mineralized domains is primarily based on drillhole spacing continuity of grade and was completed manually after a review of the geology and mineralization.

#### 14.12.1.1 Measured

Blocks estimated by drillholes with a maximum spacing of approximately 100 ft and well established geological and grade continuity were classified as Measured Mineral Resources.

#### 14.12.1.2 Indicated

Blocks estimated by drillholes with a maximum spacing of approximately 200 ft and sufficient geological and grade continuity were classified as Indicated Mineral Resources. Manual adjustments were made to eliminate the unusual artifacts generated from the estimation passes.

#### 14.12.1.3 Inferred

Mineral Resources have been defined by the wide spacing of drillholes and resultant uncertainty in geological and grade continuity. More drilling is required to determine continuity of mineralization in areas of wide drill spacing in order to upgrade Inferred Resources to the Indicated category.

### 14.12.2 Section 17

Classification of the Mineral Resource in Section 17 and within the mineralized domains is primarily based on geologic continuity, grade continuity, and a number or parameters associated with each block. The detailed wireframe modeling completed prior to grade estimation combined sample data that were in the same geologic sand unit and with similar grades, so blocks within a given mineralized domain already have geologic and grade continuity associated with them.

#### 14.12.2.1 Indicated

Blocks that met the following conditions were classified as indicated:

- Estimated in either the 1st or 2nd pass
- Utilized more than a single drillhole and single sample in the estimation (i.e., not estimated by Nearest Neighbor)
- Was within 100 ft of the nearest sample

#### 14.12.2.2 Inferred

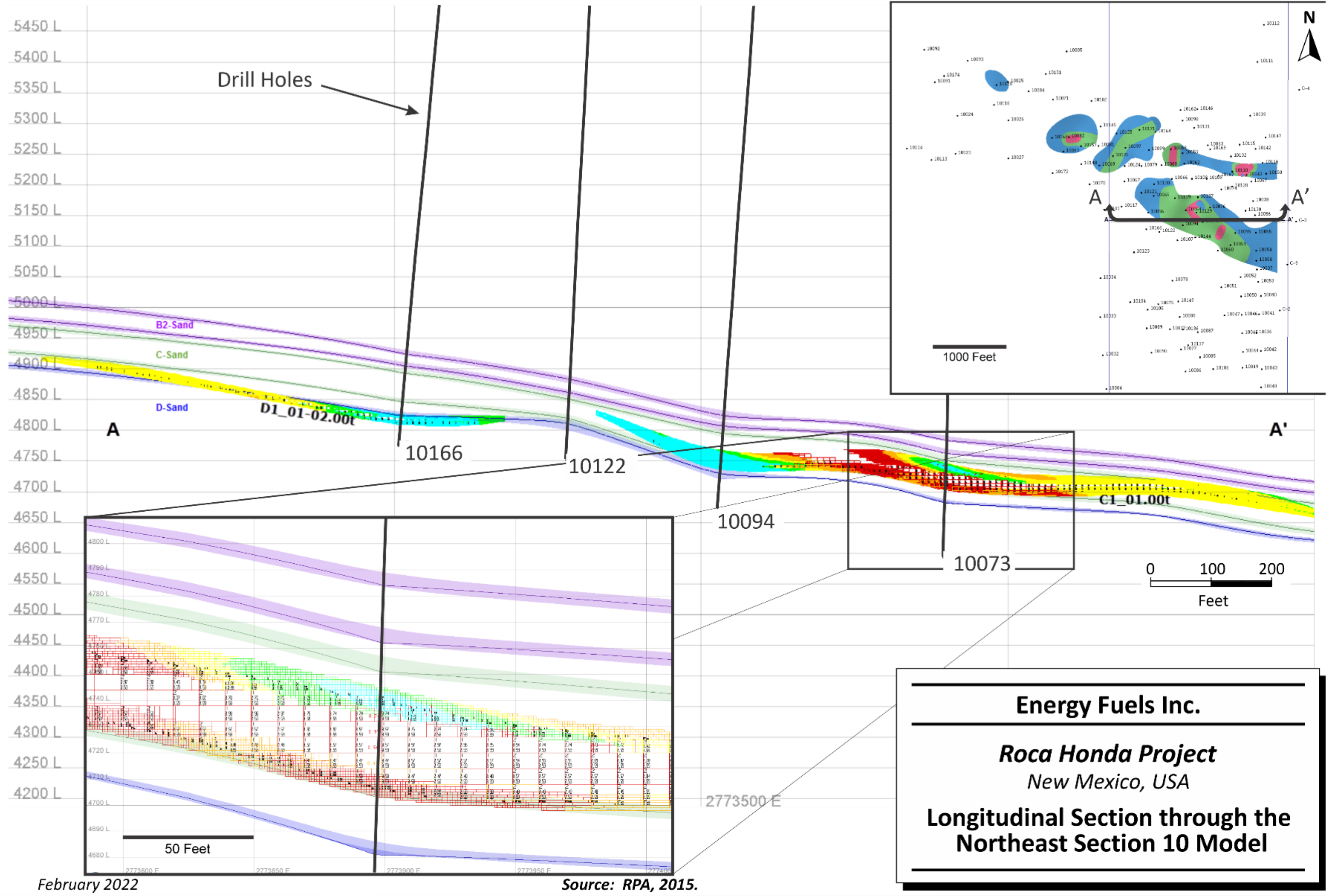
Blocks that were estimated in the 3rd pass, estimated by the Nearest Neighbor method, or over 100 ft from the closest sample were classified as inferred. More drilling is required to determine continuity of mineralization in areas of wide drill spacing in order to upgrade Inferred Resources to Indicated

In the SLR QP's opinion the classification of Mineral Resources is reasonable and appropriate for disclosure.

## 14.13 Block Model Validation

All three block model zones were validated by visual methods. This involved comparing mineralization intercepts and composite grades to block grade estimates. The comparisons showed reasonable correlation with no significant overestimation or overextended influence of high grades. A vertical longitudinal section through the Northeast Section 10 model is presented in Figure 14-8.

Additional validation methods were used for the different block model zones and are discussed below.



**Energy Fuels Inc.**

***Roca Honda Project***

*New Mexico, USA*

**Longitudinal Section through the Northeast Section 10 Model**

*February 2022*

*Source: RPA, 2015.*

Figure 14-8: Longitudinal Section through the Northeast Section 10 Model

### 14.13.1 Section 9, 10 and 16

Final block grades were compared to NN block grades by domain. NN grade estimates were run with run-length composites generated across the thickness of the mineralization models. The comparison showed good correlation with less that 10% difference in average grades for most domains. A few mineralized sand wireframe domains showed larger grade differences. B2_05 had a higher NN grade due to widely spaced high-grade composites influencing a higher number of blocks. B1_09_S_01-02 contained only one hole, with a higher run-length composite compared to lower grade six-foot composites.

No significant discrepancies were identified with the block grade validation.

The SLR QP recommends using an inverse distance squared (ID$^2$) estimation as an additional check for the block model validation.

### 14.13.2 Section 17

Final block statistics were compared to composite statistics for the same mineralized domain. Overall, no major issues were identified. Additionally, histograms and swath plots were generated for the larger mineralized domains to compare a NN estimate with either the OK or ID$^2$ estimates. Figure 14-9 shows the results of the swath plot analysis. Overall histogram distributions between the methods were similar as were swath plots looking in at north-south, east-west, and elevation slices.

The SLR QP recommends using an inverse distance cubed (ID$^3$) estimation as an additional check for the block model validation.

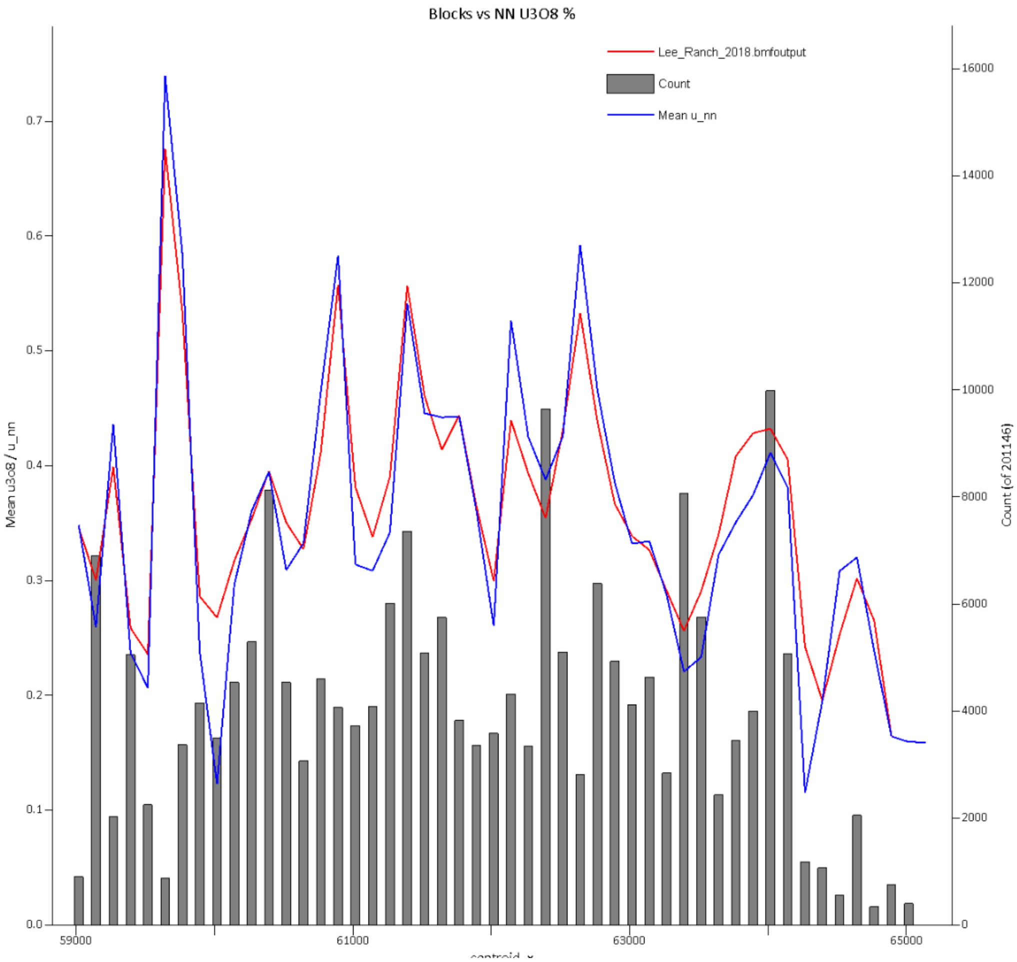


Figure 14-9: Swath Plot of the Roca Honda Project

## 14.14 Grade Tonnage Sensitivity

Table 14-16 and Figure 14-10 present the sensitivity of the Roca Honda Mineral Resource model to various cut-off grades.

Table 14-16 : Grade versus Tonnage Curve
Energy Fuels Inc. – Roca Honda Project

| Price ($/lb $U_3O_8$) | Cut-Off Grade (% $U_3O_8$) | Cut-Off GT (%-ft $U_3O_8$) | Tonnage (000 ton) | Grade (% $U_3O_8$) | Contained Metal (000 lb $U_3O_8$) |
|---|---|---|---|---|---|
| $80 | 0.160 | 0.32 | 3,777 | 0.436 | 32,906 |
| $75 | 0.170 | 0.34 | 3,615 | 0.448 | 32,375 |
| $70 | 0.183 | 0.37 | 3,443 | 0.461 | 31,766 |
| **$65** | **0.190** | **0.38** | **3,360** | **0.468** | **31,464** |
| $60 | 0.213 | 0.43 | 3,146 | 0.486 | 30,597 |
| $55 | 0.232 | 0.46 | 3,001 | 0.499 | 29,954 |

| Price ($/lb $U_3O_8$) | Cut-Off Grade (% $U_3O_8$) | Cut-Off GT (%-ft $U_3O_8$) | Tonnage (000 ton) | Grade (% $U_3O_8$) | Contained Metal (000 lb $U_3O_8$) |
|---|---|---|---|---|---|
| $50 | 0.256 | 0.51 | 2,809 | 0.517 | 29,014 |
| $45 | 0.284 | 0.57 | 2,515 | 0.545 | 27,433 |
| $40 | 0.320 | 0.64 | 2,164 | 0.585 | 25,319 |
| $35 | 0.365 | 0.73 | 1,732 | 0.646 | 22,358 |
| $30 | 0.426 | 0.85 | 1,378 | 0.710 | 19,571 |
| $25 | 0.511 | 1.02 | 999 | 0.803 | 16,037 |

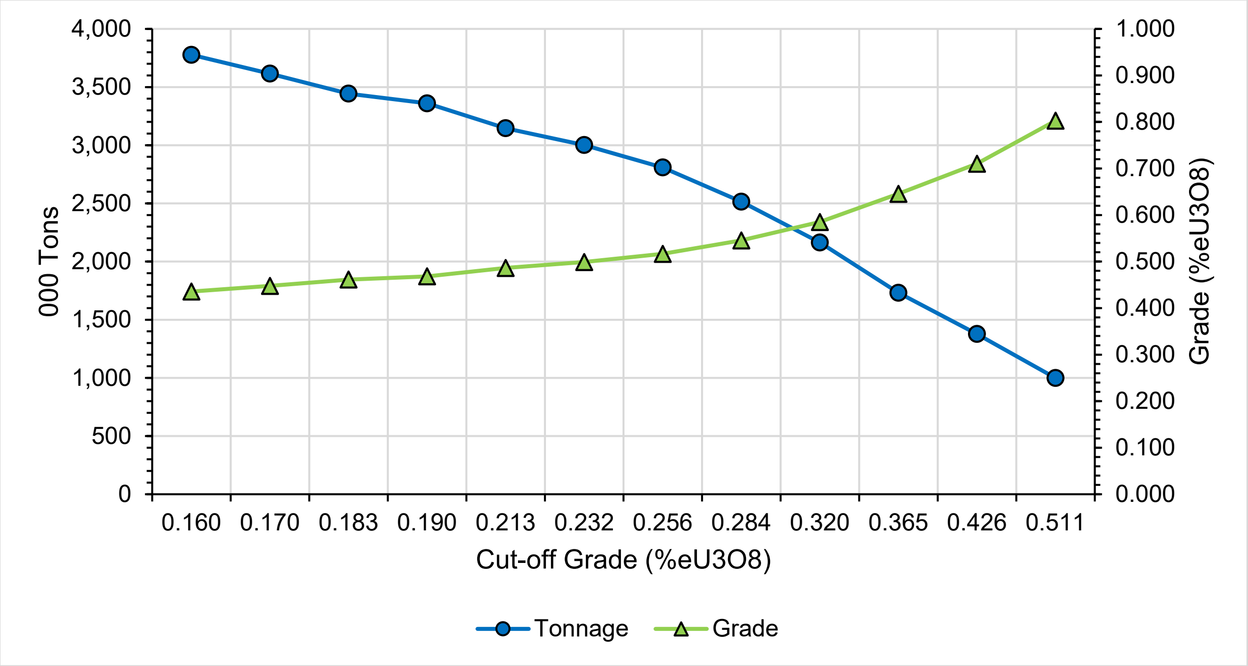


**Figure 14-10: Roca Honda Resource Grade vs. Tons**

## 14.15 Mineral Resource Reporting

The Roca Honda Mineral Resource estimate is summarized by domain at a 0.19% $U_3O_8$ cut-off grade in Table 14-17. In the SLR QP's opinion, the assumptions, parameters, and methodology used for the Roca Honda Mineral Resource estimates are appropriate for the style of mineralization and mining methods.

The SLR QP is of the opinion that with consideration of the recommendations summarized in Section 1 and Section 26, any issues relating to all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.

The SLR QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

### Table 14-17: Mineral Resource Estimate for Roca Honda – Effective Date December 31, 2021
### Energy Fuels Inc. – Roca Honda Project

| Classification | Area | Tonnage (000 ton) | Grade (% $U_3O_8$) | Contained Metal (000 lb $U_3O_8$) | Recovery (%) |
|---|---|---|---|---|---|
| Measured | Sec. 9, 10 &16 | 208 | 0.477 | 1,984 | 95 |
| | Sec. 17 | - | - | - | |
| Indicated | Sec. 9, 10 &16 | 1,303 | 0.483 | 12,580 | 95 |
| | Sec. 17 | 336 | 0.454 | 3,058 | 95 |
| **Total Measured + Indicated** | **Sec. 9, 10, 16 & 17** | **1,847** | **0.477** | **17,622** | **95** |
| Inferred | Sec. 9, 10 &16 | 1,198 | 0.468 | 11,206 | 95 |
| | Sec. 17 | 315 | 0.419 | 2,636 | 95 |
| **Total Inferred** | **Sec. 9, 10, 16 & 17** | **1,513** | **0.457** | **13,842** | **95** |

Notes:

1. SEC S-K definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.
2. Mineral Resources are estimated at a $U_3O_8$ cut-off grade of 0.19% $U_3O_8$.
3. A minimum mining thickness of six feet was used, along with $241/ton operating costs, $65/lb $U_3O_8$ price, and 95% recovery.
4. Bulk density is 0.067 ton/ft$^3$ (15.0 ft$^3$/ton or 2.14 t/m$^3$).
5. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
6. Mineral Resources are 100% attributable to EFR and are in situ.
7. Numbers may not add due to rounding.

# 15.0 MINERAL RESERVE ESTIMATE

There are no current Mineral Reserves at the Project.

# 16.0 MINING METHODS

## 16.1 Introduction

As currently envisaged, mining at the Project will be based on an average production rate of 1,050 stpd using a combination of step room-and-pillar (SRP) and drift-and-fill (DF) mining methods. Rubber tired mechanized mining equipment will provide operational flexibility in the mine in response to changing orebody geometry. Broken mineralized material will be transported by truck to ore passes leading to a skip pocket and hoisted to surface from either the Section 16 or Section 17 shaft. Cemented rockfill will be placed in mined out areas for ground control. Mining will prioritize the highest-grade areas first by Section, and in the case of stacked mineralized zones, top-down. Mineralized material will be stockpiled on surface and hauled by truck to EFR’s White Mesa Mill for processing.

Mine surface infrastructure will be based at the Section 16 shaft area and include all support buildings, mine ventilation fans, batch plant, ore and waste stockpiles, pump infrastructure and a water treatment plant with associated holding ponds.

A minor amount of infrastructure will also be required on Section 17 (Lee Ranch) to support mine operations. A concrete lined shaft, with a 14 ft finished diameter, exists in Section 17 to a depth of 1,475 ft. An additional 186 ft of sinking is required to reach its design elevation. Existing infrastructure on Section 17 includes line power, a hoist house, maintenance building, and a one-acre pond used to hold water during shaft sinking. Access is from a well-maintained two-lane gravel road.

The layouts of the mine and mill sites are shown In Figure 18-1 and Figure 17-2 respectively.

Mine production is anticipated to begin after four years of preproduction which includes Section 17 shaft rehabilitation and development, dewatering of the mineralized zone, underground development to the mineralized zones, and surface infrastructure construction, including the Section 16 shaft and associated ventilation raises. Mine production would begin in year five and lasts eleven years, followed by reclamation.

## 16.2 Mining Method

The Westwater Canyon Member, which hosts the mineralized horizons, is comprised primarily of sandstones with interbedded shales and mudstones. The A and B mineralized horizons (in Sections 9, 16, 17) are located in the upper area of the Westwater Canyon Member. The C and D mineralized horizons (in Section 10) are located in the lower portion of the Westwater Canyon Member. The Recapture Zone is located immediately below the Westwater. Due to significant historical difficulties in both developing and maintaining the integrity of drifts in the Recapture Zone, the mine design avoids any excavations in this Zone.

It is proposed that the deposit will be developed and mined by two modified room-and-pillar methods using ground support during development to ensure roof stability, especially in weak ground conditions.

Room-and-pillar mining is a simple, low-capital cost mining method where 70% to 90% recovery can be expected dependent upon the rock strengths and geological structures encountered. Although pillars are anticipated to remain unmined, even with tight backfilling and artificial support, the method is sufficiently flexible to achieve required production rates, control cut-off grades, and maintain safe working conditions. The operational sequence must be modified when mining heights are high (>12 ft) since multi-cuts and stacked pillars (low width-to-height ratios) are required and backfilling must be used to ensure pillar stability. This method becomes a hybrid of the cut-and-fill method in areas where the mineralization is thick (12 ft to 21 ft high) because slender pillars are ineffective for roof support and strong global backfill support must enhance local roof support.

With the wide range of mineralized zone thicknesses (from 6 ft to 21 ft) and dips/plunges (from flat to 15°), one of the mining methods selected for Roca Honda is SRP. Permanent pillars will be left in a pre-designed pattern and cemented rockfill (CRF) will be placed in mined-out areas as backfill. This method, recommended for the lower grade mineralized lenses, allows for mobile equipment to be used effectively in the range of dips/plunges encountered at Roca Honda.

DF methods are well suited for selective precision mining in variable-grade areas and are quite flexible, resulting in high extraction ratios. The volume of open ground at any one time is small since drifts are mined and immediately backfilled before adjacent drifts are mined. The development can be placed in the mineralized areas, minimizing waste rock. This method is not well suited for high production rates, unless many stopes are simultaneously opened, which requires a laterally extensive mineralized zone. The cost of local support (roof cabling through multi-cuts) is high because all cuts must be fully supported. This method would be considered in variable high-grade areas, where maximum recovery is desired.

DF mining is recommended for the higher-grade mineralized lenses at Roca Honda. This method is widely used in other mines with similar ground conditions and will result in higher mining recoveries as the need to leave permanent pillars will be significantly reduced. This method, however, requires a high quality, high strength engineered backfill in order to be successful. For the DF method, a high-strength CRF will be placed in the mined-out areas.

Bulk mining methods were investigated, particularly for the thick (up to 20 ft) zones. One method considered involved mining of the thick zones in staggered primary and secondary panels using engineered cemented backfill. This method was not considered to be applicable due to the weak rock conditions. The low rock strengths and limited stand-up time made this method impractical given the relatively high stope walls, which would be exposed during the benching process.

The minimum thickness used In the development of the Mineral Resource estimate was six feet. The mineralized zones range in thickness from 6 ft to 21 ft. Mineralized zones with thicknesses from 6 ft to 12 ft will be mined in one pass. Mineralized zones exceeding 12 ft in thickness will be mined in two sequential overhand cuts with each cut being approximately one-half of the overall zone thickness. The transition grade, defined as the grade where a switch from one mining method to the other would occur, was assumed to be 0.265% $U_3O_8$. Stopes with average diluted grades of less than 0.265% $U_3O_8$will be mined using the SRP method. Stopes with average diluted grades greater than 0.265% $U_3O_8$ will be mined using the DF method.

In Sections 9, 16, and 17, the mineralized horizons will be further defined using longhole drills from a dedicated drilling horizon located below the mineralized zones. In Section 10, the mineralized horizons will be defined using longhole drills on a stope by stope basis.

The proposed Life of Mine (LOM) schedule was developed based on initiating development from the production shaft located in Section 16 and mining material from Section 16 while developing the Section 17 shaft and mining that area, followed by Sections 9 and 10. The mining areas in Sections 9 and 16 will be connected to Section 10 by means of a 3,600 ft twin decline haulage way. Section 16 will be connected to Section 17 by a single haulage way.

Primary development connecting the shaft to the various mineralized zones (including the twin decline) will be driven 10 ft wide by 12 ft high. Stope access development connecting the primary development to the individual stopes will be driven 10 ft wide by 10 ft high.

The mining sequence in each Section is dependent upon the development schedule. Generally, the extraction schedule is sequenced to prioritize the mining of the largest and highest-grade zones in each section of the mine. Where mineralized zones are stacked, they will be mined in a top-down sequence.

Stope mining begins approximately four years after the start of construction and the operating mine life spans eleven years. The production rate averages approximately 1,050 stpd over the life of the mine, assuming 350 operating days per year.

Depressurization of the three main aquifers in the Mine area will be accomplished by the use of 19 depressurization wells and underground long holes that will supply water to 11 underground pumping stations that will ultimately feed water to the Section 16 and 17 shaft sump pumps and three discharge pump stations located in each shaft. It has been estimated that the mine will discharge a nominal 2,500 gpm of water at temperatures between 90°F and 95°F. An additional 2,000 gpm will be produced by surface wells, resulting in a total discharge rate as high as 4,500 gpm.

The deposit will be developed and mined based on single-pass ventilation using a series of separate and independent intake and exhaust networks. The design requires a total of 12 ventilation raises (five in Section 17, three in Section 16, two in Section 9, and three in Section 10). Two of the ventilation raises, one in Section 16 and one in Section 10, will be equipped with emergency evacuation hoisting equipment.

The LOM statistics for the Roca Honda Mine are summarized in Table 16-1.

**Table 16-1: Key Life of Mine Production Statistics**
**Energy Fuels Inc. – Roca Honda Project**

| Metric Area | Units | Life of Mine Quantity |
|---|---|---|
| Development – Primary | 000 ft | 19.2 |
| Development – Stope Access | 000 ft | 128.3 |
| Stope Mineralization | 000 tons | 3,788.9 |
| Development Mineralization | 000 tons | 231.3 |
| Total Production | 000 tons | 4,020.2 |
| Waste Tons | 000 tons | 884.5 |
| Backfill Required | 000 tons | 2,625.1 |

Notes:

1. Tables may not add due to rounding.

### 16.2.1 Mineralized Material Transportation

Mining will be done with rubber-tired mechanized equipment to provide operational flexibility. Broken mineralized material will be hauled and deposited in an ore pass leading to a skip pocket chamber in both the Section 16 and Section 17 shafts. At each of the two skip loading pockets, 15 in. fine mineralized material will be stored in a 650 ton storage area. From the shaft stations, the mineralized material will be transported to surface by a vertical shaft double drum hoist. A summary of key shaft parameters include:

- Finished Diameter: 18 ft (Section 16); 14 ft (Section 17)
- Headframe Type: Structural Steel with Backlegs
- Hoist Capacity: 1,500 stpd (Section 16), 800 stpd (Section 17)
- Personnel Cage Capacity: 10 to 12 miners
- Emergency Hoist Capacity: 10 to 12 miners
- Shaft depth: 2,100 ft (Section 16); 1,667 ft (Section 17)

Once the mineralized material is hoisted to the surface, it will be transferred into highway trucks, which will deliver the material to the Mill.

## 16.3 Mine Design

The key design criteria for the Roca Honda Project were:

- Mine capacity up to 1,700 stpd and process plant capacity up to 2,000 stpd (700,000 stpa)
- 227,000 tons in year one, approximately 400,000 stpa thereafter
- Eleven year mine life
- Mine production from Sections 9, 10, 16, and 17
- Mechanized mining using SRP and DF underground methods
- Double-drum shaft hoisting of mineralized material to the surface and highway truck haulage to the Mill
- Backfill where needed to maximize mineral extraction

Mechanized equipment of medium size, suitable for headings of 100 $ft^2$ to 150 $ft^2$, is recommended for the Mine. Mechanized equipment will be selected to minimize employee exposure to working areas.

The stoping plan starts in the highest-grade areas of Sections 16 and 17, and then proceeds to Sections 9 and 10. The stoping is planned in a series of primary and secondary stopes.

Mining methods considered included the following constraints:

- Open stope areas will require stable back conditions during extraction. Back stability will need to consider rock strength, and proximity and condition of recent workings and groundwater drainage conditions.
- Blocks of ground serving as temporary or permanent pillars must remain stable during extraction of adjacent ground.
- Backfilling of primary openings needs to provide sufficient back support to allow secondary pillars to be mined with a stable back.
- Backfill from primary openings should not slough into rib pillar cross-cuts during extraction.
- Backfill operations will require tight filling against supported rock including pillar ribs and stope backs by up-dip filling operations. In multi-cut areas that require working from fill, the working mat surface should be sufficiently competent to support equipment.
- Temporary access ramps should remain stable during their expected life and can be re-cut provided roof and rib stability can be maintained.

- Backfilling operations should include water management provisions to control drainage to main haulages.
- Mineralized lenses can be stacked one above the other with as little as tens of feet of separation.
- Considerations should be made in each mining area for variations in mining-induced stresses, rock failure mechanisms, and local ground deformations.

Stopes were designed with flat footwalls and were oriented in each of the three areas to maximize the mineralized extraction and minimize dilution due to the variations in the footwall of Section 10. Stopes will be accessed through a system of ramps located outside the Mineral Resources in Sections 9, 10, 16, and 17, plus a small part in Section 11. The locations of the workings are shown in Figure 16-1. The access ramps will connect to a haulage drift and to ventilation raises to the surface. For each stope, a short stope access will be driven to the first cut and then slashed to access subsequent cuts above or below the initial cut.

Mine ventilation will be achieved with surface fans located at exhaust raise locations. Fresh air will enter the mine via the Section 16 or 17 production shafts or an intake ventilation raise. Fresh air will travel through primary haulage ways to active mining areas. Fresh air will then enter active stopes via the fresh air stope access drift, pass through the stope, and finally exit the stope where the air will be directed toward a one pass only ventilation exhaust raise.

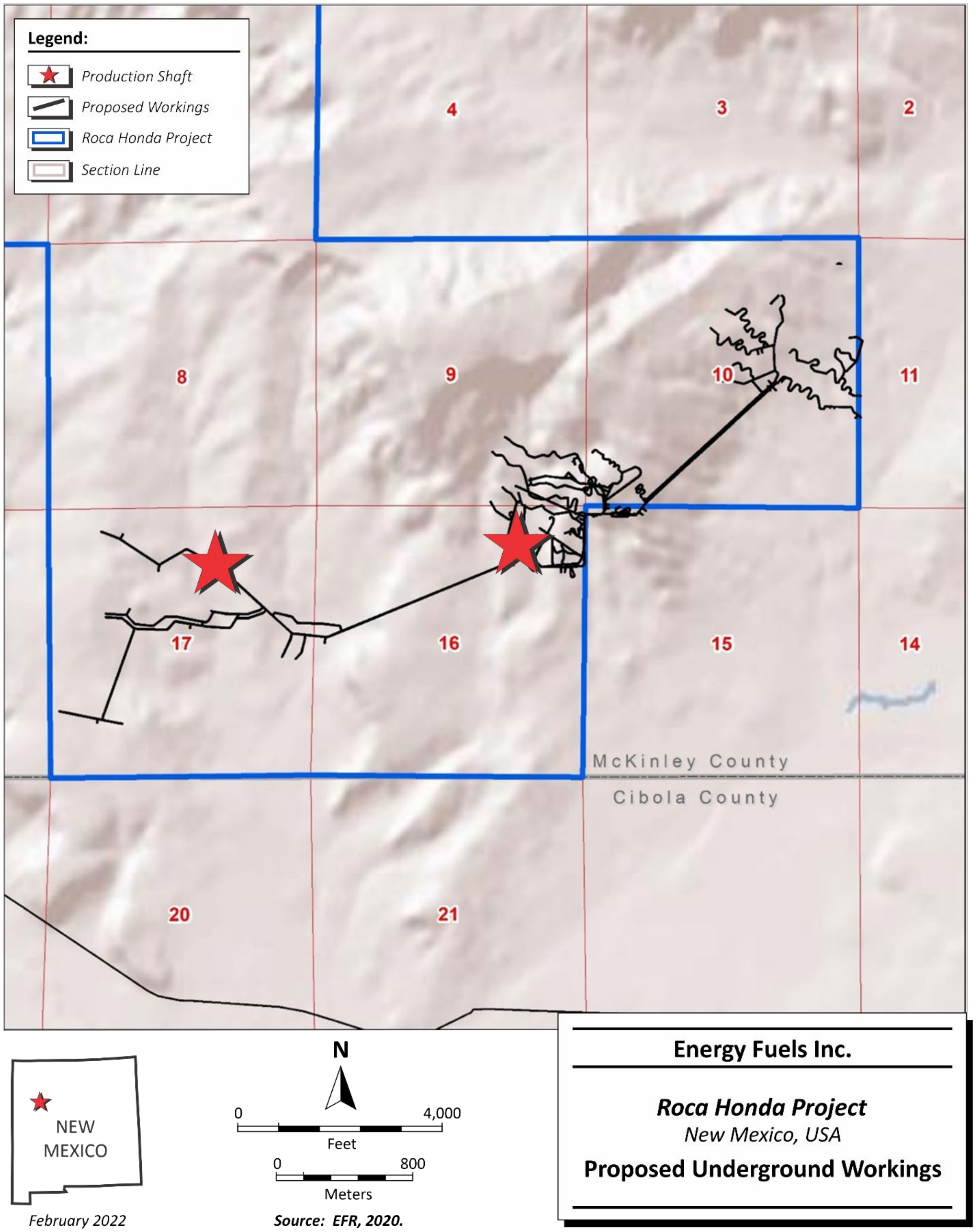


Figure 16-1: Proposed Underground Workings

### 16.3.1 Mining Recovery and Dilution

The deposit is relatively flat-lying and will be mined using both SRP stoping in the lower grade zones and DF stoping in the higher-grade sections. Dilution is estimated to average 17.1% at a grade of 0.030% $U_3O_8$. This relationship includes both low grade and waste material; dilution estimates are based on one foot of overbreak in the roof and six inches in the floor of all single lift stopes. In the case of multi-lift stopes, the initial cuts include only six inches of floor dilution. The final cut includes both floor dilution and roof dilution.

To arrive at the Mineral Resources that are potentially mineable in this PEA, the SLR QP used a diluted cut-off grade of 0.110% $U_3O_8$, a minimum mining thickness of six feet, and an average calculated mining recovery of 88%. The resource model and underlying data have not changed, however, the SLR QP has reported Mineral Resources at a higher cut-off grade, consistent with the production scenario proposed in this PEA.

### 16.3.2 Shaft Pillar Considerations

Each of the proposed shafts at Roca Honda should be located as near to the centroid of the mineralized zones as possible to minimize haulage distances, while maintaining appropriate shaft pillar distances.

The shafts should not penetrate the Recapture mudstone formation to any appreciable extent to avoid swelling and closure problems when the already wet shaft becomes distressed.

The shafts should be located at least 400 ft from the major northeast-southwest fault system to minimize the potential for mining-induced stress displacements.

And finally, the shafts should be at least 350 ft from any high extraction mining to avoid having mineralized material tied up in shaft pillar and mining-induced subsidence differential displacements impacting stability of the shaft liner and hoist guide alignment.

### 16.3.3 Geotechnical Analysis

The estimated geotechnical conditions determined the mine design parameters. These parameters included support for open spans in both long-term haulages and in short-term drifts within a stope. The support requirements were used to estimate the cost for ground support.

The approach adopted uses empirical methods for making estimates of the support parameters based on similar case histories in a range of applicable ground conditions. The use of empirical methods has been shown to be a reasonable approach to assessing ground support as long as anticipated ground conditions are within the data range. Although rock mass strengths at Roca Honda are considered poor to average quality, their Rock Mass Rating (RMR) values are within the data range of the empirical methods.

No analyses beyond these empirical assessments were performed to check the recommended support parameters. As the mining project develops, additional geotechnical analyses will be warranted, to include site specific geotechnical data from underground and appropriate rock mechanics analyses, which might include numerical modeling.

To account for the anticipated variability in rock quality a range of rock mass strengths were considered. For this reason, a range of three anticipated ground conditions were defined: weak, medium, and strong. For each of these, the SLR QP estimated the percentage of excavations that will be in each ground condition, and thus the type of support required for the type of opening (long-term primary, stope access development, and short-term stope drifts).

The groundwater table is estimated to be at a depth of 886 ft at the Section 16 proposed shaft location (elevation of 6,378 ft ASL, where the ground elevation is 7,264 ft ASL). Standing water in the Section 17 shaft is at a depth of 750 ft (elevation 6407 ft ASL) where the ground elevation is 7,157 ft ASL.

#### 16.3.3.1 Development Areas

Stability of open spans in a blocky rock mass is anticipated to be governed by the thickness of bedding in the roof and intersection of joints producing massive sandstone blocks that may be removable into the opening. Stability was analyzed using a simple limit equilibrium method that balanced block loads and support loads. The analysis used the following assumptions.

