Technical Report on the Nichols Ranch Project, Campbell and Johnson Counties, Wyoming, USA

Energy Fuels Inc.

SLR Project No: 138.02544.00001

Effective Date:
December 31, 2021

Signature Date:
February 22, 2022

Amended:
February 8, 2023

Prepared by:
SLR International Corporation

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1.0 SUMMARY

1.1 Executive Summary

This Independent Technical Report (Technical Report) was prepared by Grant A. Malensek, M.Eng., P. Eng., Mark B. Mathisen, C.P.G., Jeremy Scott Collyard, PMP, MMSA QP, Jeffrey L. Woods, MMSA QP and Phillip E. Brown, C.P.G., R.P.G. of SLR International Corporation (SLR), for Energy Fuels Inc. (Energy Fuels), the parent company of Energy Fuels Resources (USA) Inc. (EFR), with respect to the Nichols Ranch Project (Nichols Ranch or the Project), located in eastern Wyoming, USA. EFR owns 100% of the Project, with the exception of the Jane Dough area, over which EFR holds an 81% interest.

EFR's parent company, Energy Fuels, 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. Energy Fuels 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., Jeremy Scott Collyard, PMP, MMSA QP, 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).

This Technical Report has been amended to add the parameters related to cut-off grade calculations and to correct typographical errors. The effective date of the Mineral Resource, December 31, 2021, remains unchanged. The SLR QPs have not reviewed any additional information on the Project.

Resource estimates completed over Nichols Ranch in 2015 (Beahm and Goranson, 2015) and North Rolling Pin in 2010 (Graves, 2010) have been superseded by the Mineral Resource estimates of this Technical Report which includes additional new information and analysis.

The Project includes the Nichols Ranch Uranium Complex (the Complex) near the city of Caspar, Wyoming, and the White Mesa Mill (the Mill) near the city of Blanding, Utah. The Complex is currently on care and maintenance 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. A site visit was carried out to the Complex on October 28, 2021, and the Mill on November 11, 2021.

The 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). EFR acquired the Complex in 2015. EFR has controlled 100% of the Mill's assets and liabilities since August 2012.

The Complex includes the Nichols Ranch Mining Unit, which is comprised of the Nichols Ranch wellfield (Nichols Ranch Wellfield), Nichols Ranch plant (Nichols Ranch Plant), Jane Dough area, and Hank area, and several satellite properties. The production scenario reviewed for this Technical Report assumes that the Nichols Ranch Mining Unit will be developed as an in situ recovery (ISR) mining operation with an onsite processing plant and based on the current resource, an expected 11 year mine life. The Project will produce an average of 366 thousand pounds (klb) of U_3O_8 per year on-site, which will then be trucked to the Mill for final drying and upgrading before 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 effective date of the Mineral Resource estimate is December 31, 2021. Estimated uranium grades are based on radiometric probe grades using Grade-Thickness (GT) contour methodology.
- Mineral Resources for the Complex are reported at a GT cut-off grade of 0.20 %-ft and have been depleted as of December 31, 2021.
- The total production from Nichols Ranch is 1,276,589 lb eU_3O_8 as of December 31, 2021.
- Total Measured + Indicated Resources for the Complex are 3.29 million tons (Mst) at an average grade of 0.106% eU_3O_8 containing 6.99 million pounds (Mlb) eU_3O_8. Additional Inferred Resources total 650,000 tons at an average grade of 0.097% eU_3O_8 containing 1.25 Mlb eU_3O_8.
- There is a low risk of depletion of chemical uranium compared to radiometrically determined uranium at the Complex. Furthermore, there is no evidence that radiometric disequilibrium would be expected to negatively affect the uranium resource estimates of the deposits. Prompt Fission Neutron (PFN) geophysical logging provides direct analysis of the in situ chemical uranium content and is considered by the SLR QP as reliable for the purposes of assessing radiometric equilibrium
- The SLR QP is of the opinion the historical radiometric logging, analysis, and security procedures at the Complex were adequate for use in the estimation of the Mineral Resources. The SLR QP also opines that, based on the information available, the original gamma log data and subsequent conversion to % eU_3O_8 values are reliable.
- 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 drilling and radiometric logging data and GT interpretations in Nichols Ranch Mining Unit.
    - Nichols Ranch had near-continuous production for over five years beginning in 2014. There has been adequate drilling to develop the Mineral Resource models that have been used in the GT contour models and for successful mine planning. The Mineral Resource models at Nichols Ranch performed well during production, and the SLR QP is of the opinion that the database verification procedures for the remaining properties included in the Mineral Resource estimate (Nichols Ranch, Jane Dough, Hank, and North Rolling Pin) comply with

industry best practices and standards and are deemed suitable for use in mineralized material estimation.

- Significant discrepancies were identified with the coordinated location and GT contour interpretations for West North Butte, East North Butte, and Willow Creek.
  - EFR has not completed a thorough verification of drilling data reported on the West North Butte, East North Butte, and Willow Creek deposits. The SLR QP opines that although the resource estimate completed in 2008 adhered to industry best practices and standards at the time, the inability for EFR or the SLR QP to validate the model excludes it from the current resource estimate discussed in Section 14.0 of this Technical Report. The resource estimate should be regarded as historic and not relied upon until EFR completes validation of the historic drilling.
- Descriptions of recent drilling programs, logging, and sampling procedures have been well documented by EFR, with no significant discrepancies identified.
- The QA/QC procedures undertaken support the integrity of the database used for Mineral Resource estimation.
- The resource database is valid and suitable for Mineral Resource estimation under S-K 1300 and NI 43-101 standards.
- In the SLR QP's opinion, the assumptions, parameters, and methodology used for the Nichols Ranch Mining Unit and North Rolling Pin Mineral Resource estimate are 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 Methods

- The Complex is currently on care and maintenance status.

1.1.1.3 Mineral Processing

- The Nichols Ranch Plant is licensed and designed to have four major solution circuits: 1) the recovery circuit, 2) the elution circuit, 3) the precipitation and filtration circuit, 4) the drying and packaging circuit. The Nichols Ranch Unit processing plant is currently constructed and operated with the first three solution circuit installed.
- Due to the absence of the on-site drying and packaging circuit, the Project proposes to truck the U_3O_8 produced on-site 643 road miles to the Mill near Blanding, Utah, for drying and drumming for final delivery to end users.
- 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).
- The Mill is currently on a reduced operating schedule processing materials as they become available. The Mill is currently processing Rare Earth Element (REE) materials in part of the circuit,

functioning essentially as a pilot plant, therefore the facility is sufficiently staffed to initiate U_3O_8 production relatively quickly.

1.1.1.4 Infrastructure

- The Complex and the Mill are in historically important, uranium-producing regions of eastern Wyoming and southeastern Utah, respectively. All the regional infrastructure necessary to mine and process commercial quantities of U_3O_8 is in place.
- EFR has operated the Mill tailings cells since 1981, under the requirements of the Utah Department of Environmental Quality Radioactive Materials License.

1.1.1.5 Environment

- Nichols Ranch, Jane Dough, and the Hank Unit are fully licensed and permitted for ISR mining by major licenses and permits issued by the United States Nuclear Regulatory Commission (NRC), the Wyoming Department of Environmental Quality, Land Quality Division (WDEQ/LQD), and the Wyoming Department of Environmental Quality, Air Quality Division (WDEQ/AQD). The Hank Unit is also permitted for operation by a Decision Record issued by the Bureau of Land management (BLM).
- EFR has strong relationships with state and federal regulatory agencies and has a positive record of environmental performance at Nichols Ranch.
- The SLR QP is not aware of environmental, permitting, or social/community factors which would materially affect the Mineral Resource estimates.

1.1.2 Recommendations

The SLR QPs offer the following recommendations by area:

1.1.2.1 Geology and Mineral Resources

The SLR QP offers the following recommendations regarding the data supporting the drillhole database at the Project:

1. Transition from a Microsoft Excel database to acQuire or a similar database.
2. Verify all drilling data collar coordinates as Wyoming NAD27 UTM zone 13 coordinates. EFR should also consider moving to an updated coordinate system, such as WGS 84, for use in online graphic programs.
3. Create 3D geologic models of the Wasatch Formation and individual Sand Units for use in verifying and auditing uranium mineralization.
4. Use a handheld X-ray diffraction (XRF) tool to replace the scintillometer reading in order to obtain more precise mineralogical information.
5. Resume using PFN as a QA/QC tool to confirm disequilibrium within the Satellite Properties not yet exposed to ISR mining.

In addition, the SLR QP provides the following deposit specific recommendations:

1.1.2.1.1 Nichols Ranch Mining Unit

1.1.2.1.1.1 Nichols Ranch

The SLR QP makes the following recommendations regarding advancing the Project with Production Planning and Development for Production Area 2 (PA2):

1. Conduct drilling of 55 delineation to better define the mineralized trends in PA2 to meet a minimum 100 ft grid spacing.
2. Based on the results of the 55 delineation holes, drill and install 120 development wells, associated header houses and manifold to main production pipeline for the remaining four wellfields.

Additional plant upgrades are not required to put PA2 into production. The proposed budget for bringing PA2 into production is shown in Table 1-1.

Table 1-1: PA2 Wellfield Development
Energy Fuels Inc. – Nichols Ranch Project

Item	Cost (US$)
Drilling (Delineation - 55 holes)	$110,000
Drill and Install Wellfield (120 wells)	$1,800,000
Header House and Manifold Construction	$390,000
Total	$2,300,000

1.1.2.1.1.2 Jane Dough

1. Complete exploration and delineation drilling at Jane Dough, in concurrence with ongoing delineation and production well drilling at Nichols Ranch, starting in the areas most proximate to Nichols Ranch and proceeding southward.
2. Complete an Engineering study to define the most efficient infrastructure for production.
3. Install monitor wells and conduct pump tests for state and federal permit/license requirements in a phased approach as drilling will define multiple production areas (PAs).

1.1.2.1.1.3 Hank

1. Complete additional drilling at Hank to access, define, and upgrade classification of the Mineral Resource.
2. After drilling, complete the economic evaluation of the Hank area project.

1.1.2.1.2 Satellite Properties

1.1.2.1.2.1 North Rolling Pin

1. Install additional monitor wells for future EFR hydrologic studies. Determine groundwater levels and conduct pump tests to evaluate groundwater quality and impact on possible ISR mining.
2. Complete additional delineation drilling to meet a minimum 100 ft grid spacing.

3. Conduct additional radiological disequilibrium studies using PFN, Delayed Fission Neutron (DFN) logging, and/or core assays to develop a site-specific model. Also, conduct a bench scale leach tests to determine amenability to ISR.
4. Complete environmental baseline studies for preparation of state and federal permit/license applications.
5. After drilling, complete an economic evaluation of the North Rolling Pin project.
6. Update the current drilling database with all possible historical holes.

1.1.2.1.2.2 West North Butte, East North Butte, and Willow Creek

1. Update, verify, and certify the drilling database and ensure that all drilling, both historical and recent, is included.
2. Prepare an updated resource estimation upon completion of updating and verifying the database to make 2008 resource estimations current.
3. Install additional monitor wells for future EFR hydrologic studies. Determine groundwater levels and conduct pump tests to evaluate groundwater quality and impact on possible ISR mining.
4. Complete additional drilling to access the mineral resource.
5. Conduct additional radiological disequilibrium studies using PFN, DFN logging, and/or core assays to develop a site-specific model. Also, conduct bench scale leach tests to determine amenability to ISR.
6. Complete environmental baseline studies for preparation of state and federal permit/license applications.
7. After drilling, complete an economic evaluation of the West North Butte, East North Butte, and Willow Creek project.

1.1.2.2 Mining Methods

1. Consistent with the state and federal regulations requirements, environmental monitoring and analysis programs should be implemented to continually collect water level and water quality data when the mine site becomes fully operational.

1.1.2.3 Mineral Processing

1. Continue the intermittent Plant operations with maintenance program.
2. Evaluate the Nichols Ranch Plant's historical operating data to determine possible flow sheet improvements or modifications to improve production rate/economics and make these changes before commencing production.

1.2 Economic Analysis

An economic analysis was performed using the assumptions presented in this Technical Report. The SLR QP notes that, unlike Mineral Reserves, Mineral Resources do not have demonstrated economic viability. This PEA is preliminary in nature, and includes Inferred Mineral Resources that are considered too geologically speculative 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 Nichols Ranch base case cash flow is based on Measured, Indicated, and Inferred Mineral Resources (the latter being 17% 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 for the Nichols Ranch Mining Unit (Nichols Ranch, Jane Dough, and Hank areas), and is summarized in the Section 1.2.1.2. A summary of the key criteria is provided below.

1.2.1.1.1 Revenue

- Mineral Resource used for LOM planning: 3.3 Mst at 0.114% eU_3O_8 with 7.54 Mlb contained U_3O_8 (6.66 Mlb contained U_3O_8 attributable to EFR)
- Project areas mined (with % ownership): Nichols Ranch (100%), Jane Dough (81%), and Hank (100%) for net attributable basis of 88.3%
- An estimated 85% of the Mineral Resource will be under pattern with 71% U_3O_8 recovery, equating to an effective resource recovery of 60.4%, or 4.02 Mlb recovered U_3O_8 attributable to EFR
- A total of 17% of the LOM tonnage is Inferred Mineral Resource
- Average LOM flow rate: 3,016 gallons per minute (gpm)
- Average LOM pregnant leach solution (PLS) concentration: 33 milligrams U_3O_8 per liter (mg/L)
- Sold U_3O_8: 4.02 Mlb attributable to EFR
- Avg annual U_3O_8 sales: 393 klb/y
- Metal price: US$65.00/lb U_3O_8
- Concentrate shipping cost from the Mill to customer: $760/ton U_3O_8 or $0.38/lb U_3O_8

1.2.1.1.2 Capital and Operating Costs

- One year of preproduction for wellfield development before production in Year 1. All other infrastructure necessary to resume operations at the Complex is already constructed.
- Mine life of 11 years
- LOM sustaining capital costs of $81.4 million in Q1 2021 US dollar basis
- LOM site operating cost (including preproduction wellfield and G&A costs but excluding product transport to market cost, royalties, Ad Valorem tax, and Wyoming severance tax) of $76.1 million, or $19.28/lb U_3O_8 produced, on Q1 2021 US dollar basis
- LOM Restoration/decommissioning costs of $20.7 million in Q1 2021 US dollar basis.

1.2.1.1.3 Royalties and Severance Taxes

- Royalties for the Project are applicable to approximately 30% of the Nichols Ranch and Jane Dough Mineral Resources in the production schedule. Royalties are estimated using a rate of 8% of gross revenue generated over these areas.
- The Ad Valorem (or Gross Products) tax varies by county and is exclusively a volume based assessment.
- The current Wyoming state severance tax for the privilege of extracting uranium is 4% of Gross Product value above $60.00/lb U_3O_8. However, after the allowable wellhead deduction the effective severance tax rate can range from 0% to 5% of gross revenue, depending on the price paid. For the Project, it is estimated at approximately 2.45% of gross revenue over LOM.