- Drift width = 10 ft
- Unit weight of roof rock = 145 lb/ft$^3$
- Maximum bedding slab thickness = 50% of room width
- Minimum shear strength of roof rock = 350 psi

The minimum safety factor for bolts is 1.50. The bolts were assumed to be 45 kilopound per square inch (ksi) yield steel.

### 16.3.4 Underground Layout

#### 16.3.4.1 Mine Development

Primary level development will be excavated 12 ft high by 10 ft wide incorporating a semi-circular arched back in the upper 3 ft of the heading. This heading size was selected as the best compromise between the need to minimize the drift excavation dimensions and span due to the relatively weak rock conditions, yet be sufficiently large to allow adequate clearance for suitably sized mobile equipment and the associated piping, electrical and communications cables, services, and 36 in. diameter rigid ventilation ducting. This heading size was also selected as these drifts will be the primary ventilation routes for both intake and exhaust air, most importantly between the production shafts and area workings.

It is expected that the weak sandstones and shales will degrade from vehicular traffic. The use of road base material will therefore be necessary. Roadbeds will be constructed by placing a “Tensar” mesh mat on the floor of the drift to prevent mixing of the weak floor material and the roadbed material. A six-inch layer of screened rock will be placed on the mesh mat. All roads will be ditched and crowned.

Due to its higher grade and lower dewatering requirements, construction and development will begin at Section 17 with the construction of dewatering infrastructure followed by the rehabilitation and completion of the Section 17 shaft and associated underground infrastructure, including ventilation raises. Total vertical requirements will total 1,531 ft and be completed in year 2 of development. At the end of year 1, lateral development and underground construction will begin and be completed at the end of year 2. A total of 3,985 ft of horizontal development will be completed at this time.

Also in year 2, Section 16 shaft construction will begin and timed to reach the shaft station level simultaneously with development from Section 17. The 3,600 ft decline connecting the Southwest (primarily Section 9 and 16) and Northeast (primarily Section 10) mineralized zones has been designed as a twinned heading. This is required for ventilation purposes, both during the driving of the decline as the need for booster fans is eliminated, and for subsequent mining in the Northeast. When completed, one of the decline headings will serve as a dedicated fresh airway connecting the Northeast workings to the Section 16 production shaft fresh air intake. The other decline heading will serve as a dedicated exhaust airway, connecting to the various exhaust boreholes in the Southwest mining area, thus supplementing the exhaust capacity of the boreholes in the Northeast area. Depressurizing of the water in the decline area will precede the initiation of the decline construction, and it will be maintained after completion.

Development productivity calculations were prepared to estimate the rate of advance and the manpower and equipment requirements for the development work. The productivity was developed from first principles with each part of the development cycle time estimated to generate the overall cycle time for development headings.

In all cases, the mucking was assumed to be to a muck bay with re-mucking as a separate activity such that the face could be turned around as rapidly as possible. Truck loading and hauling are considered to be activities that can be undertaken simultaneously with the other activities at the face.

## 16.4 Grade Control

Grade control is the responsibility of geologists, engineers, production miners, ore control technicians, surveyors, truck drivers, samplers, and metallurgists at the Mine.

Approximately 100 Mlb of $U_3O_8$ have been produced from mines located close to (approximately 15 mi) the Mine. The grade control procedures, methods, and key items discussed below are an amalgamation of the information gathered from EFR staff and other articles from the public domain.

### 16.4.1 Roca Honda Grade Control

Grade control is a day-to-day mine production activity that must be maintained during underground development and mining. The goals of grade control are to identify the limits of mineralization prior to blasting, accurately account for the tons and grade of the broken material after blasting that will be transferred from the Mine to the Mill, mine all the mineralized material, and minimize dilution. In addition, it was reported by Kerr-McGee and others that the mines in the Ambrosia Lake subdistrict generally realized a positive reconciliation of the milled tonnage compared to the geological resource model.

Measurements and evaluations can be divided into two general time frames:

- Before Blasting: Guide the mining teams by giving them the mineralized volume according to cut-off grade and local stope constraints. This grade control is based on radioactivity measured either by a counter on the working face, by a gamma ray probe in blast holes and long holes, or by a beta/gamma scaler or x-ray counter. Physical samples will also be collected for chemical assay, on a regular basis but not for every blast. The gamma ray probe is the normal method for pre-blast measurements by RHR.
- After Blasting: Provide the ability to sort mineralized material and waste, which can become mixed during blasting, to avoid milling material that would be too expensive to process (dilution). During mucking it is possible to segregate the different grades of mineralized materials and waste selectively. The blasted material will be sampled for chemical assay and probed with a Geiger-Müller-type probe or an instrument similar to the Princeton Gamma Tech

(PGT) X-Ray Fluorescence Microanalysis System and/or the SAM 940 Handheld Radioisotope. Also, mineralized materials will need to be segregated by land title for royalty purposes. The gamma ray probe is the normal method of post blast measurements planned to be used by EFR.

Grade control for the Mine will be essential in reducing dilution, improving the head-grade to the process Mill, and aiding the geology and engineering department with accurately estimating and planning mine development and stope production. Dilution in mines is a major issue that increases costs.

Sampling is used to help optimize the delivery of head grade to the mill, and to separate the different royalty groups. Protocols are necessary in order to have a successful grade control program. The sampling areas of the underground mine grade control system are listed below:

- Selected production development and stope blast holes
- All development and production blasted material (muck piles)
- Development headings and production heading sampling, which would contain, but not be limited to the following areas:
    - Back sampling
    - Rib sampling
    - Sill sampling
- All underground transfer points (re-muck bays, storage drifts)
- Hoisting areas, which include the surface and storage pads located near the shafts

One of the most important methods that needs to be employed for a successful grade program is the visual inspection of the face by a well-trained geologist, engineer, technician, or underground mine foreman. EFR's experience has been that geologists and grade control technicians will become experienced in visually identifying the limits of mineralization for determining the best control method for a given stope.

Precise recordings of all planned and active mining faces, i.e., mine plan and production (as-built) drawings must be done periodically to support the grade control program. The mine plan will show the exact location (X, Y, and Z) of all underground workings. All development and production headings will be surveyed and measured. Particularly, the following minimum work should be completed as part of the Standard Operating Procedure for grade control:

- Sill elevations must be obtained and recorded.
- Advance maps must be kept up to date, showing each round with at least five probe readings.
- Before drilling of a blast round, vertical and rib holes will be drilled, sampled, and probed. The purpose is to determine if the rock surrounding a face contains any significant uranium mineralization. This information must be recorded.
- Prior to the design of access drifts, 100 ft to 300 ft long holes must be drilled and probed in advance of work. If no parallel trends or mineralized material extensions are identified, then the access drifts should be planned at the given cut-off grade.
- If the stope pillars are mined, pillars will be drilled, sampled, and probed prior to blasting.
- All geological characteristics, including rock type, formation member, sand horizon (A, B, C, or D sand) discontinuities (faults, folds) identified and mapped, alteration, organic content, estimated amount of moisture content, mineralization direction, grade and waste contacts, and potential disequilibrium values., must be accurately recorded.

- Channel samples should be taken on five-foot centers with a differentiation of lithologies and rock unit colors.
- Radioactivity measurements will be recorded either electronically with the probe and/or recorded in a mineralized material control technician's field book. Once the grade control technician returns to the office, the data will be transferred to the grade control databases for storage and future retrieval.

### 16.4.2 Disequilibrium

Disequilibrium can be an issue in sandstone-hosted uranium deposits within a dynamic hydrologic regime, where mobilization of the uranium into and out of the deposition site results in an overestimation or underestimation of the uranium content, based on radiometric measurements. Information gathered to date indicates that Roca Honda should not experience a negative disequilibrium problem.

## 16.5 Geotechnical Parameters

Geotechnical criteria for underground mining include providing estimates of maximum spans, maximum back area, types and use of ground support, mining orientation relative to stress loading, and maximum rib heights for large openings. These criteria consider the following mining requirements:

- The mineralized material is concentrated in pods whose mined area will range in width from 200 ft to 500 ft and extend from 200 ft to 2,000 ft in length. The height of the mining seam is expected to vary from 6 ft to 21 ft. In the Southwest mining area, the lenses range in depth from 1,800 ft to 2,100 ft below ground northwest to southeast. In the Northeast mining area, depths of the zones range from 2,100 ft to 2,500 ft.
- The pod-shaped mineralized material zones plunge at an average of 3° to southeast (125° bearing) perpendicular to the San Mateo and Ambrosia fault zones. Locally, plunges range from flat to 15°.
- Mine access will be via shafts located on Sections 16 and 17 with most of the mineralized material structures to the north (Southwest mineralized zone) and northeast (Northeast mineralized zone) of the access shafts.
- The mineralized structures are located in the Westwater Canyon Member of the Morrison Formation in sequential sand units, referred to as (from top to bottom) A, B1, B2, C, and D sands. The vertical extent of the mineralized structures will determine access, either bottom-up or top-down, from the sides of the mineralized structures. Minimum grade cut-off requirements in the variable grade mineralized material zones will result in low-grade unmined blocks of ground within mineralized structures that will remain after mining as pillars.
- Historical mining is more than two miles from the mineralized structures being considered for current mining. There are no current plans to connect new mining to old historical workings. Therefore, new mining does not need to consider the proximity of the historical workings.

A preliminary conceptual design was based on room-and-pillar mining methods used in the nearby historical mines (Fitch, 2010). The mining concept included stopes consisting of developing primary rooms and pillars extending transversely across the full-mineralized structure height for an equivalent 85% extraction ratio. Stope access was via drill/sampling/drainage galleries beneath the mineralized material structure, but above the Recapture Formation. The resource model and underlying data have not changed, however, EFR has reported Mineral Resources at a higher cut-off grade, consistent with the production scenario proposed in the 2016 NI 43-101 technical report prepared by RPA.

## 16.6 Hydrogeology

### 16.6.1 Summary of Previous Permitting and Regulatory Documentation

The SLR QP reviewed several historical permitting and regulatory documents as part of this study. These documents are described below.

- The permit granted by the New Mexico State Engineer's office in 2014 for Sections 16, 10, and 9 allows EFR to dewater at a rate of 4,500 gpm. As confirmed by the New Mexico State Engineer's Office, the hydrogeology of the Mine site has been adequately characterized to meet the permit requirements of the State and its agencies (Intera, 2017).
- A Draft Environmental Impact Statement (DEIS) for the Roca Honda Mine was distributed to the public in compliance with the National Environmental Policy Act (NEPA) by the USDA in February 2013 (USDA, 2013).

### 16.6.2 Overview

Roca Honda is located in the southeastern part of the San Juan structural basin, within the southeast part of the Ambrosia Lake uranium subdistrict. Uranium mining and associated dewatering activities occurred in this area from the 1960s through the 1980s. The proposed Mine is located approximately 22 mi northeast of Grants and 2.5 mi northwest of San Mateo, New Mexico. Mine workings will be developed at depths between 2,100 ft and 2,800 ft below the ground surface within the Westwater Canyon Member of the Jurassic Morrison Formation (Westwater) (Figure 16-2). It is anticipated that mine workings will consist of production shafts, declines, stopes, and associated underground workings.

Hydrogeologic characterizations have been performed in the Roca Honda and surrounding areas because of recoverable uranium deposits and groundwater resources. Multiple rounds of hydrogeological studies have generated data, including water quality data, aquifer properties, historical pumping rates, etc. (Kelley et al., 1963; Steinhaus, 2014; Brod and Stone, 1981; Frenzel and Lyford, 1982; Stone et al., 1983; Craigg et al., 1989; Dam et al., 1990; Dam, 1995; and Craigg, 2001 ). In. In addition, the USGS has developed a regional-scale steady-state multi–aquifer groundwater flow model of the San Juan Basin as a segment of the Regional Aquifer System Analysis program (Kernodle, 1996).

As part of historical permitting efforts, RHR developed a comprehensive numerical model (MODFLOW) of the groundwater flow system in the southern portion of the San Juan Basin that includes Sections 9, 10, and 16 of T13N, R8W (Intera, 2012). The groundwater model was used to estimate groundwater inflow and drawdown based on the mine plan developed in 2012, which was approved by the New Mexico State Engineer's Office in 2013. Permit B-1706 PODS 12 through 31 was granted in 2014, which permitted RHR to conduct dewatering at the Mine.

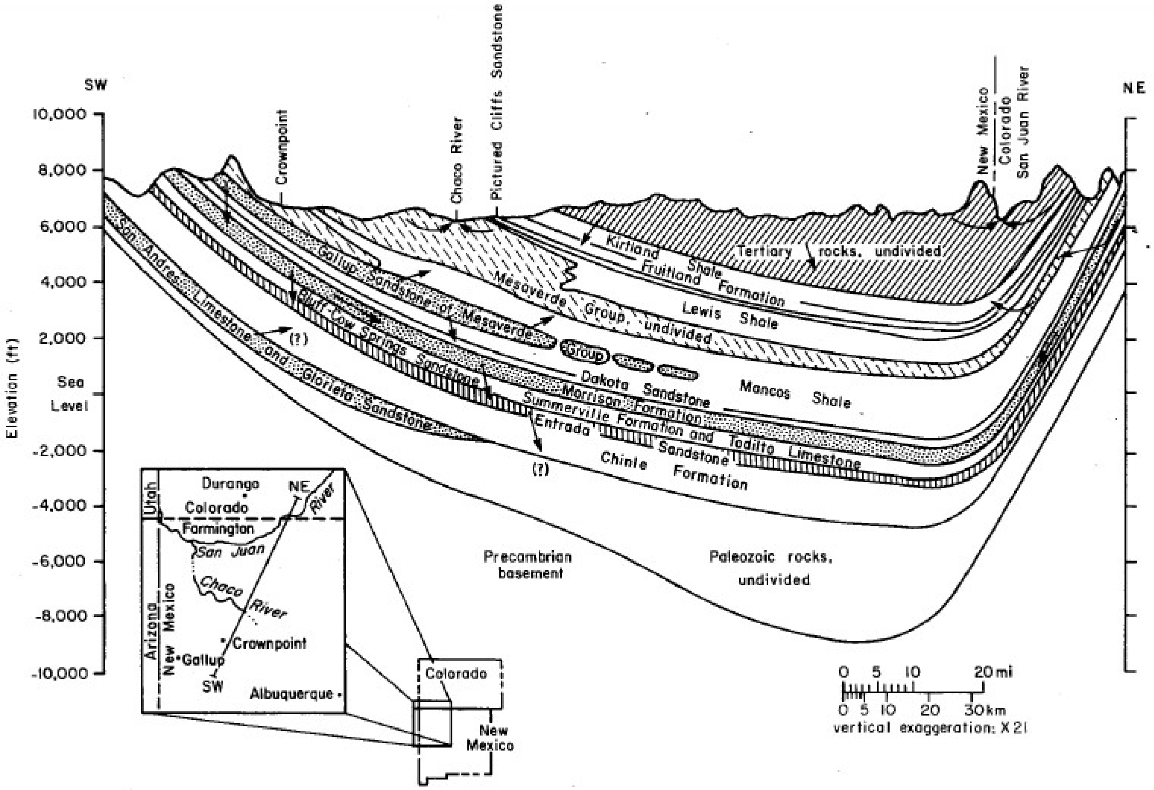
In 2016, after Section 17 was added to the mine project boundary and a new mine plan was developed, the groundwater model was updated to reflect the new mine plan. Groundwater inflow rates calculated in the 2016 groundwater models were similar to those calculated in the 2012 model (Intera, 2017). These groundwater modeling calculations used site-specific hydraulic properties acquired through aquifer testing (USFS, 2011), a summary of which is presented in Table 16-2.

## Table 16-2: Summary of Hydraulic Parameters for the Westwater Canyon Member Energy Fuels Inc. – Roca Honda Project

| Hydraulic Parameters | Kernodle Median Value[1] | RHR Pump Test[2] | Intera Numerical Model[3, 4] | Units |
|---|---|---|---|---|
| Hydraulic Conductivity | | | 0.15 – 0.9 | m/day |
| Transmissivity | 14.4 | 6.0 – 11.6 | | $m^2$/day |
| Specific Storage | | | 3.94E-06 – 9.84E-06 | $m^{-1}$ |
| Storage Coefficient | 2.0E-04 | 2.4E-04 | | unitless |
| Thickness of Westwater Canyon Formation | 76.2 | Approximately 122 | | m |

Notes:

1. Kernodel, 1996
2. Hydroscience Associates Inc., 2011
3. Intera, 2017
4. The hydraulic conductivity range represents the mine workings and surrounding areas.



Source: Kernodle, 1996

Figure 16-2: Generalized Hydrogeologic Section of the San Juan Basin showing Major Aquifers

### 16.6.3 Site Hydrogeology

The SLR QP requested from EFR basic hydrogeologic information such as water level surveys, pumping tests, flow rates, and any secondary documentation, such as numerical modeling and reports. EFR provided relevant reports and documents prepared to support permit applications. The SLR QP used these documents and others available in the public domain to highlight the following main findings.

To understand the hydrogeology of the site, RHR compiled the relevant published and unpublished information near the permit area and completed aquifer testing. This effort included an inventory of wells previously identified in published and unpublished reports as being present near the Roca Honda permit area. The inventory of 149 records includes location, completion date, well depth, producing formation, measured water levels, and availability of chemical data for each well. The wells were field checked by RHR personnel. Selected wells from the inventory were sampled. In addition, RHR drilled three monitoring wells within Section 16 of the permit area in 2007 and subsequently sampled them. RHR incorporated a subset of the selected inventory wells and all three monitoring wells into an ongoing water quality sampling program, termed the Regional Groundwater Sampling Program (USDA, 2013).

A generalized stratigraphic column in the vicinity of the permit area is presented in Figure 7-2. General descriptions of these impacted aquifers follow.

**Westwater Canyon Member of the Morrison Formation.** This is the target horizon for the proposed mining activities and the unit for which dewatering pumping is anticipated to be by far the greatest, hence the unit of greatest potential impact from such pumping. Uranium is generally confined to the sandstone units in this formation. There are minimal other uses of the aquifer in the area that could be affected by dewatering activities. Total dissolved solids (TDS) content of the water from the three permit area wells was low, ranging from 425 milligrams per liter (mg/L) to 532 mg/L in the 15 samples analyzed. Five Westwater Canyon wells approximately 5.5 mi west of the permit area had much higher TDS, ranging from 1,980 mg/L to 3,440 mg/L (excluding an apparent outlier value). Much of the higher TDS was in the form of sulfate, ranging from 1,188 mg/L to 2,150 mg/L. That level of sulfate is far above the Federal Safe Drinking Water Act (SDWA) Secondary Standard of 250 mg/L and would not be considered potable. Some of the high TDS wells also exceeded standards for a few metals and radionuclides. As presented in Table 16-3, wells S-1 and S-3 on site naturally exceed standards for radionuclides, along with other Westwater Canyon Wells.

**Table 16-3: Radionuclide Data from Permit Area Water Monitoring Wells**
**Energy Fuels Inc. – Roca Honda Project**

| Well | Parameter | Gross Beta | Gross Alpha | Radium-226 |
|---|---|---|---|---|
| | Standard | ~50[1] | 15 | 5[2] |
| | Units | pCi/L | pCi/L | pCi/L |
| S-1 | | 50.1 to 178 | 135 to 418 | 27 to 69 |
| S-3 | | Not exceeded | 17.8 to 35.2 | Not exceeded |

Source: USDA, 2013

Notes:

1. Standard is 4 millirem/year, approximately 50 pCi/L, depending on radionuclide
2. Standard is 5 pCi/L for Radium-226 and Radium-228 combined

**Dakota Sandstone.** The Dakota Sandstone has an average thickness of approximately 50 ft within the permit area. The top of the Dakota is about 5,600 ft ASL to 5,400 ft ASL. Dewatering of the Dakota will occur during shaft construction, and it is the aquifer most directly impacted by pumping of the Westwater Canyon. Brod and Stone (1981) and Kelley et al. (1980) report that water in the Dakota is typical of the sodium-sulfate type, with TDS in the range of 600 mg/L to 1,400 mg/L.

**Gallup Sandstone**. The Gallup Sandstone comprises two sandstone units with a total thickness approximating 85 ft. They are separated by the Pescado Tongue of the Mancos Shale, approximately 20 ft thick. The Gallup provides a source of municipal supply to the towns of Gallup and Crownpoint to the northwest and the community of Marquez to the east. The Gallup water is of potable quality, with a TDS range of 530 mg/L to 669 mg/L. No primary SDWA standards were exceeded in the parameters analyzed. The Gallup water is a sodium-bicarbonate type.

**Point Lookout Sandstone.** This unit is found near the permit area's land surface. Although it was found to be dry during the "first water" drilling, it is known to be the source of a small spring (Bridge Spring) discussed subsequently. Nineteen wells completed in the Point Lookout area were identified in the well inventory, most of them near the community of San Mateo southeast of the permit area. In this area, fractures and faults are believed to have enhanced the permeability of the Point Lookout; within the permit area, it is described as "dense, with low primary permeability." TDS ranged from 192 mg/L to 695 mg/L, with at least one sample each from six different wells exceeding the SDWA Secondary Standard for TDS. Iron and fluoride also exceed SDWA Secondary Standards (2.0 mg/L).

**Menefee Formation.** This unit is found near the permit area's land surface. Although it was found to be dry within the area during the "first water" drilling, it is known.to be the source of small springs discussed subsequently. The Menefee Formation comprises shales interbedded with thin to thick sandstones and minor coal seams. Except for the southeast corner of Section 10 beneath colluvium, the Menefee Formation has been removed from the permit area. The western part of the San Mateo Creek valley by erosion North of San Mateo Creek, the Menefee extends only to the central part of Section 21, T13N, R8W; south of San Mateo Creek, the Menefee extends farther west, to near the western boundary of Section 29, T13N, R8W (McCraw et al. 2009). Menefee water is of the sodium-bicarbonate type with some sulfate. Quality is quite variable, with TDS ranging from 169 mg/L to 2,299 mg/L in the 23 wells. Secondary Standards for sulfate, iron, manganese, and aluminum also were exceeded in one or more of the 23 Menefee wells. SDWA Primary Standards were exceeded for lead (seven wells), arsenic (four wells), and combined radium (one well).

**Alluvium.** This unit contains groundwater along the more extensive valleys such as San Mateo Creek.

Drilling by RHR to find "first water" for the State's groundwater discharge plan process found the shallowest saturated zone to be in the Gallup. The primary confining beds are the shales above each aquifer: the Brushy Basin Member of the Morrison above the Westwater Canyon and two units of the Mancos shale above the Dakota and Gallup. The Recapture Member of the Morrison provides a degree of hydraulic isolation between the Westwater Canyon and deeper aquifers such as the San Andres limestone.

Table 16-4 summarizes the available information from various sources on the thickness, hydraulic conductivity, transmissivity (product of thickness times horizontal hydraulic conductivity), yield, summary water quality, and storage properties of each water-yielding interval (USDA, 2013).

### Table 16-4: Summary of Aquifer Characteristics in the Vicinity of the Roca Honda Permit Area (Modified after USDA, 2013)
### Energy Fuels Inc. – Roca Honda Project

| Aquifer | Thickness Range in the San Juan Basin | Probable Thickness at the Roca Honda Permit Area | Transmissivity Range (median) | Hydraulic Conductivity (horizontal) | Hydraulic Conductivity (vertical) | Yield Range (median) | TDS | Storativity | |
|---|---|---|---|---|---|---|---|---|---|
| | (ft) | (ft) | ($ft^2$/day) | (ft/day) | (ft/day) | (gpm) | (mg/L) | Specific Yield (Sy) | Storativity |
| Alluvium | 10–80 | 0 | 700–1,450 | 27 | | <20 | 590–14,000 | 0.1–0.25 | NA |
| Menefee | 400–1,000 | <100 | 10–100 | 0.05–0.01 | 0.00001 | <20 | 200–1,400 | 0.10 | 0.0001 |
| Point Lookout Sandstone | 40–415 | <120 | <1–240 | 0.002–0.02 | 0.0002 – 0.002 | To >50 | 200–700 | | 0.000041 |
| Dalton Sandstone | 80–180 | >100 | 10-<50 | 10–80 | 0.0001 | | 4,500 | 0.09 | 0.0001 |
| Gallup Sandstone | 90–700 | 85 | 15–390 | 0.10–1.0 | 0.002 | 1–645 | 1,200–2,200 | 0.09 | 0.000002–0.000033 |
| Lower Mancos Shale Sandstones | 125 | 125 | 134 | 0.05 | 0.002 | 0.0–2,000 | 2,500–9,000 | 0.10 | 0.0001 |
| Dakota Sandstone | 50–350 | 50–60 | 44–134 | 0.25–1.5 | 0.002 | 1–200 | 600–1,400 | 0.10 | 0.0001 |
| Westwater Canyon | 100–250 | 100–250 | 50–500 | 0.10 | 0.001 | 1–401 | 360–2,200 | 0.10 | 0.0002–0.00002 |

#### 16.6.3.1 Mine Dewatering and Timeline Summary

In the mine plan developed in 2017, it was anticipated that construction and operation of the Mine and the required dewatering activities would proceed in several phases. On Section 17, an incomplete 14 ft diameter shaft has been developed to a depth of 1,478 ft (RPA, 2015). Renovation and completion of the existing production shaft in Section 17 and construction of the underground workings and stopes in Sections 17 are expected to take approximately 13 years (RPA, 2015; Intera, 2017).

Construction of the production shaft in Section 16 and underground working in Sections 9, 10, and 16 are projected to take three and ten years, respectively. Work in Sections 17 and 16 will proceed simultaneously, and mining activities necessitating dewatering will last a total of 13 years under the revised mine plan (Intera, 2017). The Section 16 production shaft will pass through three aquifer units: the Gallup Sandstone, Dakota Sandstone, and Westwater Canyon Member. All other underground mine workings in Sections 9, 10, 16, and 17 will be developed in the Westwater Canyon Member (Intera, 2017). Hydrostratigraphic units are well defined in the San Juan Basin (Stone et al., 1983; Steinhaus, 2014).

## 16.7 Production Schedule

The LOM schedule is shown in Table 16-5 and averages 1,050 stpd of mineralized material with a total tonnage of 4.02 million tons at a diluted grade of 0.36% $U_3O_8$ containing 28.995 Mlb of $U_3O_8$. This total includes Measured, Indicated and Inferred Mineral Resources.

Initial activities include development of primary mine access components including shaft sinking and preliminary station development, blind boring of the exhaust and emergency escape way boreholes and construction of the backfill/aggregate raises. This is followed by the sequential development and stope mining schedules for the mining levels; the mine schedule continues production to the end of the mine life.

## Table 16-5: Production Schedule
## Energy Fuels Inc. – Roca Honda Project

| | | | Pre-Prod | Operations | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Category** | **Units** | **Total** | **YR -1** | **YR 0** | **YR 1** | **YR 2** | **YR 3** | **YR 4** | **YR 5** | **YR 6** | **YR 7** | **YR 8** | **YR 9** | **YR 10** |
| Planned Production – Section 17 | tons | 587,680 | - | 225,000 | 327,680 | 35,000 | | | | | | | | |
| Planned Production – Section 16 | tons | 430,589 | - | 5,607 | 78,206 | 166,335 | 180,441 | | | | | | | |
| Planned Production – Section 9 | tons | 947,687 | - | | 13,857 | 120,140 | 135,275 | 224,914 | 200,123 | 158,094 | 95,284 | | | |
| Planned Production – Section 10 | tons | 2,054,219 | - | | | 86,174 | 86,296 | 155,946 | 182,329 | 244,289 | 308,881 | 418,464 | 396,938 | 174,902 |
| **Total Planned Production** | **tons** | **4,020,175** | **-** | **230,607** | **419,743** | **407,649** | **402,012** | **380,860** | **382,452** | **402,383** | **404,165** | **418,464** | **396,938** | **174,902** |
| Contained $U_3O_8$ – Section 17 | lb | 4,230,000 | - | 1,619,504 | 2,358,573 | 251,923 | | | | | | | | |
| Contained $U_3O_8$ – Section 16 | lb | 1,802,697 | - | 23,474 | 327,416 | 696,375 | 755,431 | | | | | | | |
| Contained $U_3O_8$ – Section 9 | lb | 5,958,142 | - | | 87,119 | 755,324 | 850,479 | 1,414,042 | 1,258,180 | 993,943 | 599,054 | | | |
| Contained $U_3O_8$ – Section 10 | lb | 17,003,740 | - | - | - | 713,303 | 714,313 | 1,290,839 | 1,509,223 | 2,022,095 | 2,556,754 | 3,463,824 | 3,285,643 | 1,447,746 |
| **Total $U_3O_8$ Contained** | **lb** | **28,994,579** | **-** | **1,642,978** | **2,773,108** | **2,416,925** | **2,320,223** | **2,704,881** | **2,767,404** | **3,016,038** | **3,155,808** | **3,463,824** | **3,285,643** | **1,447,746** |
| Waste Produced from Development | tons | 884,457 | 54,800 | 168,090 | 205,919 | 136,760 | 94,157 | 48,346 | 57,826 | 54,399 | 26,693 | 27,100 | 10,367 | |
| Daily Production | | | | | | | | | | | | | | |
| Ore | tons/ day | | - | 659 | 1,199 | 1,165 | 1,149 | 1,088 | 1,093 | 1,150 | 1,155 | 1,196 | 1,134 | 500 |
| Waste | tons/ day | | 157 | 480 | 588 | 391 | 269 | 138 | 165 | 155 | 76 | 77 | 30 | - |
| **Total** | **tons/ day** | | **157** | **1,139** | **1,787** | **1,555** | **1,418** | **1,226** | **1,258** | **1,305** | **1,231** | **1,273** | **1,164** | **500** |

### 16.7.1 Scheduling Assumptions and Risks

As indicated in previous sections of this Technical Report, development and stope mining productivities used for scheduling purposes have been calculated based on average ground conditions and substantial depressurization and reduction of the volumes of local groundwater inflow. Based on current rock strength testing information, it is estimated that 40% of the ground will be very weak, 40% average and 20% stronger than average. It can be expected, therefore, that, in some instances, ground conditions or water flows will be better than the average, but more often, will be significantly worse than average. Whenever higher than expected groundwater inflows or weaker rocks are encountered, productivities will be significantly reduced and the ability to meet the development and production targets included in this schedule will be challenging.

In the Southwest mineralized zones, dedicated definition drilling and dewatering drifts will be located below the mineralized horizons. The scheduled elapsed time between the definition and dewatering of a specific stoping block and the subsequent development of stope accesses followed by the initiation of mining has been maximized. This approach should result in improved ground and water inflow conditions, enhancing the probability of meeting schedule targets. In the Northeast mineralized zones, due to the proximity of the mineralized horizons to the Recapture Zone, definition drilling and dewatering is undertaken sequentially, and the dewatering efficiency will therefore be reduced.

## 16.8 Underground Mobile Equipment

A fleet of mobile equipment, suitable for the proposed heading sizes and mining methods, has been selected and quantified. Budget quotes were obtained from equipment suppliers for the production equipment. Service equipment cost estimates were obtained from other recent SLR studies. Equipment needs for development and stoping are almost identical and, as development requirements diminish over time, the equipment is transferred to stoping. This eliminates the need to procure additional mobile equipment as the number of active stopes increases. Mobile equipment requirements are shown in Table 16-6.

**Table 16-6: Mine Equipment Summary**
**Energy Fuels Inc. – Roca Honda Project**

| Mobile Equipment | hp | Quantity | Total hp |
|---|---|---|---|
| Jumbo – 1 boom (development) | 80 | 4 | 320 |
| LHD 3-yd (development) | 130 | 4 | 520 |
| Materials Handler with man-basket (development) | 101 | 2 | 202 |
| Roofbolter (development) | 80 | 4 | 320 |
| Shotcreter (development) | 148 | 2 | 296 |
| Remix Transporter (development) | 200 | 2 | 400 |
| Jumbo – 1 boom (stoping) | 80 | 5 | 400 |
| LHD 1.75-yd (stoping) | 75 | 3 | 225 |
| LHD 3-yd (stoping) | 130 | 2 | 260 |
| Roofbolter (stoping) | 80 | 5 | 400 |

| Mobile Equipment | hp | Quantity | Total hp |
|---|---|---|---|
| LHD 1.75-yd Backfill Rammer (stoping) | 75 | 2 | 150 |
| LHD 3-yd Backfill Rammer (stoping) | 130 | 2 | 260 |
| Materials Handler with man-basket (stoping) | 101 | 3 | 303 |
| Truck 16-ton ejector box (development and stoping) | 210 | 8 | 1,680 |
| LHD 3 yd (shaft station transfer to skip pocket) | 130 | 2 | 260 |
| Jumbo – 1 boom (spare) | 80 | 1 | 80 |
| LHD 3-yd (spare) | 130 | 1 | 130 |
| LHD 1.75-yd Backfill Rammer (spare) | 75 | 1 | 75 |
| LHD 3-yd Backfill Rammer (spare) | 130 | 1 | 130 |
| Roofbolter (spare) | 80 | 1 | 80 |
| Truck 16 ton ejector box (spare) | 210 | 1 | 210 |
| U/G Longhole Drill | 73 | 2 | 146 |
| Materials Handler with boom | 101 | 2 | 202 |
| Boom Truck | 148 | 2 | 296 |
| Caterpillar 272C (Skid Steer Loader) | 90 | 2 | 180 |
| Maintenance Utility Vehicle | 148 | 2 | 296 |
| Pump Crew Utility Vehicle | 148 | 1 | 148 |
| Electrical Utility Vehicle | 74 | 2 | 148 |
| Supervision and General Utility Vehicle | 22 | 3 | 66 |
| Engineering/Geology Utility Vehicle | 22 | 3 | 66 |
| Surveyor Utility Vehicle | 74 | 1 | 74 |
| Personnel Transport Vehicle | 148 | 2 | 296 |
| Grader | 110 | 1 | 110 |
| **Total Mobile Equipment** |  | **79** | **8,729** |

The Load Haul Dumps (LHDs), trucks, and jumbos will be required for the mine development and will be utilized by contractors for the preproduction period. In operations, these units are expected to experience relatively low utilization, but the fleet size is considered necessary to provide the back-up for this remote site operation.

Equipment will be selected based upon price and support and it is planned to purchase as many units as possible from one supplier to minimize the number of suppliers and to increase the level of common spares.

## 16.9 Health and Safety

The mine will operate in accordance with all applicable health and safety regulations and guidelines.

# 17.0 RECOVERY METHODS

## 17.1 Introduction

The material produced from Roca Honda will be milled at the EFR-owned White Mesa Mill (the Mill), located near Blanding, Utah. The Mill was originally built in 1980. Since construction, the Mill has processed approximately five million tons of uranium and vanadium containing ores from Arizona, Colorado, and Utah. The Mill is currently operated on a campaign basis to produce yellowcake ($U_3O_8$). It can also process alternate feed materials.

Capable of processing 2,000 stpd, the Mill will process mineralized materials from the Mine, other EFR uranium mines, potential toll milling ores for other producers in the region, and alternate feed material. This Technical Report only addresses the costs and revenues of the Roca Honda Project, including project specific costs at the Mill. The location of the Mill is shown in Figure 17-1. The site features of the Mill are shown in Figure 17-2.

The Mill process is described in the following sections and the flowsheet is shown in Figure 17-3.

## 17.2 Ore Receiving

Material will be hauled from the Mine to the Mill in 24-ton highway haul trucks. When trucks arrive at the Mill, they are weighed and probed prior to stockpiling. Samples are collected to measure the dry weight, and to perform amenability testing for process control. Trucks are washed in a contained area and scanned for gamma radiation prior to leaving the Mill site.

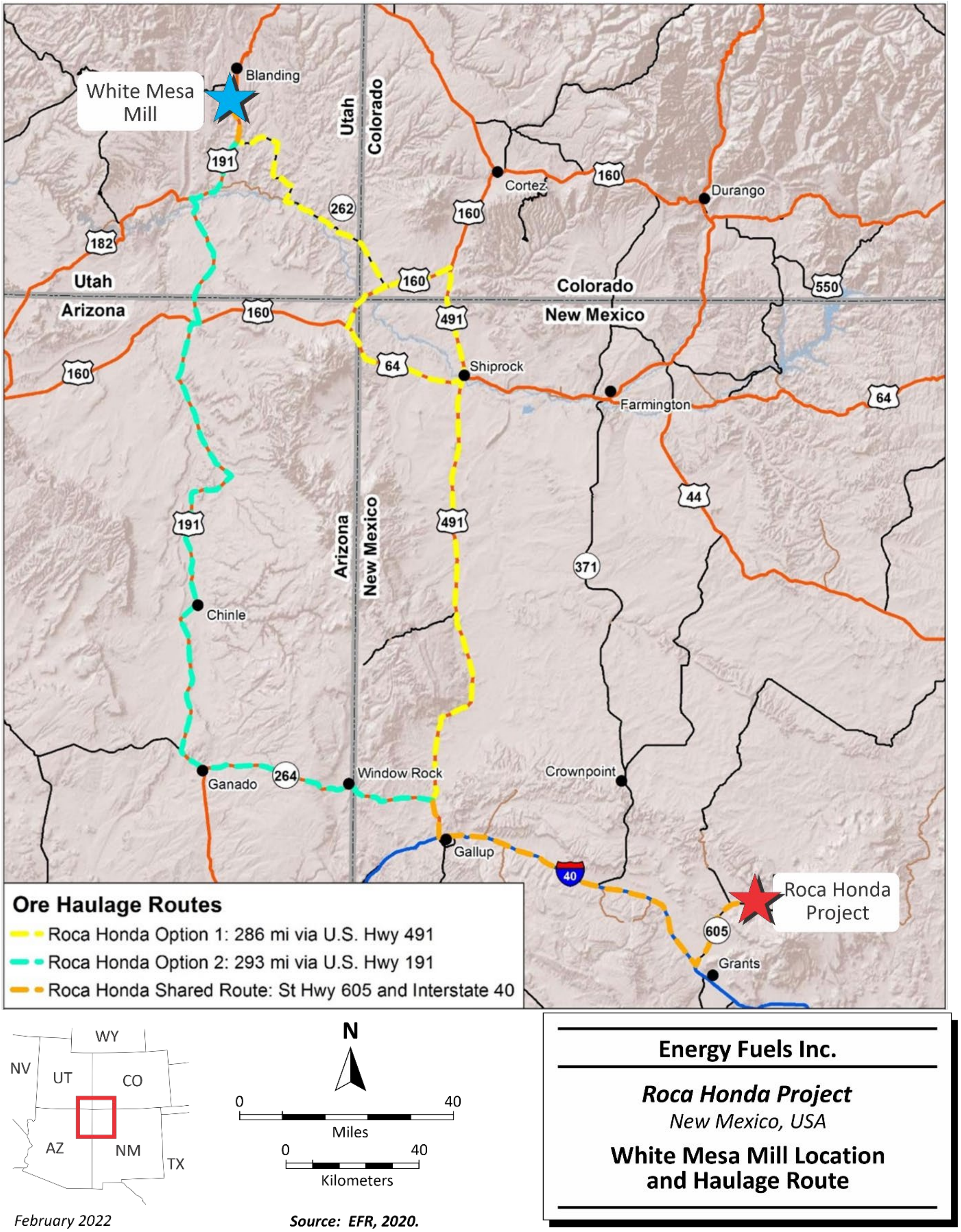
## 17.3 Grinding

A front-end loader will transfer the mineralized material from the stockpiles to the Mill through the 20 in. stationary grizzly and into the ore-receiving hopper. The ore is then transferred to the 6 ft by 18 ft diameter semi-autogenous grinding (SAG) mill via a 54 in. wide conveyor belt. Water is added with the ore into the SAG mill where the grinding is accomplished. The SAG mill is operated in closed circuit with vibrating screens. The coarse material, P80 +28 mesh (28 openings per linear inch) is returned to the SAG mill for additional grinding and the P80 -28 mesh portion is pumped to the pulp (wet) storage tanks.

The pulp storage tanks are three 35 ft diameter by 35 ft high mechanically agitated tanks. These tanks serve two basic purposes. First, they provide storage capacity for the ore prior to chemical processing; and second, they provide a facility for blending the various types of ore prior to processing.

## 17.4 Leaching

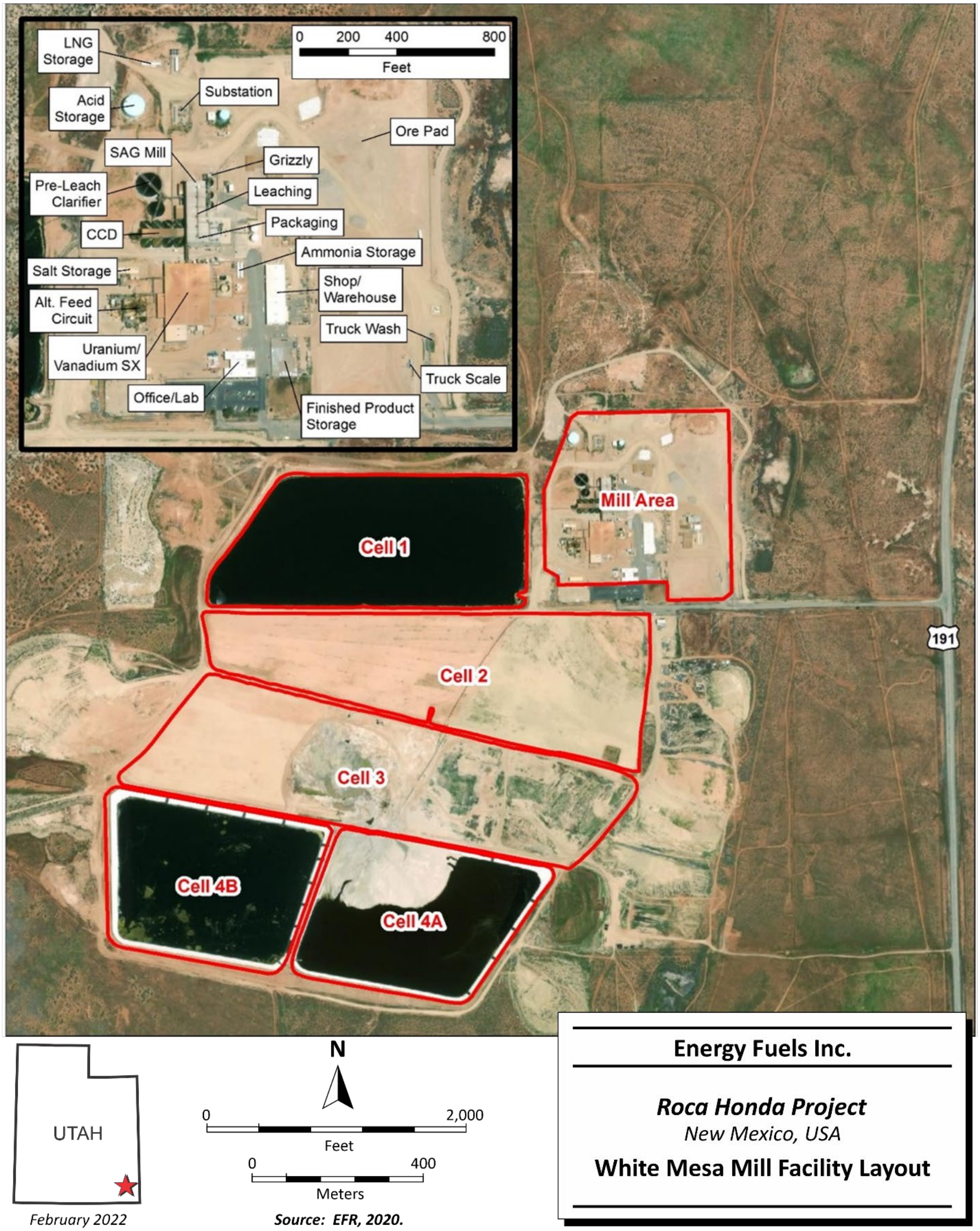
From the pulp storage tanks, pre-leach and leaching are employed to dissolve the uranium. A hot, strong acid treatment is utilized in the second stage in order to obtain adequate recoveries. This results in high concentrations of free acid in solution. Therefore, a first stage "acid kill" is employed, which is referred to as pre-leach. Ore from the pulp storage tanks is metered into the pre-leach tanks at the desired flow rate. The slurried ore from the pulp storage tanks will usually be about 50% solids mixed with 50% water. This slurry is mixed in the pre-leach tanks with a strong acid solution from the CCD circuit resulting in a density of approximately 22% solids. This step is employed to neutralize the excess acid from the second stage leach with raw ore. By doing this, not only is the excess acid partially neutralized, but also some leaching occurs in the pre-leach circuit, and less acid is needed in the second stage leach. The pre-leach ore flows by gravity to the pre-leach thickener. Here, flocculent is added and the solids are separated from the liquid. The underflow solids are pumped into the second-stage leach circuit where acid, heat, and an oxidant (sodium chlorate) are added. About three hours retention time is expected to be needed in the seven second-stage leach tanks. Each tank has an agitator to keep the solids in suspension. The discharge from the leach circuit is a slurry consisting of solids and a sulfuric acid solution with dissolved uranium and vanadium. The leach slurry is then pumped to the CCD circuit for washing and solid liquid separation. The liquid or solution from the pre-leach thickener overflow is pumped first to the clarifier and then the SX feed tank.



February 2022

Source: EFR, 2020.

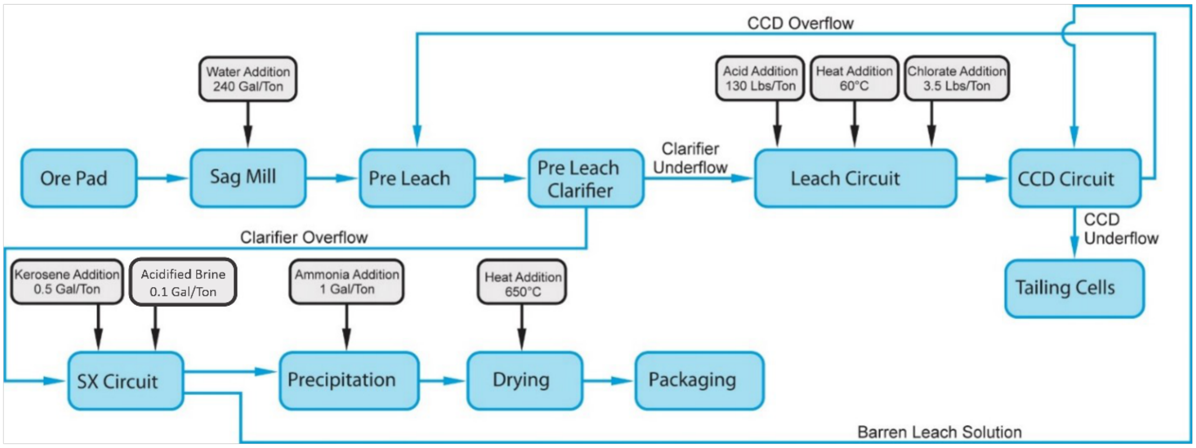
Figure 17-1: White Mesa Mill Location and Haulage Route



February 2022

Source: EFR, 2020.

Figure 17-2: White Mesa Mill Facility Layout



**Energy Fuels Inc.**

***Roca Honda Project***
*New Mexico, USA*
**White Mesa Mill Flowsheet**

*February 2022*

***Source: EFR, 2020.***

Figure 17-3: White Mesa Mill Flowsheet

## 17.5 Counter Current Decantation

The CCD circuit consists of a series of thickeners in which the pulp (underflow) goes in one direction, while the uranium/vanadium bearing solution (overflow) goes in a counter current direction. The solids settle to the bottom of the first thickener tank and flocculent is added to each thickener feed to increase the settling rate of the solids. As the pulp is pumped from one thickener to the next, it is gradually depleted of its uranium and vanadium. When the pulp leaves the last thickener, it is essentially barren waste that is disposed of in the tailings cells.

Eight thickeners are utilized in the CCD circuit to wash the acidic uranium bearing liquids from the leached solids. Water or barren solutions are added to the No. 8 thickener and flow counter-current to the solids. As the solution advances toward the No. 1 thickener, it carries the dissolved uranium. Conversely, the solids become washed of the uranium as they advance toward the last thickener. By the time, the solids are washed through the seven stages of thickening they are 99% free of soluble uranium and may be pumped to the Tailings Cells. The clear overflow solution from No. 1 CCD thickener advances through the pre-leach circuit and pre-leach thickener as previously explained, and to the clarifier, which is an additional thickener giving one more step in order to settle any suspended solids prior to advancing the solution to the SX circuit.

## 17.6 Solvent Extraction

The primary purpose of the uranium solvent extraction (SX) circuit is to concentrate the uranium. This circuit has two functions. First, the uranium is transferred from the aqueous acid solution to an immiscible organic liquid by ion exchange. Alamine 336 is a long chain tertiary amine that is used to extract the uranium compound. Then a reverse ion exchange process strips the uranium from the solvent, using aqueous sodium carbonate. As previously noted, the SX circuit is utilized to selectively remove the dissolved uranium from the clarified leach solution. Dissolved uranium is loaded on kerosene advancing counter currently to the leach solution. The uranium-loaded kerosene and leach solution are allowed to settle where the loaded kerosene floats to the top allowing for separation. The uranium barren leach solution is pumped back to the CCD circuit to be used as wash water. The loaded organic is transferred to the stripping circuit where acidified brine (stripping solution) is added and strips the uranium from the kerosene. Within the SX circuit, the uranium concentrations increase by a factor of four when loading on the kerosene and again by a factor of ten when removed by the stripping solution. The barren kerosene is returned to the start of the SX circuit. The loaded strip solution is transferred to the precipitation circuit.

With respect to impurities removal, the SX circuit of the Mill is highly selective to uranium and consistently produces yellowcake in the 98% to 99% purity range. This includes ores that contain vanadium, arsenic, and selenium, which have shown to be problematic with other uranium recovery methods. The Mill has a vanadium recovery circuit, but it is only operated when the head grades are greater than 2 g/L vanadium. This high of a head grade is only expected when the vanadium to uranium ratio is greater than 3:1. Vanadium recovery is not anticipated from the Roca Honda mineralized material based on the low vanadium content.

## 17.7 Precipitation, Drying and Packaging

In the precipitation circuit the uranium, which up to this point has been in solution, is caused to precipitate or actually “fall out” of the solution. The addition of ammonia, air, and heat to the precipitation circuit causes the uranium to become insoluble in the acid strip solution. During precipitation, the uranium solution is continuously agitated to keep the solid particles of uranium in suspension. Leaving the precipitation circuit, the uranium, now a solid particle in suspension, rather than in solution, is pumped to a two-stage thickener circuit where the solid uranium particles are allowed to settle to the bottom of the tank. From the bottom of the thickener tank the precipitated uranium in the form of a slurry, about 50% solids, is pumped to an acid re-dissolve tank and then mixed with wash water again. The solution is then precipitated again with ammonia and allowed to settle in the second thickener. The slurry from the second thickener is de-watered in a centrifuge. From this centrifuge, the solid uranium product is pumped to the multiple hearth dryer. In the dryer, the product is dried at approximately 1,200°F, which dewaters the uranium oxide further and burns off additional impurities. From the dryer, the uranium oxide ($U_3O_8$), concentrated to +95%, is stored in a surge bin and packaged in 55 gallon drums. These drums are then labeled and readied for shipment.

## 17.8 Mill Upgrades

The Mill was refurbished in 2008, and it does not require any mill-related upgrades to process the Roca Honda ore. Additional tailings capacity will be required to facilitate permanent storage of the tailings sands and barren solutions. There are additional, permitted areas available for future tailings storage beyond the current capacity of 3.5 Mt.

The processing parameters obtained from historical production of the Grants uranium district ores and from the Kerr-McGee metallurgical test work have been shown to be similar to the ores milled in 2009 and 2010 at the Mill from EFR’s Tony M mine.

## 17.9 Process Design Criteria

The principal design criteria selected are tabulated below in Table 17-1. The process operation parameters will be finalized following testing of site-specific metallurgical samples. Current power and water requirements at the Mill are discussed in Sections 18.3 and 18.6. No increase in power or water supply is envisioned to be required for future operations. Anticipated personnel requirements are presented in Section 21.2.8.

**Table 17-1: Principal Process Operation Criteria**
**Energy Fuels Inc. – Roca Honda Project**

| General | Criteria |
|---|---|
| Processing Rate | 547,500 stpa (1,800 stpd) |
| Feed Grade | 0.365% $U_3O_8$ |
| **Uranium Circuit** | |
| Final Grind | 80% passing 28 mesh |
| Typical Sulfuric Acid Consumption | 150 lb/ton (137 lb/ton actual) |
| Final Concentrate Mass | 122 lb/ft$^3$ |
| Product Assay | 97% $U_3O_8$ |
| Recovery to Final Concentrate | 95% Uranium in Feed |

# 18.0 PROJECT INFRASTRUCTURE

## 18.1 Introduction

Infrastructure at the Roca Honda Mine has been designed to accommodate all mining and transportation requirements. This includes offices, mine dry, warehousing, stockpiles, standby generators, fueling station, rapid response services, equipment utilities, and workshops.

All ore produced at the Mine will be trucked 272 mi to Energy Fuel's processing facility, the White Mesa Mill (the Mill), in Blanding, Utah.

The project area is an undeveloped site with gravel road access and no site facilities. The Mine layout is shown in Figure 18-1. The Mill is an operating uranium facility six miles from Blanding, Utah, with good paved-road access on US Highway 191 from the Mine site.

In the late 1980s, Kerr-McGee sank a shaft to a depth of approximately 1,478 ft on Section 17, referred to as the Lee mine. Excavation of the shaft stopped in the Westwater Formation at the top of the first planned production station, and the mine closed down in the mid-1980s. No ore was ever mined from the Lee Mine. Future studies are planned to evaluate the rehabilitation and the deepening of this Lee shaft on Section 17, which will initiate the development of the project.

## 18.2 Access Roads

The two-mile long gravel access road from the site to Highway 605 will be improved during haul road construction. All other roads are paved and in place.

Site roads will be required to access the following locations from the mine complex:

- Mine shaft
- Dewatering wells
- Water treatment plant
- Mine fresh air raises, two escape way raises, and mine air heater
- Four secondary mine exhaust raises
- Water reclaim area

Site roads will be low-speed, two-lane, and single-lane roads with turnouts to permit vehicles to meet. A parking area for employee and company vehicles will be provided beside the mine offices.

## 18.3 Power

Electrical power will be supplied to the mine by existing power lines that transverse the Mine area. Backup generated power will be supplied by a 5 MW diesel power station located at the site. The power will be generated and distributed about the site at 600 V and 4,160 V. The feed to the mine will be by 4,160 V power cables installed in the shaft feeding load centers with 4,160 V:600 V transformers. When the ventilation raise is in place, an additional line may be installed in the raise to provide a loop for power distribution. As an alternative, bore holes may be used as conduit for power lines to the underground mine to provide multiple feeds and to reduce the line loss with the shorter supply cables.

Electrical power will be required at the mobile load centers to provide power for jumbos and fans in the development and production areas. An electrical power supply to the main surface fan locations will also be required.

A new transmission tap substation at or near Continental Divide Electric Cooperative's existing Gulf Minerals substation would reduce the transmission level voltage to 25 kV for distribution to the mine site and water treatment plant at Section 16. The distribution line will be run overhead on poles along existing right of way to the water treatment plant site. The existing cable is not sized properly for the expected load, so it would need to be upgraded. After the distribution line reaches the mine site the overhead distribution will be dropped off at one or more locations as required to service the mine, ventilation fans and de-watering wells.

Power distribution on the mine site includes main shaft, de-watering pumps, ventilation shafts, and escape shafts. It will be distributed as 25 kV on overhead lines with taps and individual transformers for each location. The main shaft area will have two transformers. One transformer will reduce voltage from 25 kV to 4.16 kV to service the hoist and power for the mine. The other transformer will reduce the voltage from 4.16 kV to 480 V for the other surface loads around the shaft.

The underground loads include some at 4.16 kV and the remainder will be reduced to 480 V or 120/208 V for the other loads as required. All low voltage motors will be started and controlled through standard Motor Control Centers. Medium voltage (MV) motors will be started and controlled with their MV starters.

The site electrical utilization is three phase, 60 Hz, 480 V for all motors 200 hp or less; all motors larger than 200 hp will be 4,160 V. Surface grounding will be per National Electric Code (NEC) requirements and Institute of Electrical and Electronic Engineers (IEEE) 142 standards. Underground grounding will be per Mine Safety and Health Administration (MSHA) requirements.

The estimated power consumption for the underground mining, including ventilation is 1.6 MW as presented in Table 18-1.

**Table 18-1: Roca Honda Mine Estimated Electrical Load**
**Energy Fuels Inc. – Roca Honda Project**

| Load Description | No. Units | Unit hp | Connected hp | Load Factor | Load hp |
|---|---|---|---|---|---|
| Section 16 Surface Plant – Main Hoist Area | | | | | |
| Main Hoist | 1 | 1,000 | 1,000 | 80% | 800 |
| Compressors | 2 | 150 | 300 | 67% | 201 |
| Surface Pumps | 1 | 700 | 700 | 90% | 621 |
| Heat Trace | 5 | 30 | 150 | 100% | 150 |
| Shop Equipment | 1 | 15 | 15 | 40% | 6 |
| Hot Water Heaters | 1 | 25 | 25 | 70% | 18 |
| Lighting | 1 | 15 | 15 | 90% | 14 |
| Office | 1 | 20 | 20 | 40% | 8 |
| Surface Plant – Ventilation Shaft Area | | | | | |
| Primary Ventilation Fans | 3 | 150 | 450 | 65% | 294 |

| Load Description | No. Units | Unit hp | Connected hp | Load Factor | Load hp |
|---|---|---|---|---|---|
| Lighting | 1 | 10 | 10 | 90% | 9 |
| Shops | 1 | 20 | 20 | 50% | 10 |
| Portable Welder | 1 | 25 | 25 | 80% | 20 |
| | | Underground | | | |
| Shaft Pumps | 8 | 250 | 2,000 | 40% | 800 |
| Pumps | 12 | 150 | 1,800 | 78% | 1,401 |
| Secondary Fans | 8 | 50 | 400 | 100% | 400 |
| Underground Shops | 2 | 100 | 200 | 23% | 46 |
| Longhole Drill | 1 | 75 | 75 | 43% | 32 |
| Backfill/Aggregate Mixing Plant | 2 | 100 | 200 | 12% | 24 |
| Cement Mixing Tank | 2 | 50 | 100 | 12% | 12 |
| Electrohydraulic Drill Jumbo | 8 | 75 | 600 | 24% | 144 |
| Rockbolter | 8 | 75 | 600 | 24% | 144 |
| Shotcreter | 1 | 75 | 75 | 24% | 18 |
| Lunch Rooms | 2 | 20 | 40 | 8% | 3 |
| Underground Lighting | 1 | 30 | 30 | 58% | 17 |
| **Subtotal** | | | **8,850** | | **5,191** |
| Contingency | | | 10% | | 10% |
| **Total (hp)** | | | **9,735** | | **5,710** |

Power is supplied to the Mill by Rocky Mountain Power through their regional grid. Total online power for the Mill is presented in Table 18-2 and Table 18-3. Electrical loads were inventoried from existing equipment. The majority of electrical components installed are low voltage 460 V. Medium voltage, 4,160 V, is used for the SAG mill.

**Table 18-2: White Mesa Mill Connected Load Rating**
**Energy Fuels Inc. – Roca Honda Project**

| Connected Load Rating | hp | kW | kVA |
|---|---|---|---|
| SAG Mill | 700 | 567 | 651 |
| All Pumps | 604 | 489 | 615 |
| Conveyors/Feeders/Screens | 94 | 76 | 95 |
| Agitators/Settlers/Mixers | 550 | 446 | 512 |
| CCD | 200 | 162 | 186 |
| Presses/Flocculant | 22 | 18 | 23 |
| Fans/Scrubbers/Cranes | 45 | 36 | 42 |

| Connected Load Rating | hp | kW | kVA |
|---|---|---|---|
| Bag House/Miscellaneous | 91 | 65 | 81 |
| Totals | 2,306 | 1,859 | 2,205 |

**Table 18-3: White Mesa Mill Operating Load Rating**
**Energy Fuels Inc. – Roca Honda Project**

| Operating Load Rating | hp | kW | kVA |
|---|---|---|---|
| SAG Mill | 581 | 471 | 540 |
| All Pumps | 451 | 358 | 449 |
| Conveyors/Feeders/Screens | 71 | 55 | 68 |
| Agitators/Settlers/Mixers | 457 | 370 | 425 |
| CCD | 166 | 134 | 154 |
| Presses/Flocculant | 17 | 14 | 18 |
| Fans/Scrubbers/Cranes | 37 | 30 | 35 |
| Bag House/Miscellaneous | 58 | 48 | 60 |
| Total | 1,838 | 1,480 | 1,749 |

## 18.4 Diesel, Gasoline, and Propane

Fuel will be loaded at Grants, New Mexico, for transport to the mine. A bermed fuel storage area, containing diesel fuel tank(s), will be provided along the main haul access road at the mine and mill areas. This area will include a fuel load out from tankers and dispensing station for vehicles. Fuel dispensing will be monitored to provide documentation of use and environmental compliance. The storage areas will be lined with an impermeable liner and the berm will be large enough to contain the required quantity of fuel based upon storage regulations.

## 18.5 Communications

Most areas of the mine will have access to an underground radio communications system. The system will be installed in the shafts, permanent pump stations, maintenance shops, refuge stations, and muck handling facilities at the shaft bottom. Antenna cables will be installed as part of the normal water, air, and power lines. Handheld radios will be able to communicate through this line up to 1,250 ft away. The radios have digital and analog capability and can transmit emergency contact and instructions on their display. Separate channels are provided for geology, engineering, contractors, mine production, management, and surface departments. Ninety radios are included in the estimate.

Emergency hard wired phones are installed in the shaft bottom, emergency escape raises, and refuge chambers to provide a redundant communications path. All communications will have battery backup.

The communication system at the Mill includes telephone, wireless internet and computer network system.

## 18.6 Water Supply

Potable water for the underground mine will be provided in specific containers that will be resupplied regularly from the site potable water supply. Sanitary facilities in the mine will be approved self-contained units. Water for mine operations will be provided by mine dewatering operations.

The fresh water for processing operations at the Mill is provided by 2,000 ft deep water wells. Water can also be reclaimed and/or recycled from the Recapture Reservoir located on-site. Nominal water usage during uranium ore processing is approximately 250 gpm.

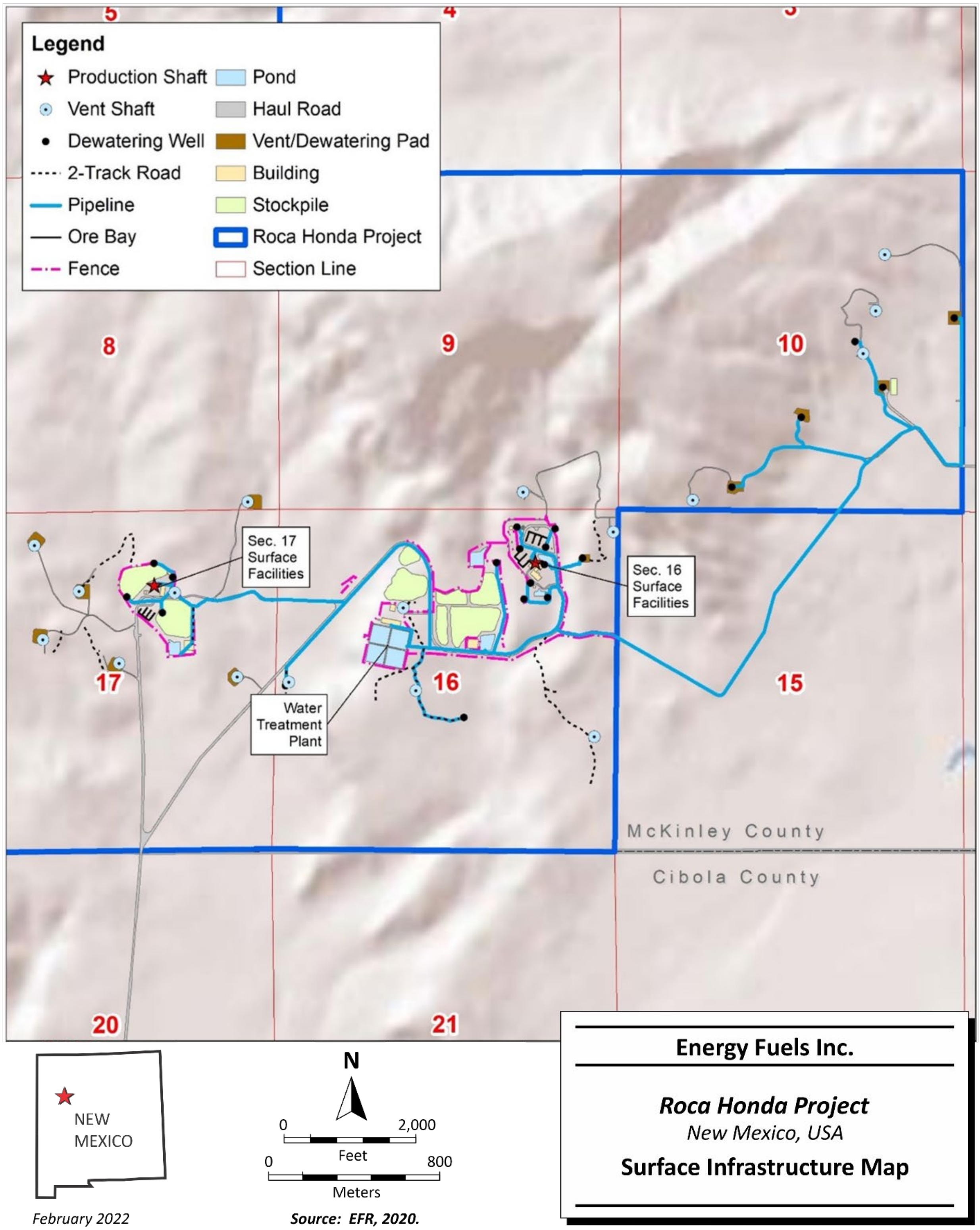
## 18.7 Mine Support Facilities

Offices for site management personnel will be located within the operations complex at the Mine. These will include administration, management, mine, process, and maintenance personnel. Mine personnel will have offices in the mine administration building.

### 18.7.1 Existing Section 17 Infrastructure

Construction of the Lee Ranch vertical shaft started in late 1980 to early 1981. The conventional (drill, blast, load, hoist) construction was halted above the first development station in April 1982. This shaft is approximately 1,478 ft deep, with no headframe or hoist, and is concrete- lined. The diameter is 14 ft. The current condition of this shaft is unknown, however, 10 gpm of water from the shaft is used by the Lee Ranch. The water level is 852 ft below the shaft collar. Other infrastructure on Section 17 includes:

- A 25 kVA power line that provides power to the ranch infrastructure currently on the site
- A Gallup well that is used by the ranch for watering horses and cattle
- A well-maintained gravel two lane road from the paved Highway 605 to the ranch facilities on Section 17. It is known as the old Kerr-McGee haul road.
- Two-track dirt roads providing access to most of Section 17
- Phone lines going to the ranch facilities
- Existing buildings, which were the Kerr-McGee surface facilities (Hoist House and Maintenance Shop). These are currently being used by the Lee Ranch for ranching operations.
- A double-wide trailer on site that is used as a residence by the ranch supervisor
- An approximate one-acre pond that Kerr-McGee used to hold water during shaft sinking. Strathmore rehabilitated the pond and lined it for use in a water pump test.
- Various cattle watering ponds and impoundments



February 2022

Source: EFR, 2020.

Figure 18-1: Surface Infrastructure Map

## 18.7.2 Mine Infrastructure

### 18.7.2.1 Underground Conveyance

Historically, in the Ambrosia Lake mining subdistrict, the size of the mineralized material supplied from the mine to the process Mill has not required a crushing circuit. Mineralized material will be dumped into a single dump point feeding the ore pass requiring a grizzly and rock breaker.

### 18.7.2.2 Ventilation

One of the major operating costs associated with underground mining is the electrical cost associated with operating a mine's primary and auxiliary ventilation circuit. In this regard, the SLR QP, in planning Roca Honda's primary ventilation, has taken steps to minimize the impact that the raise boring development will have on the mine's development and operating costs.

Roca Honda's primary ventilation system consists of:

- Two Production Shafts (completion of the Section 17 shaft and development of the Section 16 Shaft)
- Three (9 ft finished diameter) Emergency Egress Raises (one each in of Section 10, 16 and 17)
- Nine (9 ft finished diameter) Ventilation Raises

The Section 16 Shaft will have an 18 ft finished inside diameter, in which two skips and a man cage will operate, while the Section 17 shaft will have a 14 ft inside diameter with the same furnishings.

The three emergency egress raises will be steel-lined, 9 ft finished diameter raises with rope guides for the egress capsules. For each emergency egress raise, the egress capsule will be located outside the raise in either the respective emergency egress hoists' head frames, or immediately below the raise which will reduce impeding airflow.

The remaining ventilation raises will be 9 ft in diameter and steel-lined raises. While the steel-lining was initially installed for ground control issues, the lining system also appreciably reduces the system's air resistance.

It is assumed that the presence of radon and thoron gas from the rock will not be an issue with the correct installation of the proposed ventilation system, and that these contaminants will be appropriately diluted and exhausted with the mine air. Procedures for closing unused areas and for checking areas prior to reopening unventilated areas will be established to ensure that areas are suitably ventilated and that there are no noxious gases present before work commences in a new area or an area which has been closed for some time.

The mine ventilation air flow was based upon the mine equipment fleet, with an estimate of equipment utilization and an additional allowance for losses and additional needs, and the dilution of any deleterious gases such as radon. The mine ventilation requirements, per mining phase, vary from 35,000 cfm during shaft sinking to approximately 1,200,000 cfm for peak steady-state mine production.

### 18.7.2.3 Mine Air Heating Intake

Considering seasonally sub-zero temperatures at or near the surface at Roca Honda and the need to prevent freezing of water lines and ice buildup, the mine air will be heated as conditions dictate, using direct fired mine air heaters located at the mine air intake. The coldest mean monthly low temperature on record at nearby weather stations was 14.4°F. In sizing the Section 16 Shaft Heating Plant, the SLR QP utilized a 30°F temperature rise to determine the Mill's maximum heating capacity. The mine area heating requirements should be minimal, because of the expected rock and water temperatures of the mine. The main shafts will be intake shafts for ventilation; therefore, cold air will be drawn into the mine at these points.

### 18.7.2.4 Dewatering

The mine is expected to be a "wet" mine and groundwater inflows are expected to be moderate to high with a maximum estimated 5,920 gpm of groundwater inflow initially into the mine. The estimate of groundwater inflow has been based upon the observations of the numerous core drill programs and observations from historical mine and public reports previously developed in the Ambrosia Lake subdistrict, as discussed in Section 16.6.

The18-8stimateed water inflow is:

- Groundwater 4,700 gpm
- Drilling – 2 gpm per boom – 10 gpm
- Diamond drilling 10 gpm
- Mine dust suppression – carried on rock

All water will be diverted to the base of the decline either along the decline or by boreholes specifically installed for mine drainage.

The main mine dewatering pumps will be designed to operate by automatic controls. The low head pumps at the sump will operate on automatic controls such that high levels in the sump activate the operation of the pumps.

### 18.7.2.5 Backfill

In the case of the SRP mining method, backfill is designed to supplement the carrying capacity of the unmined pillars during the mining process. In this regard, a low strength backfill is sufficient. With the DF mining method, backfilling of the stope headings is primarily designed to replace pillars and fully support the back of the stope during the mining process. In this context, the backfill needs to be consistently of high quality and high strength.