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 $81.4 million taken during LOM
- Percentage depletion method was used with total allowance of $31.0 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%
- Wyoming has no corporate income tax

1.2.1.2 Cash Flow Analysis

Table 1-2 presents a summary of the Nichols Ranch base case economics at an U_3O_8 price of $65.00/lb and production schedule with 17% Inferred Mineral Resources and 83% combined Measured and Indicated Mineral Resources. The SLR QP notes 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 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 SLR QP notes that with the future exploration drilling planned at the Complex, it would be reasonable to expect a significant amount of Inferred Mineral Resources to become converted into the Indicated category through a subsequent resource model.

On an after-tax basis for the base case, the undiscounted cash flow totals $41.1 million over the mine life. The after-tax Net Present Value (NPV) at 5% discount rate is $31.5 million. The SLR QP notes that after-tax Internal Rate of Return (IRR) is not applicable as the Nichols Ranch Plant at the Complex is already constructed and already operated for a number of years. Capital identified in the economics is for sustaining operations and plant rebuilds as necessary.

Table 1-2: Base Case After-Tax Cash Flow Summary
Energy Fuels Inc. – Nichols Ranch Project

Item	Unit	Value
U_3O_8 Price	$/lb	65.00
U_3O_8 Sales	Mlb	4.02
Total Gross Revenue	**US$ M**	**262**
Wellfield Costs	US$ M	(12)
Processing Costs	US$ M	(39)
Deep Well Disposal Costs	US$ M	(1)
G&A Costs	US$ M	(26)
Selling Expense	US$ M	(2)
Production Taxes/Royalties	US$ M	(22)
Total Operating Costs	**US$ M**	**(101)**
Operating Margin	**US$ M**	**161**
Operating Margin	%	62
Corporate Income Tax	US$ M	(17)
Operating Cash Flow	**US$ M**	**143**
Sustaining Capital	US$ M	(81)
Restoration/Decommissioning	US$ M	(21)
Total Capital	**US$ M**	**(102)**
Pre-tax Free Cash Flow	US$ M	58.6
Pre-tax NPV @ 5%	**US$ M**	**46.1**
After-tax Free Cash Flow	US$ M	41.1
After-tax NPV @ 5%	**US$ M**	**31.5**

The average annual U_3O_8 sales for the base case during the 11 years of operation (and one year of preproduction expense) is 393 klb U_3O_8 per year at an average All-in Sustaining Cost (AISC) of $50.43/lb U_3O_8 (or $45.30/lb U_3O_8 excluding Restoration/ Decommissioning costs).

1.2.1.3 Sensitivity Analysis

The Project is most sensitive to uranium price and recovery, and only less sensitive to operating cost and capital cost at an American Association of Cost Engineers (AACE) International Class 4 level of accuracy (15% to -30% to +20% to +50%). The sensitivities to pounds of U_3O_8 and metal price are nearly identical. The SLR QP notes that head grade variations in ISR mining are difficult to measure at this PEA stage and thus were not included in this sensitivity analysis.

1.2.2 Alternate Case (Measured and Indicated Mineral Resources Only)

The SLR QP also undertook an analysis of an alternative case, considering only combined Measured and Indicated Mineral Resources (83% of the base case production schedule). The SLR QP notes 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 PEA is based will be realized.

Using the same cost parameters and ISR mining and processing assumptions as the base case, the alternate case production schedule generates 3.3 Mlb U_3O_8 over a nine year mine life.

Table 1-3 presents a summary of the Nichols Ranch alternate case economics at an U_3O_8 price of $65.00/lb. On an after-tax basis, the undiscounted cash flow totals $27.4 million over the mine life. The after-tax NPV at 5% discount rate is $23.7 million.

Table 1-3: Alternate Case After-Tax Cash Flow Summary
Energy Fuels Inc. – Nichols Ranch Project

Item	Unit	Value
U_3O_8 Price	$/lb	65
U_3O_8 Sales	Mlb	3.36
Total Gross Revenue	**US$ M**	**219**
Wellfield Costs	US$ M	(10)
Processing Costs	US$ M	(33)
Deep Well Disposal Costs	US$ M	(1)
G&A Costs	US$ M	(21)
Product Transport to Market Cost	US$ M	(1)
Production Taxes/Royalties	US$ M	(19)
Total Operating Costs	**US$ M**	**(85)**
Operating Margin	**US$ M**	**133**
Operating Margin	US$ M	61%
Corporate Income Tax	US$ M	(16)
Operating Cash Flow	**US$ M**	**117**
Sustaining Capital	**US$ M**	(73)
Restoration/Decommissioning	**US$ M**	(17)
Total Capital	**US$ M**	**(90)**
Pre-tax Free Cash Flow	US$ M	43.7
Pre-tax NPV @ 5%	**US$ M**	**37.4**
After-tax Free Cash Flow	US$ M	27.4
After-tax NPV @ 5%	**US$ M**	23.7

The average annual U_3O_8 sales for the alternate case during the nine years of operation are 418 klb U_3O_8 per year at an average AISC of \$52.00/lb U_3O_8 (or \$47.05/lb U_3O_8 excluding Restoration/Decommissioning costs)

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 uranium price and recovery, and only slightly less sensitive to operating cost and capital cost at an AACE International Class 4 level of accuracy.

1.3 Technical Summary

1.3.1 Property Description and Location

The Complex is located in Campbell and Johnson Counties, in eastern Wyoming, USA in the Pumpkin Buttes Mining District of the Powder River Basin, 80 miles northeast of the city of Casper, Wyoming. The Complex is located approximately at latitude 43°42' North and longitude 106°01' West. The 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" North and longitude 109°30'12" West. The proposed Project will produce approximately 366 klb U_3O_8 annually.

1.3.2 Land Tenure

Excluding the Jane Dough area in which EFR owns 81%, EFR owns 100% interest in the remaining areas which comprise the Complex land holdings totaling 10,755 acres and the Mill land holdings totalling 5,389 acres.

The Complex is divided into two primary areas, the Nichols Ranch Mining Unit and the Satellite Properties.

The Nichols Ranch Mining Unit includes the following:

- **Nichols Ranch Area** (approximately 740 acres)
- **Jane Dough Area** (approximately 3,680 acres)
- **Hank Area** (approximately 2,250 acres)

Nichols Ranch and Jane Dough are contiguous, and the Hank area is located approximately six miles north of Nichols Ranch.

EFR currently controls four additional properties (the Satellite Properties) which are known to have significant mineralization, but not currently included in the mine permit. These include:

- **North Rolling Pin (NRP) Area** (approximately 1,180 acres)
- **West North Butte (WNB) Area** (approximately 2,360 acres)
- **East North Butte (ENB) Area** (approximately 325 acres)
- **Willow Creek (WC) Area** (approximately 220 acres)

1.3.3 History

The Complex is an advanced stage project which is licensed to operate by the U.S. Nuclear Regulatory Commission (NRC) and the Wyoming Department of Environmental Quality (WDEQ). Construction of the processing facility began in 2011. Plant construction and initial wellfield installation was competed in 2014 and operations were initiated in April 2014. Production of 1,265,805 pounds of uranium oxide has been reported from initiation of production through December 31, 2019, via ISR mining.

1.3.4 Geology and Mineralization

1.3.4.1 Geologic Setting

The Complex is located in the Powder River Basin, which is a large structural and topographic depression sub-parallel to the trend of the Rocky Mountains. The Basin is bounded on the south by the Hartville Uplift and the Laramie Range, on the east by the Black Hills, and on the west by the Big Horn Mountains and the Casper Arch. The Miles City Arch in southeastern Montana forms the northern boundary of the Basin.

The Powder River Basin is an asymmetrical syncline with its axis closely paralleling the western basin margin. During sedimentary deposition, the structural axis (the line of greatest material accumulation) shifted westward resulting in the Basin's asymmetrical shape.

Uranium mineralization at the Complex deposits is hosted by the Eocene Wasatch Formation. The Wasatch Formation was deposited in a multi-channel fluvial and flood plain environment. The climate at the time of deposition was wet tropical to subtropical with medium stream and river sediment load depositing most medium grained materials. The source of the sediments, as evidenced by abundant feldspar grains in the sandstones, was the nearby Laramie and Granite Mountains.

Within the Complex, there is a repetitive transgressive/regressive sequence of sandstones separated by fine-grained horizons composed of siltstone, mudstone, carbonaceous shale, and poorly developed thin coal seams. The fine-grained materials were deposited in flood plain, shallow lake (lacustrine), and swamp environments. Ultimately, deposition of the Wasatch Formation was a function of stream bed load entering the basin and subsidence from within the basin. However, in the central part of the Powder River Basin, long periods of balanced stability occurred. During these periods the stream gradients were relatively low and allowed for development of broad (0.5 mi to 6.0 mi wide) meander belt systems, associated over-bank deposits, and finer grained materials in flood plains, swamps, and shallow bodies of water.

Meander belts in the Wasatch Formation are generally 5 ft to 30 ft thick. The A Sand at Nichols Ranch area is made up of three to four stacked meander belts and the F Sand at Hank area has two to three stacked meander belts. Individual meander belt layers will rarely terminate at the same location twice. Meanders have been noted to frequently terminate in the interior of a belt system but are more likely to terminate somewhere closer to the edge of the meander stream valley. The net effect for fluvial sands is to generally thin away from the main axis of the meander belt system. The A Sand meander belt system at Nichols Ranch area is approximately four miles wide. At Hank, the F Sand meander belt system is smaller than Nichols Ranch at approximately one and a half miles wide.

At the North Rolling Pin area, the mineralized sand horizon (F Sand) occurs within the Wasatch Formation at an approximate depth from surface ranging from 51 ft to 403 ft and averaging 282 ft to the top of the mineralization. Generally, the depth of mineralization decreases from the northeast to the southwest due mainly to topography along which the surface elevation decreases from approximately 5,180 ft to approximately 4,800 ft. The F Sand primarily consists of two stacked sand sets, termed the Upper and Lower F Sands that each average 20 ft to 25 ft thick

The mineralized sand horizons occur within the lower part of the Wasatch Formation, at an approximate depth from surface ranging from 482 ft to 1,012 ft at West North Butte, 540 ft to 660 ft at East North Butte, and 172 ft to 567 ft at Willow Creek. The host sands are primarily arkosic in composition, friable, and contain trace carbonaceous material and organic debris. There are local sandy mudstone/siltstone intervals with the sandstones, and the sands may thicken or pinch-out in some locations. Mineral resources are located in the Eocene age Wasatch Formation in what is identified as the A, B, C and F host sand units of the WNB area, the A and B host sands of the ENB area and in the A and F host sand units of the WC area.

1.3.4.2 Mineralization

The uranium mineralization is composed of amorphous uranium oxide, sooty pitchblende, and coffinite, and is deposited in void spaces between detrital sand grains and within minor authigenic clays. The host sandstone is composed of quartz, feldspar, accessory biotite and muscovite mica, and locally occurring carbon fragments. Grain size ranges from very fine to very coarse sand but is medium-grained overall. The sandstones are weakly to moderately cemented and friable. Pyrite and calcite are associated with the sands in the reduced facies. Hematite or limonite stain from pyrite are common oxidation products in the oxidized facies. Montmorillonite and kaolinite clays from oxidized feldspars are also present in the oxidized facies (Uranerz, 2010a). The uranium being extracted is hosted in a sandstone, roll front deposit at a depth ranging from 400 ft to 800 ft.

1.3.4.3 Deposit

Wyoming uranium deposits are typically sandstone roll front uranium deposits as defined in the "World Distribution of Uranium Deposits (UDEPO) with Uranium Deposit Classification", (IAEA, 2009). The key components in the formation of roll front type mineralization include:

- A permeable host formation:
  - Sandstone units of the Wasatch Formation.
- A source of soluble uranium:
  - Volcanic ash flows coincidental with Wasatch deposition containing elevated concentration of uranium is the probable source of uranium deposits for the Pumpkin Buttes Uranium District.
- Oxidizing groundwaters to leach and transport the uranium:
  - Groundwaters regionally tend to be oxidizing and slightly alkaline.
- Adequate reductant within the host formation:
  - Conditions resulting from periodic hydrogen sulfide (H_2S gas) migrating along faults and subsequent iron sulfide (pyrite) precipitation created local reducing conditions.
- Time sufficient to concentrate the uranium at the oxidation/reduction interface.
  - Uranium precipitates from solution at the oxidation/reduction boundary (REDOX) as uraninite (UO_2, Uranium oxide), which is dominant, or coffinite ($USiO_4$, uranium silicate).
  - The geohydrologic regime of the region has been stable over millions of years with groundwater movement controlled primarily by high-permeability channels within the predominantly sandstone formations of the Tertiary.

1.3.5 Exploration Status

On October 15, 1951, J. D. Love discovered uranium mineralization in the Pumpkin Buttes Mining District in the Wasatch Formation on the south side of North Pumpkin Butte in the west central portion of the Powder River Basin. The mineralization was one of eight areas recommended in April 1950 for investigation in the search for uranium bearing lignites and volcanic tuffs. In response to this recommendation, an airborne radiometric reconnaissance of most of these areas was undertaken by the USGS in October 1950. The uranium mineralization discovered by J. D. Love was in the vicinity of an aerial radiometric anomaly identified from this survey (Love, 1952).

Early mining focused on shallow oxidized areas using small open pit mines. Primary exploration methods included geologic mapping and ground radiometric surveys. Modern exploration and mining in the district have focused on deeper reduced mineralization.

Rotary drilling on the Complex is the principal method of exploration and delineation of uranium mineralization. Drilling can generally be conducted year-round on the Project.

As of the effective date of this Technical Report, EFR and its predecessor companies have completed a total of 3,942 drillholes across the Complex over the course of several drilling programs that began in 1960. Of the 3,942 drillholes recorded, EFR drilling database contains 3,504 drillholes totaling 2,363,890 ft drilled of which 449 totaling 281,126 ft have been completed by EFR since acquiring the Project in 2015. The drill record includes both Rotary and Diamond Drill (DD) drilling, monitor wells, and injection and production wells. No drilling has occurred across the properties since December 5, 2016.

1.3.6 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 NI43-101.

The SLR QP has reviewed and accepted the Mineral Resource estimate prepared by EFR for the Complex. Resource estimates were completed with the following effective dates using the GT contour method and audited by the SLR QP for accuracy and completeness:

- Nichols Ranch Mining Unit:
  - Nichols Ranch by EFR in 2021
  - Jane Dough and Hank by Uranerz in 2015
- Satellite Properties:
  - North Rolling Pin by TREC in 2010

The effective date of this Mineral Resource estimate is December 31, 2021. The U_3O_8 Mineral Resource for the Complex is reported at a GT cut-off grade of 0.20 %-ft and have been depleted as of December 31, 2021. The total production from Nichols Ranch is now 1,276,589 pounds eU_3O_8.as of December 31, 2021.

Total Measured + Indicated Resources for the Complex are 3.294 Mst at an average grade of 0.106% eU_3O_8 containing 6.988 Mlb eU_3O_8. Additional Inferred Resources total 0.65 Mst at an average grade of 0.097% eU_3O_8 containing 1.256 Mlb eU_3O_8, of which 1.176 Mlb is attributable to EFR. A summary of the Mineral Resource estimate is presented in Table 1-4..