CRF is the backfill method recommended for use with both of these mining methods. High strength or low strength CRF can be mixed underground then transported, dumped, and jammed into place, increasing density through mechanical compaction. Truck, LHD, and jammer placement provide for operational flexibility.

Over the mine life, a total of 2.24 million tons of backfill will be needed with the high strength variety comprising 75% of the total. Of this total, 387,000 ton of underground development waste will be directly placed into stopes. The surface development waste stockpile will contribute 516,000 ton, which includes hoisted waste, surface excavations, main shaft, and other mine surface structure excavations. The remaining 1.34 million tons will be generated from a surface quarry.

The primary source of high strength backfill material will be quarried and screened (concrete quality) surface rock. RHR has communicated that an agreement with a local landowner may be possible. The location of the quarry has not yet been specifically identified, nor has there been any test work to confirm that surface rock from the site will be suitable for high strength backfill.

The backfill rock will be transported from the backfill raise to the backfill mixing facilities located at each of the shaft stations. The backfill material and cement slurry will be mixed in a 27 in. diameter by 8.5 ft long “pug” mill prior to loading into 17 ton ejector box dump trucks (such as the MTI DT-1604 model truck). The truck will then travel to the stope requiring backfill. The telescopic dump box allows for dumping in heights as low as nine feet. In mining zones with heights of nine feet or greater, the truck will dump backfill directly into the stope drift being filled. In lower stope height areas, the truck will dump in the stope access or sill drift and the backfill will then be transported to the backfill area by LHD.

#### 18.7.2.6 Maintenance Facilities

Two shops will be constructed underground in the vicinity of the Section 16 and Section 17 shaft bottoms. The shops include 700 lineal feet of concrete floors with oil collection and separation facilities. The area also contains parts storage, compressors, diesel fuel, hydraulic hoses, communication, lighting, and nearby refuge chambers.

The work stations in the shop include areas for welding, vehicle repair, tire repair, and tire storage. It is anticipated that all equipment repairs and rebuilds will be done in these locations. Major equipment repairs, such as engine replacement, will be completed by installing a re-built component overhauled elsewhere and brought into the mine using the main hoist. The larger maintenance work on the mine equipment will be competed in surface heavy equipment shops located adjacent to the Mill complex. This work will include all major repairs and major services. The surface shop will be used for the surface and underground mobile equipment at the site.

#### 18.7.2.7 Materials and Consumables Storage

Material storage will be built underground for short-term storage of mine supplies such as rock bolts, mesh and ventilation duct and spare fans. These bays will be located near the service area and will be accessed by mobile equipment such as the forklift and tool handler.

#### 18.7.2.8 Explosives Storage

Detonators, primers, and stick and bulk powder will be stored in separate approved explosives magazines. All of these explosives will be stored either in the underground magazines and/or the surface explosives magazines.

The main explosive planned for use at the Mine is ammonium-nitrate fuel oil (ANFO), which will be supplied in 50-lb bags or in larger capacity tote bags as required. There will however still be a requirement for packaged slurry explosives and “stick” powder for wet holes or for boosting the ANFO in some applications. These are easily provided by the explosives manufacturer in containers, which will be stored and inventoried. It is assumed that the stopes will be sufficiently dewatered to allow for ANFO to be used as the primary blasting agent, however this requires further study.

An average powder factor of 1.34 lb/ton was used for costing purposes. An allowance of 10% of the total explosives for stick powder and package slurry is recommended for purchase and storage on site. A non-electric detonation system will be used with in-the-hole delays on all detonators. A range of delay periods will be required and approximately 45,000 are required for a year of operation. Costs have been based upon the use of Nonel detonators, however, it is recommended that EFR investigate and consider the electronic initiation systems that are now available as this may provide better fragmentation and ground control.

#### 18.7.2.9 Underground Roadway Maintenance

A grader will be included in the equipment fleet for the maintenance of underground roadways.

### 18.7.3 Surface Infrastructure

#### 18.7.3.1 Warehouse Facilities

A central warehouse located on surface will be established at the mine site. The heated indoor storage will be supplemented with an organized container storage yard and some outdoor lay down area. The warehouse area will be manned by a purchasing agent and an assistant.

#### 18.7.3.2 Maintenance Facilities

The surface maintenance shop will be used for maintenance of all surface equipment and limited, small underground equipment at the mine site. The underground fleet and part of the surface fleet will see service through the year.

The planned underground shop will have service bays for heavy equipment as well as space for light equipment. The shop will be equipped with an overhead crane for servicing equipment.

A machine shop with milling tools, a lathe, saws, and work benches will be installed to provide emergency replacement of parts, if necessary. There will be a welding bay for the repair of boxes and buckets and other welding jobs.

#### 18.7.3.3 Mine Development Rock Stockpile Area

The mine development rock stockpile has been sized at 11 acres. No special handling is required for the mine waste rock. Mine waste will be placed directly on the ground after the topsoil stripping and grubbing has been completed. The mine waste rock will be hauled from the mine to the stockpile, placed, and spread. This size waste stockpile will accommodate a total of 0.35 million $yd^3$ of mine waste. Mine development waste will only be stockpiled during initial development and the stockpile is sized assuming that most development waste will be used as backfill during mining operations.

The storage area at the mine will require space for fuel storage and some bulk materials storage. The yards will be designed to divert surface drainage away from roads and storage yards and appropriate spill response plans will be developed for the various products that are to be handled in the area.

Mine development material will be either be hoisted to the surface and either used for surface construction or stockpiled in storage areas for backfill and reclamation, in temporary locations for run of mine (ROM) mineralized material, or used as backfill in underground excavated areas. The stockpiles of ROM material will subsequently be used as plant feed.

#### 18.7.3.4 Surface Infrastructure Space Requirements

Space requirements for the surface mine infrastructure were determined based on the staffing requirements, production rate, type of mining method, and equipment. The mine surface requirements are summarized in Table 18-4.

### Table 18-4: Mine Surface Infrastructure Space Requirements – Buildings Energy Fuels Inc. – Roca Honda Project

| Area Description | Est. Square Feet | Comments |
|---|---|---|
| Mine Dry and Office Building | 30,572 | 2 Floors |
| Office and Dry | 19,528 | 1st & 2nd floor |
| Maintenance and Shop | 8,160 | 1st & 2nd floor |
| Indoor Warehouse | 4,080 | 1st & 2nd floor |
| Emergency Services Building | 3,784 | |
| Entrance, Guard Shack and Scale House | 1,542 | |
| Assay Laboratory Building | 320 | Trailer |
| Outdoor Warehouse | 9,800 | Cold Warehouse is in corner of yard |
| Cold Warehouse (Not Insulated or heated) | 3,200 | |
| Explosives Magazine No 1 | 160 | |
| Detonators, Caps and Fuse Magazine No. 2 | 36 | |
| Tank Farm Containment Area | 800 | 20,000 gal |
| Batch Plant Area | 900 | |
| Stockpile (At the headframe) | 2,500 | |
| Waste Stockpile (At the headframe) | 2,500 | |

### 18.7.3.5 Medical Facility

The proposed medical facility at the mine will consist of an appropriately supplied first aid station, and there will be appropriately qualified first aid personnel on site and on call at all times. First aid rooms will be located in the mine offices.

An ambulance will be available on site for the transport of injured personnel to the first aid stations and or site helipad. Seriously injured personnel will be evacuated from the mine site by helicopter to Albuquerque, New Mexico. A helipad will be constructed at the mine site.

A fire truck will be available on site to respond to surface fire incidents. The surface fire brigade will be a combination of personnel from the site.

Mine rescue gear will be purchased and located within a mine rescue training area in the office complex. Mine rescue personnel will be selected and trained as required under the Mine Safety and Health Administration Rules.

### 18.7.3.6 Graywater and Sewage

The graywater and sewage from the mine will be sent to separate sewage treatment facilities (Biodisk or equivalent) after which the water will be discharged. Solids in the sewage treatment units will be removed on an annual basis and disposed at the appropriate municipal treatment facility

## 18.8 Roca Honda Surface Equipment

Site services at the Mine will include the surface equipment fleet presented in Table 18-5.

**Table 18-5: Surface Equipment Fleet**
**Energy Fuels Inc. – Roca Honda Project**

| Area | Units | Primary Uses |
|---|---|---|
| Forklift | 1 | Freight Handling, Pipelines, General |
| Bobcat | 1 | Mine Clean Up |
| HDPE Pipe Welder | 1 | Water Supply/Dewatering |
| Fuel Truck | 1 | Fuel Haul |
| Container Trailer | 1 | Container Moves |
| Pick-up Truck | 4 | Garbage/Maintenance/Inspection |
| Vans (for Crew) | 4 | Crew Transportation |
| Ambulance | 1 | Emergency Rescue |
| Fire Truck | 1 | Fire Fighting |
| Spill Response | 1 | Spill Clean Up |

## 18.9 White Mesa Mill

### 18.9.1 Administration Buildings and Offices

There is office space for the administration, technical, mill and maintenance personnel in a central office location at the White Mesa Mill facility, as shown in Figure 17-2. Mill support facilities also include warehousing for maintenance spares, reagents, and operating supplies.

### 18.9.2 Tailings Disposal

The Mill and Tailings Cells are located approximately six miles south of Blanding, Utah, on US Highway 191.

The Mill currently operates on a campaign basis to produce yellowcake, which results in tailings production and deposition on a similar campaign basis. While the Mill is capable of processing 2,000 stpd, ore is typically stockpiled until the mill can operate at a nominal rate for a reasonable period of time. When tailings are generated, whole tailings are typically pumped in a slurry to the designated Tailings Cell, at approximately 60% solids (by weight).

The location of the Tailings Cells is shown on Figure 17-2.

#### 18.9.2.1 Tailings Facility Description

The Tailings Cells at the White Mesa Mill currently consist of five cells: Cells 1, 2, 3, 4A, and 4B.

Typically, two of the Cells are used for solution management and two Tailings Cells are used for tailings storage. Currently, Cells 1 and 4B are used for solution management and Tailings Cells 3 and 4A are used for tailings storage.

Three stormwater diversion channels were designed and constructed to divert surface water around the Mill and Tailings Cells.

#### 18.9.2.2 Design and Construction

The tailings dams are either excavated in cut or constructed from compacted fill in a downstream manner. The Tailings Cells were built and are operated and maintained to follow the Discharge Minimization Technology (DMT) and Best Available Technology (BAT) standards noted below.

- Cell 1 was designed by D'Appolonia in 1979 and construction was completed in 1981. The cell has a crest elevation of approximately 5,620 ft, with a crushed nominal 6 in. thick sandstone sub-base underlay, a 30 mil Polyvinyl Chloride (PVC) flexible membrane liner (FML), and a 12 in. to 18 in. thick protective soil cover.
- Cell 2 is downgradient of Cell 1. It was designed by D'Appolonia in 1979, and construction was completed in 1980. It was built to a crest elevation of approximately 5,615 ft, and constructed with a crushed nominal 6 in. thick sandstone sub-base underlay, a 30 mil PVC FML, and a 12 in. thick protective soil cover. Tailings Cell 2 was used for the storage of tailings, but is at capacity and has been partially reclaimed.
- Cell 3 is downgradient of Cell 2. It was designed by D'Appolonia in 1981 and construction was completed in 1982. It was constructed to a crest elevation of approximately 5,610 ft, and constructed with a crushed nominal 6 in. thick sandstone sub-base underlay, a 30 mil PVC FML, and a 12 in. to 18 in. thick protective soil cover. Tailings Cell 3 is used for the storage of tailings and process solutions, but is nearing capacity and has been partially reclaimed in select areas.
- Cell 4A is downgradient of Cell 3 and adjacent to Cell 4B. It was designed by Western Engineers in 1988, construction was completed in 1989, and it placed into operations in 1990. Tailings Cell 4A was used for a short period of time before being removed from service. After a period of inactivity, the original 40 mil High Density Polyethylene (HDPE) geomembrane became damaged. The lining system was redesigned by Geosyntec in 2006, and constructed with a geosynthetic clay liner, a 60 mil HDPE liner, a 300 mil HDPE geonet drainage layer, a second 60 mil HDPE liner, and a slimes drain network (12 in. to 18 in. thick granular drainage layer for the tailings above the HDPE liner with perforated piping network) over the entire cell bottom. This cell was placed into service in October 2008 and is used for storage of tailings and evaporation of process solutions. While it has a maximum capacity of approximately 1.6 million yd$^3$ of tailings, the EFR QP understands that the current available tailings storage capacity is approximately 1 million yd$^3$ (1.5 million tons).
- Cell 4B is downgradient of Cell 3 and adjacent to Cell 4A. It was designed by Geosyntec in 2007 to be in compliance with the applicable regulatory standards for the State of Utah, the United States Nuclear Regulatory Commission, and the EPA, and in particular, the Utah Administrative Code (UAC) R317-6 and the BAT requirements mandated by Part ID of the existing site Ground Water Discharge Permit No. UGW370004. It was constructed with a geosynthetic clay liner, a 60 mil HDPE liner, a 300 mil HDPE geonet drainage layer, a second 60 mil HDPE liner, and a slimes drain network over the entire cell bottom. This cell was placed into service in February 2011, is used for evaporation of process solutions, and has not been used for tailings storage. It

encompasses approximately 40 acres and has a maximum capacity of approximately 1.9 million $yd^3$ of tailings (approximately 3 million tons). Cell 4B will be used for tailings disposal once Cell 3 has been filled.

Foundation conditions generally consist of loess and eolian deposits over Dakota Sandstone.

EFR has submitted the design for Cells 5A and 5B, which will be constructed adjacent to, and downstream from, Cell 4, should additional storage capacity be required. Cell 5A was designed with a maximum dam height of approximately 30 ft and sized to contain approximately 2.1 million $yd^3$ of tailings. Cell 5B was designed with a maximum dam height of approximately 40 ft and sized to contain approximately 2.2 million $yd^3$. The liner system was designed to meet the Best Available Technology requirements of the UAC R317-6.

EFR acts as the Engineer of Record (EOR) for the Tailings Cells, wherein they coordinate the design (i.e., volumetrics, stability analysis, water balances, hydrology, seepage cut-off design, etc.), construction and construction monitoring, inspections, and instrumentation monitoring and data review to verify that the Tailings Cells are being operated to meet all applicable regulations, guidelines, and standards.

### 18.9.2.3 Audits

No independent audits have been performed on the facility.

As part of the design approval process for Cells 4A and 4B, completeness reviews were performed by URS Corporation.

### 18.9.2.4 Inspections

Various inspections are performed and documented in daily, weekly, monthly, quarterly and/or annual basis. The reporting requirements follow those presented in the Tailings Management (Energy Fuels, 2017) as required under RML No. UT1900479, and Discharge Minimization Technology (DMT) Monitoring Plans (Energy Fuels, 2016) as specified throughout Parts I.D, I.E and I.F of the White Mesa Mill's Groundwater Discharge Permit (GWDP) Number 370004.

Daily and weekly inspection reports are performed by EFR staff and are kept onsite, with any deficiencies and corrective actions noted, and regulatory agencies notified accordingly. The quarterly and annual inspection reports are submitted to UDEQ, in which select daily reports are included, as well as monthly and quarterly inspection reports.

### 18.9.2.5 Conclusions

EFR has been operating the White Mesa tailings cells since 1981, which is currently operating under the requirements of the UDEQ RML.

While this Technical Report has been prepared for a Preliminary Economic Assessment, the existing Tailings Storage Facility (TSF) at the White Mesa Mill can be used for tailings management.

## 18.10 Security

In view of the remote nature of the mine site, there is little risk to the general public and little risk of public access to the site. There will be occasional visitors in summer, who will come to the site by passenger vehicles. Such visitors will be met with signs and personnel who will explain that this is a private mine and mill site, and visitors are not allowed on site and there are no services available. There will be manned security stations at entrance locations on the mine and mill sites.

Where necessary, fencing will be installed to keep wildlife out of areas such as the reagent storage. The use of containers for storage will minimize the requirement for such fencing.

## 18.11 Landfill

Garbage from the mine will be collected periodically and shipped to the appropriate municipal landfill. Recyclable materials will be collected separately and shipped out annually for processing. A waste management site will be established for the long-term storage of waste materials. All waste generated at the Mill is disposed of in dedicated areas of the tailing cells.

# 19.0 MARKET STUDIES AND CONTRACTS

## 19.1 Markets

The majority of uranium is traded via long-term supply contracts, negotiated privately without disclosing prices and terms. Spot prices are generally driven by current inventories and speculative short-term buying. Monthly long-term industry average uranium prices based on the month-end prices are published by Ux Consulting, LLC, and Trade Tech, LLC. An accepted mining industry practice is to use "Consensus Forecast Prices" obtained by collating commodity price forecasts from credible sources.

### 19.1.1 Supply

According to the World Nuclear Association (World Nuclear, 2021), world uranium requirements totaled more than 47,700 t U in 2020, with the global pandemic accelerating a trend of slowly-decreasing production:

- 2016 – 63,207 t U
- 2017 – 60,514 t U
- 2018 – 54,154 t U
- 2019 – 54,742 t U
- 2020 – 47,731 t U

The top five producing countries (Kazakhstan, Australia, Namibia, Canada, and Uzbekistan) accounted for over 80% of world production in 2020.

The share of uranium produced by in situ recovery (ISR) mining has steadily increased mainly due to the addition of ISR operations in Kazakhstan, and now accounts for over 50% of production.

Over half of uranium mine production is from state-owned mining companies, some of which prioritise secure supply over market considerations.

### 19.1.2 Demand

Demand is primarily as a source for nuclear power plants. The use of nuclear power generation plants has become increasingly acceptable politically. Both China and India have indicated an intention to increase the percentage of power generated by nuclear plants. The largest increase in demand will come from those two countries.

Demand for uranium fuel is more predictable than for most other mineral commodities, due to the cost structure of nuclear power generation, with high capital and low fuel costs. Once reactors are built, it is very cost-effective to keep them running at high capacity and for utilities to make any adjustments to load trends by cutting back on fossil fuel use. Demand forecasts for uranium thus depend largely on installed and operable capacity, regardless of economic fluctuations.

The World Nuclear Association website notes that mineral price fluctuations are related to demand and perceptions of scarcity. The price cannot indefinitely stay below the cost of production, nor can it remain at a very high price for longer than it takes for new producers to enter the market and for supply anxiety to subside.

### 19.1.3 Price

The key to understanding any mineral market is knowing how the mineral price is determined. There are generally considered to be two prices in the uranium market: 1) long term contract prices, and 2) spot prices. These are published by companies that provide marketing support to the industry with UxC being the most commonly followed price report. Over the long term price follows the classic market force of supply demand balance with a “speculative” investment market that creates price volatility.

Figure 19-1 provides a Long Term Uranium Price Forecast through 2035 from TradeTech LLC (TradeTech) from the third quarter of 2021. The Forward Availability Model (FAM 1 and 2) forecast differ in assumptions as to how future uranium supply enters the market. “FAM 1 represents a good progression of planned uranium projects incorporating some delays to schedules, while FAM 2 assumes restricted project development because of an unsupportive economic environment.” (TradeTech, 2021). Currently most US producers are in a mode of care and maintenance and numerous facilities globally are also slowing or shutting in production at least on a temporary basis. At this time in the US, no new projects are being constructed, and very few are moving forward with permitting and/or licensing. This condition aligns more with the FAM 2 projections.

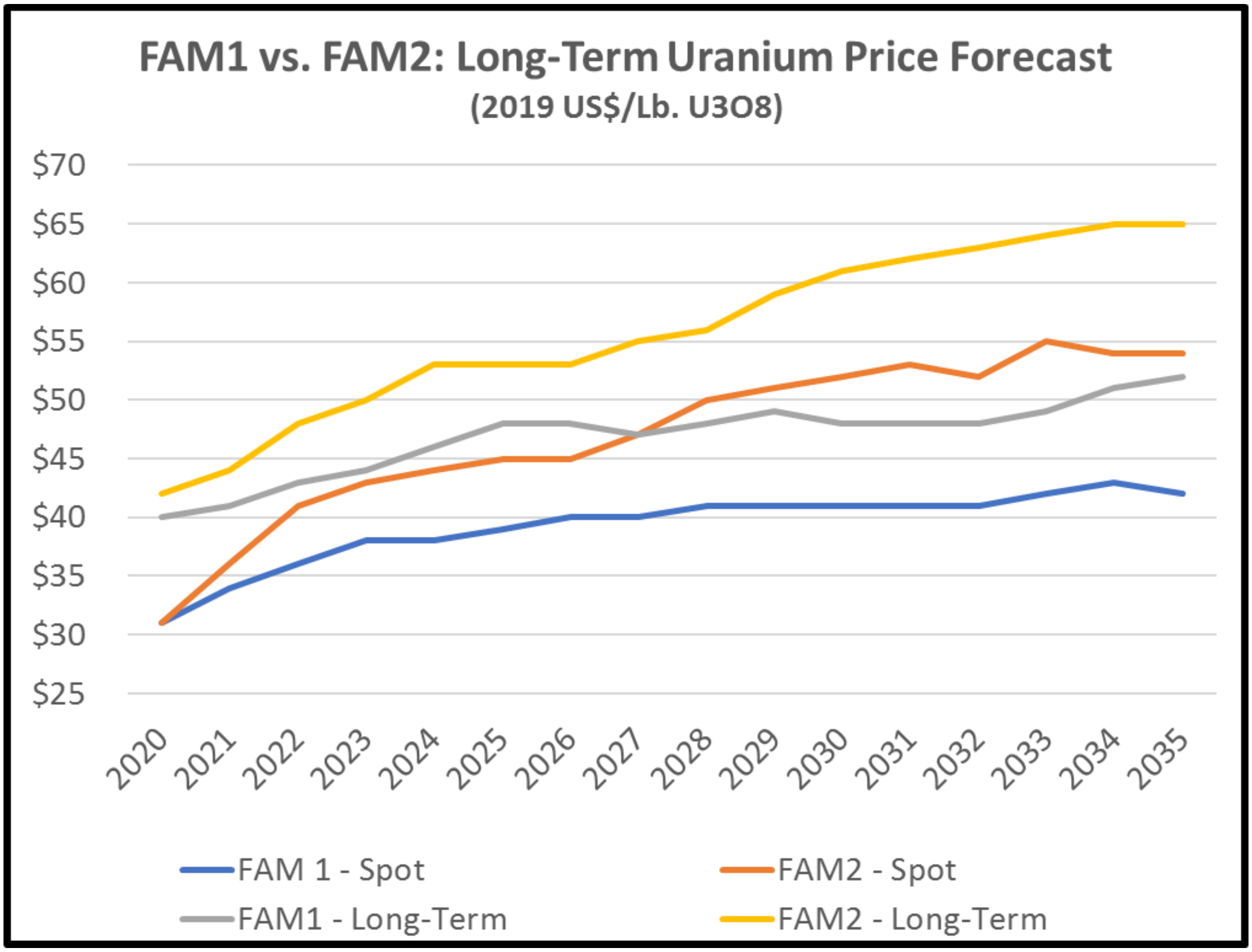


**Figure 19-1: Long Term Uranium Price Forecast**

Consensus forecasts collected by the SLR QP are in line with the FAM2 – Spot prices in Figure 19-1, with long-term averages of approximately $55.00/lb. General industry practice is to use a consensus long-term forecast price for estimating Mineral Reserves, and 10% to 20% higher prices for estimating Mineral Resources.

For Mineral Resource estimation and cash flow projections, EFR selected a $U_3O_8$ price of $65.00/lb, on a Cost, Insurance, and Freight (CIF) basis to customer facility, based on independent forecasts. The SLR QP considers this price to be reasonable and consistent with industry practice based on independent long-term forecasts and a mark-up for use with Mineral Resource estimation.

The SLR QP has reviewed the market studies and analysis reports and is of the opinion they support the findings of this Technical Report and disclosure of the Mineral Resource estimates.

## 19.2 Contracts

At this time, EFR has not entered into any long term agreements for the provision of materials, supplies or labor for the Project. The construction and operations will require negotiation and execution of a number of contracts for the supply of materials, services, and supplies.

# 20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

## 20.1 Roca Honda Mine

The Roca Honda Mine is at an advanced stage of permitting with no production to-date. A mine permit application was submitted in October 2009, revised in 2011, and deemed administratively complete. A DEIS was completed by the USFS in February 2013. In March 2015 the USFS initiated the scoping process for a new mine dewatering alternative to be addressed in a Supplement to the DEIS. In September 2016, an additional scoping process to incorporate Section 17 and development drilling into the mine plan was initiated by the USFS. This Supplement to the DEIS is expected to be completed in late 2022 or early 2023 with a Final EIS and Record of Decision (RoD) expected in 2023.

### 20.1.1 Environmental Studies

Extensive environmental baseline studies have been completed for the Mine in support of its permitting applications.

#### 20.1.1.1 Baseline Studies

Environmental baseline studies for the Mine site began in 2006. Methods and results of work to date were documented in the Baseline Data Report and Sampling and Analysis Plan submitted to the New Mexico Mining and Minerals Division (MMD) and the USFS (Cibola National Forest) in October 2009 and revised in 2011. Since that time the report has been supplemented as needed to better describe climatology, vegetation, wildlife, soils, geology, surface water, groundwater, cultural resources, land use and radiological baseline information within the Mine area and the proposed discharge pipeline routes. Details of all baseline activities are documented in the Baseline Data Report, and continually updated as needed.

Additional studies and designs for proposed facilities in Section 17 were completed in 2015 and 2016 and submitted to the USFS in 2017.

Strathmore had previously planned to construct a new mill to process mill feed from the mine on property owned by RHR about 15 mi north of the Mine site. Extensive environmental characterization studies were completed to support permit applications, but a source material license application was never submitted to the U.S. Nuclear Regulatory Commission, the federal agency charged with permitting uranium processing facilities. Although EFR now intends to transport uranium mill feed to its wholly–owned White Mesa Mill in Blanding, Utah, the baseline studies completed at the proposed mill site would be valuable for future permitting purposes if market conditions eventually justified a “local” mill.

#### 20.1.1.2 Prior Mining Activities

There were prior mining operations located near the Mine site, which may have affected the Mine area. A 1,478 ft deep vertical shaft in the NW ¼ NE ¼ Section 17, Township 13 North, Range 8 West of the New Mexico Principal Meridian, named the Lee Ranch Shaft, was constructed by Kerr-McGee in the late 1970s. The shaft reached the Westwater Canyon Member of the Morrison Formation, however, it did not penetrate to the mineralized zone, so no mineralized material has been mined in Section 17.

More than 1,450 historical exploration boreholes were drilled from the late 1960s to the early 1980s in various locations throughout the Mine area. Additionally, some of the property immediately surrounding the Mine area contains drillholes to varying degrees. Field inspections of these areas conducted in conjunction with other field activities revealed occasional pipe and other markers that may identify possible drillhole locations but cannot be confirmed as such. In addition to the drillholes, the USFS mapped a network of drill roads, mainly in Sections 9 and 10, that accessed the drill sites. Most of these roads have naturally re-vegetated.

#### 20.1.1.3 Hydrogeology

The Mine area is located in the southeastern part of the San Juan Structural Basin, within the southeast part of the Ambrosia Lake uranium subdistrict, which was the site of previous uranium mining and associated mine dewatering activities from the 1960s through the 1980s. The Mine area lies within the Bluewater Underground Water Basin as extended by the New Mexico Office of the State Engineer on May 14, 1976.

Large amounts of data on groundwater exist for the San Juan Basin because the area contains deposits of recoverable uranium and valuable groundwater resources. The USGS, the New Mexico Bureau of Geology and Mineral Resources, and the New Mexico State Engineer cooperated in several hydrogeological studies of the San Juan Basin, which have described area aquifers and compiled and analyzed groundwater quality data and estimates of hydraulic parameter values (Kelley et al., 1963; Steinhaus, 2011; Brod and Stone, 1981; Frenzel and Lyford, 1982; Stone et al., 1983; Craigg et al., 1989; Dam et al., 1990; Dam, 1995; and Craigg, 2001). Moreover, as part of the Regional Aquifer System Analysis program, the USGS developed a steady-state multi-aquifer groundwater flow model of the San Juan Basin (Kernodle, 1996). Strathmore developed a comprehensive and accurate model of groundwater occurrences in the southern portion of the San Juan Basin in support of mine permitting efforts. The model was accepted by the New Mexico State Engineer's Office in 2013 as part of the mine dewatering permit process.

The Mine area is approximately three miles northwest of the Mount Taylor uranium mine, formerly operated by Gulf Mineral Resources Company and others. The mine is now owned by Rio Grande Resources Corporation (General Atomics). This mine was dewatered during the 1970s and early 1980s. Groundwater quality data and hydraulic parameter estimates were collected both at the Mount Taylor mine and at various mines west of the Mine area in the Ambrosia Lake subdistrict (NMEI, 1974; GMRC, 1979; and Kelley et al., 1980). The groundwater quality and hydraulic characteristics of the Westwater Canyon Member of the Morrison Formation were re-evaluated more recently during site licensing in the Crownpoint and Church Rock areas.

Historical exploratory drilling, conducted by others, and more recent drilling, conducted by RHR, determined that the strata beneath the Mine area represent the same sequence of rocks found in the San Juan Structural Basin. Potentiometric data collected from wells in and near the Mine area indicate that groundwater moves continuously through the Mine area in the same aquifers found to the west. The aquifers and aquitards encountered in the Mine area likely have hydraulic characteristics similar to those found in the same units elsewhere in the San Juan Structural Basin. The hydraulic characteristics are discussed in Section 16.6.

In general, the hydraulically significant structural features of the southeastern San Juan Basin have been previously identified, and the groundwater quality and hydraulic characteristics of the aquifers in the Mine area are expected to lie within the ranges identified in previous studies. Strathmore compiled the relevant published and unpublished groundwater information near the Mine area. This effort included an inventory of wells previously identified in published and unpublished reports as being present within a

10 mi radius of the Mine area. The inventory includes location, completion dates, well depth, producing formation, measured water levels, and availability of chemical data for each well. The wells were field-checked and RHR incorporated some of them, along with three wells drilled by RHR within the Mine area, into a quarterly water quality sampling program that has been completed. The well data inventory, earlier studies, recent drilling by RHR, and the water quality sampling program provide a great deal of baseline information for the groundwater in and adjacent to the Mine area. RHR conducted an onsite pump test in May 2010. In total, RHR collected four years of water quality data and contracted Intera Geosciences and Engineering (Intera) to complete a groundwater model.

#### 20.1.1.4 Surface Hydrology

Watercourses in the vicinity of the Project area are identified as ephemeral, intermittent, or perennial. The southern portion of the Mine area drains to San Mateo Creek, which is part of the Rio Grande drainage basin as a tributary of the Rio San Jose. The Rio San Jose joins the Rio Puerco west of the city of Las Lunas, and the Rio Puerco confluences with the Rio Grande near the community of Bernardo, south of the town of Belen, New Mexico.

The headwaters of San Mateo Creek are on the north flank of Mount Taylor. The head of one branch is in San Mateo Canyon above the community of San Mateo and drains down San Mateo Canyon, while the other drains the San Mateo arch/Jesus Mesa area via Marquez and Maruca canyons. Within the San Mateo Canyon branch, springs maintain a small perennial flow that is captured in the San Mateo Reservoir, located above the community of San Mateo. Field investigations conducted by RHR during 2009 and 2010 have determined that San Mateo Creek is an intermittent stream that has flow when water is being diverted from the reservoir for irrigation purposes and during high rainfall events from the San Mateo downstream to a pond on the Lee Ranch. Downstream of the pond, San Mateo Creek is ephemeral.

The northern portion of the Mine area drains to an unnamed ephemeral wash.

#### 20.1.1.5 Site Monitoring

There are currently no environmental obligations for the Mine. It is anticipated that mineralized and non-mineralized rock will be stored in permitted stockpile areas. As the Project will be limited to mining only, no process (mill) tailings will be generated at the Project site. During development and mine operations, it is expected that water produced during dewatering activities and other sources, such as storm water, will be stored in one or more permitted holding ponds prior to treatment and discharge. Site monitoring activities will be subject to the requirements of various local, state, and federal requirements and permit conditions, which are currently in progress.

### 20.1.2 Project Permitting

#### 20.1.2.1 Federal

The Roca Honda Mine is at an advanced stage of permitting. A DEIS was completed by the USFS in February 2013. In March 2015 the USFS initiated the scoping process for a new mine dewatering alternative to be addressed in a Supplement to the DEIS. In September 2016, an additional scoping process to incorporate Section 17 (the Adjacent Properties) and development drilling into the mine plan was initiated by the USFS. The Supplement to the DEIS is expected to be completed in late 2022 or early 2023 with a Final EIS and RoD scheduled to be completed in 2023.

Other federal permits required for the Project include a Multi-sector General permit under the National Pollutant Discharge Elimination System (NPDES) for the discharge of stormwater issued by the EPA and a discharge permit for the discharge of treated effluent issued by the EPA and U.S. Army Corp of Engineers (USACE). An application for the USACE permit has been submitted and the permit is expected prior to issuance of the Permit to Mine in 2023. An application for the EPA permit has also been submitted, however, the previous application is expected to be withdrawn and a new application submitted during 2022. Permit approvals from the USACE and the EPA are also required for discharge of treated mine water associated with mine activities. An application for the USACE permit has been submitted and the permit is expected prior to issuance of the Permit to Mine in 2023. An application for the EPA permit has also been submitted, however, the previous application is expected to be withdrawn and a new application submitted during 2022. The EPA permit for discharge of treated mine water is expected prior to issuance of the Permit to Mine in 2023. EPA approval under the Clean Air Act National Emissions Standard for Hazardous Air Pollutants will also be required prior to mining.

#### 20.1.2.2 State and County

Other major state and county permits required for the Project include:

- Permit to Mine to be issued by the New Mexico MMD
- Discharge Permit issued by the NMED
- Public water supply system permit issued by the NMED
- Mine Dewatering Permit issued by the New Mexico State Engineer's Office
- Building permits issued by McKinley County
- Septic system approval issued by McKinley County

The Mine Dewatering Permit was approved in December 2013 but was appealed by the Acoma Pueblo in January 2014. RHR subsequently proposed a new alternative for discharging treated mine water that would benefit a number of downstream users including the Acoma Pueblo. The Acoma Pueblo agreed to withdraw the dewatering permit appeal in March 2015. The dewatering permit will need to be revised to reflect a higher dewatering rate with the addition of Section 17 to the mine plan.

The Discharge Permit is expected to be issued in 2023, and the Permit to Mine is expected to be issued in 2023 following approval of the Final EIS and the issuance of the RoD by the USFS.

### 20.1.3 Social or Community Requirements

The construction, operation, and reclamation of Roca Honda would potentially create beneficial impacts of moderate magnitude due to the creation of jobs, labor income, and tax revenues. The proposed Mine would support over a billion dollars in economic activity including over 2,000 jobs with salaries worth approximately $350 million. Approximately $81 million in local and state of New Mexico revenue would be generated during the life of the Mine. As a result, this Project represents a significantly beneficial cumulative economic impact for the local community.

### 20.1.4 Mine Closure Requirements

#### 20.1.4.1 Mine Closure Plan

There are no mine closure requirements currently for the Mine. A reclamation plan including a cost estimate was provided in the permit application to the New Mexico MMD and the USFS PoO. The reclamation plan consists of two phases including contemporaneous reclamation to be performed during operations and final reclamation to be performed at cessation of operations. Final reclamation is designed to remove surface facilities, plug the mine shafts, recontour the disturbed area, replace stockpiled soil, and establish vegetation suitable for the post-mining land use of grazing.

#### 20.1.4.2 Reclamation Cost Estimate and Bonds

Reclamation cost estimates and financial assurance requirements will be completed during the final phase of permitting and prior to the commencement of development and mining activities. As the New Mexico MMD regulations allow for phased bonding, an initial bond amount of approximately $1,000,000 is expected to cover the cost of Phase 1 dewatering wells abandonment, removing the associated piping, and reclaiming the access roads, water treatment plant, and storm water retention pond.

A reclamation cost estimate associated with the proposed mine closure plan was provided in the USFS PoO submitted in 2013. The cost estimate was approximately US$7 million.