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 1-4: Attributable Mineral Resource Estimate for the Nichols Ranch Uranium Complex – Effective December 31, 2021
Energy Fuels Inc. – Nichols Ranch Project

Project Area	Classification	Tonnage (ton)	Grade (% eU_3O_8)	Contained Metal (lb U_3O_8)	EFR Attrib. Basis (%)	EFR Attributable (lb U_3O_8)	Recovery (%)
Nichols Ranch Mining Unit + Satellite Properties	Total Measured	11,000	0.187	41,140	100.0	41,140	71.0
	Total Indicated	3,283,000	0.106	6,946,693	88.4	6,141,663	60.4
	Total Measured + Indicated	**3,294,000**	**0.106**	**6,987,833**	**88.5**	**6,182,803**	**60.4**
	Total Inferred	650,000	0.097	1,256,000	93.6	1,176,200	60.4

Notes:

1. SEC S-K 1300 definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.
2. Measured Mineral Resource includes reduction for production through December 31, 2021.
3. Mineral Resources are 100% attributable to EFR for Nichols Ranch, Hank, and North Rolling Pin, and are in situ.
4. Mineral Resources are 81% attributable to EFR and 19% attributable to United Nuclear Corp in parts of Jane Dough, and are in situ.
5. Mineral Resource estimates are based on a GT cut-off of 0.20 %-ft
6. The cut-off grade is calculated using a metal price of $65/lb U_3O_8, operating costs of $19.28/lb U_3O_8, and 60.4% recovery (based on 71% process recovery and 85% under wellfield).
7. Mineral Resources are based on a tonnage factory of 15.0 ft^3/ton (Bulk density 0.0667 ton/ft^3 or 2.13 t/m^3).
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
9. Numbers may not add due to rounding.

1.3.7 Mineral Reserves

There are no current Mineral Reserves at the Complex.

1.3.8 Mining Method

The production schedule in this Technical Report is based on ISR mining of the uranium mineralization at the Nichols Ranch Mining Unit section of the Complex (Nichols Ranch, Jane Dough, and Hank areas). ISR is an injected-solution mining process that reverses the natural processes that originally deposited the uranium in the sandstones. On-site ground water is being fortified with gaseous oxygen and introduced to the zones of uranium mineralization through a pattern of injection wells. The solution dissolves the uranium from the sandstone host.

The uranium-bearing solution is brought back to surface through production wells where the uranium is concentrated at a central processing plant and dried into yellowcake for market.

ISR mining and milling utilizes the five steps described below. The first three steps describe the mining process while steps 4 and 5 describe the milling (i.e., processing and refinement).

1. A solution called lixiviant (typically containing water mixed with oxygen and/or hydrogen peroxide, as well as sodium bicarbonate or carbon dioxide) is injected through a series of wells into the mineralized zones to dissolve and to complex the uranium.
2. The lixiviant with uranium in solution is then collected in a series of recovery wells, through which it is pumped to a processing plant, where the uranium is extracted from the solution through an ion-exchange process.
3. Once the uranium has been extracted, the lixiviant is fortified and reused in the wellfield. Typically, 99% of the solution is reused. The remaining percentage is waste which is disposed of in deep injection wells within EPA exempted aquifers.
4. The uranium extract is then further purified, concentrated, and dried to produce a material, which is called "yellowcake" because of its yellowish color.
5. Finally, the yellowcake is packed in 55-gallon drums to be transported to a uranium conversion facility, where it is processed through the stages of the nuclear fuel cycle to produce fuel for use in nuclear power reactors.

Due to the absence of the on-site drying and packaging circuit, the U_3O_8 slurry produced on-site will be trucked 643 road miles to the Mill near Blanding, Utah, for drying and drumming for final delivery to end users.

A production schedule has been developed for this Technical Report with a mine life of 11 years producing an average of 366 klb of U_3O_8 per year.

1.3.9 Mineral Processing

1.3.9.1 Nichols Ranch Plant

The Nichols Ranch Plant is licensed and designed to have four major solution circuits: 1) the recovery circuit, 2) the elution circuit, 3) the precipitation and filtration circuit, 4) the drying and packaging circuit. The first three solution circuits are constructed and operated from 2014 to 2019. Due to the absence of the on-site drying and packaging circuit, the Project proposes to truck the U_3O_8 produced on-site 643 road miles to the Mill near Blanding, Utah, for drying and drumming for final delivery to end users.

The Nichols Ranch Plant's recovery circuit includes the flow of lixiviant from the wellfield to the sand filters, or directly to the ion exchange (IX) columns, and back to the wellfield. The uranium that is liberated underground is extracted in the ion exchange system of the process plant. The bleed from the circuit is permanently removed from the lixiviant flow to create a "cone of depression" in the wellfield's static water level and ensure that the lixiviant is contained by the inward movement of groundwater within the designated recovery area. The bleed is disposed of by means of injection into two deep, approved, Class I – Non Hazardous disposal wells. The volume of the concentrated bleed is approximately 0.5% to 1.5% of the circulating lixiviant flow for the Nichols Ranch area and projected to be 2.5% to 3.5% for the Hank area.

The elution circuit consists of transferring the uranium loaded resin bed contained in an IX column into an elution column and to circulate a briny-carbonated solution through the resin bed to remove the uranium from the ion exchange resin until it is completely stripped. The barren or eluted ion exchange resin is then transferred back from the elution column to the IX column.

The uranium concentration in the eluate will be built up at a controlled concentration range of between 20 g/L to 40 g/L. This uranium rich eluate is ready for the de-carbonation process that occurs in the uranium precipitation circuit.

The precipitation and filtration circuit starts when the eluate is treated with acid to destroy the carbonate portion of the dissolved uranium complex. In addition to adding the acid slowly, a common defoamer may be used to reduce the foaming activity. The precipitation reagents, hydrogen peroxide and sodium hydroxide, are added to the eluate to start precipitating uranium yellowcake. The yellowcake slurry is then filtered, washed, and loaded into a slurry trailer. When full, the yellowcake slurry trailer is transported by road to the Mill in Blanding, Utah, where it will be unloaded, dried, and drummed for final delivery to end users.

1.3.9.2 White Mesa Mill

Yellowcake produced at the Nichols Ranch Plant will only be dried and packaged at the Mill.

The Mill is currently on a reduced operating schedule processing materials as they become available. The Mill is currently processing Rare Earth Element (REE) materials in part of the circuit, functioning essentially as a pilot plant, therefore the facility is sufficiently staffed to initiate U_3O_8 production relatively quickly.

1.3.10 Project Infrastructure

The Complex previously operated from 2014 to 2019 and is located within uranium-producing regions of central Wyoming. All the infrastructure necessary to mine and process significant commercial quantities of U_3O_8 is in place.

The Infrastructure items include:

- The Complex, near Casper, Wyoming , and Mill near Blanding, Utah
- A power line is reaching the Complex from a substation located 15 miles away on HI 50.
- The Complex water is non potable and comes from 2 of on-site water wells.
- Propane gas is used for heating and is delivered by vendors to the Complex.
- Property access by maintained dirt roads, paved roads, and highways
- Finished U_3O_8 yellowcake can be transported by truck to customer facilities nationwide
- Accommodations for employees

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

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. The SLR QP considers this price to be reasonable and consistent with industry practice.

1.3.12 Environmental, Permitting and Social Considerations

Nichols Ranch, Jane Dough, and the Hank areas are fully licensed and permitted for ISR mining and processing by major licenses and permits issued by the NRC, the WDEQ/LQD, Wyoming Department of Environmental Quality, Water Quality Division (WDEQ/WQD), and the WDEQ/AQD. Portions of the Hank area, totaling 280 acres, are on public lands managed by the BLM. This area is permitted for operation by the BLM and a FONSI and Decision Record were issued in July 2015. Nichols Ranch and the Hank areas consist of 3,370 acres and Jane Dough has approximately an additional 3,680 acres which have been approved and amended to the permitted Project boundary.

EFR has strong relationships with state and federal regulatory agencies and has a positive record of environmental performance at Nichols Ranch. The SLR QP is not aware of environmental, permitting, or social/community, factors which would materially affect the mineral resource estimates.

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 sustaining capital and restoration/decommissioning capital in Q1 2021 US dollar basis. These cost estimates are based on 2015 estimates for a 6.3 Mlb production schedule that has been adjusted by the SLR QP to 4.0 Mlb for this Technical Report and escalated to a Q1 2021 US dollar basis using subscription-based Mining Cost Services (MCS) cost indices (Infomine, 2021). The SLR QP is of the opinion that the inflationary indices since Q1 2021 are too volatile to apply against a long lived asset.

Table 1-5: Base Case Capital Cost Estimate
Energy Fuels Inc. – Nichols Ranch Project

Capital Cost Area	Cost (US$ 000)
Wellfield Development	61,327
Trunkline	227
Soft Costs	12,721

Capital Cost Area	Cost (US$ 000)
Plant - CPP Buildout	4,990
Plant - Hank Pipeline	2,177
Total Sustaining Capital	**81,442**
Restoration/Decommissioning	20,664
Grand Total	**102,105**

The average LOM operating cost of $24.5568/lb U_3O_8 produced for the base case is summarized in Table 1-6 in Q1 US dollar basis. The production cost estimate of $18.91/lb U_3O_8 is based on 2015 estimates for a 6.3 Mlb production schedule that has been adjusted by the SLR QP to 4.0 Mlb for this Technical Report and escalated to a Q1 2021 US dollar basis using the MCS cost indices. The SLR QP is of the opinion that the inflationary indices since Q1 2021 are too volatile to apply against a long lived asset.

Table 1-6: Base Case Operating Cost Estimate
Energy Fuels Inc. – Nichols Ranch Project

Item	Cost (US$ 000)	Unit Cost (US$/lb produced)
Wellfield	11,575	2.88
Processing	39,494	9.81
Deep Well Disposal	656	0.16
G & A	25,865	6.43
Total Site Operating Costs	**77,590**	**19.28**
Product Transport to Market	1,533	0.38
Total Production Costs	**79,123**	**19.66**
Ad Valorem Tax	10,583	2.63
WY Severance Tax	6,408	1.59
Royalties	4,717	1.17
Total Operating Costs	**100,832**	**25.06**

In the SLR QP's opinion, the base case capital and operating cost estimates meet an AACE International Class 4 cost estimate with an accuracy range of 15% to -30% to +20% to +50%.

2.0 INTRODUCTION

This Independent Technical Report (Technical Report) was prepared by Grant A. Malensek, M.Eng., P. Eng., Mark B. Mathisen, C.P.G., Jeremy Scott Collyard, PMP, MMSA QP, Jeffrey L. Woods, MMSA QP and Phillip E. Brown, C.P.G., R.P.G. of SLR International Corporation (SLR), for Energy Fuels Inc. (Energy Fuels), the parent company of Energy Fuels Resources (USA) Inc. (EFR), with respect to the Nichols Ranch Project (Nichols Ranch or the Project), located in eastern Wyoming, USA, for EFR's parent company, Energy Fuels Inc. EFR owns 100% of the Project, with the exception of the Jane Dough area, over which EFR holds an 81% interest.

EFR's parent company, Energy Fuels, 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. Energy Fuels 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.

This Technical Report has been amended to add the parameters related to cut-off grade calculations and to correct typographical errors. The effective date of the Mineral Resource, December 31, 2021, remains unchanged. The SLR QPs have not reviewed any additional information on the Project.

Resource estimates completed over Nichols Ranch in 2015 (Beahm and Goranson, 2015) and North Rolling Pin in 2010 (Graves, 2010) have been superseded by the Mineral Resource estimates of this Technical Report which includes additional new information and analysis.

The Project includes the Nichols Ranch Uranium Complex (the Complex) near the city of Caspar, Wyoming, and the White Mesa Mill (the Mill) near the city of Blanding, Utah. The Complex is currently on care and maintenance 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. Grant A. Malensek, M.Eng., P. Eng., Mark B. Mathisen, C.P.G., Jeremy Scott Collyard, PMP, MMSA QP, Jeffrey L. Woods, MMSA QP and Phillip E. Brown, C.P.G., R.P.G. are all QPs within the meaning of both S-K 1300 and NI 43-101 (SLR QPs).

The 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). EFR acquired the Complex in 2015. EFR has controlled 100% of the Mill's assets and liabilities since August 2012.

The Complex includes the Nichols Ranch Mining Unit, which is comprised of the Nichols Ranch wellfield (Nichols Ranch Wellfield), Nichols Ranch plant (Nichols Ranch Plant), Jane Dough area, and Hank area, and several satellite properties. The production scenario reviewed for this Technical Report assumes that the Nichols Ranch Mining Unit will be developed as an in situ recovery (ISR) mining operation with an onsite processing plant and based on the current resource, an expected 11 year mine life. The Project will produce an average of 366 thousand pounds (klb) of U_3O_8 per year on-site, which will then be trucked to the Mill for final drying and upgrading before delivery to end-users.

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 SLR QPs, Messers. Mathisen, Collyard, and Woods, in addition to Mr. Tedros Tesfay, PhD, SLR Senior Hydrogeologist, visited the Complex on October 28, 2021, and inspected the wellfields and ISR Plant. The SLR QPs, Messers. Malensek, Collyard, and Woods, also visited the Mill on November 11, 2021, and toured the operational areas, mill offices, and tailings storage facility (TSF).

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

Table 2-1: Summary of QP Responsibilities
Energy Fuels Inc. – Nichols Ranch 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, and 30
Mark B. Mathisen, C.P.G.	SLR	Principal Geologist	1.1.1.1, 1.1.2.1, 1.3.1 to 1.3.7, 2, 3, 4.1, 4.2, 4.4, 4.5, 5.1 to 5.4, 5.6, 6 to 12, 14, 15, 23, 24, 25.1, and 26.1
Jeremy Scott Collyard, PMP, MMSA QP	SLR	Mining & Minerals Sector Lead	1.1.1.5, 1.3.12, 4.3, 4.6, 20, and 25.5
Jeffrey L. Woods, MMSA QP	Woods Process Services	Principal Consulting Metallurgist	1.1.1.3, 1.1.1.4, 1.1.2.3, 1.1.2.4, 1.3.9, 1.3.10, 5.5, 13, 17, 18, 25.3, 25.4, 26.3, and 26.4
Phillip E. Brown, C.P.G., R.P.G.	Consultants in Hydrogeology	Principal Consulting Hydrogeologist	1.1.1.2, 1.1.2.2, 1.3.8, 16, 25.2, and 26.2
All	-	-	27

During the preparation of this Technical Report, discussions were held with EFR, Uranerz (a wholly owned subsidiary of EFR), and the Mill personnel:

- Gordon Sobering, PE, QP, Senior Mine Engineer, Energy Fuels Resources (USA) Inc.
- Bernard Bonifas, Director of ISR Operations, Uranerz Energy Corporation
- Bruce Larsen, Director of Geology and Land, Uranerz Energy Corporation
- Travis Boam, Senior Geologist, Uranerz Energy Corporation
- Benjamin Vrbas, Environmental Safety Health Manager, Uranerz Energy Corporation
- Tony Hinde, Project Manager, Uranerz Energy Corporation
- Daniel Kapostasy, P.G., Chief Geologist Conventional Mining, Energy Fuels Resources (USA) Inc.

- Scott Bakken, Vice President, Regulatory Affairs, Energy Fuels Resources (USA) Inc.