## 20.2 White Mesa Mill

The material produced from the Roca Honda Mine will be milled at EFR's White Mesa Mill located near Blanding, Utah. The Mill was originally built in 1980. Since construction, the Mill has processed approximately five million tons of uranium and vanadium containing ores from Arizona, Colorado, and Utah. The Mill is currently operated on a campaign basis to produce yellowcake ($U_3O_8$). It can also process alternate feed materials.

Prior to EFR taking ownership of the Mill in August 2012, it was operated by Denison from December 2006 to August 2012. Proceeding Denison, the facility was operated by International Uranium (USA) Corporation.

The Mill operation is comprised of the following main facilities:

- Ore stockpiles (containerized and stockpiles)
- Mill
- Cells 1, 2, 3, 4A, and 4B
- Infrastructure such as administration building, maintenance buildings, etc.
- Potable water source including treatment plant

### 20.2.1 Environmental Studies

Extensive environmental studies have been completed and are ongoing for the White Mesa Mill. These studies have been conducted to support the permitting of the mill and associated facilities (tailings cells) including groundwater quality. These baseline studies resulted in the permitting of the White Mesa Mill. Future baseline studies may be conducted to support future permitting effort.

#### 20.2.1.1 Environmental Baseline Studies

EFR conducted monitoring to detail baseline environmental conditions at the Mill site to support permitting efforts including groundwater, surface water, air quality, and waste. Baseline studies are routinely performed on an as needed basis for the installation of new monitoring locations or new facilities.

#### 20.2.1.2 Hydrogeology

Prior to EFR's acquisition of the Mill, chloroform in the shallow aquifer at the Mill site was discovered. The chloroform appears to have resulted from the operation of a temporary laboratory facility that was located at the site prior to and during the construction of the Mill, and from septic drain fields that were used for laboratory and sanitary wastes prior to construction of the Mill's tailings cells. In April 2003, an interim remedial program commenced consisting of pumping the chloroform affected water from the groundwater to the Mill's tailings system. This action enabled EFR to begin cleanup of the affected areas and to progress towards resolution of this outstanding issue. Pumping from the wells continued through 2015. On September 14, 2015, the State of Utah approved a long-term Corrective Action Plan (CAP) for cleanup of the chloroform, which involves continued pumping of the affected water to the Mill's tailings system.

Prior to EFR's acquisition of the Mill, elevated concentrations of nitrate and chloride were observed in some of the monitoring wells at the Mill site in 2008, a number of which are upgradient of the Mill's tailings cells. Pursuant to a Stipulated Consent Agreement with UDEQ, an independent professional engineering firm was retained to investigate these elevated concentrations and to prepare a Contamination Investigation Report for submittal to UDEQ. The investigation was completed in 2009, and the Contamination Investigation Report was submitted to UDEQ in January 2010. The Report concluded that: (1) the nitrate and chloride are co-extensive and appear to originally come from the same source; and (2) the source is upgradient of the Mill property and is not the result of Mill activities. UDEQ reviewed the Report and concluded that further investigations were required before it could determine the source of the contamination and the responsibility for cleanup. Such investigations were performed in 2010 and 2011 but were considered inconclusive by UDEQ. As a result, after the investigations, it was determined that there are site conditions that make it difficult to ascertain the source(s) of contamination at the site, and that it was not possible at that time to determine the source(s), causes(s), attribution, magnitude(s) of contribution, and proportion(s) of the local nitrate and chloride in groundwater. For those reasons, UDEQ decided that it could not eliminate Mill activities as a potential cause, either in full or in part, of the contamination. The Company and UDEQ have therefore agreed that resources are better spent in developing a CAP, rather than continuing with further investigations as to the source(s) and attribution of the groundwater contamination. Pursuant to a revised Stipulated Consent Agreement, a draft CAP for remediation of the contamination was submitted to UDEQ in November 2011. The CAP proposed a program of pumping the nitrate contaminated groundwater to the Mill's tailings cells, similar to the chloroform remedial program. UDEQ approved the CAP on December 12, 2012. In accordance with the CAP, in 2013 the Company commenced pumping nitrate/chloride contaminated water from four monitoring wells for use in Mill processing or discharge into the Mill's process or tailings cells. In December 2017 the Mill filed its first Corrective Action Comprehensive Monitoring Evaluation, required under the CAP every five years. By letter dated June 22, 2018, the Utah Division of Waste Management and Radiation Control (DWMRC) requested the implementation of Phase III actions specified in the CAP. Phase III actions include modeling, and study of plume dynamics and assessment of future actions if any. The Phase III report was submitted to DWMRC in December 2018 and is currently under review by DWMRC.

During 2011, 2012, and 2013, the Mill reported consecutive exceedances of groundwater compliance limits (GWCLs) under the Mill's GWDP for several constituents in several wells, and there are decreasing trends in pH in a number of wells across the site that have caused the pH in a number of compliance monitoring wells to have dropped below their GWCLs. These exceedances and pH trends include wells that are up-gradient of the Mill facilities, far down-gradient of the Mill site and at the site itself. Source Assessment Reports were submitted in 2012 and 2013 addressing each exceedance and the decreasing trends in pH at the site. UDEQ has accepted the Source Assessment Reports and has concluded that such exceedances and decreasing trends in pH are due to natural background influences at the site. The renewed GWDP, issued on January 19, 2018, has revised GWCLs which are intended to account for these background influences and put those constituents, including pH at the site, back into compliance.

#### 20.2.1.3 Air Quality

Air quality monitoring is conducted in accordance with Air Quality Approval Order DAQE-AN112050024-21 and the Radioactive Materials License. The air quality approval order monitoring and reporting includes meteorological conditions; air quality monitoring including radon-222, radon flux, thorium-232, and airborne particulates; and surface water. Monitoring is conducted at various frequencies from weekly to annually based on the sample location and parameter. Monitoring and reporting have been conducted since 2009 and are ongoing.

#### 20.2.1.4 Water Management

##### 20.2.1.4.1 Surface Hydrology

The White Mesa Mill is a zero surface water discharge facility. All contact stormwater is contained at the site and there are no permitted outfalls associated with the White Mesa Mill. Surface water monitoring is conducted at various frequencies in accordance with the GWDP. Monitoring and reporting are ongoing.

##### 20.2.1.4.2 Potable Water

The White Mesa Mill provides potable water to the site as permitted by the Utah Division of Drinking Water. Monitoring is conducted in accordance with the White Mesa Mill Water System Number 19025 permit and includes quarterly water quality sampling and monthly water usage. Monitoring and reporting are ongoing.

### 20.2.2 Tailings Disposal

The tailings storage facilities are described in Section 18.9.2.

The tailings cells at the White Mesa Mill are inspected daily, weekly, monthly, and quarterly. Inspections include tailings slurry transportation system, operation systems such as tailings beach, liner condition, water level, dust control, leak detection, and dikes and embankments for erosion and seepage.

### 20.2.3 Operating Permits and Status

No permitting is required to start milling the Roca Honda Project material at the White Mesa Mill. The White Mesa Mill is fully permitted with the State of Utah and has all the necessary operating licenses for a conventional uranium mill. The White Mesa Mill holds a Radioactive Materials License through the State of Utah. Uranium milling in the U.S. is primarily regulated by the NRC pursuant to the Atomic Energy Act of 1954, as amended. The NRC's primary function is to ensure the protection of employees, the public and the environment from radioactive materials, and it also regulates most aspects of the uranium recovery process. The NRC regulations pertaining to uranium recovery facilities are codified in Title 10 of the Code of Federal Regulations.

On August 16, 2004, the State of Utah became an Agreement State for the regulation of uranium mills. This means that the primary regulator for the Mill is the UDEQ rather than the NRC. At that time, the Source Material License, which was previously issued and regulated by the NRC, was transferred to the

State and became a Radioactive Materials License. The State of Utah incorporates, through its own regulations or by reference, all aspects of Title 10 pertaining to uranium recovery facilities. The Mill License was due for renewal on March 31, 2007. An application for the Mill License renewal was timely submitted on February 28, 2007. The renewed Mill License was issued by UDEQ on January 19, 2018, then reissued on February 16, 2018 for a period of ten years (with a number of Amendments issued since), after which another application for renewal will need to be submitted. During the review period for each application for renewal, the Mill can continue to operate under its then existing Mill License until such time as the renewed Mill License is issued. The Mill License was initially issued in 1980 and was also renewed in 1987 and 1997.

When the State of Utah became an Agreement State, it required that a GWDP be put in place for the Mill. The GWDP is required for all similar facilities in the State of Utah, and effects the State groundwater regulations to the Mill site. The State of Utah requires that every operating uranium mill have a GWDP, regardless of whether the facility discharges to groundwater. The GWDP for the Mill was finalized and implemented in March 2005. The GWDP required that the Mill add over 40 additional monitoring parameters and 15 additional monitoring wells at the site. The GWDP came up for renewal in 2010, at which time an application for renewal was timely submitted. The renewed GWDP was issued by UDEQ on January 19, 2018 for a period of five years, after which another application for renewal will need to be submitted. During the review period for each application for renewal, the Mill can continue to operate under its then existing GWDP until such time as the renewed GWDP is issued. The Mill also maintains a permit for air emissions with the UDEQ, Division of Air Quality.

The White Mesa Mill operates with applicable State of Utah permitting requirements. Table 201 presents a list of primary active permits including the approving authority and status. The list of approved legal permits for the White Mesa Mill provided to the SLR QP by EFR addresses the following aspects:

- Air Emissions
- Groundwater Discharge
- Radioactive Material Handling
- Dam Safety
- Reclamation Planning

**Table 20-1: Environmental Permits for the White Mesa Mill Operation**
**Energy Fuels Inc. – Roca Honda Project**

| Authority | Obligation/License | Status |
|---|---|---|
| Utah Department of Environmental Quality | Air Quality Approval Order DAQE-AN112050024-211 | Active |
| UDEQ | Groundwater Discharge Permit No. UGW370004 | Active |
| Utah Department of Waste Management and Radiation Control | Radioactive Materials License No. UT1900479, Amendment 10 | Active |

There are no violations or regulatory matters of any significance or that are not being addressed under normal regulatory procedures.

#### 20.2.3.1 Tailings Cells 5A and 5B Amendment Request

As additional tailings storage capacity may eventually be required at the Mill over the life of the mine, an Amendment to the White Mesa Mill's Radioactive Materials License issued by DWMRC will be required in due course to construct additional tailing cells, if and when required. In July 2018, EFRs submitted permit amendment requests for the GWDP and the Radioactive Materials License for the construction of tailings cells 5A and 5B. EFR anticipates the permit amendment requests will be approved in 2022. The construction of tailings cells 5A and 5B are not currently critical to the operations of the Mill.

### 20.2.4 Social or Community Requirements

EFR is committed to the operation of its facilities in a manner that puts the safety of its workers, contractors and community, the protection of the environment and the principles of sustainable development above all else. On September 16, 2021, the Company announced its establishment of the San Juan County Clean Energy Foundation, a fund specifically designed to contribute to the communities surrounding the Mill in Southeastern, Utah. The Foundation will focus on supporting education, the environment, health/wellness, and economic advancement in the City of Blanding, San Juan County, the White Mesa Ute Community, the Navajo Nation and other area communities. The Company made an initial deposit of $1 million into the Foundation and anticipates providing ongoing annual funding equal to 1% of the Mill's future revenues, providing funding to support the local economy and local priorities.

### 20.2.5 Closure Plans and Bonds

#### 20.2.5.1 Closure Plan

A reclamation plan is in place that presents EFR's plans and estimated costs for the reclamation of cells 1, 2, 3, 4A, and 4B, and the decommissioning of the Mill and Mill site. The uranium and vanadium processing areas of the Mill, including all equipment, structures and support facilities will be decommissioned and disposed of in tailings or buried at the Mill site as appropriate. As with the equipment for disposal, any contaminated soils from the Mill and surrounding areas and any ore or feed materials on the Mill site will be disposed of in the tailings cells. All equipment (including tankage and piping, agitation, process control instrumentation and switchgears, and contaminated structures) will be cut up, removed, and buried in tailings prior to final cover placement. Concrete structures and foundations will be demolished and removed for disposal in tailings or covered in place with soil as appropriate. The sequence of demolition will proceed so as to allow the maximum use of support areas of the facility, such as the office and shop areas. Any uncontaminated or decontaminated equipment to be considered for salvage will be released in accordance with NRC guidance and in compliance with the conditions of the State of Utah Radioactive Materials License No. UT1900479.

#### 20.2.5.2 Reclamation Cost Estimate and Bonds

The Mill is subject to decommissioning liabilities. EFR, as part of the Mill License, is required to annually review its estimate for the decommissioning of the Mill site and submit it to UDEQ for approval. The estimate of closure costs for the Mill is $20.8 million as of December 31, 2021, and financial assurances are in place for the total amount.

# 21.0 CAPITAL AND OPERATING COSTS

EFR forecasted capital and operating cost estimates are derived from mainly factoring other operations, judgement, and analogy. According to the American Association of Cost Engineers (AACE) International, these estimates would be classified as Class 4 with an accuracy range between -15% to -30% (low-end) to +20% to +50% (high-end).

## 21.1 Capital Cost

The base case capital cost estimate summarized in Table 21-1 covers the life of the Project and includes initial capital costs, expansion capital, and end-of-mine-life recovery of working capital in Q1 2021 US dollar basis. The capital costs are based on the estimates from the NI 43-101 technical report on the Project completed by RPA in 2016, which were estimated in Q1 2015 US dollars. The SLR QP has escalated these costs for this Technical Report to Q1 2021 US dollar basis using subscription-based Mining Cost Services (MCS) cost indexes (Infomine, 2021). In the SLR QP's opinion, Q1 2021 indices are the most appropriate inflationary indices to use as the inflationary indices since Q1 2021 have been too volatile to apply against a long lived asset. The effect of escalation on capital costs is estimated to be 16.3%, which is a $67.4 million increase since the 2015 estimates.

**Table 21-1: Capital Cost Estimate**
**Energy Fuels Inc. – Roca Honda Project**

| Capital Cost Area | Units | Project Capital Totals | Preproduction (Years -4 to 1) | Production (Years 2 to 11) |
|---|---|---|---|---|
| UG Mine | US$ (000) | (261,884) | 198,806 | 63,078 |
| Surf. Infra. | US$ (000) | (62,812) | 59,087 | 3,726 |
| Indirect Costs | US$ (000) | (35,223) | 17,242 | 18,481 |
| Contingency | US$ (000) | 54,118 | 41,238 | 12,880 |
| **Subtotal Development Capital** | **US$ (000)** | **414,038** | **316,373** | **97,665** |
| Working Capital | US$ (000) | - | 16,622 | (16,622) |
| Exploration | US$ (000) | 2,926 | 2,926 | - |
| Sustaining Capital | US$ (000) | 61,403 | - | 61,403 |
| Closure & Reclamation | US$ (000) | 3,952 | - | 3,952 |
| **2021 Escalated[1] Grand Total** | **US$ (000)** | **482,319** | **335,921** | **146,399** |

Notes:

1. Capital cost estimate escalated to Q1 2021 US dollars.

Working capital costs, composed of accounts receivable (45 days outstanding), accounts payable (14 days labor and 30 days supplies outstanding), and consumable inventories (2% of capital expenditures), are included in in the Project cash flow and net to zero over LOM. Sustaining capital includes an additional allowance for underground infill/exploration drilling, underground development, dewatering wells, and mobile equipment. The closure and reclamation cost consists of the cumulative bond purchases during the LOM and incurred in the first year after closure of the Mine. Closure and reclamation cost for the Mill is not included In this estimate as it is assumed the Mill will still be operating with other sources of mill feed after the Mine is closed and reclaimed.

### 21.1.1 Capital Cost Exclusions

Capital costs do not include those capital costs associated with milling, as EFR's White Mesa Mill will be used for processing Roca Honda mineralized material.

Additional capital cost exclusions:

- Costs to obtain permits
- Project financing and interest charges
- Escalation during construction
- Sales and use taxes
- Import duties and custom fees
- Costs of fluctuations in currency exchanges
- Sunk costs
- Pilot Plant and other test work
- Corporate administration costs in Lakewood, Colorado
- Exploration activities
- Salvage value of assets

### 21.1.2 Mine and Surface Capital Cost Estimate

It is proposed that mine equipment will be purchased through the preproduction period. Mine development includes activities prior to mine stope development. Ventilation and escapeway raise development costs include conventional raise boring and contractor costs.

### 21.1.3 Surface Infrastructure and Equipment

Surface equipment is estimated using new equipment. Used equipment is estimated for low use equipment such as the grader and cranes.

Infrastructure includes roads, yards, power, and supplies storage needs for the Roca Honda Project, including the materials handling requirements at the Mill.

### 21.1.4 Surface Indirect Costs and Total Indirect Costs

The surface infrastructure indirect costs exclude embedded indirect costs allocated to the underground mine construction contracts and surface installation construction contracts. Engineering for the facilities and operations will be carried out through the permitting and the construction phases. Engineering costs for the completion of the feasibility engineering are included in this estimate.

Procurement for the Project is forecast to extend over a three-year period with a crew of three working on purchasing, expediting, payables, and some level of freight handling. The construction management at Roca Honda is forecast to include a staff of four to five management personnel for a two-year period. After construction, most of the personnel will continue with operations. Supervisor salary rates for this period reflect the overtime in a remote construction effort.

The construction support crew includes operators for cranes, forklifts, and trucks, as well as laborers to support the construction efforts. The cost estimate includes construction support items that would be rented or provided by subcontractors in a less remote location.

The Owner's Costs include an Owner's team of eight staff for two years prior to the commencement of development and operations, including operating personnel brought to site in advance of the "start-up". The estimate is based upon a staff and crew of 160 at full operation and includes recruitment. Freight costs for the Mill are carried in those individual capital estimates. The environmental bond is estimated to be $11.9 million for the combined Roca Honda Mine and White Mesa Mill sites (for the Roca Honda mineralized material only).

The cost estimate includes a contingency allowance of 15%. The SLR QP considers this a minimum level of contingency for the Project at the current state of planning and development.

### 21.1.5 Capital Cost Escalation Methodology

In this Technical Report, the SLR QP escalated the original 2015 capital cost estimate costs from its previous 2016 NI 43-101 technical report on the project to Q1 2021 US dollar basis using subscription-based Mining Cost Services (MCS) cost indexes dated July 2021 (Infomine, 2021). In the SLR QP's opinion, inflationary indices since Q1 2021 are too volatile to apply against a long lived asset. The capital cost escalation factors are presented in Table 21-2. The escalation effect on capital costs during this five year period is estimated to be 16.3% or $67.4 million for the Project.

**Table 21-2: 2021 SLR Capital Cost Escalation Factors**
**Energy Fuels Inc. – Roca Honda Project**

| Capital Cost Area | MCS Source | 2015 | March 2021 | Factor |
|---|---|---|---|---|
| Underground Mine | Table 5 UG Mine | 101.0 | 117.4 | 1.162 |
| Mill | Table 5 Mill | 95.7 | 116.2 | 1.214 |
| Surface Infrastructure | Table 5 UG Mine | 101.0 | 117.4 | 1.162 |
| Surface Mine, Water Treatment Plant, Powerline Indirect Costs | Table 5 UG Mine | 101.0 | 117.4 | 1.162 |
| Exploration | Table 5 UG Mine | 101.0 | 117.4 | 1.162 |
| Sustaining Capital | Table 5 UG Mine | 101.0 | 117.4 | 1.162 |
| Closure & Reclamation | Table 5 UG Mine | 101.0 | 117.4 | 1.162 |
| Additional Capex | US$ (000) | 67,447 | | |
| Escalation Factor | % | 16.3 | | |

## 21.2 Operating Cost

The average base case LOM operating costs and unit rates are shown in Table 21-3 in Q1 2021 US dollar basis. The LOM average operating cost includes mining, mill feed hauling to and processing at the Mill located near Blanding, Utah, general and administration, freight of the product to a point of sale (White Mesa Mill), and various royalties and severance taxes. The Project operating costs were estimated in 2015 US dollars basis for the NI 43-101 technical report completed by RPA in 2016. The SLR QP has escalated these costs for this Technical Report to Q1 2021 US dollar basis using subscription-based Mining Cost Services (MCS) cost indexes (Infomine, 2021). In the SLR QP's opinion, inflationary indices since Q1 2021 are too volatile to apply against a long lived asset. The effect of escalation on operating costs is estimated to be 10.3%, or $89.0 million, for an increase of $21.77/ton milled over 2015 estimates. The methodology is presented later in this section.

**Table 21-3: Operating Cost Estimate**
**Energy Fuels Inc. – Roca Honda Project**

| Operating Cost Summary | US$ (000) | $/ton milled |
|---|---|---|
| Mining | 445,896 | $110.91 |
| Mill Feed Transport | 207,660 | $51.65 |
| Processing | 250,642 | $62.35 |
| Surface Facility Maintenance | 5,353 | $1.33 |
| G & A | 36,360 | $9.04 |
| **Total Site Operating Costs** | **945,877** | **$235.28** |
| Product Transport to Market | 9,401 | 2.34 |
| **Total Production Costs** | **955,278** | **237.62** |
| Royalties | 25,993 | 6.47 |
| Severance Taxes | 30,877 | 7.68 |
| **2021 Escalated[1] Grand Total** | **1,012,148** | 251.77 |

Notes:

1. Operating cost estimate escalated to Q1 2021 US dollars.

### 21.2.1 Operating Cost Assumptions

#### 21.2.1.1 Operating Cost Exclusions

The 2015 operating cost estimate excluded:

- Any provision for changes in exchange rates
- Sales and use taxes
- Preproduction period expenditures
- Corporate administration and head office costs in Lakewood, Colorado

- Site exploration costs or surface infill drilling or development for conversion of additional resources to Mineral Resources
- Severance cost for employees at the cessation of operations

#### 21.2.1.2 Salary and Labor Rates

Salary and wage rates are based on prevailing regional wage and salary surveys in the Project area. Federal Insurance Contributions Act (FICA) tax is estimated at 7.65% tax on the wage and salary costs.

Wages have not been adjusted either downward or upward given the nature of the work and the location. The SLR QP does consider this element to be a cost risk. Skilled operators, maintenance, and technical personnel live in the surrounding area of Grants, New Mexico.

An allowance for workman's compensation, health insurance, bonuses, FICA, and other benefits are included in the labor rates.

#### 21.2.1.3 Fuel Price and Taxes

Operating costs are based upon a diesel fuel price of $3.20/gal Free on Board (FOB) mine site. The freight costs are from Grants, New Mexico, to the Roca Honda site.

Propane has been included at a cost of $0.51/therm. Natural gas is an option but requires pipeline construction to the mine site. The SLR QP considers this to be a cost risk as natural gas or propane prices vary over a wide range. EFR may benefit from purchasing an annual supply in the summer months.

#### 21.2.1.4 Mine Power

Power for the Roca Honda site will be generated from commercially supplied line power with diesel units as emergency backup for shaft hoist, dewatering pumps, water treatment, and mill critical pumps and essential equipment. The operating costs are based on the price of $0.06/kWh of electrical power, and the installation of power factor management facilities to run a power factor near unity. The annual fuel requirement for electrical power generation at Roca Honda is considered to be inconsequential.

### 21.2.2 Operating Cost Escalation Methodology

In this Technical Report, the SLR QP escalated the original 2015 US dollar basis operating cost estimate costs to Q1 2021 US dollar basis using subscription-based Mining Cost Services (MCS) cost indexes dated July 2021 (Infomine, 2021). The March 2021 index value was selected as it was the last finalized data point in the July 2021 MCS guide at the time of this Technical Report. The operating cost escalation factors are presented in Table 21-4. The escalation effect on direct operating cash costs during this five year period is estimated to be 10.3% or $89.0 million for the Project.

**Table 21-4: 2021 SLR Operating Cost Escalation Factors**
**Energy Fuels Inc. – Roca Honda Project**

| Operating Cost Area | MCS Source | 2015 | March 2021 | Raw Factor | Adj. Factor | % Change | % Labor Cost of Total |
|---|---|---|---|---|---|---|---|
| UG Mine | Table 5 UG Mine | 100.0 | 108.6 | 1.086 | 1.034 | (4.8%) | 45% |
| Mill Feed Transport | Table 2 – "S" | 143.5 | 170.4 | 1.187 | 1.187 | 0% | NA |

| Operating Cost Area | MCS Source | 2015 | March 2021 | Raw Factor | Adj. Factor | % Change | % Labor Cost of Total |
|---|---|---|---|---|---|---|---|
| Mill | Table 5 Mill | 95.7 | 116.2 | 1.214 | 1.186 | (2.3%) | 22% |
| Surface Facility Maintenance (mainly labor) | Table 2 – “A” | 26.65 | 28.59 | 1.073 | 1.017 | (5.2%) | 80% |
| G&A (mainly labor) | Table 2 – “A” | 26.65 | 28.59 | 1.073 | 1.017 | (5.2%) | 80% |
| Sales and Marketing ($U_30_8$ Freight to Customer) | Table 2 – “S” | 143.5 | 170.4 | 1.187 | 1.187 | 0% | NA |
| **Additional Operating Costs** | **US$ (000)** |  | **88,974** |  |  |  |  |
| Escalation Factor | % |  | 10.3 |  |  |  |  |

Except for trucking costs, each factor’s labor cost index value was adjusted -10.5% for assumed lower labor cost escalation in New Mexico and Utah compared to the more active Nevada mining industry from which Infomine draws much of its information for its cost index guidance.

### 21.2.3 Mining

Mine costs include all underground mining costs except for haulage of material from the mine to the crusher, which is included in the Mill operating costs estimate. The costs are summarized in Table 21-5 in Q1 2021 US dollar basis.

**Table 21-5: Underground Mine Operating Cost Summary**
**Energy Fuels Inc. – Roca Honda Project**

| Area | Cost (US$/ROM Ton) | LOM (US$ millions) | LOM (% of Budget) |
|---|---|---|---|
| Labor | 49.91 | 200.7 | 45% |
| Ground Support | 17.75 | 71.3 | 16% |
| Electrical | 5.55 | 22.3 | 5% |
| Drilling | 2.22 | 8.9 | 2% |
| Blasting | 4.44 | 17.8 | 4% |
| Ventilation | 3.33 | 13.4 | 3% |
| Services, Roads, and Propane | 5.55 | 22.3 | 5% |
| Water Treatment (W/O Electricity) | 2.22 | 8.9 | 2% |
| Definition Drilling | 1.11 | 4.5 | 1% |
| Maintenance | 17.75 | 71.3 | 16% |
| **Mine Operating Totals** | **110.91** | **445.9** | **100%** |

Major mine supplies are electricity, explosives, ground support, fuel, and propane to heat the mine air in the winter months. Mine power costs are included in the overall power cost estimate for the site.

An average powder factor of 1.34 lb/ton was used for costing purposes. Given the uncertain level of groundwater drainage in the development headings, explosives costs have been based on the use of hand loaded emulsion cartridges (Orica Senatel Magnafrac small diameter detonator sensitive emulsion). Explosives costs could be reduced (from $1.82/lb to $0.60/lb) by replacing the cartridges with a bulk loading system and ANFO.

Mobile equipment costs are estimated on annual operating hours and equipment utilization.

Salary and wages are included as single line items and are not allocated to the various activities in the mine.

Backfill placement is included in the mine costs at a cement addition rate of 4.5% for low strength backfill and 8% for high strength backfill. The cost of obtaining the quarried and screened rock component of the high strength backfill is estimated at $9.00/ton FOB site. The annual cement requirement is estimated at 17,600 ton.

### 21.2.4 Mill Feed Transportation

Trucking costs for transporting mill feed 290 miles from the Mine to Mill are included in the cost estimate at $51.65/t mill feed in Q1 2021 dollar basis.

### 21.2.5 Processing

Mill operating costs are summarized in Table 21-6 in Q1 2021 dollar basis. The Mill operating costs are based on the listed line items identified to the level of detail available for the PEA study. The operating personnel costs are based on the actual number of operating, maintenance, overhead personnel required to operate the facility using experienced workers, and on salaries provided by EFR.

**Table 21-6: Mill Operating Cost Summary**
**Energy Fuels Inc. – Roca Honda Project**

| Mill Operating Cost by Area | Cost (US$/ton milled) | Cost (US$ millions) | LOM (% of Budget) |
|---|---|---|---|
| Mill Administration | 2.26 | 9.1 | 4% |
| Legal | 0.92 | 3.7 | 2% |
| Taxes, Bonding, & Insurance | 3.23 | 13.0 | 6% |
| Lab/Mill Technical | 1.51 | 6.1 | 3% |
| Safety/Environmental/Rad. | 2.26 | 9.1 | 4% |
| Compliance | 1.18 | 4.8 | 2% |
| Ore Receiving | 0.86 | 3.5 | 2% |
| Warehouse | 0.81 | 3.2 | 2% |
| Grinding | 2.64 | 10.6 | 5% |
| Leach | 22.51 | 90.5 | 42% |

| Mill Operating Cost by Area | Cost (US$/ton milled) | Cost (US$ millions) | LOM (% of Budget) |
|---|---|---|---|
| CCD | 2.53 | 10.2 | 5% |
| Uranium SX | 8.08 | 32.5 | 15% |
| Uranium Precipitation | 1.02 | 4.1 | 2% |
| Uranium Drying and Packaging | 1.78 | 7.1 | 3% |
| Tailings | 2.26 | 9.1 | 4% |
| **Subtotal Mill Operating Cost** | **53.85** | **216.5** | **100.0%** |
| Tailings Replacement and Reclamation Costs | 8.50 | 34.2 | |
| **Grand Total Mill Operating Cost** | **62.35** | **250.6** | |

Reagent costs shown in Table 21-7 are considered as element costs in Q1 2021 US dollar basis.

### Table 21-7: Mill Operating Reagent Usage Details
### Energy Fuels Inc. – Roca Honda Project

| Reagents Description | Typical Usage Unit | US$/Usage Unit | Typical Usage Unit/ton milled | Cost US$/ton |
|---|---|---|---|---|
| Kerosene | gal | 6.030 | 7.322 | 0.55 |
| Soda Ash | lb | 0.159 | 0.193 | 4.50 |
| International Barrels | bbl | 66.000 | 80.138 | 0.01 |
| Grinding Media/Liners | lb | 0.589 | 0.715 | 0.80 |
| Chlorate | lb | 0.657 | 0.798 | 3.50 |
| Flocculent | lb | 3.728 | 4.527 | 0.32 |
| Salt | lb | 0.070 | 0.085 | 0.90 |
| Amines | lb | 3.505 | 4.256 | 0.20 |
| Caustic Soda | lb | 0.351 | 0.426 | 1.50 |
| Iso-decanol | lb | 1.740 | 2.113 | 0.15 |
| Ammonium Sulfate | lb | 0.346 | 0.420 | 0.20 |
| Sulfuric Acid | lb | 0.100 | 0.121 | 137.00 |
| Anhydrous Ammonia | lb | 0.446 | 0.542 | 0.05 |
| Propane | gal | 1.288 | 1.564 | 0.00 |
| LNG | gal | 0.258 | 0.313 | 9.00 |

The reagent and comminution media costs, based on fourth quarter 2015 budget pricing obtained from suppliers, include an operating period freight cost and escalated to Q1 2021 US dollar basis. The reagent costs are based on average mid-range consumptions provided by EFR for the Mill. The minimum and maximum ranges provided in the PEA imply that the reagent cost is appropriately noted. The major reagent cost is the cost of sulfuric acid at $200/ton. Power is based on electrical power cost of $0.06/kWh for the Mill and Mine sites. These power costs are based on actual power rates for the Mill and published power rates for the Mine.

### 21.2.6 Mine Surface Maintenance

These costs include the operation and maintenance of the surface facilities at the Roca Honda site, well maintenance, and the operation of the surface equipment for the maintenance of roads and movement of materials and supplies. Surface maintenance costs are $1.33/ton milled in Q1 2021 US dollar basis.

### 21.2.7 Mine General and Administration

The General and Administrative (G&A) costs for the Roca Honda site cover the mine site administration on the basis that the operation is a stand-alone site with site management, purchasing, payroll and accounts payable handled by site personnel. Health and safety and environment are also included in the mine administration. The administrative costs are summarized in Table 21-8 and total $9.04/t milled in Q1 2021 US dollar basis.

**Table 21-8: Mine G&A Costs**
**Energy Fuels Inc. – Roca Honda Project**

| Administration Cost Summary | Typical Cost per Ton Milled (US$/ton) | Cost (US$ Millions) | LOM (% of Budget) |
|---|---|---|---|
| Direct Labor | 2.48 | 9.8 | 27% |
| General and Administration Operating | 5.15 | 20.7 | 57% |
| Site Services | 1.40 | 5.8 | 16% |
| **Total** | **9.04** | **36.3** | **100.0%** |

Crew transportation costs are included for the transportation of employees to the Mine from Grants, New Mexico.

### 21.2.8 Manpower

Table 21-9 summarizes the staffing requirements for the Mine and Mill operations during the peak production period.

**Table 21-9: Staff Requirements**
**Energy Fuels Inc. – Roca Honda Project**

| Department | Number of Employees | | |
|---|---|---|---|
| | Staff | Hourly | Total |
| **Mine** | | | |
| Administration | 6 | 1 | 7 |

| **Department** | **Number of Employees** | | |
|---|---|---|---|
| | **Staff** | **Hourly** | **Total** |
| Operations | 28 | 219 | 247 |
| Maintenance | 3 | 0 | 3 |
| **Subtotal Mine Operations** | **37** | **220** | **257** |
| **Mill** | | | |
| Administration | 2 | 1 | 3 |
| Operations | 6 | 32 | 38 |
| Maintenance | 4 | 12 | 16 |
| Metallurgical Lab | 3 | 6 | 9 |
| Radiation/ESG/Safety | 4 | 5 | 9 |
| **Subtotal Mill Operations** | **19** | **56** | **75** |
| **Total All Operations** | **56** | **276** | **332** |

This study assumed a typical schedule at the Mine of 4 crews, 7 days per week, 3 shifts per day, and 8 hours per shift. The Mill schedule assumed 4 crews, 7 days per week, 2 shifts per day, and 12 hours per shift. The schedule for most administration would be Monday through Friday, 8 am to 5 pm.

# 22.0 ECONOMIC ANALYSIS

An economic analysis was performed by the SLR QP using the assumptions presented in this Technical Report. The Roca Honda base case cash flow is based on Measured, Indicated, and Inferred Mineral Resources. An alternate case based on only Measured and Indicated Mineral Resources was analyzed as well.

It is important to note that, unlike Mineral Reserves, Mineral Resources do not have demonstrated economic viability. This PEA is preliminary in nature, it includes Inferred Mineral Resources that are considered too speculative geologically to have modifying factors applied to them that would enable them to be categorized as Mineral Reserves and there is no certainty that this economic assessment would be realized.

## 22.1 Base Case (Measured, Indicated, and Inferred Mineral Resources)

### 22.1.1 Economic Criteria

An after-tax cash flow projection for the base case has been generated from the LOM schedule and capital and operating cost estimates, and is summarized in the Section 19.2. A summary of the key criteria is provided below.

#### 22.1.1.1 Revenue

- Total mill feed processed: 4.020 million tons
- Percent of Inferred Mineral Resource tonnage in LOM: 45%
- Average processing rate: 1,150 stpd
- $U_3O_8$ head grade: 0.36%
- Average mill recovery: 95%
- Recovered $U_3O_8$: 27,545 thousand lb
- Avg annual $U_3O_8$ sales: 2,504 thousand lb/y
- Metal price: US$65.00/lb $U_3O_8$
- Concentrate shipping cost from the Mill to customer: $683/ton $U_3O_8$ or $0.34/lb $U_3O_8$.