This Technical Report supersedes the previous NI 43-101 Technical Report completed by Beahm and Goranson, dated February 28, 2015, and the previous Technical Report completed by Graves, dated June 4, 2010.

This Technical Report was prepared by the SLR QPs. The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Section 27.0, 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 Energy Fuels. The information, conclusions, opinions, and estimates contained herein are based on:

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

3.1 Reliance on Information Provided by the Registrant

For the purpose of this Technical Report, the SLR QPs have relied on ownership information provided by Energy Fuels in a legal opinion by Brown, Drew, Massey & Durham, LLP dated February 7, 2022 entitled Ownership Summary, Nichols Ranch Project, Campbell and Johnson Counties, Wyoming. The SLR QPs have not researched property title or mineral rights for the Project as we consider it reasonable to rely on Energy Fuels' legal counsel who is responsible for maintaining this information. The opinion was relied on in Section 4 Property Description and Location and the Summary of this Technical Report.

The SLR QPs have relied on Energy Fuels for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Project, to the extent such information constitutes legal matters or governmental factors outside the expertise of the SLR QPs in the Executive Summary and Section 22.0. 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.

The SLP QPs have taken all appropriate steps, in their professional opinion, to ensure that the above information from Energy Fuels is sound.

Except for the purposes legislated under 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 Nichols Ranch Uranium Complex

Nichols Ranch is located in the Pumpkin Buttes Mining District of the Powder River Basin in Campbell and Johnson Counties in Wyoming. The Complex facilities and mine office are located at latitude of 43°42' N and longitude 106°01' W. The Complex is located approximately 70 mi southwest of Gillette, Wyoming, and 80 mi northeast of Casper, Wyoming (Figure 4-1).

The Complex (Figure 4-2) is divided into two primary areas, the Nichols Ranch mining unit (the Nichols Ranch Mining Unit) and the satellite properties (the Satellite Properties).

The Nichols Ranch Mining Unit includes the following:

- **Nichols Ranch Area** contains approximately 740 acres and is located in Sections 7, 8, 17, and 18, Township 43 North (T43N), Range 76 West (R76W), Sixth Principal Meridian at approximately 43°42' N and 106°01' W.
- **Jane Dough Area** permit boundary encompasses approximately 3,680 acres of land in Sections 20, 21, 27, 28, 29, 30, 31, 32, 33, and 34, T43N, R76W, at approximately 43°41' N and 106°01' W.
- **Hank Area** encompasses approximately 2,250 acres of land and is located in Sections 30 and 31, T44N, R75W, and Sections 5, 6, and 7, T43N, R75W. The location is approximately 43°44' N and 105°55' W.

Nichols Ranch and Jane Dough are contiguous, and the Hank area is located approximately six miles north of Nichols Ranch. All surface data is in local grid or modified NAD 1927 UTM Zone 13 (US feet) system.

EFR currently controls four additional properties (the Satellite Properties) which are known to have significant mineralization, but not currently included in the mine permit. These include:

- **North Rolling Pin (NRP) Area** is located in the Pumpkin Buttes region of the Powder River Basin in the state of Wyoming, approximately 62 air mi northeast of the city of Casper. The North Rolling Pin area is located within Campbell County, Wyoming, in the SE¼ of SE¼ Section 10, Section 11, NW¼ Section 14, and NE¼ and NW¼ of SE¼ Section 15, T43N, R76W, and SW¼ of SW¼, SE¼, and SE¼ of the NE¼ Section 35, T44N, R76W. The location is approximately 43°41' N and 105°58' W. Mining claims cover approximately 1,180 acres. This area is located approximately 2.5 mi east of Nichols Ranch.
- **West North Butte (WNB) Area** is located in Sections 10, 11, 12, 13, 14, 15, 23, 25, and 26, T44N, R76W, in Campbell County, Wyoming, in the Powder River Basin. The location is approximately 43°47' N and 105°58' W. Mining claims cover approximately 2,360 acres. This area is located approximately 6.4 mi northeast of Nichols Ranch.
- **East North Butte (ENB) Area** is located in Section 24, T44N, R76W, and Section 19, T44N, R75W in Campbell County, Wyoming, in the Powder River Basin. The location is approximately 43°46' N and 105°55' W. Mining claims cover approximately 325 acres. This area is located approximately seven miles northeast of Nichols Ranch.

- **Willow Creek (WC) Area** is located in Section 35, T44N, R76W, Campbell County, Wyoming, in the Powder River Basin. The location is approximately 43°44' N and 105°57' W. Mining claims cover approximately 220 acres. This area is located 4.5 mi northeast of Nichols Ranch.

4.1.2 White Mesa Mill

The 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 4-3).

Figure 4-3 shows the relative locations of the Complex and the Mill, and the proposed haul route for the Nichols Ranch U_3O_8 production to the Mill. The Complex and the Mill are located approximately 643 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.

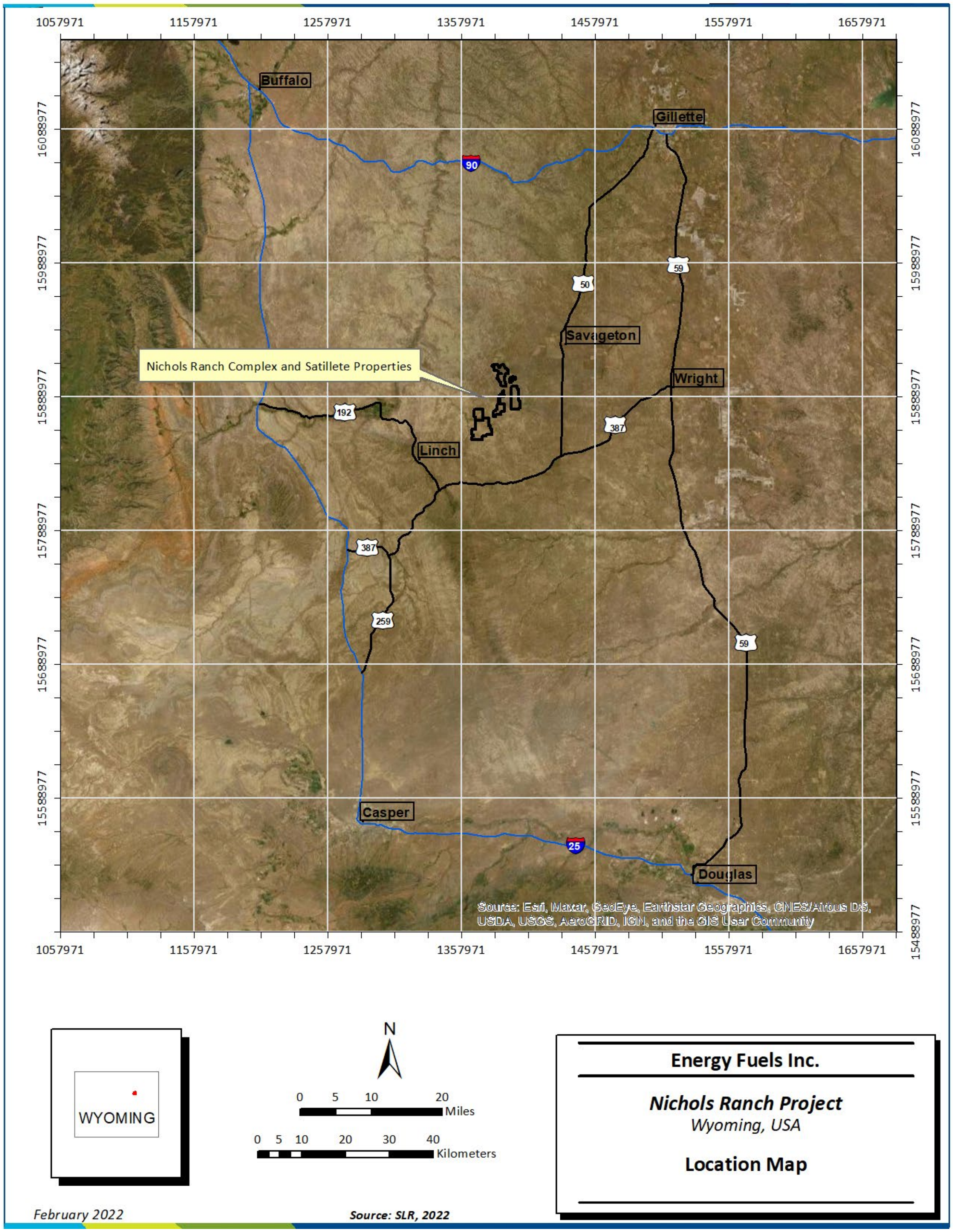


Figure 4-1: Location Map

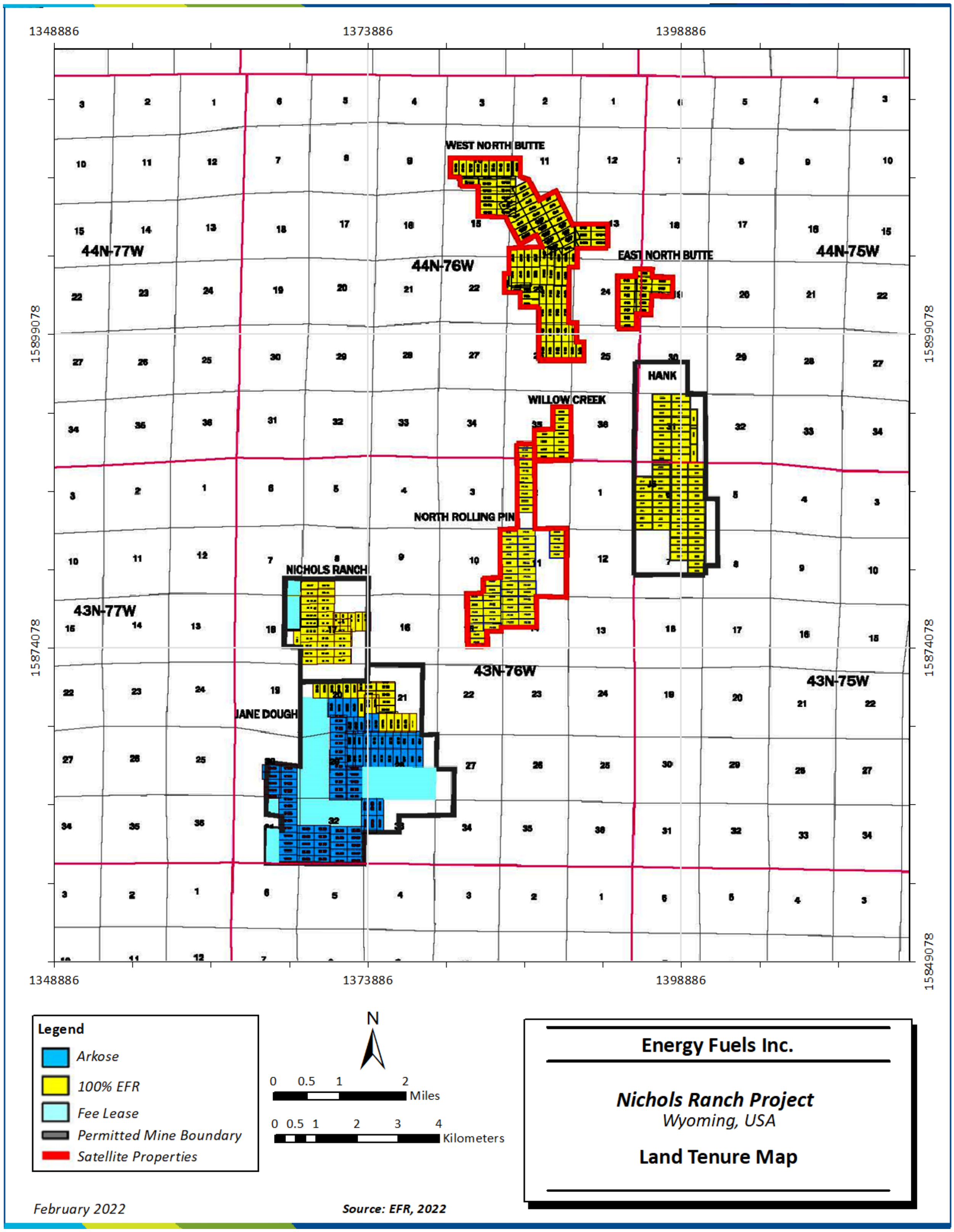


Figure 4-2: Land Tenure Map

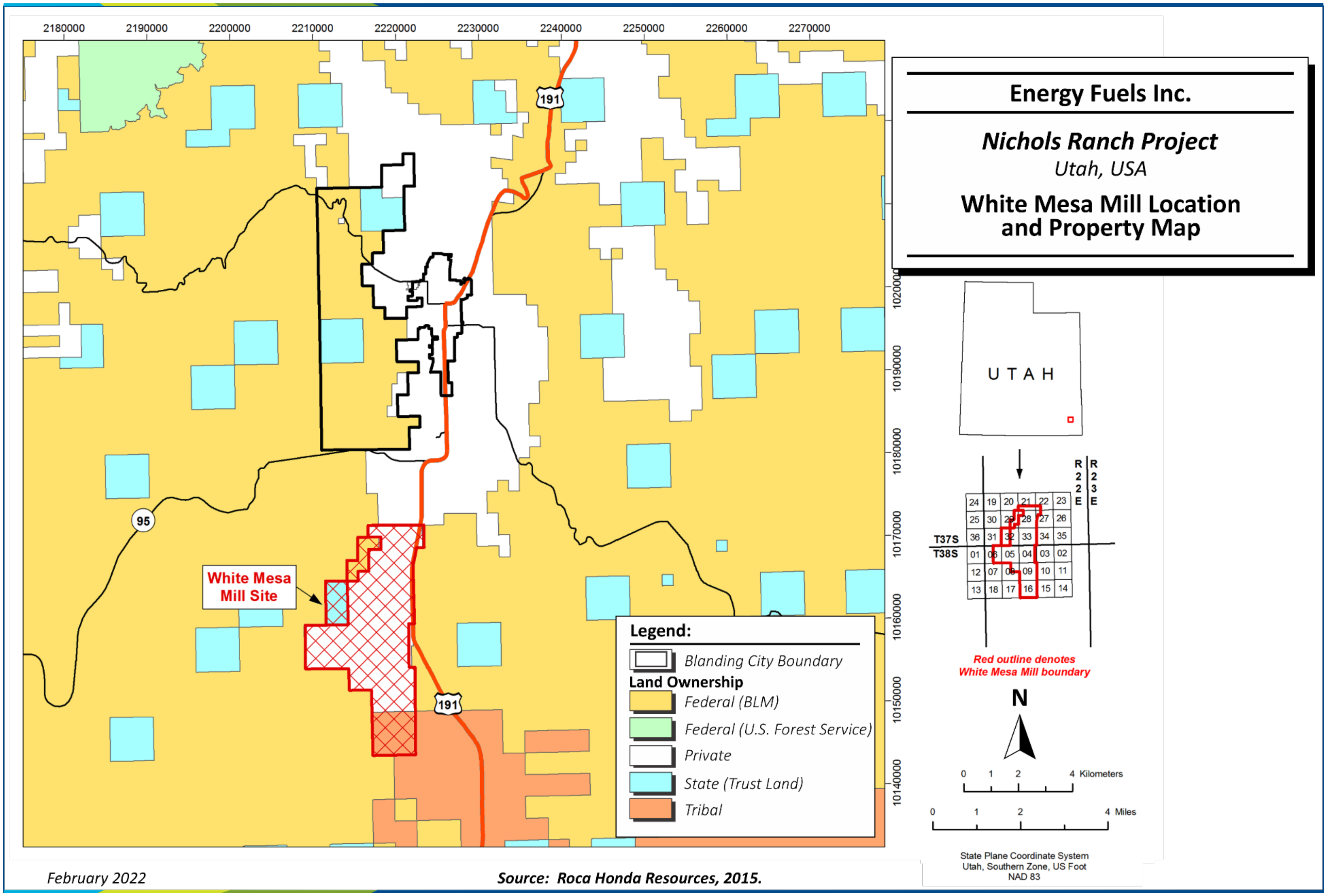


Figure 4-3: White Mesa Mill Location and Property Map

4.2 Land Tenure

4.2.1 Nichols Ranch Uranium Complex

4.2.1.1 Nichols Ranch Mining Unit

4.2.1.1.1 Nichols Ranch Area

The permit boundary for the Nichols Ranch area, located in Sections 7, 8, 17, and 18, T43N, R76W, encompasses 1,120.00 acres. Within the Nichols Ranch permit boundary, EFR has 38 unpatented lode-mining claims, two fee mineral leases and three Surface Use Agreements (SUAs). The claims and fee leases encompass approximately 920 acres. The mineral fee leases and SUA have a 10 year term. Provisions are set by the SUA for reimbursement to the surface owner for damages resulting from operations.