#### 22.1.1.2 Capital and Operating Costs

- Preproduction period of 54 months
- Mine life of eleven years
- LOM capital costs of $482.3 million on Q1 2021 US dollar basis
- LOM operating cost (excluding product transport to market costs, royalties, and severance taxes) of $945.9 million or $235.28/ton milled on Q1 2021 US dollar basis

#### 22.1.1.3 Royalties and Severance Taxes

New Mexico mining and private royalties on the value of special minerals extracted were applied as shown below:

- Landowner Gross Royalty (1%)
- Section 9 Gross Royalty (1%)
- Section 16 New Mexico State Lease Royalty (5% of gross less transportation and milling costs)
- New Mexico mining severance tax of 3.5% payable on the "value" of mineral production for New Mexico state leases. The severance tax is currently 3.5% of 50% (net 1.75%) of the taxable value of $U_3O_8$ produced. The taxable value is based upon the operating cash flow less a development allowance, depreciation, and a processing allowance.

#### 22.1.1.4 Income Taxes

The economic analysis includes the following assumptions for corporate income taxes (CIT):

- Unit of Production depreciation method was used with total allowance of $475.4 million taken during LOM
- Percentage depletion method was used with total allowance of $136.5 million taken during LOM
- Loss Carry Forwards – Income tax losses may be carried forward indefinitely but may not be used for prior tax years
- Federal tax rate of 21%
- State tax rate of 5.9% (4.66% after federal benefit)
- LOM income tax payable totaling $42 million.

### 22.1.2 Cash Flow Analysis

It is important to note that, unlike Mineral Reserves, Mineral Resources do not have demonstrated economic viability. The economic analysis for the base case contained in this Technical Report is based, in part, on Inferred Resources, and is preliminary in nature. Inferred Resources are considered too geologically speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that economic forecasts on which this Preliminary Economic Assessment is based will be realized. It is important to note that with the future exploration drilling planned at the Roca Honda Project, it would be reasonable to expect a significant amount of Inferred Mineral Resources would be converted into the Indicated category.

The Project production schedule as currently envisioned, comprised of 45% Inferred Mineral Resources and 55% combined Measured and Indicated Mineral Resources, is presented in Figure 22-1 and Figure 22-2, and the resulting after-tax free cash flow profile is shown in Figure 22-3.

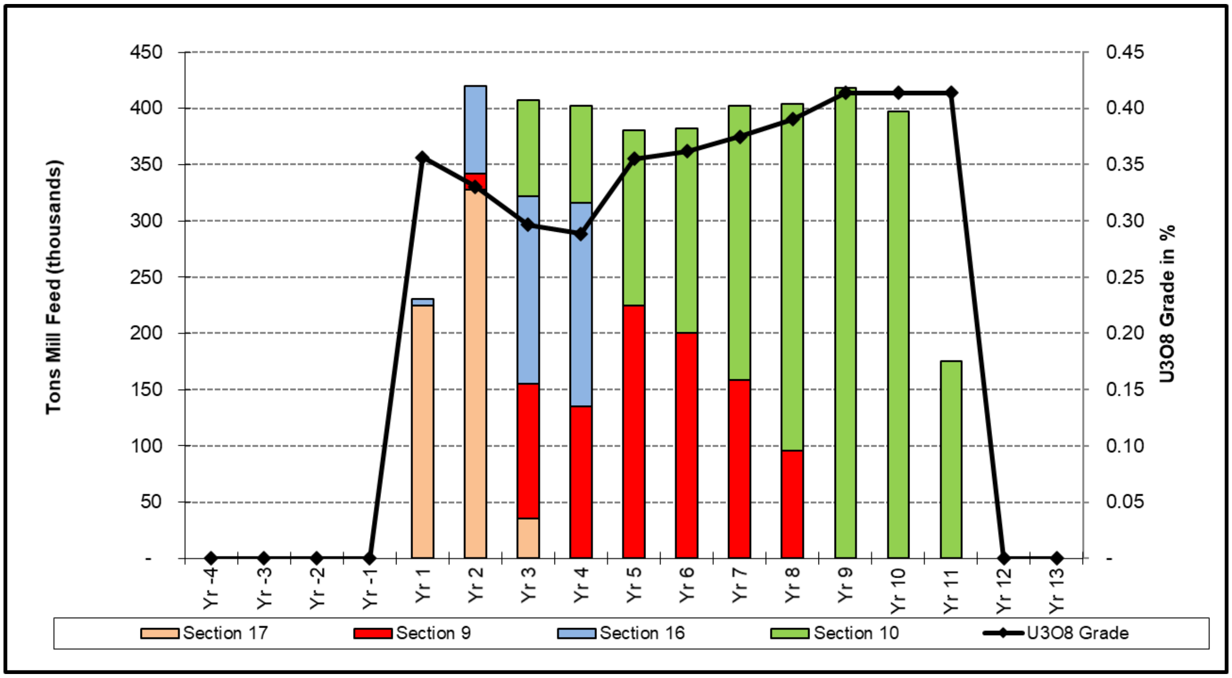


**Figure 22-1:** **Base Case Annual Mine Production by Area**

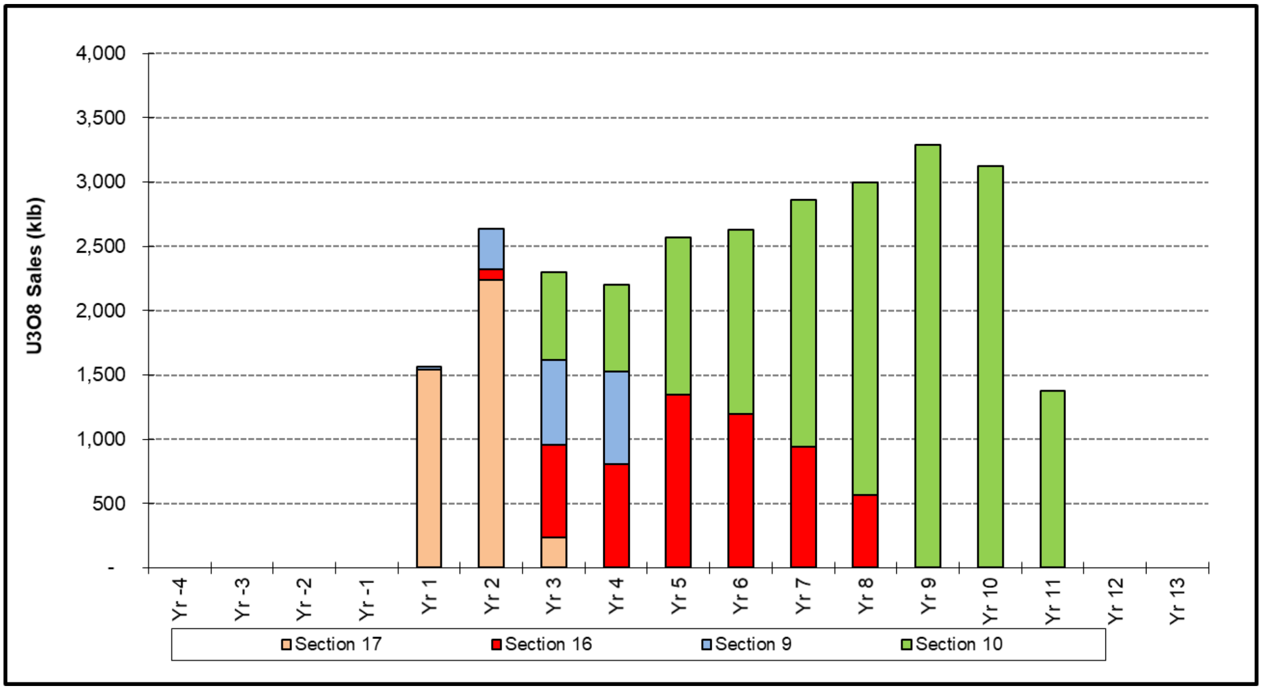


**Figure 22-2:** **Base Case Annual $U_3O_8$ Production by Area**

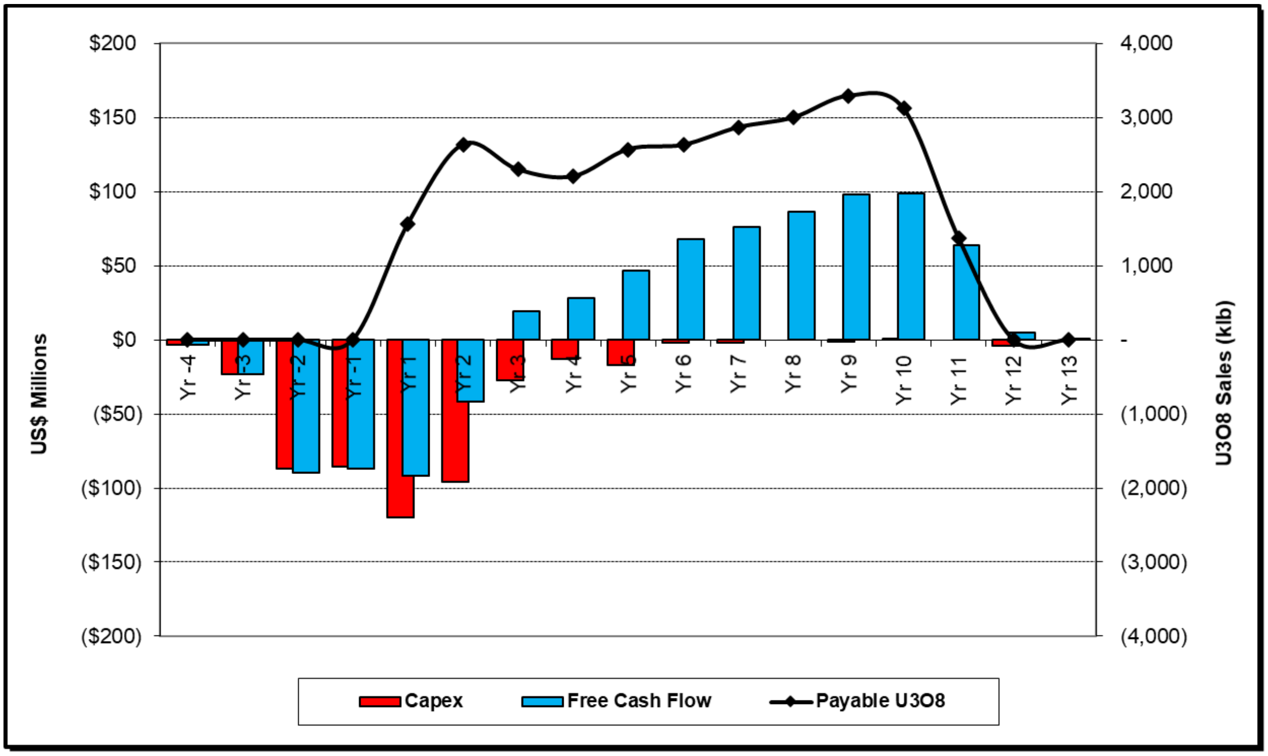


Figure 22-3: Base Case Project After-Tax Metrics Summary

Table 22-1 presents a summary of the Roca Honda base case economics at an $U_3O_8$ price of $65.00/lb. The full annual cash flow model is presented in Appendix 1.

On a pre-tax basis, the undiscounted cash flow totals $295.9 million over the mine life. The pre-tax Net Present Value (NPV) at a 5% discount rate is $81.2 million and the Internal Rate of Return (IRR) is 8.7% with simple payback (PB) from start of commercial production (CP) occurring in 7.8 years.

On an after-tax basis, the undiscounted cash flow totals $253.7 million over the mine life. The after-tax NPV at 5% discount rate is $55.9 million and the IRR is 7.6%, with simple PB from start of CP occurring in 8.1 years.

Table 22-1: Base Case After-Tax Cash Flow Summary
Energy Fuels Inc. – Roca Honda Project

| Item | Unit | Value |
|---|---|---|
| $U_3O_8$ Price | $/lb | $65.00 |
| $U_3O_8$ Sales | klb | 27,545 |
| **Total Gross Revenue** | **US$ M** | **1,790** |
| Mining Cost | US$ M | (446) |
| Mill Feed Transport Cost | US$ M | (208) |
| Process Cost | US$ M | (251) |
| Maintenance Cost | US$ M | (5) |

| Item | Unit | Value |
|---|---|---|
| G & A Cost | US$ M | (36) |
| Product Transport to Market | US$ M | (9) |
| Royalties | US$ M | (26) |
| Severance Tax | US$ M | (31) |
| **Total Operating Costs** | **US$ M** | **(1,012)** |
| Operating Margin | US$ M | 778 |
| Operating Margin | % | 43% |
| Corporate Income Tax | US$ M | (42) |
| Working Capital | US$ M | 0 |
| **Operating Cash Flow** | **US$ M** | **736** |
| Development Capital | US$ M | (414) |
| Exploration | US$ M | (3) |
| Sustaining Capital | US$ M | (61) |
| Closure/Reclamation Capital | US$ M | (4) |
| **Total Capital** | **US$ M** | **(482)** |
| | | |
| Pre-tax Free Cash Flow | US$ M | 295.9 |
| Pre-tax NPV @ 5% | US$ M | 81.2 |
| Pre-tax NPV @ 8% | US$ M | 11.8 |
| Pre-tax NPV @ 12% | US$ M | (42.4) |
| Pre-tax IRR | % | 8.7% |
| Pre-tax Undiscounted PB from Start of CP | Years | 7.8 |
| | | |
| After-tax Free Cash Flow | US$ M | 253.7 |
| After-tax NPV @ 5% | US$ M | 55.9 |
| After-tax NPV @ 8% | US$ M | (7.3) |
| After-tax NPV @ 12% | US$ M | (55.7) |
| After-tax IRR | % | 7.6% |
| After-tax Undiscounted PB from Start of CP | Years | 8.1 |

The average annual $U_3O_8$ sales for the base case during the 11 years of operation are 2.50 Mlb per year at an average AISC of $39.12/lb $U_3O_8$, as shown in Table 22-2.

### Table 22-2: Base Case All-in Sustaining Costs Composition
### Energy Fuels Inc. – Roca Honda Project

| Item | US$ M | US$/lb $U_3O_8$ |
|---|---|---|
| Mining | 446 | 16.2 |
| Mill Feed Transport | 208 | 7.5 |
| Process | 251 | 9.1 |
| Maintenance | 5 | 0.2 |
| G & A | 36 | 1.3 |
| **Subtotal Site Costs** | **946** | **34.3** |
| Offsite Treatment | 9 | 0.34 |
| **Total Direct Cash Costs** | **955** | **34.7** |
| NSR Royalty | 26 | 0.9 |
| Severance Tax | 31 | 1.1 |
| **Total Cash Costs** | **1,012** | **36.7** |
| Sustaining Capex | 61 | 2.2 |
| Closure/Reclamation Capital | 4 | 0.1 |
| **Subtotal Sustaining Costs** | **65** | **2.4** |
| **Total All-in Sustaining Costs** | **1,078** | **39.12** |
| $U_3O_8$ Sales (Mlb) |  | 27.5 |
| Average $U_3O_8$ Sales per Year (Mlb) |  | 2.50 |

Figure 22-4 shows the annual AISC trend during the base case mine operations against an overall average AISC of $39.12 over the 11-year LOM. The AISC variations are mainly due to changes in grades and mine schedule. The AISC metric can range from $32/lb to $56/lb $U_3O_8$ through the Project life.

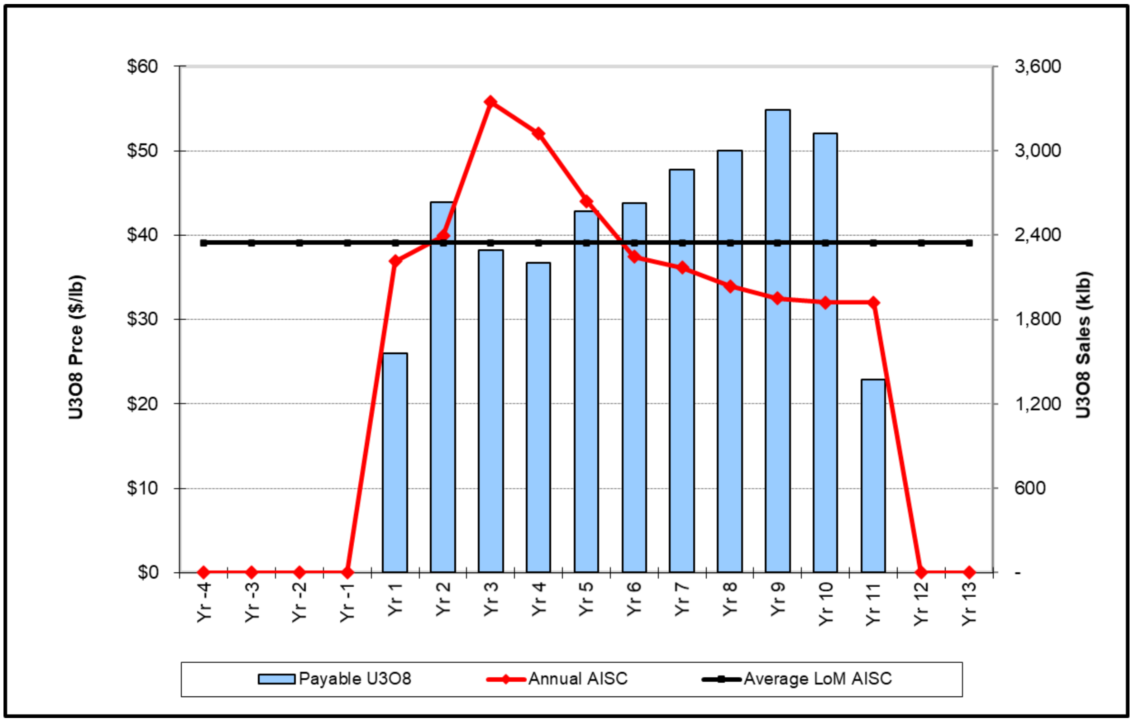


Figure 22-4: Base Case Annual AISC Curve Profile

### 22.1.3 Sensitivity Analysis

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities calculated over a range of variations based on realistic fluctuations within the listed factors:

- $U_3O_8$ price: $10/lb increments between $45/lb and $85/lb
- Head grade: -/+ 20%
- Recovery: -20%/+5% (95% is base case already)
- Operating cost per ton milled: -15% to -30%/+20% to 50% (AACE Class 4 range)
- Capital cost: -15% to -30%/+20% to 50% (AACE Class 4 range)

The after-tax cash flow sensitivities for the base case are shown in Table 22-3, Figure 22-5, and Figure 22-6. The Project is most sensitive to head grade, uranium price, and recovery, and only slightly less sensitive to operating cost and capital cost at a Class 4 accuracy level. The sensitivities to metallurgical recovery, head grade, pounds of $U_3O_8$ and metal price are nearly identical.

**Table 22-3: Base Case After-tax Sensitivity Analysis**
**Energy Fuels Inc. – Roca Honda Project**

| Factor Change | $U_3O_8$ Price (US$/lb) | NPV at 5% (US$ M) | IRR (%) |
|---|---|---|---|
| 0.69 | 45.00 | (282) | (11.4) |
| 0.85 | 55.00 | (113) | (0.7) |
| **1.00** | **65.00** | **56** | **7.6** |
| 1.15 | 75.00 | 225 | 14.7 |
| 1.31 | 85.00 | 394 | 21.1 |

| Factor Change | Head Grade (% $U_3O_8$) | NPV at 5% (US$ M) | IRR (%) |
|---|---|---|---|
| 0.80 | 0.29 | (164) | (3.6) |
| 0.90 | 0.32 | (54) | 2.4 |
| **1.00** | **0.36** | **56** | **7.6** |
| 1.10 | 0.40 | 166 | 12.3 |
| 1.20 | 0.43 | 276 | 16.7 |

| Factor Change | Recovery (%) | NPV at 5% (US$ M) | IRR (%) |
|---|---|---|---|
| 0.80 | 76.0 | (164) | (3.6) |
| 0.90 | 85.5 | (54) | 2.4 |
| **1.00** | **95.0** | **56** | **7.6** |
| 1.03 | 97.5 | 84 | 8.8 |
| 1.05 | 100.0 | 114 | 10.1 |

| Factor Change | Operating Costs (US$/ton milled) | NPV at 5% (US$ M) | IRR (%) |
|---|---|---|---|
| 0.70 | 164.70 | 233 | 15.1 |
| 0.85 | 200.00 | 144 | 11.5 |
| **1.00** | **235.29** | **56** | **7.6** |
| 1.25 | 294.12 | (91) | 0.5 |
| 1.50 | 352.94 | (239) | (7.5) |

| Factor Change | Capital Costs (US$ M) | NPV at 5% (US$ M) | IRR (%) |
|---|---|---|---|
| 0.70 | 338 | 170 | 14.9 |
| 0.85 | 410 | 113 | 10.8 |
| **1.00** | **482** | **56** | **7.6** |
| 1.25 | 603 | (39) | 3.4 |
| 1.50 | 723 | (134) | 0.3 |

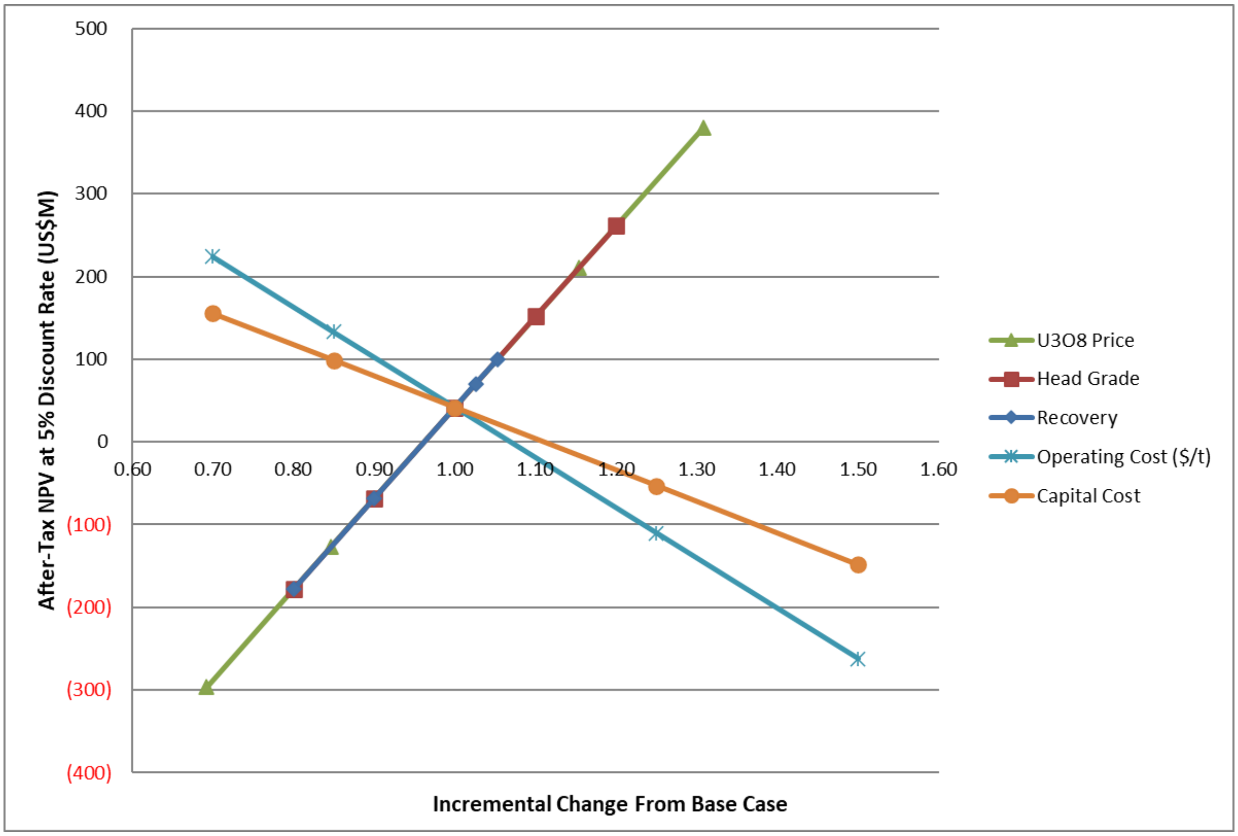


**Figure 22-5: Base Case After-tax NPV 5% Sensitivity Analysis**

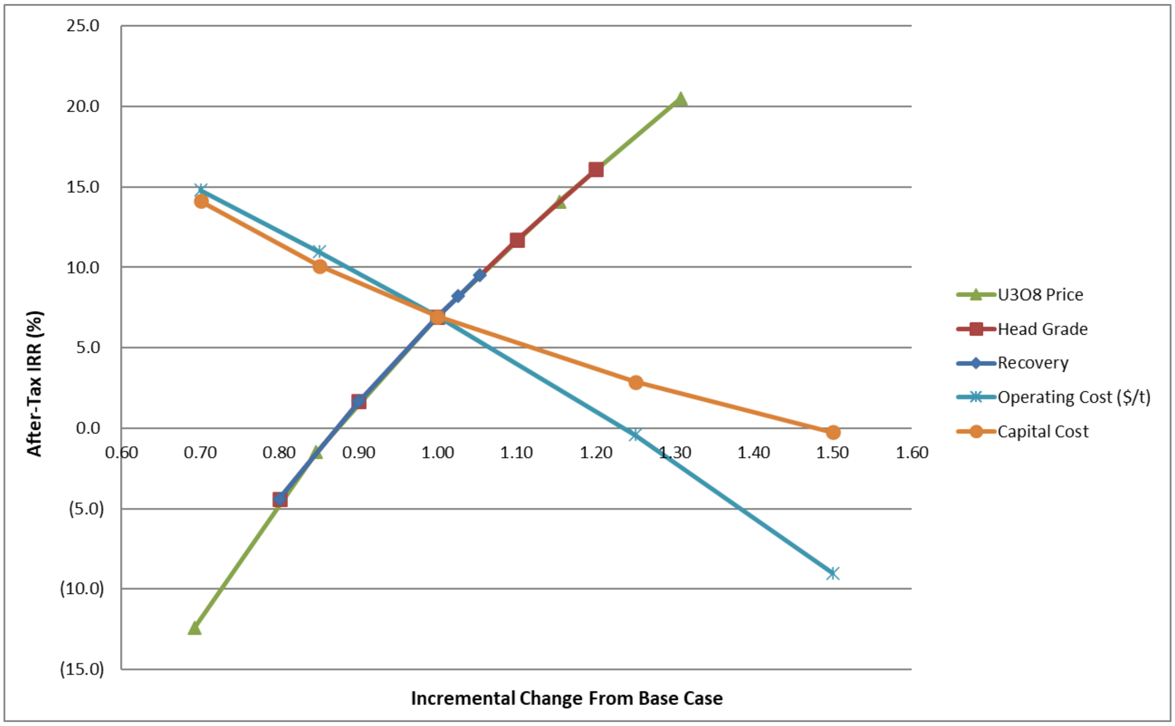


Figure 22-6: Base Case After-tax IRR Sensitivity Analysis

## 22.2 Alternate Case (Measured and Indicated Mineral Resources Only)

The SLR QP also completed a high level analysis of a scenario (the alternate case) with a production schedule that included only Measured and Indicated Mineral Resources, i.e., excluding Inferred Mineral Resources, which comprised 45% of the tons in the base case. It is important to note that while the alternate case does not contain Inferred Mineral Resources, Measured and Indicated Mineral Resources do not have demonstrated economic viability. There is no certainty that economic forecasts on which this Preliminary Economic Assessment is based will be realized.

Using the same mining and processing assumptions and operating cost parameters as the base case, the alternate case production schedule has 1.79 million tons at 0.41% $U_3O_8$ generating 14.0 Mlb $U_3O_8$ over the same 11 year mine life but at a milling rate of 490 tpd compared to 1,150 tpd rate in the base case, as shown in Figure 22-7.

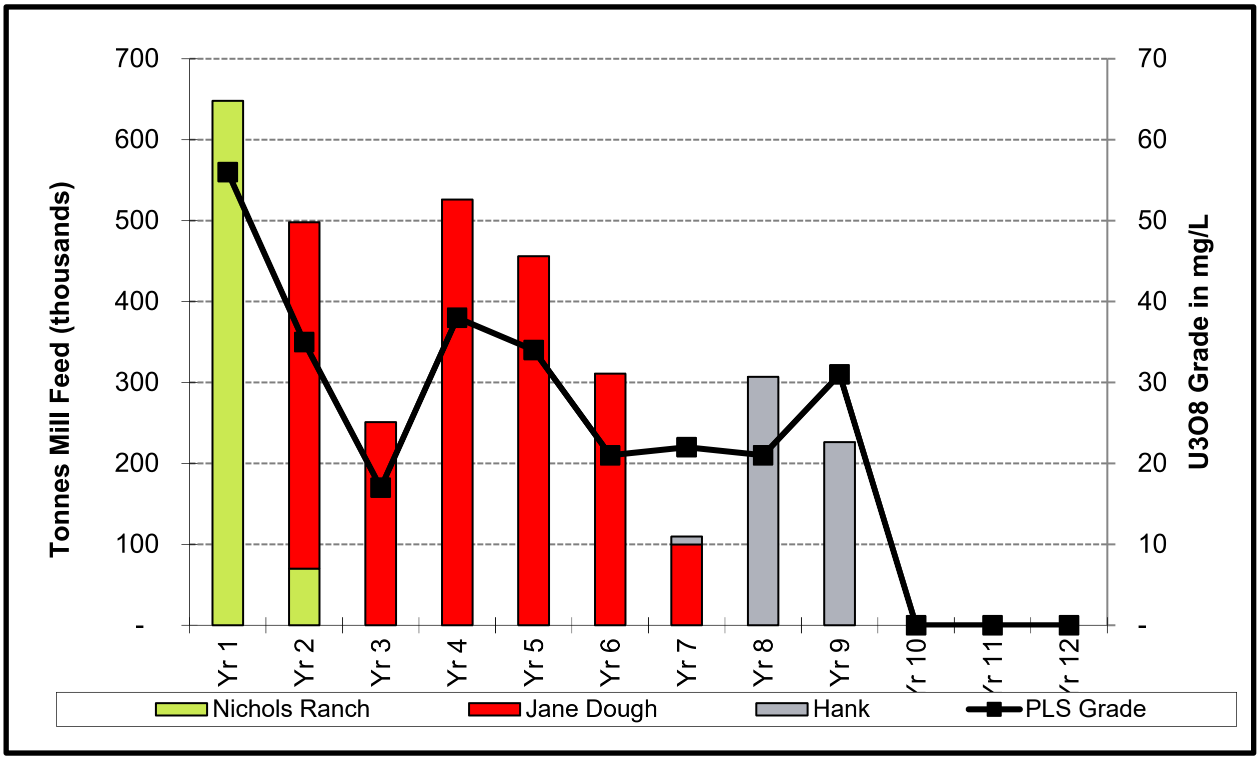


Figure 22-7: Alternate Case Annual $U_3O_8$ Production by Area

As part of the alternate case analysis, it was necessary to scale the 1,150 tpd base case total capital cost estimate of $482 million to better reflect the 490 tpd rate used in the alternate case. The SLR QP used the 0.6 capital cost rule as follows:

Alternate Case capital cost=$482 M*(490/1,150)^0.6

Thus, the alternate case capital cost estimate at a milling rate of 490 tpd is $289 million, a reduction of $193 million, or 40%, compared to the base case capital cost estimate.

Table 22-4 presents a summary of the Roca Honda alternate case economics at an $U_3O_8$ price of $65.00/lb. On a pre-tax basis, the undiscounted cash flow totals $170 million over the mine life. The pre-tax NPV at a 5% discount rate is $46.0 million with pre-tax IRR of 8.6%. On an after-tax basis, the undiscounted cash flow totals $130 million over the mine life. The after-tax NPV at 5% discount rate is $22.0 million with after-tax IRR of 6.8%. The undiscounted payback period from start of production is just over eight years on both pre-tax and after-tax basis.

**Table 22-4: Alternate Case After-Tax Cash Flow Summary**
**Energy Fuels Inc. – Roca Honda Project**

| Item | Unit | Value |
|---|---|---|
| $U_3O_8$ Price | $/lb | $65.00 |
| $U_3O_8$ Sales | klb | 14,030 |
| **Total Gross Revenue** | **US$ M** | **912** |
| Mining Cost | US$ M | (198) |
| Mill Feed Transport Cost | US$ M | (92) |
| Process Cost | US$ M | (111) |
| Maintenance Cost | US$ M | (2) |
| G & A Cost | US$ M | (16) |
| Product Transport to Market | US$ M | (5) |
| Royalties | US$ M | (12) |
| Severance Tax | US$ M | (16) |
| **Total Operating Costs** | **US$ M** | **(453)** |
| **Operating Margin** | **US$ M** | **459** |
| **Operating Margin** | **%** | **50%** |
| Corporate Income Tax | US$ M | (40) |
| Working Capital | US$ M | (0) |
| **Operating Cash Flow** | **US$ M** | **419** |
| Development Capital | US$ M | (248) |
| Exploration | US$ M | (2) |
| Sustaining Capital | US$ M | (37) |
| Closure/Reclamation Capital | US$ M | (2) |
| **Total Capital** | **US$ M** | **(289)** |
| | | |
| **Pre-tax Free Cash Flow** | US$ M | 170.0 |
| **Pre-tax NPV @ 5%** | **US$ M** | **46.0** |
| Pre-tax NPV @ 8% | US$ M | 6.1 |

| Item | Unit | Value |
|---|---|---|
| Pre-tax NPV @ 12% | US$ M | (24.9) |
| **Pre-tax IRR** | % | 8.6% |
| **Pre-tax Undiscounted PB from Start of CP** | **Years** | 8.1 |
| | | |
| **After-tax Free Cash Flow** | **US$ M** | **130.4** |
| **After-tax NPV @ 5%** | **US$ M** | **22.0** |
| After-tax NPV @ 8% | US$ M | (12.0) |
| After-tax NPV @ 12% | US$ M | (37.7) |
| **After-tax IRR** | **%** | **6.8%** |
| **After-tax Undiscounted PB from Start of CP** | **Years** | **8.5** |

Table 22-5 shows the average annual $U_3O_8$ sales for the alternate case during the 11 years of operation are 1.275 Mlb per year at an average AISC of $35.07/lb $U_3O_8$.

### Table 22-5: Alternate Case All-in Sustaining Costs Composition
### Energy Fuels Inc. – Roca Honda Project

| Item | US$ M | US$/lb $U_3O_8$ |
|---|---|---|
| Mining | 198 | 14.1 |
| Mill Feed Transport | 92 | 6.6 |
| Process | 111 | 7.9 |
| Maintenance | 2 | 0.2 |
| G & A | 16 | 1.2 |
| **Subtotal Site Costs** | **421** | **30.0** |
| Offsite Treatment | 5 | 0.34 |
| **Total Direct Cash Costs** | **425** | **30.3** |
| NSR Royalty | 12 | 0.8 |
| Severance Tax | 16 | 1.1 |
| **Total Cash Costs** | 453 | 32.3 |
| Sustaining Capex | 37 | 2.6 |
| Closure/Reclamation Capital | 2 | 0.2 |
| **Subtotal Sustaining Costs** | **39** | **2.8** |
| **Total All-in Sustaining Costs** | **492** | **35.07** |
| $U_3O_8$ Sales (Mlb) | | 14.0 |
| Average $U_3O_8$ Sales per Year (Mlb) | | 1.275 |

The after-tax cash flow sensitivities for the alternate case are shown in Figure 22-8 and Figure 22-9, and are similar in magnitude to the base case with the Project being most sensitive to head grade, uranium price and recovery, and only slightly less sensitive to operating cost and capital cost at a Class 4 accuracy level.