Claims do not have an expiration date, however, affidavits must be filed annually with the federal U.S. Bureau of Land Management (BLM) and respective county recorder's offices in order to maintain the claims' validity. In addition, most of the unpatented lode claims are located on Stock Raising Homestead land where the U.S. government has issued a patent for the surface to an individual and reserved the minerals to the U.S. government subject to the location rights by claimants as set forth in the 1872 Mining Law.

Table 4-1 presents the Nichols Ranch lode mining claims. The Nichols Ranch lode mining claims are held by Uranerz, which is 100% owned by EFR.

Table 4-1: Nichols Ranch Lode Mining Claims
Energy Fuels Inc. – Nichols Ranch Project

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
EB-69	SE	17-43N-76W	WY101420762	Campbell	09/15/1968	9/1/2022
EB-70	SE	17-43N-76W	WY101420906	Campbell	09/15/1968	9/1/2022
EB-71	NE, SE	17-43N-76W	WY101608724	Campbell	09/15/1968	9/1/2022
EB-73	NE	17-43N-76W	WY101731931	Campbell	09/15/1968	9/1/2022
EB-81	SW	17-43N-76W	WY101422980	Johnson	09/19/1968	9/1/2022
EB-83	SW	17-43N-76W	WY101606644	Johnson	09/19/1968	9/1/2022
EB-85 Am	NW, SW 17; SE, NW SE 18	17-43N-76W	WY101343361	Johnson	09/19/1968	9/1/2022
EB-87 Am	NW 17, NE 18	17,18-43N-76W	WY101425489	Johnson	09/19/1968	9/1/2022
EB-88	NW	17-43N-76W	WY101422584	Johnson	09/19/1968	9/1/2022
EB-89 Am	NW, NE	17,18-43N-76W	WY101423120	Johnson	09/19/1968	9/1/2022
EB-90	NW	17-43N-76W	WY101422355	Johnson	09/19/1968	9/1/2022
EB-91 Am	NW 17, NE 18	17,18-43N-76W	WY101731972	Johnson	09/19/1968	9/1/2022
EB-92	NW	17-43N-76W	WY101854615	Johnson	09/19/1968	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
EB-93 Am	NW 17, NE 18	17-43N-76W	WY101458512	Johnson	09/19/1968	9/1/2022
EB-77	SW	17-43N-76W	WY102524364	Johnson	01/27/2006	9/1/2022
EB-78	SW	17-43N-76W	WY102524365	Johnson	01/27/2006	9/1/2022
EB-79	SW	17-43N-76W	WY102524366	Johnson	01/27/2006	9/1/2022
EB-80	SW	17-43N-76W	WY102524367	Johnson	01/27/2006	9/1/2022
EB-82	SW	17-43N-76W	WY102524368	Johnson	01/27/2006	9/1/2022
EB-84	SW	17-43N-76W	WY102524369	Johnson	01/27/2006	9/1/2022
EB-86	NW,SW	17-43N-76W	WY102524370	Johnson	01/27/2006	9/1/2022
EB-94	NW	17-43N-76W	WY102524371	Johnson	02/06/2006	9/1/2022
EB-95	SE,SW 7, NW 17,NE 18	7,8,17,18-43N-76W	WY102524372	Johnson	02/06/2006	9/1/2022
EB-96	SW 8, NW 17	8,17-43N-76W	WY102524373	Johnson	02/06/2006	9/1/2022
EB-98	SE, SW	8-43N-76W	WY101313966	Johnson	01/28/2006	9/1/2022
EB-99	SW	7,8-43N-76W	WY102524374	Johnson	01/28/2006	9/1/2022
EB-100	SE	8-43N-76W	WY102524375	Johnson	01/28/2006	9/1/2022
EB-68	SE	17-43N-76W	WY101856483	Campbell	01/27/2006	9/1/2022
EB-97	SE 7, SW 8	7,8-43N-76W	WY101856484	Johnson	01/28/2006	9/1/2022
EB-102	NE	17-43N-76W	WY101856485	Campbell	09/26/2007	9/1/2022
EB-103	NE	17-43N-76W	WY101519051	Campbell	09/26/2007	9/1/2022
EB-104	NE	17-43N-76W	WY101519052	Campbell	09/26/2007	9/1/2022
EB-105	NE	17-43N-76W	WY101519053	Campbell	09/26/2007	9/1/2022
EB-106	NE	17-43N-76W	WY101519054	Campbell	09/26/2007	9/1/2022
EEB-1	NE, SE	18-43N-76W	WY101519055	Johnson	08/11/2009	9/1/2022
EF-1	NW	17-43N-76W	WY101474091	Campbell	03/22/2016	9/1/2022
EF-2	NW 17, NE 18	17-43N-76W	WY101474092	Campbell	03/22/2016	9/1/2022

4.2.1.1.2 Jane Dough Area

The permit boundary for the Jane Dough area encompasses approximately 3,680 acres. Within the Jane Dough permit boundary, EFR controls 117 unpatented lode-mining claims, three SUAs, and 16 fee mineral leases. The fee mineral leases and claims encompass approximately 3,121.43 acres. The fee mineral leases and SUAs have terms of 10 years, which can be extended indefinitely. The SUAs have set provisions for reimbursement to the surface owner for damages resulting from EFR operations. In the south half of Section 28, T43N, R76W, EFR controls 59.29% of the fee mineral estate under various fee mineral leases mentioned above.

Portions of the Jane Dough area were formerly held separately by EFR and the joint venture (JV) on the Arkose project (Arkose Project). These holdings have been combined. EFR retains 100% of the mineral rights for the portion it originally held and 81% of the mineral rights for the Arkose Mining Venture portion of Jane Dough. Mineral Resources for Jane Dough reflect this partition of mineral ownership.

Table 4-2 presents the Jane Dough lode mining claims. The Jane Dough lode mining claims are held by Uranerz, which is 100% owned by EFR.

Table 4-2: Jane Dough Lode Mining Claims
Energy Fuels Inc. – Nichols Ranch Project

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
EB-40	SW	21-43N-76W	WY101423165	Campbell	9/17/1968	9/1/2022
EB-42	SW	21-43N-76W	WY101605103	Campbell	9/17/1968	9/1/2022
EB-43	NE,NW	20,21-43N-76W	WY102523137	Campbell	2/6/2006	9/1/2022
EB-44	NW	21-43N-76W	WY102524361	Campbell	2/6/2006	9/1/2022
EB-45	NE,NW	20,21-43N-76W	WY102524362	Campbell	2/6/2006	9/1/2022
EB-46	NW	21-43N-76W	WY102524363	Campbell	2/6/2006	9/1/2022
RK-453	NW	33-43N-76W	WY102523280	Campbell	2/8/2006	9/1/2022
RK-454	NW	33-43N-76W	WY102523281	Campbell	2/8/2006	9/1/2022
RK-455	NW	33-43N-76W	WY102523282	Campbell	2/8/2006	9/1/2022
RK-456	NW	33-43N-76W	WY102523283	Campbell	2/8/2006	9/1/2022
RK-457	NW	33-43N-76W	WY102523284	Campbell	2/8/2006	9/1/2022
RK-458	NW	33-43N-76W	WY102524508	Campbell	2/8/2006	9/1/2022
TR-229	SE	29-43N-76W	WY101512156	Campbell	2/24/2006	9/1/2022
TR-230	SE	29-43N-76W	WY101512157	Campbell	2/24/2006	9/1/2022
TR-231	SE	29-43N-76W	WY101512158	Campbell	2/24/2006	9/1/2022
TR-232	SE	29-43N-76W	WY101512159	Campbell	2/24/2006	9/1/2022
TR-233	SE	29-43N-76W	WY101512160	Campbell	2/24/2006	9/1/2022
TR-234	SE	29-43N-76W	WY101512161	Campbell	2/24/2006	9/1/2022
TR-235	SE	29-43N-76W	WY101513425	Campbell	2/24/2006	9/1/2022
TR-236	SE	29-43N-76W	WY101513426	Campbell	2/24/2006	9/1/2022
TR-237	SE	29-43N-76W	WY101513427	Campbell	2/24/2006	9/1/2022
TR-238	NE	29-43N-76W	WY101513428	Campbell	2/24/2006	9/1/2022
TR-239	NE	29-43N-76W	WY101513429	Campbell	2/24/2006	9/1/2022
TR-240	NE	29-43N-76W	WY101513430	Campbell	2/24/2006	9/1/2022
TR-241	NE	29-43N-76W	WY101513431	Campbell	2/24/2006	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
TR-242	SE,NE	20,29-43N-76W	WY101513432	Campbell	2/24/2006	9/1/2022
TR-243	SE	20,29-43N-76W	WY101513433	Campbell	2/24/2006	9/1/2022
TR-244	SE	20-43N-76W	WY101513434	Campbell	2/24/2006	9/1/2022
TR-245	SE	20-43N-76W	WY101513435	Campbell	2/24/2006	9/1/2022
TR-246	SE	31-43N-76W	WY101514714	Johnson	2/23/2006	9/1/2022
TR-247	SE	31-43N-76W	WY101514715	Johnson	2/23/2006	9/1/2022
TR-248	SE	31-43N-76W	WY101514716	Johnson	2/23/2006	9/1/2022
TR-249	SE	31-43N-76W	WY101514717	Johnson	2/23/2006	9/1/2022
TR-250	SE	31-43N-76W	WY101514718	Johnson	2/23/2006	9/1/2022
TR-251	NE,SE	31-43N-76W	WY101514719	Johnson	2/23/2006	9/1/2022
TR-252	NE	31-43N-76W	WY101514720	Johnson	2/23/2006	9/1/2022
TR-253	NE	31-43N-76W	WY101514721	Johnson	2/23/2006	9/1/2022
TR-254	NE	31-43N-76W	WY101514722	Johnson	2/23/2006	9/1/2022
TR-255	SE,NE	30,31-43N-76W	WY101514723	Johnson	2/23/2006	9/1/2022
TR-256	SE	30-43N-76W	WY101514724	Johnson	2/23/2006	9/1/2022
TR-257	SE	30-43N-76W	WY101515999	Johnson	2/23/2006	9/1/2022
TR-258	SE	30-43N-76W	WY101516000	Johnson	2/23/2006	9/1/2022
TR-259	SE	30-43N-76W	WY101516001	Johnson	2/23/2006	9/1/2022
TR-260	SE	30-43N-76W	WY101516002	Johnson	2/23/2006	9/1/2022
TR-261	SE	30-43N-76W	WY101516003	Johnson	2/23/2006	9/1/2022
TR-262	SE	30-43N-76W	WY101516004	Johnson	2/23/2006	9/1/2022
TR-263	SE	30-43N-76W	WY101516005	Johnson	2/23/2006	9/1/2022
TR-264	NE,SE	30-43N-76W	WY101516006	Johnson	2/23/2006	9/1/2022
WC-319	SE	32-43N-76W	WY102523401	Campbell	2/22/2006	9/1/2022
WC-320	SE	32-43N-76W	WY102523402	Campbell	2/22/2006	9/1/2022
WC-321	SE	32-43N-76W	WY102523403	Campbell	2/22/2006	9/1/2022
WC-322	SE	32-43N-76W	WY102523404	Campbell	2/22/2006	9/1/2022
WC-323	SE	32-43N-76W	WY102523405	Campbell	2/22/2006	9/1/2022
WC-324	SE	32-43N-76W	WY102523406	Campbell	2/22/2006	9/1/2022
WC-325	SE	32-43N-76W	WY102523407	Campbell	2/22/2006	9/1/2022
WC-326	SE	32-43N-76W	WY102523408	Campbell	2/22/2006	9/1/2022
WC-327	SE	32-43N-76W	WY102523409	Campbell	2/22/2006	9/1/2022
WC-328	SE	32-43N-76W	WY102523410	Campbell	2/22/2006	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
WC-365	SW	32-43N-76W	WY102522273	Johnson	2/22/2006	9/1/2022
WC-366	SW	32-43N-76W	WY102522274	Johnson	2/22/2006	9/1/2022
WC-367	SW	32-43N-76W	WY102522275	Johnson	2/22/2006	9/1/2022
WC-368	SW	32-43N-76W	WY102522276	Johnson	2/22/2006	9/1/2022
WC-369	SW	32-43N-76W	WY102522277	Johnson	2/22/2006	9/1/2022
WC-370	SW	32-43N-76W	WY102522278	Johnson	2/22/2006	9/1/2022
WC-371	SW	32-43N-76W	WY102522279	Johnson	2/22/2006	9/1/2022
WC-372	SW	32-43N-76W	WY102523468	Johnson	2/22/2006	9/1/2022
WC-373	SW	32-43N-76W	WY102523469	Johnson	2/22/2006	9/1/2022
WC-374	SW	32-43N-76W	WY102523470	Johnson	2/22/2006	9/1/2022
DS-3	NE,SE	28-43N-76W	WY101353836	Campbell	12/10/2006	9/1/2022
DS-4	SE,NE	21,28-43N-76W	WY101353837	Campbell	12/10/2006	9/1/2022
DS-5	NE,SE	28-43N-76W	WY101353838	Campbell	12/10/2006	9/1/2022
DS-6	SE,NE	21,28-43N-76W	WY101353839	Campbell	12/10/2006	9/1/2022
DS-7	NE,SE	28-43N-76W	WY101353840	Campbell	12/10/2006	9/1/2022
DS-8	SE,NE	21,28-43N-76W	WY101353841	Campbell	12/10/2006	9/1/2022
DS-9	NE,NW,SE,SW	28-43N-76W	WY101353842	Campbell	12/10/2006	9/1/2022
DS-10	SE,NE,SW	21,28-43N-76W	WY101353843	Campbell	12/10/2006	9/1/2022
DS-11	NW,SW	28-43N-76W	WY101354747	Campbell	12/10/2006	9/1/2022
DS-12	SW,NW	21,28-43N-76W	WY101354748	Campbell	12/10/2006	9/1/2022
DS-13	NW,SW	28-43N-76W	WY101354749	Campbell	12/10/2006	9/1/2022
DS-14	SW,NW	21,28-43N-76W	WY101354750	Campbell	12/10/2006	9/1/2022
DS-15	NW,SW	28-43N-76W	WY101354751	Campbell	12/10/2006	9/1/2022
DS-16	SW,NW	21,28-43N-76W	WY101354752	Campbell	12/10/2006	9/1/2022
DS-17	NW,SW	28,29-43N-76W	WY101354753	Campbell	12/10/2006	9/1/2022
DS-18	NW 28; NE 29	20,21,28,29-43N-76W	WY101354754	Campbell	12/10/2006	9/1/2022
DS-19	NE,SE	29-43N-76W	WY101354755	Campbell	12/10/2006	9/1/2022
DS-20	SE 20; NE 29	20,29-43N-76W	WY101354756	Campbell	12/10/2006	9/1/2022
DS-21	NE,SE	29-43N-76W	WY101354757	Campbell	12/10/2006	9/1/2022
DS-22	SE 20; NE 29	20,29-43N-76W	WY101354758	Campbell	12/10/2006	9/1/2022
DS-23	NE,SE	29-43N-76W	WY101354759	Campbell	12/10/2006	9/1/2022
DS-24	SE 20; NE 29	20,29-43N-76W	WY101354760	Campbell	12/10/2006	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
DS-25	SE	20-43N-76W	WY101354761	Campbell	12/10/2006	9/1/2022
DS-26	NE	20-43N-76W	WY101354762	Campbell	12/10/2006	9/1/2022
DS-27	SE	20-43N-76W	WY101354763	Campbell	12/10/2006	9/1/2022
DS-28	NE	20-43N-76W	WY101354764	Campbell	12/10/2006	9/1/2022
DS-29	SE	20-43N-76W	WY101354765	Campbell	12/10/2006	9/1/2022
DS-30	NE	20-43N-76W	WY101354766	Campbell	12/10/2006	9/1/2022
DS-31	SE	20-43N-76W	WY101354767	Campbell	12/10/2006	9/1/2022
DS-32	NE	20-43N-76W	WY101354768	Campbell	12/10/2006	9/1/2022
DS-33	SE,SW	20-43N-76W	WY101355711	Campbell/ Johnson	12/10/2006	9/1/2022
DS-34	NE,NW	20-43N-76W	WY101355712	Campbell/ Johnson	12/10/2006	9/1/2022
DS-35	NW	20-43N-76W	WY101355713	Johnson	12/10/2006	9/1/2022
DS-36	NW	20-43N-76W	WY101355714	Johnson	12/10/2006	9/1/2022
DS-37	SE	20-43N-76W	WY101355715	Campbell	12/10/2006	9/1/2022
DS-38	SE	20-43N-76W	WY101355716	Campbell	12/10/2006	9/1/2022
DS-39	SE	20-43N-76W	WY101355717	Campbell	12/10/2006	9/1/2022
DS-100	SW	21-43N-76W	WY101371502	Campbell	3/1/2007	9/1/2022
DS-101	SW	21-43N-76W	WY101372148	Campbell	3/1/2007	9/1/2022
DS-102	SW	21-43N-76W	WY101372149	Campbell	3/1/2007	9/1/2022
DS-103	SW	21-43N-76W	WY101372150	Campbell	3/2/2007	9/1/2022
DS-104	SE,SW	21-43N-76W	WY101372151	Campbell	3/2/2007	9/1/2022
DS-105	SE	21-43N-76W	WY101372152	Campbell	3/2/2007	9/1/2022
DS-106	SE	21-43N-76W	WY101372153	Campbell	3/2/2007	9/1/2022
DS-109	SW	21-43N-76W	WY101372154	Campbell	3/1/2007	9/1/2022
DS-110	SW	21-43N-76W	WY101372155	Campbell	3/1/2007	9/1/2022
DS-111	SE,SW	21-43N-76W	WY101372156	Campbell	3/2/2007	9/1/2022
DS-112	NE,NW	21-43N-76W	WY101546607	Campbell	6/3/2015	9/1/2022
DS-113	NW	21-43N-76W	WY101546608	Campbell	6/3/2015	9/1/2022

4.2.1.1.3 Hank Area

The Hank area permit boundary encompasses approximately 2,250 acres. Within the permit boundary, EFR has 49 unpatented lode-mining claims, and one SUA covering approximately 1,392.58 acres.

Table 4-3 presents the Hank lode mining claims. The Hank lode mining claims are held by Uranerz, which is 100% owned by EFR.

Table 4-3: Hank Lode Mining Claims
Energy Fuels Inc. – Nichols Ranch Project

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
B-81	SE	31-44N-75W	WY101606674	Campbell	9/15/1968	9/1/2022
B-83	SE	31-44N-75W	WY101421365	Campbell	9/15/1968	9/1/2022
B-85	SE	31-44N-75W	WY101426704	Campbell	9/15/1968	9/1/2022
B-87	SE	31-44N-75W	WY101604478	Campbell	9/15/1968	9/1/2022
B-89	NE	31-44N-75W	WY101731939	Campbell	9/15/1968	9/1/2022
B-91	NE	31-44N-75W	WY101607996	Campbell	9/15/1968	9/1/2022
B-93	NE	31-44N-75W	WY101608986	Campbell	9/15/1968	9/1/2022
B-94A	NW	31-44N-75W	WY101424771	Campbell	9/15/1968	9/1/2022
B-95	NE	31-44N-75W	WY101342049	Campbell	9/15/1968	9/1/2022
B-96A	NW	31-44N-75W	WY101603271	Campbell	9/15/1968	9/1/2022
MB-1	NE	6-43N-75W	WY101736673	Campbell	6/22/2006	9/1/2022
MB-2	NE	6-43N-75W	WY101736674	Campbell	6/22/2006	9/1/2022
MB-30	NE	6-43N-75W	WY101736675	Campbell	6/22/2006	9/1/2022
MB-4	NE	6-43N-75W	WY101736676	Campbell	6/22/2006	9/1/2022
MB-5	NE	6-43N-75W	WY101736677	Campbell	6/22/2006	9/1/2022
MB-6	NE	6-43N-75W	WY101736678	Campbell	6/22/2006	9/1/2022
MB-7	NE	6-43N-75W	WY101736679	Campbell	6/22/2006	9/1/2022
MB-8	NE	6-43N-75W	WY101736680	Campbell	6/22/2006	9/1/2022
MB-9	NE	6-43N-75W	WY101736681	Campbell	6/22/2006	9/1/2022
MB-10	NE,SE	6-43N-75W	WY101736682	Campbell	6/22/2006	9/1/2022
MB-11	SE	6-43N-75W	WY101736683	Campbell	6/22/2006	9/1/2022
MB-12	SE	6-43N-75W	WY101737755	Campbell	6/22/2006	9/1/2022
MB-13	SE	6-43N-75W	WY101737756	Campbell	6/22/2006	9/1/2022
MB-14	SE	6-43N-75W	WY101737757	Campbell	6/22/2006	9/1/2022
MB-15	SE	6-43N-75W	WY101737758	Campbell	6/22/2005	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
MB-16	SE	6-43N-75W	WY101737759	Campbell	6/22/2006	9/1/2022
MB-17	SE,NE	6,7-43N-75W	WY101737760	Campbell	6/22/2006	9/1/2022
MB-18	SE,NE	6,7-43N-75W	WY101737761	Campbell	6/22/2006	9/1/2022
MB-19	NE	7-43N-75W	WY101737762	Campbell	8/1/2006	9/1/2022
MB-20	NE	7-43N-75W	WY101737763	Campbell	8/1/2006	9/1/2022
MB-21	NE	7-43N-75W	WY101737764	Campbell	8/1/2006	9/1/2022
MB-22	NE	7-43N-75W	WY101737765	Campbell	8/1/2006	9/1/2022
MB-23	NE	7-43N-75W	WY101737766	Campbell	8/1/2006	9/1/2022
MB-24	NE	7,8-43N-75W	WY101737767	Campbell	8/1/2006	9/1/2022
MB-25	NW	7-43N-75W	WY101737768	Campbell	8/1/2006	9/1/2022
MB-26	NE	7-43N-75W	WY101737769	Campbell	8/1/2006	9/1/2022
MB-28	NE	7-43N-75W	WY101737770	Campbell	8/1/2006	9/1/2022
MB-30	SE	7-43N-75W	WY101737771	Campbell	8/1/2006	9/1/2022
JS-1	SE	6-43N-75W	WY101372157	Campbell	2/27/2007	9/1/2022
JS-2	SW	6-43N-75W	WY101372158	Campbell	2/27/2007	9/1/2022
JS-3	SW	6-43N-75W	WY101372159	Campbell	2/27/2007	9/1/2022
JS-4	SW	6-43N-75W	WY101372160	Campbell	2/27/2007	9/1/2022
JS-5	SW,NW	6-43N-75W	WY101372859	Campbell	2/27/2007	9/1/2022
JS-6	SW	6-43N-75W	WY101372860	Campbell	2/27/2007	9/1/2022
JS-7	NW	6-43N-75W	WY101372861	Campbell	2/27/2007	9/1/2022
JS-8	NW	6-43N-75W	WY101372862	Campbell	2/27/2007	9/1/2022
JS-9	SW	6-43N-75W	WY101372863	Campbell	2/27/2007	9/1/2022
JS-10	SW	6-43N-75W	WY101372864	Campbell	2/27/2007	9/1/2022
JS-11	SW	6-43N-75W	WY101372865	Campbell	2/27/2007	9/1/2022
JS-12	SW,NW	6-43N-75W	WY101372866	Campbell	2/27/2007	9/1/2022
JS-13	SW	6-43N-75W	WY101372867	Campbell	2/27/2007	9/1/2022
JS-14	NW	6-43N-75W	WY101372868	Campbell	2/27/2007	9/1/2022
JS-15	NW	6-43N-75W	WY101372869	Campbell	2/27/2007	9/1/2022
JS-16	NW	6-43N-75W	WY101372870	Campbell	2/27/2007	9/1/2022
JS-17	NW	6-43N-75W	WY101372871	Campbell	2/27/2007	9/1/2022
B-100	NW	31-44N-75W	WY101673158	Campbell	2/22/2008	9/1/2022
B-101	SW	31-44N-75W	WY101674116	Campbell	2/22/2008	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
B-102	SW	31-44N-75W	WY101674117	Campbell	2/22/2008	9/1/2022
B-103	SW	31-44N-75W	WY101674118	Campbell	2/22/2008	9/1/2022
B-104	SW,NW	31-44N-75W	WY101674119	Campbell	2/22/2008	9/1/2022
B-105	SW	31-44N-75W	WY101674120	Campbell	2/22/2008	9/1/2022
B-106	NW	31-44N-75W	WY101674121	Campbell	2/22/2008	9/1/2022
B-107	NW	31-44N-75W	WY101674122	Campbell	2/22/2008	9/1/2022
HB-1	NE,SE	31-44N-75W	WY101563325	Campbell	8/10/2009	9/1/2022
HB-2	SW,SE	31-44N-75W	WY101563326	Campbell	8/10/2009	9/1/2022
HB-3	SW,SE	31-44N-75W	WY101563327	Campbell	8/10/2009	9/1/2022

4.2.1.2 Satellite Properties

4.2.1.2.1 North Rolling Pin

The North Rolling Pin area has 54 unpatented lode-mining claims and one SUA. There are no mineral fee leases associated with the NRP area. There is one SUA that will remain in force so long as the terms of the agreement are met. All of the unpatented lode mining claims have annual filing requirements with the BLM, to be paid on or before September 1 of each year. The claims area encompasses approximately 1,180 acres.

Table 4-4 presents the NRP lode mining claims. The NRP lode mining claims are held by Uranerz, which is 100% owned by EFR.

Table 4-4: North Rolling Pin Lode Mining Claims
Energy Fuels Inc. – Nichols Ranch Project