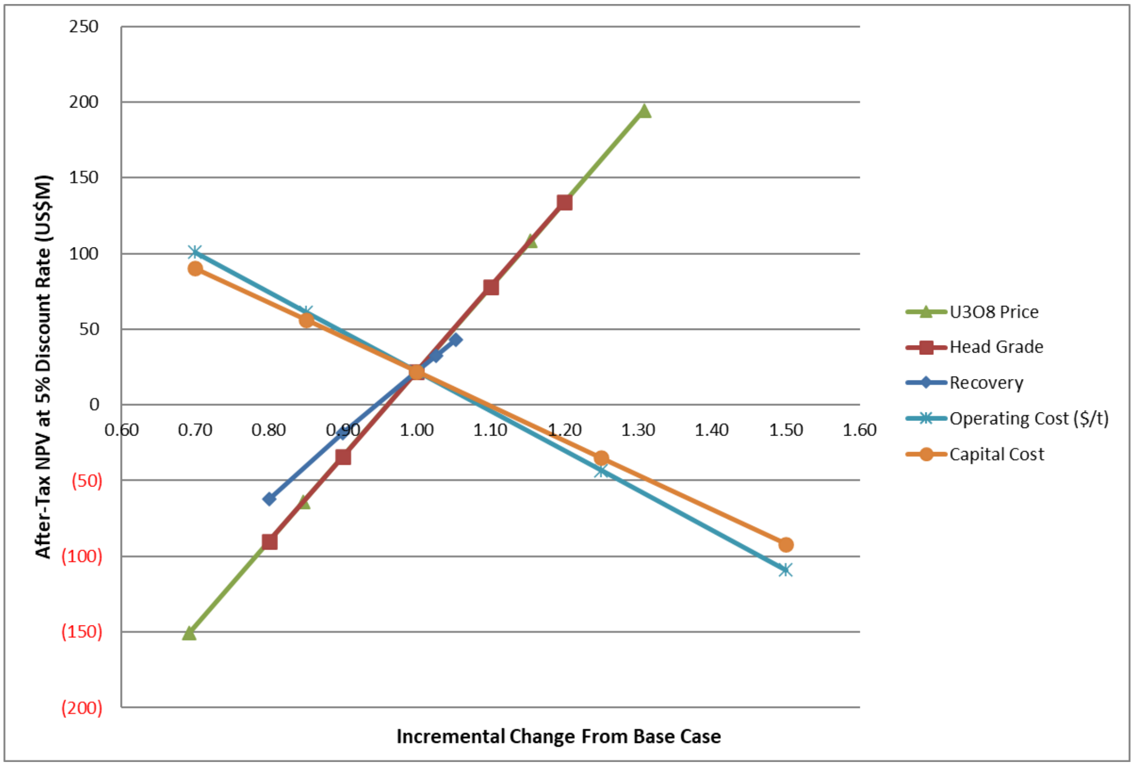


Figure 22-8: Alternate Case After-tax NPV 5% Sensitivity Analysis

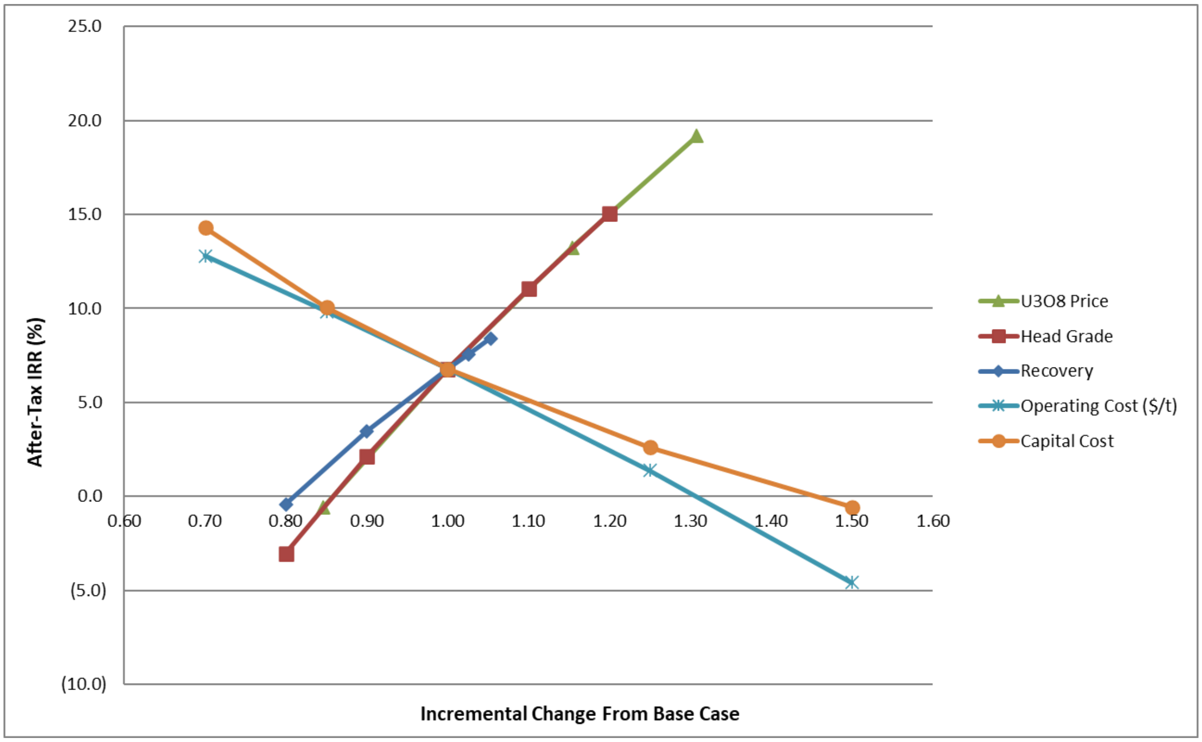


**Figure 22-9: Alternate Case After-tax IRR Sensitivity Analysis**

# 23.0 ADJACENT PROPERTIES

## 23.1 Historical Production from Adjacent Properties

By the end of 1982, Kerr-McGee reported total production from seven of its nearby mines in the Ambrosia Lake subdistrict of 17.9 million tons grading 0.217% $U_3O_8$ containing 77.3 Mlb $U_3O_8$ (Malone, 1980 and 1982).

- The Mount Taylor underground uranium mine, located approximately 3.5 mi southeast of the Roca Honda Project area, is now owned by Rio Grande Resources Corporation (RGR), a subsidiary of General Atomics Corporation. Uranium was discovered in the Mount Taylor area (about 60 mi west of Albuquerque) in 1968 and exploratory drilling identified an ore deposit extending nearly six miles. Chevron Corporation began commercial production at Mount Taylor in 1986, initially shipping the ore to Chevron's Panna Maria mill in south Texas for processing. More than eight million pounds of uranium were produced from the Mount Taylor mine before the mine was placed on standby in 1989 (online records and reports). The Mount Taylor uranium mine project is a conventional underground mine that contains an in situ resource of over 100 Mlb of uranium – the largest uranium resource in the United States. Rio Grande Resources informed the New Mexico Energy, Mineral and Natural Resources Department on December 3, 2019, that it would cease mining operations at Mount Taylor and begin closure activity (Mining Connection, 2020).
- The Johnny M mine is located one mile west of the Project area, on Section 7 and the east half of Section 18 (T13N, R08W). Approximately five million pounds of $U_3O_8$ were mined from the Westwater Canyon Member sandstone units from 1976 to 1982 (Fitch, 2010).
- Approximately four miles southwest of the Project area is the San Mateo underground uranium mine. This mine has not been in operation for many years, however, approximately 2.8 Mlb $U_3O_8$ were mined from 1959 to 1970 (McLemore et al., 2002).

The SLR QP has been unable to verify this information on adjacent properties. This information on adjacent properties is not necessarily indicative of the mineralization at the Roca Honda property.

# 24.0 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

# 25.0 INTERPRETATION AND CONCLUSIONS

The SLR QPs offers the following interpretations and conclusions regarding the Roca Honda Project:

## 25.1 Geology and Mineral Resources

- The Roca Honda Mine is a significant high grade uranium deposit.
- Drilling to date has intersected localized, high-grade mineralized zones contained within five sandstone units of the Westwater Canyon Member of the Morrison Formation.
- The sampling, sample preparation, and sample analysis programs are appropriate and to industry standards for the style of mineralization.
- Although continuity of mineralization is variable, drilling to date confirms that local continuity exists within individual sandstone units.
- No significant discrepancies were identified with the survey location, lithology, and electric and gamma log interpretations data in historical holes.
- No significant discrepancies were identified with the lithology and electric and gamma log data interpretations in RHR holes.
- Descriptions of recent drilling programs, logging, and sampling procedures have been well documented by RHR, with no significant discrepancies identified.
- There is a low risk of depletion of chemical uranium compared to radiometrically determined uranium in the Roca Honda deposit.
- The sample security, analytical procedures, and QA/QC procedures used by EFR meet industry best practices and are adequate to estimate Mineral Resources.
- The resource database is valid and suitable for Mineral Resource estimation under S-K 1300 standards.
- The assumptions, parameters, and methodology used for the Roca Honda Mineral Resource estimate is appropriate for the style of mineralization and mining methods.
- The SLR QP is not aware of any environmental, permitting, legal, title, taxation, socioeconomic, marketing, political, or other relevant factors that could materially affect the current resource estimate.

## 25.2 Mining

- The proposed Mine is currently in the planning and permitting stages.
- The mineralization is relatively flat-lying, and will be mined with a combination of step room-and-pillar (SRP) and drift-and-fill (DF) extraction methods.
- In the development of the Mineral Resource estimate for this PEA, the SLR QP used a diluted cut-off grade of 0.110% $U_3O_8$, a minimum mining thickness of six feet, and the historical mining recovery of 85% for the SRP mining method and 90% recovery for the DF mining method.
- The PEA is based on mining a total of 4.02 million tons of mineralized material, at a grade of 0.36% $U_3O_8$, containing 28.994 million pounds (Mlb) of $U_3O_8$.
- The Mine will be accessed from two shafts, one located in Section 16, and the other located in Section 17, the latter which has been partially developed.

- Mining is partially dependent upon the use of a suitable backfill, assumed to be backfill with cement added as a binder. Initial test work to demonstrate that a suitable cemented backfill can be produced with development rock and rock from surface at Roca Honda must be determined prior to mine production.

## 25.3 Hydrogeology

- The 2016 groundwater model results demonstrate that, over the projected 11 year mine life, the average annual inflow rates of all the mine workings will range from approximately 2,170 gpm to approximately 5,920 gpm with an average of nearly 4,700 gpm. Steinhaus (2014) has estimated the median flow rate extracted from the Wastewater Canyon Formation near the proposed Mine to range from 9 $m^3$/min (2,380 gpm) to 19 $m^3$/min (5,020 gpm) using an analytical model (Theis equation's Copper Jacob straight-line approximation method).
- The permit granted by the New Mexico State Engineer's office to RHR in 2012 for Sections 16, 10, and 9 allows dewatering at a rate of 4,500 gpm. This permit does not include Section 17.
- Dewatering from the underground mine will cause declines (depressurizing) within the confined aquifer systems of the Westwater Canyon Member (Westwater) of the Morrison Formation, where the mine workings will be developed. The New Mexico Office of the State Engineer determined that the dewatering of the Westwater Canyon Member would impact some domestic wells (RPA, 2015). The maximum drawdown of 10 ft in the Gallup Sandstone is not expected to extend past site boundaries. A 10 ft drawdown in the Dakota Sandstone may occur within a 2,000 ft radius around the shaft. Aquifers overlying and/or underlying the Westwater may be affected insignificantly due to confining units that separate the aquifers. The groundwater flow model simulated that the impact of depressurizing on area streams would be negligible (RPA, 2015).
- Per the court settlement reached between Pueblo of Acoma and RHR, the treated mine water will be piped to the community of Milan to assist in recharging the Rio San Jose. The water produced from depressurizing activities will be treated to state and federal water discharge standards. An influx of this quantity of water into the overlying soil/alluvium found in the irrigated area will likely raise the water table; however, no adverse impact on the water quality of the underlying alluvial Westwater Canyon Member of the Morrison Formation aquifer is expected.
- Because Mine water will be piped to Milan, treated, and used for aquifer recharge, local shallow aquifers will not be affected. Such aquifers that could otherwise be vulnerable to potential accidental impacts from facility activity or discharged water, include the alluvium, the Point Lookout Sandstone, and the Dalton Sandstone Member of the Crevasse Canyon Formation.

## 25.4 Mineral Processing

- The Mill has been in operation since 1981 and is equipped with the required equipment using a proven process for the production of uranium oxide ($U_3O_8$) product, called "yellowcake". In addition, although it is not part of the production schedule for Roca Honda mineralized material, the Mill also has the capacity to produce vanadium pentoxide ($V_2O_5$).
- Mill operations can receive run-of-mine (ROM) material from the Roca Honda Mine and various other mines (toll milling). Material will be dumped from trucks at the White Mesa Mill on an ore pad and stockpiled by type to be blended as needed. Material will be weighed, sampled, and probed for uranium grade. The ore pad area has an approximate capacity of 450,000 tons.

- The Mill utilizes agitated hot acid leach and solvent extraction to recover uranium. Historical metallurgical tests from similar ores in the region and Mill production records confirm this processing method will recover 95% of the contained uranium.
- The Mill is currently on a reduced operating schedule processing feed materials as they become available.

## 25.5 Infrastructure

- The Roca Honda Mine and White Mesa Mill are in historically important, uranium-producing regions of central New Mexico and southeastern Utah. All the regional infrastructure necessary to mine and process commercial quantities of $U_3O_8$ is in place.
- EFR has been operating the White Mesa tailings cells since 1981, which is currently operating under the requirements of the UDEQ RML.

## 25.6 Environment

- Extensive baseline studies have been completed for the Roca Honda Mine site area.
- Rock characterization studies indicate that waste rock from the Mine will not be acid generating.
- The DEIS for the Mine was published by the USFS in February 2013. A Supplement to the DEIS is expected to be completed in late 2022 or early 2023 with an expected RoD and Final EIS anticipated in 2023. A mine permit is expected to be issued following the RoD and Final EIS.
- Environmental considerations are typical of underground mining and processing facilities and are being addressed in a manner that is reasonable and appropriate for the stage of the Project.
- All required permits for the White Mesa Mill to operate are in place.
- There are no violations or regulatory matters of any significance or that are not being addressed under normal regulatory procedures.
- The EFR QP is not aware of any environmental, permitting, legal, title, taxation, socioeconomic, marketing, political, or other relevant factors that could materially affect the current resource estimate.

# 26.0 RECOMMENDATIONS

The SLR QPs offer the following recommendations by area:

## 26.1 Geology and Mineral Resources

The SLR QP makes the following recommendations regarding advancing the Project forward in a non-phased and independent approach. The proposed work (Table 26-1) would be completed during the four years of preproduction, followed by a final investment decision from Energy Fuels.

**Table 26-1: Roca Honda Four-Year Estimated Budget**
**Energy Fuels Inc. – Roca Honda Project**

| Item | Cost (US$) |
|---|---|
| Drilling to increase measured and indicated resources (208 Holes) | $7,930,000 |
| Geophysical Logging and Assay | $218,000 |
| Updated Pre-Feasibility Study | $300,000 |
| **Total** | **$8,448,000** |

In addition, the SLR QPs recommend the following which are independent of the proposed budget:

1. Although there is a relatively low risk in assuming that density of mineralized zones is similar to that reported in mining operations east and west of the Roca Honda property, conduct additional density determinations, particularly in the mineralized zones, to confirm and support future resource estimates.
2. Although there is a low risk of depletion of chemical uranium compared to radiometrically determined uranium in the Roca Honda mineralization, complete additional sampling and analyses to supplement results of the limited disequilibrium testing to date.
3. Modify the sample analysis QA/QC protocol to include the regular submission of blanks and standards for future drill programs.
4. Prepare fault modeling once additional data have been obtained to support future mine design work.
5. Digitize historical drilling logs for Sections 9, 10, and 16 at 0.5 ft intervals, similar to the work completed on Section 17 for any future Mineral Resource estimates.
6. Complete additional confirmation drilling at the earliest opportunity to confirm historical drillhole data on all zones.
7. Use a secondary alternative estimation method ($ID^2$, $ID^3$, or Ordinary Kriging) as an additional check for the block model validation.

## 26.2 Mining and Mineral Reserves

1. Implement a program of additional sampling and laboratory testing concurrently with the definition drilling program to support the geotechnical designs which are based on a limited number of core samples. Boreholes should be located on the centerline of the various proposed ventilation shafts. The cores from these holes will define the different lithologies to be

encountered and provide samples for rock strength testing and other needed geotechnical design information. The geotechnical study on the proposed Section 16 shaft core hole was completed in 2012. More detailed geotechnical designs and cost estimates for shaft construction should be completed.

2. Continue to evaluate the feasibility of starting access to the mine operations in Section 17 by way of the existing 1,478 ft deep (14 ft diameter) shaft.
3. Investigate more thoroughly the applicability of using roadheaders, and other selective mining methods that may reduce dilution for development and stope mining. This will reduce the tonnage and increase the grade of mineralized material shipped and processed at the Mill.

## 26.3 Hydrogeology

1. Consistent with state and federal regulations requirements, implement environmental monitoring and analysis programs to collect water level and water quality data when the mine site becomes fully operational.
2. Update on an annual basis the numerical groundwater model based on mine inflows and drawdowns in monitoring wells.
3. Expand the well distribution to confirm the predicted cone of depression.
4. Develop specific plans for future monitoring of springs, both flow and quality, similar to previous monitoring programs completed on site.

## 26.4 Mineral Processing

1. Continue the White Mesa Mill intermittent operations with maintenance program.
2. Evaluate historical operating data to determine possible flowsheet improvements or modifications to improve production rate/economics and make these changes before commencing production.

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# 28.0 DATE AND SIGNATURE PAGE

This report titled “Technical Report on the Roca Honda Project, McKinley County, New Mexico, USA” with an effective date of December 31, 2021, was prepared and signed by the following authors:

**(Signed & Sealed) *Grant A. Malensek***

Dated at Lakewood, CO
February 22, 2022

Grant A. Malensek, M.Eng., P.Eng.
Senior Principal Mining Engineer, SLR

**(Signed & Sealed) *Mark B. Mathisen***

Dated at Lakewood, CO
February 22, 2022

Mark B. Mathisen, C.P.G.
Principal Geologist, SLR

**(Signed & Sealed) *David M. Robson***

Dated at Toronto, ON
February 22, 2022

David M. Robson, P.Eng., MBA
Principal Mining Engineer, SLR

**(Signed & Sealed) *Jeffrey L. Woods***

Dated at Sparks, NV
February 22, 2022

Jeffrey L. Woods, MMSA QP
Principal Consulting Metallurgist, Woods Process Services

**(Signed & Sealed) *Phillip E. Brown***

Dated at Evergreen, CO
February 22, 2022

Phillip E. Brown, C.P.G., R.P.G.
Principal Consulting Hydrogeologist, Consultants in Hydrogeology

**(Signed & Sealed) *Daniel D. Kapostasy***

Dated at Lakewood, CO
February 22, 2022

Daniel D. Kapostasy, P.G.
Director of Technical Services, EFR

# 29.0 CERTIFICATE OF QUALIFIED PERSON

## 29.1 Grant A. Malensek

I, Grant A. Malensek, M.Eng., P.Eng., as an author of this report entitled “Technical Report on the Roca Honda Project, McKinley County, New Mexico, USA” with an effective date of December 31, 2021 prepared for Energy Fuels Inc., do hereby certify that:

1. I am a Senior Principal Mining Engineer with SLR International Corporation, of Suite 100, 1658 Cole Boulevard, Lakewood, CO, USA 80401.
2. I am a graduate of the University of British Columbia, Canada, in 1987 with a B.Sc. degree in Geological Sciences and Colorado School of Mines, USA in 1997 with a M.Eng. degree in Geological Engineering.
3. I am registered as a Professional Engineer/Geoscientist in the Province of British Columbia (Reg.# 23905). I have worked as a mining engineer for a total of 25 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Feasibility, Prefeasibility, and scoping studies
    - Fatal flaw, due diligence, and Independent Engineer reviews for equity and project financings
    - Financial and technical-economic modelling, analysis, budgeting, and forecasting
    - Property and project valuations
    - Capital cost estimates and reviews
    - Mine strategy reviews
    - Options analysis and project evaluations in connection with mergers and acquisitions
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Roca Honda Project on October 19, 2021, and the White Mesa Mill on November 11, 2021.
6. I am responsible for Sections 1.2, 1.3.11, 1.3.13, 19, 21, 22, and 30, and contributions to Section 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, Sections 1.2, 1.3.11, 1.3.13, 19, 21, 22, and 30 of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 22nd day of February, 2022

**(Signed & Sealed)** ***Grant A. Malensek***

Grant A. Malensek, M.Eng., P.Eng.

## 29.2 Mark B. Mathisen

I, Mark B. Mathisen, C.P.G., as an author of this report entitled “Technical Report on the Roca Honda Project, McKinley County, New Mexico, USA” with an effective date of December 31, 2021 (the Technical Report), prepared for Energy Fuels, Inc., do hereby certify that:

1. I am Principal Geologist with SLR International Corporation, of Suite 100, 1658 Cole Boulevard, Lakewood, CO, USA 80401.
2. I am a graduate of Colorado School of Mines in 1984 with a B.Sc. degree in Geophysical Engineering.
3. I am a Registered Professional Geologist in the State of Wyoming (No. PG-2821), a Certified Professional Geologist with the American Institute of Professional Geologists (No. CPG-11648), and a Registered Member of SME (RM #04156896). I have worked as a geologist for a total of 23 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Mineral Resource estimation and preparation of NI 43-101 Technical Reports.
    - Director, Project Resources, with Denison Mines Corp., responsible for resource evaluation and reporting for uranium projects in the USA, Canada, Africa, and Mongolia.
    - Project Geologist with Energy Fuels Nuclear, Inc., responsible for planning and direction of field activities and project development for an in situ leach uranium project in the USA. Cost analysis software development.
    - Design and direction of geophysical programs for US and international base metal and gold exploration joint venture programs.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Roca Honda Project on October 19, 2021.
6. I am responsible for Sections 1.1.1.1, 1.1.2.1, 1.3.1, 1.3.2, 1.3.4 to 1.3.8, 2, 3, 4.1, 4.2, 4.4, 4.5, 5.1 to 5.6, 6 to 12, 14, 15, 23, 24, 25.1, and 26.1, and contributions to Section 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, Sections 1.1.1.1, 1.1.2.1, 1.3.1, 1.3.2, 1.3.4 to 1.3.8, 2, 3, 4.1, 4.2, 4.4 to 4.5, 5.1 to 5.6, 6 to 12, 14, 15, 23, 24, 25.1, and 26.1 of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 22nd day of February 2022

**(Signed & Sealed) *Mark B. Mathisen***

Mark B. Mathisen, C.P.G.

## 29.3 David M. Robson

I, David M. Robson, MBA, P.Eng., as an author of this report entitled "Technical Report on the Roca Honda Project, McKinley County, New Mexico, USA" with an effective date of December 31, 2021, prepared for Energy Fuels Inc., do hereby certify that:

1. I am Consultant Mining Engineer with SLR Consulting (Canada) Ltd, of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.
2. I am a graduate of Queen's University in 2005 with a B.Sc. (Honours) in Mining Engineering and Schulich School of Business, York University, in 2014 with an MBA degree.
3. I am registered as a Professional Engineer in the Province of Saskatchewan (Reg. #13601). I have worked as a mining engineer for 14 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Review and report as a consultant on mining operations and projects around the world for due diligence and regulatory requirements
    - Mine design and scheduling at uranium, industrial minerals, and base metal operations in Canada and Europe.
    - Financial analysis, cost estimation, and budgeting.
    - Experienced user of Vulcan, VentSim, AutoCAD, and Deswik.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I have not visited the Roca Honda Project.
6. I am responsible for the preparation of Sections 1.1.1.2, 1.1.2.2, 1.3.9, 16.1 to 16.5, 16.7 to 16.10, 25.2, and 26.2, and contributions to Section 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, Sections 1.1.1.2, 1.1.2.2, 1.3.9, 16.1 to 16.5, 16.7 to 16.10, 25.2, and 26.2 of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 22nd day of February, 2022.

**(Signed & Sealed) *David M. Robson***

David M. Robson, MBA, P.Eng.

## 29.4 Jeffrey L. Woods

I, Jeffrey L. Woods, MMSA QP, as an author of this report entitled “Technical Report on the Roca Honda Project, McKinley County, New Mexico, USA” with an effective date of December 31, 2021, prepared for Energy Fuels Inc., do hereby certify that:

1. I am Principal Consulting Metallurgist with Woods Process Services, of 1112 Fuggles Drive, Sparks, Nevada 89441
2. I am a graduate of Mackay School of Mines, University of Nevada, Reno, Nevada, U.S.A., in 1988 with a B.S. degree in Metallurgical Engineering.
3. I am a member in good standing of Society for Mining, Metallurgy and Exploration, membership #4018591. I have practiced my profession continuously for 34 years since graduation. My relevant experience for the purpose of the Technical Report is:
    - Review and report as a consultant on numerous exploration, development, and production mining projects around the world for due diligence and regulatory requirements
    - Metallurgical engineering, test work review and development, process operations and metallurgical process analyses, involving copper, gold, silver, nickel, cobalt, uranium, and base metals located in the United States, Canada, Mexico, Honduras, Nicaragua, Chile, Turkey, Cameroon, Peru, Argentina, and Colombia
    - Senior Process Engineer for a number of mining-related companies
    - Manager and Business Development for a small, privately owned metallurgical testing laboratory in Plano, Texas, USA
    - Vice President Process Engineering for at a large copper mining company in Sonora, Mexico
    - Global Director Metallurgy and Processing Engineering for a mid-tier international mining company
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

1. I visited White Mesa Mill on November 11, 2021.
2. I am responsible for Sections 1.1.1.4, 1.1.1.5, 1.1.2.4, 1.3.3, 1.3.10, 5.5, 13, 17, 18.1 to 18.8, 18.9.1, 18.10, 18.11, 25.4, 25.5, and 26.4, contributions to Section 27 of the Technical Report.
3. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
4. I have had prior involvement with the property that is the subject of the Technical Report. This involvement includes authoring previous technical reports as a QP
5. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
6. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, Sections 1.1.1.4, 1.1.1.5, 1.1.2.4, 1.3.3, 1.3.10, 5.5, 13, 17, 18.1 to 18.8, 18.9.1, 18.10, 18.11, 25.4, 25.5, and 26.4 of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 22nd day February, 2022.

**(Signed & Sealed)** ***Jeffrey L. Woods***

Jeffrey L. Woods, MMSA QP

## 29.5 Phillip E. Brown

I, Phillip E. Brown, C.P.G., R.P.G., as an author of this report entitled “Technical Report on the Roca Honda Project, McKinley County, New Mexico, USA" with an effective date of December 31, 2021, prepared for Energy Fuels Inc., do hereby certify that:

1. I am Principal Consulting Hydrogeologist with Consultants in Hydrogeology, of 26241 Wolverine Trail, Evergreen, Colorado 80439.
2. I am a graduate of Virginia Tech in 1972 with a B.S. Geology and M.S. in Civil Engineering.
3. I am registered as a Certified Professional Geologist Reg# CPG-6209 and as Professional Engineer/Geologist in the State of Alaska Reg#560. I have worked as a mining hydrogeologist for a total of 45 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Review Consultant on the Jackpile Uranium Mine.
    - Performed a hydrogeologic investigation for Power Tech’s Centennial In-situ Uranium Project in Weld County, Colorado.
    - Former Senior Hydrogeologist for Peabody Coal Company.
    - Performed numerous hydrogeologic evaluations dewatering studies on mines throughout the Western United States and the World. Mines have included Nevada Copper’s, Pumpkin Hollow Mine in Nevada, B2 Gold, Santa Pancha Mine, Nicaragua, New Market Gold’s Cosmo Howley Gold Mine in the Northern Territory, Australia, Entrée Gold’s Ann Mason Copper Project in Nevada, improved underground dewatering system at the Palmarejo Gold Mine in Chihuahua, Mexico and numerous others.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I am responsible for Sections 1.1.1.3, 1.1.2.3, 16.6, 25.3, and 26.3, and contributions to Section 27, of the Technical Report.
6. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
7. I have had no prior involvement with the property that is the subject of the Technical Report.
8. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
9. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, Sections 1.1.1.3, 1.1.2.3, 16.6, 25.3, and 26.3 of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 22nd day of February, 2022

**(Signed & Sealed)** ***Phillip E. Brown***

Phillip E. Brown, C.P.G., R.P.G.

## 29.6 Daniel D. Kapostasy

I, Daniel D. Kapostasy, P.G., as an author of this report entitled “Technical Report on the Roca Honda Project, McKinley County, New Mexico, USA" with an effective date of December 31, 2021, prepared for Energy Fuels Inc., do hereby certify that:

1. I am currently employed as the Director of Technical Services with Energy Fuels Resources (USA) Inc., 225 Union Blvd. Suite 600, Lakewood, Colorado, 80228.
2. I graduated with a Bachelor of Sciences degree in Geology in May 2003 from the University of Dayton in Dayton, Ohio.
3. I graduated with a Master of Science Degree in December 2005 from The Ohio State University in Columbus, Ohio.
4. I am a Registered Professional Geologist in the State of Wyoming (PG-3778), a Registered Professional Geologist in the State of Utah (10110615-2250), and a Registered Member of SME (RM#04172231). I have worked as a geologist for a total of 16 years since my graduation. My relevant experience for the purpose of this Technical Report is:
    - Senior Geologist, Chief Geologist, Manager of Technical Resources, and Director of Technical Resources with Energy Fuels Resources (USA) Inc. since 2013, working on all aspects of developing their uranium assets, including resource evaluation and estimation, drill hole planning, underground mine geology, permitting, and economic evaluation.
    - Directly involved with compliance issues at the White Mesa Mill, including water well drilling and installation, core/chip sampling, and tailings cell dewatering monitoring.
    - Geologist and Senior Geologist with Strathmore Resources between 2008 and 2013 working on drill programs, resource evaluation and permitting the Roca Honda uranium project and Pena Ranch uranium mill.
    - Geologist with Apogen Resources between 2006 and 2013, working as a consultant geologist on the Roca Honda uranium project.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. As I am currently employed by Energy Fuels (USA) Inc. I do not meet the definition of being independent of the issuer as described in section 1.5 of NI 43-101.
7. I visited the Roca Honda Project on October 19, 2021, and the White Mesa Mill on September 16 and 17, 2021.
8. I am responsible for Sections 1.1.1.6, 1.3.12, 4.3, 18.9.2, 20 (all), and 25.6 of this Technical Report
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, Sections 1.1.1.6, 1.3.12, 4.3, 18.9.2, 20, and 25.6 of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated 22nd day of February, 2022