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DDYYYY)	Expiry Date (MM/DD/YYYY)
PB #1	NE	10,11-43W-76N	WY101436313	Campbell	12/2/2006	9/1/2022
PB #2	NE,NW	11-43W-76N	WY101436314	Campbell	12/2/2006	9/1/2022
PB #3	NW	10,11-43W-76N	WY101436315	Campbell	12/2/2006	9/1/2022
PB #4	NE.NW	11-43W-76N	WY101436316	Campbell	12/2/2006	9/1/2022
PB #5	NE,NW	10,11-43W-76N	WY101436317	Campbell	12/2/2006	9/1/2022
PB #6	NE,NW	11-43W-76N	WY101436318	Campbell	12/2/2006	9/1/2022
PB #7	NE,NW	10,11-43W-76N	WY101436319	Campbell	12/2/2006	9/1/2022
PB #8	NE,NW	11-43W-76N	WY101436320	Campbell	12/2/2006	9/1/2022
PB #9	NE,SE,NW,SW	10,11-43W-76N	WY101436321	Campbell	12/2/2006	9/1/2022
PB #10	NE,NW,SE,SW	11-43W-76N	WY101436322	Campbell	12/2/2006	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DDYYYY)	Expiry Date (MM/DD/YYYY)
PB #11	SE,SW	10,11-43W-76N	WY101436323	Campbell	12/2/2006	9/1/2022
PB #12	SE,SW	11-43W-76N	WY101436324	Campbell	12/2/2006	9/1/2022
PB #13	SE,SW	10,11-43W-76N	WY101436325	Campbell	12/2/2006	9/1/2022
PB #14	SE,SW	11-43W-76N	WY101436326	Campbell	12/2/2006	9/1/2022
PB #15	SE,SW	10,11-43W-76N	WY101437051	Campbell	12/2/2006	9/1/2022
PB #16	SE,SW	11-43W-76N	WY101437052	Campbell	12/2/2006	9/1/2022
PB #17	SE,SW,NW,NE	10,11,14,15-43W-76N	WY101437053	Campbell	12/2/2006	9/1/2022
PB #18	SE,SW,NW,NE	11,14-43W-76N	WY101437054	Campbell	12/2/2006	9/1/2022
PB #19	NW,NE	14,15-43W-76N	WY101437055	Campbell	12/2/2006	9/1/2022
PB #20	NE,NW	14-43W-76N	WY101437056	Campbell	12/2/2006	9/1/2022
PB #21	NW,NE	14,15-43W-76N	WY101437057	Campbell	12/2/2006	9/1/2022
PB #22	NE,NW	14-43W-76N	WY101437058	Campbell	12/2/2006	9/1/2022
PB #23	NW,NE	14,15-43W-76N	WY101437059	Campbell	12/2/2006	9/1/2022
PB #24	NE,NW	14-43W-76N	WY101437060	Campbell	12/2/2006	9/1/2022
PB #25	NW,NE	14,15-43W-76N	WY101437061	Campbell	12/2/2006	9/1/2022
PB #26	NE,NW	14-43W-76N	WY101437062	Campbell	12/2/2006	9/1/2022
PB #27	SE	10-43W-76N	WY101437063	Campbell	12/2/2006	9/1/2022
PB #28	SE	10-43W-76N	WY101437064	Campbell	12/2/2006	9/1/2022
PB #29	SE,SW,NW,NE	10,15-43W-76N	WY101437065	Campbell	12/2/2006	9/1/2022
PB #30	SE,NE	10,15-43W-76N	WY101437066	Campbell	12/2/2006	9/1/2022
PB #31	NE,NW	15-43W-76N	WY101437067	Campbell	12/2/2006	9/1/2022
PB #32	NE	15-43W-76N	WY101437068	Campbell	12/2/2006	9/1/2022
PB #33	NE,NW	15-43W-76N	WY101437069	Campbell	12/2/2006	9/1/2022
PB #34	NE	15-43W-76N	WY101437070	Campbell	12/2/2006	9/1/2022
PB #35	NE,NW	15-43W-76N	WY101437822	Campbell	12/2/2006	9/1/2022
PB #36	NE	15-43W-76N	WY101437823	Campbell	12/2/2006	9/1/2022
PB #37	NE,NW,SE,SW	15-43W-76N	WY101437824	Campbell	12/2/2006	9/1/2022
PB #38	NE,SE	15-43W-76N	WY101437825	Campbell	12/2/2006	9/1/2022
PB #39	SE,SW	15-43W-76N	WY101437826	Campbell	12/2/2006	9/1/2022
PB #40	SE,SW	15-43W-76N	WY101437827	Campbell	12/2/2006	9/1/2022
PB 53	NE	11-43W-76N	WY101437971	Campbell	6/16/2008	9/1/2022
PB 54	NE	11-43W-76N	WY101437972	Campbell	6/16/2008	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DDYYYY)	Expiry Date (MM/DD/YYYY)
PB 55	NE	11-43W-76N	WY101437973	Campbell	6/16/2008	9/1/2022
PB 56	NE	11-43W-76N	WY101437974	Campbell	6/16/2008	9/1/2022
PB 57	SW	2-43W-76N	WY101437975	Campbell	6/9/2008	9/1/2022
PB 58	SW	2-43W-76N	WY101437976	Campbell	6/9/2008	9/1/2022
PB 59	NW,SW	2-43W-76N	WY101437977	Campbell	6/9/2008	9/1/2022
PB 60	NW	2-43W-76N	WY101437978	Campbell	6/9/2008	9/1/2022
PB 61	NW	2-43W-76N	WY101437979	Campbell	6/9/2008	9/1/2022
PB 62	NW	2-43W-76N	WY101437980	Campbell	6/9/2008	9/1/2022
PB 63	NW	2,[35]-43[44]N-76N	WY101437981	Campbell	6/9/2008	9/1/2022
PB 64	SW	35-44N-76N	WY101437982	Campbell	6/9/2008	9/1/2022
PB 65	SW	35-44N-76N	WY101437983	Campbell	6/9/2008	9/1/2022
PB 66	SW	35-44N-76N	WY101437984	Campbell	6/9/2008	9/1/2022

4.2.1.2.2 West North Butte

The West North Butte area claims were acquired by Uranerz, which was acquired by EFR in 2015. There are no fee leases associated with West North Butte. There is one SUA that will remain in force provided the terms of the agreement are met.

Table 4-5 presents the West North Butte lode mining claims. The WNB lode mining claims are held by Uranerz, which is 100% owned by EFR.

Table 4-5: West North Butte Lode Mining Claims
Energy Fuels Inc. – Nichols Ranch Project

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
P 179	SE,NE	26-44W-76W	WY101426369	Campbell	2/15/1987	9/1/2022
P 180	NE	26-44W-76W	WY101497208	Campbell	2/15/1987	9/1/2022
P 181	SE,NE	26-44W-76W	WY101491777	Campbell	2/15/1987	9/1/2022
P 182	NE	26-44W-76W	WY101739809	Campbell	2/15/1987	9/1/2022
P 189	NE,SE	23-44W-76W	WY101426736	Campbell	2/16/1987	9/1/2022
P 190	SE	23-44W-76W	WY101528512	Campbell	2/16/1987	9/1/2022
P 191	NE,SE	23-44W-76W	WY101458339	Campbell	2/16/1987	9/1/2022
P 192	SE	23-44W-76W	WY101739818	Campbell	2/16/1987	9/1/2022
B1767	SE	14,23-44W-76W	WY101340343	Campbell	2/16/1987	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
B1768	NE	23-44W-76W	WY101502230	Campbell	2/16/1987	9/1/2022
B1769	NE	14,23-44W-76W	WY101490716	Campbell	2/17/1987	9/1/2022
B1770	NE	23-44W-76W	WY101856854	Campbell	2/17/1987	9/1/2022
WSC #1	SE	14-44W-76W	WY101342071	Campbell	2/24/1987	9/1/2022
WSC #2	SW,NE,SE	13,14-44W-76W	WY101502225	Campbell	2/24/1987	9/1/2022
WC #114	NW,SW	10-44W-76W	WY101490711	Campbell	2/18/1987	9/1/2022
WC #116	NW,SW	10-44W-76W	WY101856849	Campbell	2/18/1987	9/1/2022
WC #118	NW,SW	10-44W-76W	WY101607538	Campbell	2/18/1987	9/1/2022
WC #120	NE,NW,SE,SW	10-44W-76W	WY101339579	Campbell	2/18/1987	9/1/2022
WC #122	NE,SE	10-44W-76W	WY101340187	Campbell	2/18/1987	9/1/2022
WC #124	NE,SE	10-44W-76W	WY101426152	Campbell	2/18/1987	9/1/2022
WC #175	NW,NE	14, 15-44W-76W	WY101422765	Campbell	2/19/1987	9/1/2022
WC #177	NW,NE,SE,SW	14, 15-44W-76W	WY101420778	Campbell	2/19/1987	9/1/2022
WC #177A	SE,SW	10, 11-44W-76W	WY101508383	Campbell	2/19/1987	9/1/2022
WC #178	SE	10-44W-76W	WY101604763	Campbell	2/19/1987	9/1/2022
WC #180	SE	10-44W-76W	WY101608014	Campbell	2/19/1987	9/1/2022
WC #182	SE	10-44W-76W	WY101502253	Campbell	2/19/1987	9/1/2022
JC #1	SWSE	13,14-44W-76W	WY101343371	Campbell	2/21/1987	9/1/2022
JC #2	SW,NE,SE	14-44W-76W	WY101858037	Campbell	2/22/1987	9/1/2022
JC #3	NE,SE	14-44W-76W	WY101855630	Campbell	2/22/1987	9/1/2022
JC #20	SE	14-44W-76W	WY101858017	Campbell	2/24/1987	9/1/2022
JC #22	SE,SW	14-44W-76W	WY101423115	Campbell	2/24/1987	9/1/2022
JC #24	NE,NW,SE,SW	14-44W-76W	WY101527278	Campbell	2/24/1987	9/1/2022
JC #25	SW	14-44W-76W	WY101507069	Campbell	2/24/1987	9/1/2022
JC #26	NENW,SW	14-44W-76W	WY101455493	Campbell	2/24/1987	9/1/2022
JC #27	NW,SW	14-44W-76W	WY101602473	Campbell	2/24/1987	9/1/2022
JC #28	NE,NW	14-44W-76W	WY101603105	Campbell	2/24/1987	9/1/2022
JC #29	NW,SW	14-44W-76W	WY101425162	Campbell	2/24/1987	9/1/2022
JC #30	NE,NW	14-44W-76W	WY101339791	Campbell	2/25/1987	9/1/2022
JC #31	NW	14-44W-76W	WY101455756	Campbell	2/26/1987	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
JC #33	NW<NE	14,15-44W-76W	WY101608050	Campbell	2/26/1987	9/1/2022
JC #35	NW,NE	14,15-44W-76W	WY101421197	Campbell	2/26/1987	9/1/2022
P 175	SE,NE	26-44W-76W	WY101525153	Campbell	6/20/2005	9/1/2022
P 176	NE	26-44W-76W	WY101525718	Campbell	6/20/2005	9/1/2022
P 177	SE,NE	26-44W-76W	WY101525719	Campbell	6/20/2005	9/1/2022
P 178	NE	26-44W-76W	WY101525720	Campbell	6/20/2005	9/1/2022
WC 126	SE	10-44W-76W	WY101525721	Campbell	7/6/2005	9/1/2022
WC 128	SE	10-44W-76W	WY101525722	Campbell	7/6/2005	9/1/2022
WC 130	NW,SW	10,11-44W-76W	WY101525723	Campbell	7/6/2005	9/1/2022
WC 132	NW,SW	11-44W-76W	WY101525724	Campbell	7/6/2005	9/1/2022
WC 157	SE,SW	10-44W-76W	WY101525725	Campbell	7/6/2005	9/1/2022
WC 159	SE	10-44W-76W	WY101525726	Campbell	7/6/2005	9/1/2022
WC 172	NE	15-44W-76W	WY101525727	Campbell	7/7/2005	9/1/2022
WC 173	NW,NE	14-44W-76W	WY101525728	Campbell	7/7/2005	9/1/2022
WC 174	NE	15-44W-76W	WY101525729	Campbell	7/7/2005	9/1/2022
WC 176	NE	15-44W-76W	WY101525730	Campbell	7/7/2005	9/1/2022
WC 179	SE,SW	11-44W-76W	WY101525731	Campbell	7/6/2005	9/1/2022
WC 181	SE,SW	11-44W-76W	WY101525732	Campbell	7/6/2005	9/1/2022
B 900	NW	25-44W-76W	WY101525733	Campbell	6/20/2005	9/1/2022
B 901	NW	25-44W-76W	WY101525734	Campbell	6/20/2005	9/1/2022
B 902	NW	25-44W-76W	WY101525735	Campbell	6/20/2005	9/1/2022
JC 42	NW	23-44W-76W	WY101525736	Campbell	6/28/2005	9/1/2022
JC 43	SW,NW	14-44W-76W	WY101525737	Campbell	6/28/2005	9/1/2022
JC 44	NW	23-44W-76W	WY101525738	Campbell	6/28/2005	9/1/2022
JC 45	SW,NW	14-44W-76W	WY101526363	Campbell	6/28/2005	9/1/2022
JC 46	SW,NW	14-44W-76W	WY101526364	Campbell	6/28/2005	9/1/2022
JC 47	SE,SW,NE,NW	14-44W-76W	WY101526365	Campbell	6/28/2005	9/1/2022
B1765	NW	23-44W-76W	WY101526366	Campbell	6/28/2005	9/1/2022
B1766	NW	23-44W-76W	WY101526367	Campbell	6/28/2005	9/1/2022
B1771	SE	14-44W-76W	WY101526368	Campbell	6/20/2005	9/1/2022
B1772	NE	23-44W-76W	WY101526369	Campbell	6/20/2005	9/1/2022
B1773	SE	14-44W-76W	WY101526370	Campbell	6/20/2005	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
B1774	NE	23-44W-76W	WY101526371	Campbell	6/20/2005	9/1/2022
B1775	SW	13-44W-76W	WY101526372	Campbell	6/20/2005	9/1/2022
P185	NE,SE	23-44W-76W	WY101526373	Campbell	6/20/2005	9/1/2022
P 186	SE	23-44W-76W	WY101526374	Campbell	6/20/2005	9/1/2022
P 187	NE,SE	23-44W-76W	WY101526375	Campbell	6/20/2005	9/1/2022
P 188	SE	23-44W-76W	WY101526376	Campbell	6/20/2005	9/1/2022
JC 32	NW	14-44W-76W	WY101526377	Campbell	7/5/2005	9/1/2022
JC 34	SW,NW	11,14-44W-76W	WY101526378	Campbell	7/5/2005	9/1/2022
JC 36	SW,NW	11,14-44W-76W	WY101526379	Campbell	7/5/2005	9/1/2022
JC 4	NE,SE	14-44W-76W	WY101526380	Campbell	7/5/2005	9/1/2022
JC 5	NE	14-44W-76W	WY101526381	Campbell	7/5/2005	9/1/2022
JC 6	NE	14-44W-76W	WY101526382	Campbell	7/5/2005	9/1/2022
JC 7	SE,NE	11,14-44W-76W	WY101526383	Campbell	7/5/2005	9/1/2022
B1796	NW,SW	13-44W-76W	WY101526384	Campbell	6/27/2005	9/1/2022
B1797AM	SW	13-44W-76W	WY101526959	Campbell	6/27/2005	9/1/2022
B1798	SW	13-44W-76W	WY101526960	Campbell	6/27/2005	9/1/2022
B1799AM	SW	13-44W-76W	WY101526961	Campbell	6/27/2005	9/1/2022
B1800	SW	13-44W-76W	WY101526962	Campbell	6/27/2005	9/1/2022
B1801AM	SW	13-44W-76W	WY101526963	Campbell	6/27/2005	9/1/2022
B1802A	SW	13-44W-76W	WY101526964	Campbell	6/27/2005	9/1/2022
B1803A	SE,SW	13-44W-76W	WY101526965	Campbell	6/27/2005	9/1/2022
JC #1 AM	SW,SE	13,14-44W-76W	WY101312466	Campbell	2/25/2006	9/1/2022
JC #2 AM	SW,NE,SE	13,14-44W-76W	WY101312467	Campbell	2/25/2006	9/1/2022
JC #3 AM	NE,SE	14-44W-76W	WY101312468	Campbell	2/25/2006	9/1/2022
JC #20 AM	SE	14-44W-76W	WY101312469	Campbell	2/25/2006	9/1/2022
JC #22 AM	SE,SW	14-44W-76W	WY101312470	Campbell	2/25/2006	9/1/2022
JC #24 AM	NE,NW,SE,SW	14-44W-76W	WY101312471	Campbell	2/25/2006	9/1/2022
JC #25 AM	SW	14-44W-76W	WY101312472	Campbell	2/26/2006	9/1/2022
JC #26 AM	NE,NW,SW	14-44W-76W	WY101313683	Campbell	2/25/2006	9/1/2022
JC #27 AM	NW,SW	14-44W-76W	WY101313684	Campbell	2/26/2006	9/1/2022
WSC #1 AM	SE	14-44W-76W	WY101313685	Campbell	2/25/2006	9/1/2022
P 200	NW	23-44W-76W	WY101511313	Campbell	6/28/2007	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
P 201	NW	23-44W-76W	WY101511314	Campbell	6/24/2007	9/1/2022
P 202	NW	23-44W-76W	WY101511315	Campbell	6/24/2007	9/1/2022
P 203	NW	23-44W-76W	WY101511316	Campbell	6/28/2007	9/1/2022
P 204	NW,SW	23-44W-76W	WY101511317	Campbell	6/28/2007	9/1/2022
P 205	SW	23-44W-76W	WY101511318	Campbell	6/28/2007	9/1/2022

4.2.1.2.3 East North Butte

The East North Butte area claims were acquired by Uranerz. There are no fee leases associated with East North Butte. There is one SUA which will remain in force so long as the terms of the agreement are met.

Table 4-6 presents the ENB lode mining claims. The ENB lode mining claims are held by Uranerz, which is 100% owned by EFR.