**(Signed & Sealed)** ***Daniel D. Kapostasy***

Daniel D. Kapostasy, SME Registered Member

# 30.0 APPENDIX 1

## Table 30-1: Base Case Annual Cash Flow Model

## Energy Fuels Inc. – Roca Honda Project

| Project Timeline in Years | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Commercial Production Timeline in Years | | | | -4 | -3 | -2 | -1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Time Until Closure In Years | | US$ & Imperial Units | LOM Avg / Total | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | -1 | -2 | -3 |
| **Market Prices** | | | | | | | | | | | | | | | | | | | | | |
| $U_3O_8$ | | US$/lb | $65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| **Physicals** | | | | | | | | | | | | | | | | | | | | | |
| Total Mill Feed Mined (45% Inferred) | | 000 t | 4,020 | - | - | - | - | 231 | 420 | 408 | 402 | 381 | 382 | 402 | 404 | 418 | 397 | 175 | - | - | - |
| Total Waste Mined | | 000 t | 884 | - | - | - | 55 | 168 | 206 | 137 | 94 | 48 | 58 | 54 | 27 | 27 | 10 | - | - | - | - |
| Total Material Mined | | 000 t | 4,905 | - | - | - | 55 | 399 | 626 | 544 | 496 | 429 | 440 | 457 | 431 | 446 | 407 | 175 | - | - | - |
| Total Mill Feed Processed | | 000 t | 4,020 | - | - | - | - | 231 | 420 | 408 | 402 | 381 | 382 | 402 | 404 | 418 | 397 | 175 | - | - | - |
| Head Grade, $U_3O_8$ | | % | 0.36 | - | - | - | - | 0.36 | 0.33 | 0.30 | 0.29 | 0.36 | 0.36 | 0.37 | 0.39 | 0.41 | 0.41 | 0.41 | - | - | - |
| Contained $U_3O_8$ | | 000 lb | 28,995 | - | - | - | - | 1,643 | 2,773 | 2,417 | 2,320 | 2,705 | 2,767 | 3,016 | 3,156 | 3,464 | 3,286 | 1,448 | - | - | - |
| Average Recovery | | % | 95.0% | – | – | – | – | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | – | – | – |
| Recovered $U_3O_8$ | | 000 lb | 27,545 | - | - | - | - | 1,561 | 2,634 | 2,296 | 2,204 | 2,570 | 2,629 | 2,865 | 2,998 | 3,291 | 3,121 | 1,375 | - | - | - |
| $U_3O_8$ Sales | | 000 lb | 27,545 | - | - | - | - | 1,561 | 2,634 | 2,296 | 2,204 | 2,570 | 2,629 | 2,865 | 2,998 | 3,291 | 3,121 | 1,375 | - | - | - |
| **Cash Flow** | | | | | | | | | | | | | | | | | | | | | |
| **Gross Revenue** | | **$000s** | **1,790,415** | - | - | - | - | **101,454** | **171,239** | **149,245** | **143,274** | **167,026** | **170,887** | **186,240** | **194,871** | **213,891** | **202,888** | **89,398** | - | - | - |
| Mining & Development Costs | $110.91 | $000s | (445,896) | - | - | - | - | (25,578) | (46,556) | (45,214) | (44,589) | (42,243) | (42,420) | (44,630) | (44,828) | (46,414) | (44,026) | (19,399) | - | - | - |
| Mill Feed Transport Cost | $51.65 | $000s | (207,660) | - | - | - | - | (11,912) | (21,682) | (21,057) | (20,766) | (19,673) | (19,755) | (20,785) | (20,877) | (21,615) | (20,504) | (9,034) | - | - | - |
| Processing | $62.35 | $000s | (250,642) | - | - | - | - | (14,377) | (26,169) | (25,415) | (25,064) | (23,745) | (23,844) | (25,087) | (25,198) | (26,090) | (24,747) | (10,904) | - | - | - |
| Surface Facility Maintenance | $1.33 | $000s | (5,353) | - | - | - | - | (307) | (559) | (543) | (535) | (507) | (509) | (536) | (538) | (557) | (529) | (233) | - | - | - |
| G&A | $9.04 | $000s | (36,327) | - | - | - | - | (2,084) | (3,793) | (3,684) | (3,633) | (3,442) | (3,456) | (3,636) | (3,652) | (3,781) | (3,587) | (1,580) | - | - | - |
| **Subtotal Site Operating Costs** | **$235.28** | **$000s** | **(945,877)** | - | - | - | - | **(54,258)** | **(98,758)** | **(95,913)** | **(94,586)** | **(89,610)** | **(89,984)** | **(94,674)** | **(95,093)** | **(98,457)** | **(93,393)** | **(41,151)** | - | - | - |
| Product Transport to Market | $2.34 | $000s | (9,401) | - | - | - | - | (533) | (899) | (784) | (752) | (877) | (897) | (978) | (1,023) | (1,123) | (1,065) | (469) | - | - | - |
| Royalties | $6.47 | $000s | (25,993) | - | - | - | - | (1,072) | (2,567) | (3,662) | (3,806) | (2,543) | (2,486) | (2,476) | (2,319) | (2,139) | (2,029) | (894) | - | - | - |
| Severance Tax | $7.68 | $000s | (30,877) | - | - | - | - | (1,757) | (2,952) | (2,548) | (2,441) | (2,878) | (2,947) | (3,216) | (3,370) | (3,706) | (3,515) | (1,549) | - | - | - |
| **Total Cash Costs** | **$251.77** | **$000s** | **(1,012,148)** | - | - | - | - | **(57,619)** | **(105,176)** | **(102,906)** | **(101,585)** | **(95,909)** | **(96,314)** | **(101,344)** | **(101,804)** | **(105,425)** | **(100,002)** | **(44,064)** | - | - | - |
| **Operating Margin** | | **$000s** | **778,267** | - | - | - | - | **43,835** | **66,063** | **46,339** | **41,689** | **71,118** | **74,573** | **84,897** | **93,067** | **108,466** | **102,887** | **45,335** | - | - | - |
| EBITDA | | **$000s** | **778,267** | - | - | - | - | **43,835** | **66,063** | **46,339** | **41,689** | **71,118** | **74,573** | **84,897** | **93,067** | **108,466** | **102,887** | **45,335** | - | - | - |
| Depreciation/Amortization Allowance | | $000s | (475,441) | - | - | - | - | (17,927) | (39,946) | (37,510) | (37,403) | (45,979) | (47,381) | (52,120) | (54,535) | (60,486) | (57,027) | (25,128) | - | - | - |
| Depletion Allowances | | $000s | (136,538) | - | - | - | - | (14,215) | (11,460) | (2,862) | (611) | (11,119) | (12,139) | (14,856) | (17,726) | (22,396) | (19,718) | (9,437) | - | - | - |
| **Earnings Before Taxes** | | **$000s** | **166,287** | - | - | - | - | **11,692** | **14,657** | **5,967** | **3,674** | **14,020** | **15,053** | **17,921** | **20,806** | **25,584** | **26,142** | **10,770** | - | - | - |
| State/Fed Corp Income Taxes | | $000s | (42,257) | - | - | - | - | (3,452) | (3,762) | (1,532) | (944) | (3,598) | (3,863) | (4,600) | (5,340) | (6,566) | (5,836) | (2,764) | - | - | - |
| **Net Income** | | **$000s** | **124,030** | - | - | - | - | **8,240** | **10,896** | **4,435** | **2,731** | **10,422** | **11,190** | **13,322** | **15,466** | **19,018** | **20,305** | **8,005** | - | - | - |
| Non-Cash Add Back - Depreciation/Amortization | | $000s | 475,441 | - | - | - | - | 17,927 | 39,946 | 37,510 | 37,403 | 45,979 | 47,381 | 52,120 | 54,535 | 60,486 | 57,027 | 25,128 | - | - | - |
| Non-Cash Add Back - Depletion | | $000s | 136,538 | - | - | - | - | 14,215 | 11,460 | 2,862 | 611 | 11,119 | 12,139 | 14,856 | 17,726 | 22,396 | 19,718 | 9,437 | - | - | - |
| Working Capital | | $000s | 0 | - | - | (2,375) | (1,711) | (12,417) | (8,184) | 2,087 | 413 | (3,551) | (499) | (1,707) | (1,042) | (2,207) | 1,117 | 21,084 | 8,993 | 279 | (279) |
| **Operating Cash Flow** | | **$000s** | **736,010** | - | - | **(2,375)** | **(1,711)** | **27,966** | **54,117** | **46,894** | **41,158** | **63,969** | **70,210** | **78,590** | **86,685** | **99,693** | **98,167** | **63,654** | **8,993** | **279** | **(279)** |
| Development Capital | | | | | | | | | | | | | | | | | | | | | |
| Underground Mine | | $000s | (261,884) | - | (10,476) | (61,550) | (51,905) | (74,874) | (63,078) | - | - | - | - | - | - | - | - | - | - | - | - |
| Mill | | $000s | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Surface Infrastructure | | $000s | (62,812) | (328) | (7,372) | (10,784) | (19,426) | (21,177) | (3,726) | - | - | - | - | - | - | - | - | - | - | - | - |
| Surface Mine, Water Treatment Plant, Powerline Indirects | | $000s | (35,223) | - | (2,556) | (3,361) | (3,045) | (8,280) | (16,208) | (1,941) | (161) | (142) | (23) | (7) | - | - | 500 | - | - | - | - |
| Contingency | 15.0% | $000s | (54,118) | - | (3,061) | (11,354) | (11,156) | (15,667) | (12,539) | (291) | (24) | (21) | (4) | (1) | - | - | - | - | - | - | - |
| Development Capital | | $000s | (414,038) | (328) | (23,464) | (87,050) | (85,533) | (119,999) | (95,551) | (2,232) | (185) | (164) | (27) | (8) | - | - | 500 | - | - | - | - |
| Exploration | | $000s | (2,926) | (2,926) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sustaining Capital | | $000s | (61,403) | - | - | - | - | - | - | (25,167) | (13,130) | (17,258) | (2,072) | (2,289) | - | (1,487) | - | - | - | - | - |
| Closure/Reclamation | | $000s | (3,952) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | (3,952) | - |
| **Total Capital** | | **$000s** | **(482,319)** | **(3,253)** | **(23,464)** | **(87,050)** | **(85,533)** | **(119,999)** | **(95,551)** | **(27,399)** | **(13,315)** | **(17,422)** | **(2,099)** | **(2,296)** | - | **(1,487)** | 500 | - | - | **(3,952)** | - |
| **Cash Flow Adj./Reimbursements** | | **$000s** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| Project Timeline in Years | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Commercial Production Timeline in Years | | | | -4 | -3 | -2 | -1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Time Until Closure In Years | | US$ & Imperial Units | LOM Avg / Total | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | -1 | -2 | -3 |
| **LOM Metrics** | | | | | | | | | | | | | | | | | | | | | |
| Economic Metrics | | | | | | | | | | | | | | | | | | | | | |
| Discount Rate | BOP | 5% | | 0.9524 | 0.9070 | 0.8638 | 0.8227 | 0.7835 | 0.7462 | 0.7107 | 0.6768 | 0.6446 | 0.6139 | 0.5847 | 0.5568 | 0.5303 | 0.5051 | 0.4810 | 0.4581 | 0.4363 | 0.4155 |
| Discount Rate | BOP | 8% | | 0.9259 | 0.8573 | 0.7938 | 0.7350 | 0.6806 | 0.6302 | 0.5835 | 0.5403 | 0.5002 | 0.4632 | 0.4289 | 0.3971 | 0.3677 | 0.3405 | 0.3152 | 0.2919 | 0.2703 | 0.2502 |
| Discount Rate | BOP | 12% | | 0.8929 | 0.7972 | 0.7118 | 0.6355 | 0.5674 | 0.5066 | 0.4523 | 0.4039 | 0.3606 | 0.3220 | 0.2875 | 0.2567 | 0.2292 | 0.2046 | 0.1827 | 0.1631 | 0.1456 | 0.1300 |
| **a) Pre-Tax** | | | | | | | | | | | | | | | | | | | | | |
| Free Cash Flow | | $000s | **295,948** | (3,253) | (23,464) | (89,425) | (87,243) | (88,581) | (37,671) | 21,027 | 28,786 | 50,145 | 71,974 | 80,894 | 92,024 | 104,772 | 104,503 | 66,419 | 8,993 | (3,673) | (279) |
| Cumulative Free Cash Flow | | $000s | | (3,253) | (26,718) | (116,143) | (203,386) | (291,967) | (329,638) | (308,611) | (279,824) | (229,679) | (157,705) | (76,811) | 15,213 | 119,985 | 224,488 | 290,907 | 299,900 | 296,227 | 295,948 |
| NPV @ 5% | | $000s | **81,249** | (3,098) | (21,283) | (77,249) | (71,775) | (69,405) | (28,111) | 14,944 | 19,484 | 32,324 | 44,186 | 47,297 | 51,243 | 55,563 | 52,781 | 31,948 | 4,120 | (1,602) | (116) |
| NPV @ 8% | | $000s | **11,817** | (3,012) | (20,117) | (70,989) | (64,126) | (60,287) | (23,739) | 12,269 | 15,552 | 25,085 | 33,338 | 34,694 | 36,544 | 38,525 | 35,579 | 20,938 | 2,625 | (993) | (70) |
| NPV @ 12% | | $000s | **(42,360)** | (2,905) | (18,706) | (63,651) | (55,445) | (50,263) | (19,085) | 9,512 | 11,626 | 18,083 | 23,174 | 23,255 | 23,620 | 24,011 | 21,383 | 12,134 | 1,467 | (535) | (36) |
| Cumulative NPV @ 5% | | $000s | | (3,098) | (24,381) | (101,630) | (173,405) | (242,811) | (270,921) | (255,978) | (236,494) | (204,170) | (159,984) | (112,687) | (61,445) | (5,882) | 46,900 | 78,848 | 82,968 | 81,365 | 81,249 |
| Cumulative NPV @ 8% | | $000s | | (3,012) | (23,129) | (94,118) | (158,244) | (218,531) | (242,270) | (230,001) | (214,448) | (189,363) | (156,025) | (121,331) | (84,787) | (46,263) | (10,684) | 10,254 | 12,879 | 11,887 | 11,817 |
| Cumulative NPV @ 12% | | $000s | | (2,905) | (21,610) | (85,261) | (140,706) | (190,969) | (210,055) | (200,543) | (188,917) | (170,834) | (147,660) | (124,405) | (100,785) | (76,774) | (55,390) | (43,256) | (41,789) | (42,324) | (42,360) |
| IRR | | % | **8.7%** | | | | | | | | | | | | | | | | | | |
| Profitability Index (NPV/PW Capex) | | NPV/PW$_{capex}$ | **0.2** | 312 | 21,283 | 75,197 | 70,368 | 94,022 | 71,301 | 19,472 | 9,012 | 11,230 | 1,289 | 1,343 | - | 788 | (253) | - | - | - | - |
| Undiscounted Payback From Start of Comm. Prod. | | Years | **7.8** | - | - | - | - | - | - | - | - | - | - | - | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 |
| **b) After-Tax** | | | | | | | | | | | | | | | | | | | | | |
| Free Cash Flow | | $000s | **253,691** | (3,253) | (23,464) | (89,425) | (87,243) | (92,032) | (41,433) | 19,495 | 27,843 | 46,547 | 68,111 | 76,294 | 86,685 | 98,206 | 98,667 | 63,654 | 8,993 | (3,673) | (279) |
| Cumulative Free Cash Flow | | $000s | | (3,253) | (26,718) | (116,143) | (203,386) | (295,419) | (336,852) | (317,357) | (289,514) | (242,967) | (174,856) | (98,562) | (11,877) | 86,329 | 184,996 | 248,650 | 257,643 | 253,970 | 253,691 |
| NPV @ 5% | | $000s | **55,897** | (3,098) | (21,283) | (77,249) | (71,775) | (72,110) | (30,918) | 13,855 | 18,845 | 30,005 | 41,814 | 44,608 | 48,269 | 52,081 | 49,834 | 30,619 | 4,120 | (1,602) | (116) |
| NPV @ 8% | | $000s | **(7,262)** | (3,012) | (20,117) | (70,989) | (64,126) | (62,636) | (26,110) | 11,375 | 15,043 | 23,285 | 31,548 | 32,721 | 34,424 | 36,110 | 33,592 | 20,066 | 2,625 | (993) | (70) |
| NPV @ 12% | | $000s | **(55,737)** | (2,905) | (18,706) | (63,651) | (55,445) | (52,222) | (20,991) | 8,819 | 11,245 | 16,785 | 21,930 | 21,933 | 22,250 | 22,506 | 20,189 | 11,629 | 1,467 | (535) | (36) |
| Cumulative NPV @ 5% | | $000s | | (3,098) | (24,381) | (101,630) | (173,405) | (245,515) | (276,433) | (262,578) | (243,733) | (213,729) | (171,915) | (127,307) | (79,038) | (26,957) | 22,877 | 53,495 | 57,615 | 56,013 | 55,897 |
| Cumulative NPV @ 8% | | $000s | | (3,012) | (23,129) | (94,118) | (158,244) | (220,880) | (246,990) | (235,615) | (220,572) | (197,287) | (165,739) | (133,017) | (98,594) | (62,483) | (28,891) | (8,825) | (6,200) | (7,192) | (7,262) |
| Cumulative NPV @ 12% | | $000s | | (2,905) | (21,610) | (85,261) | (140,706) | (192,928) | (213,919) | (205,101) | (193,855) | (177,070) | (155,140) | (133,207) | (110,958) | (88,451) | (68,262) | (56,633) | (55,166) | (55,701) | (55,737) |
| IRR | | % | **7.6%** | | | | | | | | | | | | | | | | | | |
| Profitability Index | | NPV/PW$_{capex}$ | **0.1** | 312 | 21,283 | 75,197 | 70,368 | 94,022 | 71,301 | 19,472 | 9,012 | 11,230 | 1,289 | 1,343 | - | 788 | (253) | - | - | - | - |
| Undiscounted Payback from Start of Comm. Prod. | | Years | **8.1** | - | - | - | - | - | - | - | - | - | - | - | - | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 |
| Operating Metrics | | | | | | | | | | | | | | | | | | | | | |
| Mine Life | | Years | 11 | | | | | | | | | | | | | | | | | | |
| Average Daily Processing Rate | | tpd placed | 1,150 | - | - | - | - | 659 | 1,199 | 1,165 | 1,149 | 1,088 | 1,093 | 1,150 | 1,155 | 1,196 | 1,134 | 500 | - | - | - |
| UG Mining Cost | | $ / t milled | $110.91 | - | - | - | - | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | - | - | - |
| Mill Feed Transport Cost | | $ / t milled | $51.65 | - | - | - | - | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | - | - | - |
| Processing Cost | | $ / t milled | $62.35 | - | - | - | - | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | - | - | - |
| Surface Facility Maintenance Cost | | $ / t milled | $1.33 | - | - | - | - | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | - | - | - |
| G&A Cost | | $ / t milled | $9.04 | - | - | - | - | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | - | - | - |
| **Total Site Operating Costs** | | **$ /** t milled | **$235.28** | - | - | - | - | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | - | - | - |
| Product Transport to Market | | $ / t milled | $2.34 | - | - | - | - | 2.31 | 2.14 | 1.92 | 1.87 | 2.30 | 2.35 | 2.43 | 2.53 | 2.68 | 2.68 | 2.68 | - | - | - |
| Royalties | | $ / t milled | $6.47 | - | - | - | - | 4.65 | 6.12 | 8.98 | 9.47 | 6.68 | 6.50 | 6.15 | 5.74 | 5.11 | 5.11 | 5.11 | - | - | - |
| Severance Tax | | $ / t milled | $7.68 | - | - | - | - | 7.62 | 7.03 | 6.25 | 6.07 | 7.56 | 7.71 | 7.99 | 8.34 | 8.86 | 8.86 | 8.86 | - | - | - |
| **Total Operating Costs** | | **$ /** t milled | **$251.77** | - | - | - | - | **249.86** | **250.57** | **252.44** | **252.69** | **251.82** | **251.83** | **251.86** | **251.89** | **251.93** | **251.93** | **251.93** | - | - | - |
| Sales Metrics | | | | | | | | | | | | | | | | | | | | | |
| $U_3O_8$ Sales | | 000 lb | **27,545** | - | - | - | - | 1,561 | 2,634 | 2,296 | 2,204 | 2,570 | 2,629 | 2,865 | 2,998 | 3,291 | 3,121 | 1,375 | - | - | - |
| Total Cash Cost | | $ / lb $U_3O_8$ | **36.75** | - | - | - | - | 36.92 | 39.92 | 44.82 | 46.09 | 37.32 | 36.63 | 35.37 | 33.96 | 32.04 | 32.04 | 32.04 | - | - | - |
| Total AISC | | $ / lb $U_3O_8$ | **39.12** | - | - | - | - | 36.92 | 39.92 | 55.78 | 52.04 | 44.04 | 37.42 | 36.17 | 33.96 | 32.49 | 32.04 | 32.04 | - | - | - |
| Avg. ROM Annual $U_3O_8$ Sales | | 000 lb/yr | **2,504** | | | | | | | | | | | | | | | | | | |

## Table 30-2: Alternate Case Annual Cash Flow Model

## Energy Fuels Inc. – Roca Honda Project

| **Project Timeline in Years** | | | | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Commercial Production Timeline in Years** | | | | **-4** | **-3** | **-2** | **-1** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| **Time Until Closure in Years** | | **US$ & Imperial Units** | **LOM Avg / Total** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** | **7** | **6** | **5** | **4** | **3** | **2** | **1** | **-1** | **-2** | **-3** |
| **Market Prices** | | | | | | | | | | | | | | | | | | | | | |
| $U_3O_8$ | | US$/lb | **$65** | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| **Physicals** | | | | | | | | | | | | | | | | | | | | | |
| Total Mill Feed Mined (45% Inferred) | | 000 t | 1,788 | - | - | - | - | 153 | 252 | 152 | 136 | 110 | 122 | 151 | 178 | 225 | 215 | 95 | - | - | - |
| Total Waste Mined | | 000 t | 393 | - | - | - | - | 34 | 56 | 33 | 30 | 24 | 27 | 33 | 39 | 50 | 47 | 21 | - | - | - |
| Total Material Mined | | 000 t | 2,181 | - | - | - | - | 186 | 308 | 185 | 166 | 134 | 149 | 184 | 218 | 275 | 262 | 115 | - | - | - |
| Total Mill Feed Processed | | 000 t | 1,788 | - | - | - | - | 153 | 252 | 152 | 136 | 110 | 122 | 151 | 178 | 225 | 215 | 95 | - | - | - |
| Head Grade, $U_3O_8$ | | % | 0.41 | - | - | - | - | 0.39 | 0.37 | 0.34 | 0.33 | 0.43 | 0.44 | 0.44 | 0.45 | 0.46 | 0.45 | 0.45 | - | - | - |
| Contained $U_3O_8$ | | 000 lb | 14,768 | - | - | - | - | 1,181 | 1,872 | 1,036 | 895 | 953 | 1,061 | 1,329 | 1,592 | 2,049 | 1,943 | 856 | - | - | - |
| Average Recovery | | % | 95.0% | – | – | – | – | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | – | – | – |
| Recovered $U_3O_8$ | | 000 lb | 14,030 | - | - | - | - | 1,122 | 1,778 | 984 | 851 | 905 | 1,008 | 1,263 | 1,513 | 1,946 | 1,846 | 813 | - | - | - |
| $U_3O_8$ Sales | | 000 lb | 14,030 | - | - | - | - | 1,122 | 1,778 | 984 | 851 | 905 | 1,008 | 1,263 | 1,513 | 1,946 | 1,846 | 813 | - | - | - |
| **Cash Flow** | | | | | | | | | | | | | | | | | | | | | |
| **Gross Revenue** | | **$000s** | **911,932** | - | - | - | - | **72,953** | **115,570** | **63,973** | **55,289** | **58,843** | **65,529** | **82,073** | **98,332** | **126,502** | **119,995** | **52,873** | - | - | - |
| Mining & Development Costs | $110.91 | $000s | (198,264) | - | - | - | - | (16,915) | (27,993) | (16,852) | (15,074) | (12,150) | (13,510) | (16,732) | (19,797) | (24,959) | (23,797) | (10,486) | - | - | - |
| Mill Feed Transport Cost | $51.65 | $000s | (92,334) | - | - | - | - | (7,878) | (13,037) | (7,848) | (7,020) | (5,658) | (6,292) | (7,792) | (9,220) | (11,624) | (11,083) | (4,883) | - | - | - |
| Processing | $62.35 | $000s | (111,445) | - | - | - | - | (9,508) | (15,735) | (9,472) | (8,473) | (6,829) | (7,594) | (9,405) | (11,128) | (14,029) | (13,377) | (5,894) | - | - | - |
| Surface Facility Maintenance | $1.33 | $000s | (2,380) | - | - | - | - | (203) | (336) | (202) | (181) | (146) | (162) | (201) | (238) | (300) | (286) | (126) | - | - | - |
| G&A | $9.04 | $000s | (16,152) | - | - | - | - | (1,378) | (2,281) | (1,373) | (1,228) | (990) | (1,101) | (1,363) | (1,613) | (2,033) | (1,939) | (854) | - | - | - |
| **Subtotal Site Operating Costs** | **$235.28** | **$000s** | **(420,576)** | - | - | - | - | **(35,882)** | **(59,382)** | **(35,747)** | **(31,977)** | **(25,773)** | **(28,658)** | **(35,493)** | **(41,995)** | **(52,945)** | **(50,481)** | **(22,243)** | - | - | - |
| Product Transport to Market | $2.68 | $000s | (4,788) | - | - | - | - | (383) | (607) | (336) | (290) | (309) | (344) | (431) | (516) | (664) | (630) | (278) | - | - | - |
| Royalties | $6.59 | $000s | (11,783) | - | - | - | - | (757) | (1,556) | (1,541) | (1,534) | (705) | (759) | (903) | (1,033) | (1,265) | (1,200) | (529) | - | - | - |
| Severance Tax | $8.81 | $000s | (15,753) | - | - | - | - | (1,263) | (1,995) | (1,093) | (941) | (1,017) | (1,133) | (1,420) | (1,703) | (2,192) | (2,079) | (916) | - | - | - |
| **Total Cash Costs** | **$253.37** | **$000s** | **(452,899)** | - | - | - | - | **(38,285)** | **(63,541)** | **(38,717)** | **(34,742)** | **(27,805)** | **(30,895)** | **(38,247)** | **(45,247)** | **(57,065)** | **(54,389)** | **(23,966)** | - | - | - |
| **Operating Margin** | | **$000s** | **459,033** | - | - | - | - | **34,668** | **52,029** | **25,256** | **20,547** | **31,038** | **34,634** | **43,826** | **53,085** | **69,436** | **65,605** | **28,907** | - | - | - |
| **EBITDA** | | **$000s** | **459,033** | - | - | - | - | **34,668** | **52,029** | **25,256** | **20,547** | **31,038** | **34,634** | **43,826** | **53,085** | **69,436** | **65,605** | **28,907** | - | - | - |
| Depreciation/Amortization Allowance | | $000s | (284,919) | - | - | - | - | (15,173) | (31,920) | (19,122) | (17,195) | (19,318) | (21,664) | (27,369) | (32,790) | (42,561) | (40,127) | (17,681) | - | - | - |
| Depletion Allowances | | $000s | (17,719) | - | - | - | - | (3,271) | (4,325) | (1,637) | (1,370) | (301) | (416) | (801) | (1,284) | (2,240) | (1,180) | (895) | - | - | - |
| **Earnings Before Taxes** | | **$000s** | **156,394** | - | - | - | - | **16,223** | **15,784** | **4,498** | **1,982** | **11,420** | **12,555** | **15,656** | **19,010** | **24,636** | **24,298** | **10,332** | - | - | - |
| State/Fed Corp Income Taxes | | $000s | (39,592) | - | - | - | - | (4,488) | (4,051) | (1,155) | (509) | (2,931) | (3,222) | (4,018) | (4,879) | (6,323) | (5,363) | (2,652) | - | - | - |
| **Net Income** | | **$000s** | **116,803** | - | - | - | - | **11,735** | **11,733** | **3,343** | **1,473** | **8,489** | **9,332** | **11,638** | **14,131** | **18,313** | **18,935** | **7,680** | - | - | - |
| Non-Cash Add Back - Depreciation/Amortization | | $000s | 284,919 | - | - | - | - | 15,173 | 31,920 | 19,122 | 17,195 | 19,318 | 21,664 | 27,369 | 32,790 | 42,561 | 40,127 | 17,681 | - | - | - |
| Non-Cash Add Back - Depletion | | $000s | 17,719 | - | - | - | - | 3,271 | 4,325 | 1,637 | 1,370 | 301 | 416 | 801 | 1,284 | 2,240 | 1,180 | 895 | - | - | - |
| Working Capital | | $000s | (0) | - | - | (1,465) | (1,025) | (8,779) | (5,129) | 4,907 | 730 | (977) | (707) | (1,727) | (1,681) | (2,943) | 685 | 12,701 | 5,410 | - | - |
| **Operating Cash Flow** | | **$000s** | **419,441** | - | - | **(1,465)** | **(1,025)** | **21,401** | **42,849** | **29,009** | **20,768** | **27,130** | **30,705** | **38,080** | **46,525** | **60,171** | **60,927** | **38,957** | **5,410** | - | - |
| Development Capital | | | | | | | | | | | | | | | | | | | | | |
| Underground Mine | | $000s | (156,987) | - | (6,280) | (36,897) | (31,114) | (44,883) | (37,813) | - | - | - | - | - | - | - | - | - | - | - | - |
| Mill | | $000s | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Surface Infrastructure | | $000s | (37,653) | (196) | (4,419) | (6,464) | (11,645) | (12,695) | (2,233) | - | - | - | - | - | - | - | - | - | - | - | - |
| Surface Mine, Water Treatment Plant, Powerline Indirects | | $000s | (21,115) | - | (1,532) | (2,015) | (1,825) | (4,964) | (9,716) | (1,163) | (96) | (85) | (14) | (4) | - | - | 300 | - | - | - | - |
| Contingency | 15.0% | $000s | (32,356) | (29) | (1,835) | (6,806) | (6,688) | (9,381) | (7,464) | (175) | (14) | (13) | (2) | (1) | - | - | 52 | - | - | - | - |
| Development Capital | | $000s | (248,111) | (226) | (14,066) | (52,182) | (51,273) | (71,923) | (57,226) | (1,338) | (111) | (98) | (16) | (5) | - | - | 352 | - | - | - | - |
| Exploration | | $000s | (1,754) | (1,754) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sustaining Capital | | $000s | (36,808) | - | - | - | - | - | - | (15,086) | (7,871) | (10,345) | (1,242) | (1,372) | - | (891) | - | - | - | - | - |
| Closure/Reclamation | | $000s | (2,369) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | (2,369) | - |
| **Total Capital** | | **$000s** | **(289,042)** | **(1,980)** | **(14,066)** | **(52,182)** | **(51,273)** | **(71,923)** | **(57,226)** | **(16,424)** | **(7,982)** | **(10,443)** | **(1,259)** | **(1,376)** | - | **(891)** | **352** | - | - | **(2,369)** | - |
| **Cash Flow Adj./Reimbursements** | | **$000s** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| Project Timeline in Years | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Commercial Production Timeline in Years | | | | -4 | -3 | -2 | -1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Time Until Closure In Years | | US$ & Imperial Units | LOM Avg / Total | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | -1 | -2 | -3 |
| **LOM Metrics** | | | | | | | | | | | | | | | | | | | | | |
| Economic Metrics | | | | | | | | | | | | | | | | | | | | | |
| Discount Rate | BOP | 5% | | 0.9524 | 0.9070 | 0.8638 | 0.8227 | 0.7835 | 0.7462 | 0.7107 | 0.6768 | 0.6446 | 0.6139 | 0.5847 | 0.5568 | 0.5303 | 0.5051 | 0.4810 | 0.4581 | 0.4363 | 0.4155 |
| Discount Rate | BOP | 8% | | 0.9259 | 0.8573 | 0.7938 | 0.7350 | 0.6806 | 0.6302 | 0.5835 | 0.5403 | 0.5002 | 0.4632 | 0.4289 | 0.3971 | 0.3677 | 0.3405 | 0.3152 | 0.2919 | 0.2703 | 0.2502 |
| Discount Rate | BOP | 12% | | 0.8929 | 0.7972 | 0.7118 | 0.6355 | 0.5674 | 0.5066 | 0.4523 | 0.4039 | 0.3606 | 0.3220 | 0.2875 | 0.2567 | 0.2292 | 0.2046 | 0.1827 | 0.1631 | 0.1456 | 0.1300 |
| **a) Pre-Tax** | | | | | | | | | | | | | | | | | | | | | |
| Free Cash Flow | | $000s | **295,948** | (3,253) | (23,464) | (89,425) | (87,243) | (88,581) | (37,671) | 21,027 | 28,786 | 50,145 | 71,974 | 80,894 | 92,024 | 104,772 | 104,503 | 66,419 | 8,993 | (3,673) | (279) |
| Cumulative Free Cash Flow | | $000s | | (3,253) | (26,718) | (116,143) | (203,386) | (291,967) | (329,638) | (308,611) | (279,824) | (229,679) | (157,705) | (76,811) | 15,213 | 119,985 | 224,488 | 290,907 | 299,900 | 296,227 | 295,948 |
| NPV @ 5% | | $000s | **81,249** | (3,098) | (21,283) | (77,249) | (71,775) | (69,405) | (28,111) | 14,944 | 19,484 | 32,324 | 44,186 | 47,297 | 51,243 | 55,563 | 52,781 | 31,948 | 4,120 | (1,602) | (116) |
| NPV @ 8% | | $000s | **11,817** | (3,012) | (20,117) | (70,989) | (64,126) | (60,287) | (23,739) | 12,269 | 15,552 | 25,085 | 33,338 | 34,694 | 36,544 | 38,525 | 35,579 | 20,938 | 2,625 | (993) | (70) |
| NPV @ 12% | | $000s | **(42,360)** | (2,905) | (18,706) | (63,651) | (55,445) | (50,263) | (19,085) | 9,512 | 11,626 | 18,083 | 23,174 | 23,255 | 23,620 | 24,011 | 21,383 | 12,134 | 1,467 | (535) | (36) |
| Cumulative NPV @ 5% | | $000s | | (3,098) | (24,381) | (101,630) | (173,405) | (242,811) | (270,921) | (255,978) | (236,494) | (204,170) | (159,984) | (112,687) | (61,445) | (5,882) | 46,900 | 78,848 | 82,968 | 81,365 | 81,249 |
| Cumulative NPV @ 8% | | $000s | | (3,012) | (23,129) | (94,118) | (158,244) | (218,531) | (242,270) | (230,001) | (214,448) | (189,363) | (156,025) | (121,331) | (84,787) | (46,263) | (10,684) | 10,254 | 12,879 | 11,887 | 11,817 |
| Cumulative NPV @ 12% | | $000s | | (2,905) | (21,610) | (85,261) | (140,706) | (190,969) | (210,055) | (200,543) | (188,917) | (170,834) | (147,660) | (124,405) | (100,785) | (76,774) | (55,390) | (43,256) | (41,789) | (42,324) | (42,360) |
| IRR | | % | **8.7%** | | | | | | | | | | | | | | | | | | |
| Profitability Index (NPV/PW Capex) | | NPV/PW$_{capex}$ | **0.2** | 312 | 21,283 | 75,197 | 70,368 | 94,022 | 71,301 | 19,472 | 9,012 | 11,230 | 1,289 | 1,343 | - | 788 | (253) | - | - | - | - |
| Undiscounted Payback From Start of Comm. Prod. | | Years | **7.8** | - | - | - | - | - | - | - | - | - | - | - | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 |
| **b) After-Tax** | | | | | | | | | | | | | | | | | | | | | |
| Free Cash Flow | | $000s | **253,691** | (3,253) | (23,464) | (89,425) | (87,243) | (92,032) | (41,433) | 19,495 | 27,843 | 46,547 | 68,111 | 76,294 | 86,685 | 98,206 | 98,667 | 63,654 | 8,993 | (3,673) | (279) |
| Cumulative Free Cash Flow | | $000s | | (3,253) | (26,718) | (116,143) | (203,386) | (295,419) | (336,852) | (317,357) | (289,514) | (242,967) | (174,856) | (98,562) | (11,877) | 86,329 | 184,996 | 248,650 | 257,643 | 253,970 | 253,691 |
| NPV @ 5% | | $000s | **55,897** | (3,098) | (21,283) | (77,249) | (71,775) | (72,110) | (30,918) | 13,855 | 18,845 | 30,005 | 41,814 | 44,608 | 48,269 | 52,081 | 49,834 | 30,619 | 4,120 | (1,602) | (116) |
| NPV @ 8% | | $000s | **(7,262)** | (3,012) | (20,117) | (70,989) | (64,126) | (62,636) | (26,110) | 11,375 | 15,043 | 23,285 | 31,548 | 32,721 | 34,424 | 36,110 | 33,592 | 20,066 | 2,625 | (993) | (70) |
| NPV @ 12% | | $000s | **(55,737)** | (2,905) | (18,706) | (63,651) | (55,445) | (52,222) | (20,991) | 8,819 | 11,245 | 16,785 | 21,930 | 21,933 | 22,250 | 22,506 | 20,189 | 11,629 | 1,467 | (535) | (36) |
| Cumulative NPV @ 5% | | $000s | | (3,098) | (24,381) | (101,630) | (173,405) | (245,515) | (276,433) | (262,578) | (243,733) | (213,729) | (171,915) | (127,307) | (79,038) | (26,957) | 22,877 | 53,495 | 57,615 | 56,013 | 55,897 |
| Cumulative NPV @ 8% | | $000s | | (3,012) | (23,129) | (94,118) | (158,244) | (220,880) | (246,990) | (235,615) | (220,572) | (197,287) | (165,739) | (133,017) | (98,594) | (62,483) | (28,891) | (8,825) | (6,200) | (7,192) | (7,262) |
| Cumulative NPV @ 12% | | $000s | | (2,905) | (21,610) | (85,261) | (140,706) | (192,928) | (213,919) | (205,101) | (193,855) | (177,070) | (155,140) | (133,207) | (110,958) | (88,451) | (68,262) | (56,633) | (55,166) | (55,701) | (55,737) |
| IRR | | % | **7.6%** | | | | | | | | | | | | | | | | | | |
| Profitability Index | | NPV/PW$_{capex}$ | **0.1** | 312 | 21,283 | 75,197 | 70,368 | 94,022 | 71,301 | 19,472 | 9,012 | 11,230 | 1,289 | 1,343 | - | 788 | (253) | - | - | - | - |
| Undiscounted Payback from Start of Comm. Prod. | | Years | **8.1** | - | - | - | - | - | - | - | - | - | - | - | - | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 |
| Operating Metrics | | | | | | | | | | | | | | | | | | | | | |
| Mine Life | | Years | 11 | | | | | | | | | | | | | | | | | | |
| Average Daily Processing Rate | | tpd placed | 1,150 | - | - | - | - | 659 | 1,199 | 1,165 | 1,149 | 1,088 | 1,093 | 1,150 | 1,155 | 1,196 | 1,134 | 500 | - | - | - |
| UG Mining Cost | | $ / t milled | $110.91 | - | - | - | - | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | 110.91 | - | - | - |
| Mill Feed Transport Cost | | $ / t milled | $51.65 | - | - | - | - | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | 51.65 | - | - | - |
| Processing Cost | | $ / t milled | $62.35 | - | - | - | - | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | 62.35 | - | - | - |
| Surface Facility Maintenance Cost | | $ / t milled | $1.33 | - | - | - | - | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | 1.33 | - | - | - |
| G&A Cost | | $ / t milled | $9.04 | - | - | - | - | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | 9.04 | - | - | - |
| **Total Site Operating Costs** | | **$ / t milled** | **$235.28** | - | - | - | - | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | **235.28** | - | - | - |
| Product Transport to Market | | $ / t milled | $2.34 | - | - | - | - | 2.31 | 2.14 | 1.92 | 1.87 | 2.30 | 2.35 | 2.43 | 2.53 | 2.68 | 2.68 | 2.68 | - | - | - |
| Royalties | | $ / t milled | $6.47 | - | - | - | - | 4.65 | 6.12 | 8.98 | 9.47 | 6.68 | 6.50 | 6.15 | 5.74 | 5.11 | 5.11 | 5.11 | - | - | - |
| Severance Tax | | $ / t milled | $7.68 | - | - | - | - | 7.62 | 7.03 | 6.25 | 6.07 | 7.56 | 7.71 | 7.99 | 8.34 | 8.86 | 8.86 | 8.86 | - | - | - |
| **Total Operating Costs** | | **$ / t milled** | **$251.77** | - | - | - | - | **249.86** | **250.57** | **252.44** | **252.69** | **251.82** | **251.83** | **251.86** | **251.89** | **251.93** | **251.93** | **251.93** | - | - | - |
| Sales Metrics | | | | | | | | | | | | | | | | | | | | | |
| $U_3O_8$ Sales | | 000 lb | **27,545** | - | - | - | - | 1,561 | 2,634 | 2,296 | 2,204 | 2,570 | 2,629 | 2,865 | 2,998 | 3,291 | 3,121 | 1,375 | - | - | - |
| Total Cash Cost | | $ / lb $U_3O_8$ | **36.75** | - | - | - | - | 36.92 | 39.92 | 44.82 | 46.09 | 37.32 | 36.63 | 35.37 | 33.96 | 32.04 | 32.04 | 32.04 | - | - | - |
| Total AISC | | $ / lb $U_3O_8$ | **39.12** | - | - | - | - | 36.92 | 39.92 | 55.78 | 52.04 | 44.04 | 37.42 | 36.17 | 33.96 | 32.49 | 32.04 | 32.04 | - | - | - |
| Avg. ROM Annual $U_3O_8$ Sales | | 000 lb/yr | **2,504** | | | | | | | | | | | | | | | | | | |

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