Table 4-6: East North Butte Lode Mining Claims
Energy Fuels Inc. – Nichols Ranch Project

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
B-745	NE,NW,SE,SW	[19]24-44N-[75]76W	WY101491337	Campbell	2/12/1987	9/1/2022
B-747	NW	[19]24-44N-[75]76W	WY101422726	Campbell	2/12/1987	9/1/2022
B-748	NW,SW	19-44N-75W	WY101425036	Campbell	2/12/1987	9/1/2022
B-749	NW,SW,NE,SE	[19]24-44N-[75]76W	WY101340291	Campbell	2/12/1987	9/1/2022
B-750	NE	19-44N-75W	WY101855804	Campbell	2/12/1987	9/1/2022
B-751	NE	[19]24-44N-[75]76	WY101856833	Campbell	2/12/1987	9/1/2022
B-752	NE,SE	19-44N-75W	WY101425739	Campbell	2/12/1987	9/1/2022
B-753	SE	[19]24-44N-[75]76W	WY101423911	Campbell	2/12/1987	9/1/2022
B-754	SE	[19]24-44N-[75]76W	WY101422333	Campbell	2/12/1987	9/1/2022
B-1767	SE	14,23-44N-76W	WY101527286	Campbell	2/12/1987	9/1/2022
B-1768	SE,NE	23-44N-76W	WY101505868	Campbell	2/12/1987	9/1/2022
B-1769	SW,SE	14,23-44N-76W	WY101853424	Campbell	2/12/1987	9/1/2022
B-1770	SW,SE	23-44N-76W	WY101731356	Campbell	2/12/1987	9/1/2022

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
GAP-4	SE,NE	19-44N-76W	WY101340343	Campbell	2/16/1987	9/1/2022
P-19	NE	24-44N-76W	WY101502230	Campbell	2/16/1987	9/1/2022
P-21	SE,NE	24-44N-76W	WY101490716	Campbell	2/17/1987	9/1/2022
P-23	NE	24-44N-76W	WY101856854	Campbell	2/17/1987	9/1/2022
P-25	NW,NE	24-44N-76W	WY101345831	Campbell	2/12/1987	9/1/2022
P-27	NW,NE	24-44N-76W	WY101603691	Campbell	2/12/1987	9/1/2022
P-29	NW	24-44N-76W	WY101603094	Campbell	2/12/1987	9/1/2022
P-30	NW,NE	24,25-44N-76W	WY101426188	Campbell	2/12/1987	9/1/2022

4.2.1.2.4 Willow Creek

The Willow Creek area claims were acquired by Uranerz. There are no fee leases associated with Willow Creek. There is one SUA will remain in force so long as the terms of the agreement are met.

Table 4-7 presents the WC lode mining claims. The WC lode mining claims are held by Uranerz, which is 100% owned by EFR.

Table 4-7: Willow Creek Lode Mining Claims
Energy Fuels Inc. – Nichols Ranch Project

Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	County	Location Date (MM/DD/YYYY)	Expiry Date (MM/DD/YYYY)
B 860	NE	35-44N-76W	WY101421379	Campbell	2/17/1968	9/1/2022
B 862	NE	35-44N-76W	WY101731000	Campbell	2/17/1968	9/1/2022
B 858	SE	35-44N-76W	WY101339516	Campbell	2/17/1968	9/1/2022
B 857	SE	35-44N-76W	WY101345848	Campbell	2/17/1968	9/1/2022
B 853	SE	35-44N-76W	WY101420734	Campbell	2/17/1968	9/1/2022
B 852	SE	35-44N-76W	WY101527318	Campbell	2/17/1968	9/1/2022
B 851	SE	35-44N-76W	WY101529741	Campbell	2/17/1968	9/1/2022
B 855	SE	35-44N-76W	WY101606669	Campbell	2/17/1968	9/1/2022
B 854	SE	35-44N-76W	WY101607982	Campbell	2/17/1968	9/1/2022
B 850	SE	35-44N-76W	WY101608041	Campbell	2/17/1968	9/1/2022
B 856	SE	35-44N-76W	WY101731194	Campbell	2/17/1968	9/1/2022

4.3 Required Permits and Status

All of the unpatented lode mining claims have annual filing requirements with the BLM, to be paid on or before September 1 of each year. Mining claims are subject to the Mining Law of 1872. Changes in the mining law could affect the mineral tenure. The unpatented lode mining claims will remain the property of EFR provided they adhere to required filing and annual payment requirements with Johnson and Campbell Counties and the BLM. The SUAs will remain in force so long as the mining claims are maintained.

4.3.1 Exploration

EFR has conducted exploration drilling at Nichols Ranch but has not conducted any exploration drilling at Jane Dough, Hank, or the Satellite Properties since acquiring the properties in 2015. EFR has in place a Drilling Notification (DN), issued for exploration drilling, from the Wyoming Department of Environmental Quality, Land Quality Division (WDEQ/LQD).

4.3.2 Production

The Nichols Ranch, Jane Dough, and Hank areas are fully licensed and permitted for ISR mining and processing by major licenses and permits issued by the US Nuclear Regulatory Commission (NRC) and the Wyoming Department of Environmental Quality (WDEQ). Portions of the Hank area, totaling 280 acres, are on public lands managed by the BLM. This area is permitted for operation by the BLM and a Finding of No Significant Impact (FONSI) and Decision Record was issued in July 2015. The permitted Project boundary includes the Nichols Ranch and Hank areas, consisting of 3,370 acres, and was amended to include the Jane Dough area, approximately an additional 3,680 acres.

4.4 Encumbrances

To the SLR QP's knowledge there are no environmental liabilities which are not included in current bonds held by the jurisdictional regulatory agencies. Financial assurance instruments are held by the State for drilling, ISR mining, and uranium processing. The bonds are required to insure reclamation and restoration of the affected lands and aquifers in accordance with federal and state regulations and permit requirements. The WDEQ regulations require an annual review of the bonding, and bonds may be adjusted annually to reflect changes in conditions at the mine. The current approved closure cost estimate for the Complex is provided in Table 4-8.

Table 4-8: Current Reclamation Bond Summary
Energy Fuels Inc. – Nichols Ranch Project

Program/Permit	Amount (US$)	Date Approved/Agency
WDEQ/LQD[1] Permit to Mine and NRC[2] Source Materials License	6,435,000	5/29/2019 LQD
WDEQ/LQD[1] Drilling Notification DN336	50,000	1/8/2018 LQD

Note:

1. Wyoming Department of Environmental Quality – Land Quality Division
2. US Nuclear Regulatory Commission

4.5 Royalties

4.5.1 Nichols Ranch Mining Unit

4.5.1.1 Nichols Ranch Area

In Section 21, the northern portion of Section 28, eastern portion of Section 20, and northeast quarter of Section 29, unpatented lode mining claims have an overriding royalty interest burden of 6% or 8% depending on the sale price of uranium. In the southern portion of Section 32, 20 of the unpatented lode mining claims have an overriding royalty of 0.25% based on production. In the southern portion of Section 28 where North Jane is located, 14 fee mineral leases have royalties ranging from 2% to 10% depending on the sale price of uranium. In the western half of Section 29 two mineral leases have a royalty of 6% or 8% depending on the sale price of uranium. Surface owners have a set rate for reimbursement of any land taken out of service for mining activities and two of the Surface Owners could receive an extraction fee on production with a burden of 1% or 2% percent depending on the sale price of uranium.

The unpatented lode mining claims will remain the property of EFR provided it adheres to the required filing and annual payment requirements with Campbell County and the BLM. The SUA's will remain in force so long as the mining claims are maintained. Legal surveys of unpatented lode mining claims are not required and are not known to have been completed.

All of the unpatented lode mining claims have annual filing requirements (US$165 per claim) with the BLM, to be paid on or before September 1 of each year.

4.5.1.2 Jane Dough Area

In the south portion of Section 32, twenty of the unpatented lode mining claims have an overriding royalty of 0.25% based on production. In the southern half of Section 28 and northern half of section 32, five fee mineral leases have royalties ranging from 2% to 10% depending on the sale price of uranium. In the west half of Section 29, two mineral leases have a royalty of 6% or 8% depending on the sale price of uranium. Surface owners have a set rate for reimbursement of any land taken out of service for mining activities and two of the Surface Owners could receive an extraction fee on production with a burden of 1% or 2%, depending on the sale price of uranium.

The unpatented lode mining claims will remain the property of EFR provided it adheres to required filing and annual payment requirements with Campbell County and the BLM. The SUAs will remain in force so long as the mining claims are maintained. Legal surveys of unpatented lode mining claims are not required and are not known to have been completed.

All of the unpatented lode mining claims have annual filing requirements with the BLM, to be paid on or before September 1 of each year.

4.5.1.3 Hank Area

All claims were located or acquired by EFR and a portion of the claims were subject to a 6% to 8% royalty which has since been extinguished. Four claims may be subject to a 5% overriding royalty vested in Brown Land Company and its successors. The claims will remain the property of EFR provided they adhere to required filing and annual payment requirements with Campbell County and the BLM. All of the unpatented lode claims have annual filing requirements with the BLM, to be paid on or before September 1 of each year.

The SUA will remain in force so long as the terms of the agreements are met. Legal surveys of unpatented claims are not required and are not known to have been completed.

4.5.2 Satellite Properties

4.5.2.1 North Rolling Pin Area

Lode mining claims in the North Rolling Pin area are not subject to royalties. There are no fee mineral leases.

4.5.2.2 West North Butte Area

The claims were acquired by Uranerz and none of the unpatented lode claims in the West North Butte area are subject to a royalty. There are no fee leases associated with West North Butte. There is one SUA which will remain in force so long as the mining claims are maintained.

4.5.2.3 East North Butte Area

None of the unpatented lode claims in the ENB area are subject to a royalty. There are no fee mineral leases.

4.5.2.4 Willow Creek Area

The claims were acquired by Uranerz and none of the unpatented lode claims in the WC area are subject to a royalty. There are no fee leases associated with Willow Creek.

4.6 Other Significant Factors and Risks

The SLR QP is not aware of any environmental liabilities on the Project. EFR has all required permits to conduct the proposed work on the Project. The SLR QP is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the Project.

From the time of construction to the effective date of this Technical Report the Complex has experienced two minor compliance issues. Both issues pertained to the Permit to Mine issued by WDEQ/LQD and were resolved quickly under normal regulatory procedures.

4.6.1 Mine Closure Plans and Bonds

A reclamation plan is in place for the Complex which includes groundwater restoration, site decontamination and decommissioning, and surface reclamation and decommissioning. A general reclamation schedule and a reclamation cost estimate are provided in the reclamation plan. WDEQ regulations require an annual review of the bonding, and bonds may be adjusted annually to reflect changes in conditions at the mine.

Detailed reclamation plans, including site decommissioning, will be provided to the WDEQ/LQD for approval prior to initiation.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

5.1.1 Nichols Ranch Uranium Complex

The site is 80 mi northeast of Casper, Wyoming and accessible via two-wheel drive on existing county and/or private gravel and dirt roads by proceeding north approximately 10 mi from Wyoming Highway 387 on the IDT Road and approximately 12 mi northwest of the junction of Wyoming Highway 387 and Wyoming Highway 50.

5.1.2 Satellite Properties

5.1.2.1 North Rolling Pin

The NRP property is accessible via two-wheel drive on existing private gravel and dirt roads, many of which have been improved by coal bed methane (CBM) development. The approximate center of the NRP property is approximately nine miles north of Wyoming Highway 387. Some road development and improvements may be required at a later time to facilitate future development of wellfields or satellite facilities.

5.1.2.2 West North Butte, East North Butte and Willow Creek

WNB, ENB, and WC are accessible via two-wheel drive on existing county and/or private gravel and dirt roads. The approximate center of the Satellite Properties is roughly 8 mi to 11 mi west of Wyoming Highway 50, and the southern edge of the Satellite Properties is approximately 12 mi to 15 mi north of Wyoming Highway 387. Road development and improvements may be required at a later time to facilitate future development of wellfields and processing facilities. The north-northwest half of the WNB area is located in an area of significant topographical relief and would likely require significant excavation to construct roads to potential wellfields or require the use of directional drilling to develop the resource.

5.2 Vegetation

Vegetation and wildlife surveys of the Complex area were completed as part of the environmental baseline studies required for permitting and licensing. Vegetation communities consist primarily of sagebrush shrub-land and mixed grasslands, with limited juniper, greasewood, and wetland communities. The Complex area has the potential to provide habitat for mule deer, elk, pronghorn antelope, jackrabbit, cottontail rabbit, coyote, bobcat, mountain lion, red fox, badger, raccoon, skunk, chipmunk, rodents, songbirds, waterfowl, eagles, hawks, owls, sage grouse, chukar, wild turkey, Hungarian partridge, mourning dove, magpie, and crow. Most species are yearlong residents, however, some species such as elk, eagles, songbirds, and waterfowl are more abundant during migration periods.

5.3 Climate

In the vicinity of the Complex, the climate is semi-arid and receives an annual precipitation of approximately 13 in., the majority of which falls from February to April as snow. Cold, wind, and snow/blizzards may occasionally present challenges for winter exploration and construction work in this area however operations can take place year round. The summer months are typically hot, dry, and clear, except for infrequent high-intensity, short-duration storm events.

5.4 Local Resources

The Complex is located in Johnson and Campbell Counties. These counties are generally rural; according to the 2010 United States Census, there were 8,569 people living in Johnson County and 46,133 people living in Campbell County. Most of the workers at the Complex are from the local area and nearby communities such as Casper, Wyoming, approximately 80 mi southwest of the Complex. Casper is the county seat of Natrona County and, as of the 2010 census, has a population of 55,316. Casper has numerous industrial supply and service companies to support mining operations. EFR maintains an office in Casper to support its Wyoming mining operations.

The SLR QP concludes that EFR either has in place or can obtain the necessary permits and/or agreements, and local resources are sufficient for current and future ISR operations within the Complex.

5.5 Infrastructure

EFR has secured sufficient surface access rights for exploration and development of the Complex. The Nichols Ranch Mining Unit is a fully licensed, operable facility with sufficient sources of power, water, and waste disposal facilities for operations and aquifer restoration.

The basic infrastructure (power, water, and transportation) necessary to support an ISR mining operation has been established at the Nichols Ranch Mining Unit and is located within reasonable proximity of all satellite properties within this Technical Report . Existing infrastructure is associated with local oil, gas, and CBM development.

Non-potable water is and/or will be supplied by wells developed at or near the sites. Water extracted as part of ISR operations will be recycled for reinjection. Typical ISR mining operations also require a disposal well for limited quantities of fluids that cannot be returned to the production aquifers. Two deep disposal wells have been permitted and are operational at the Nichols Ranch Plant

The proximity of the Complex to paved roads will facilitate transportation of equipment, supplies, personnel, and product to and from the properties. Although the population within 50 mi of the subject properties consists mainly of rural ranch residences, personnel required for exploration, construction, and operation are available in the nearby towns of Wright, Midwest, Edgerton, Gillette, Buffalo, and Casper, Wyoming.

Power transmission lines are located on or near parts of the Project. EFR has secured power from the local electrical service provider to accommodate all operational needs.

Tailing storage areas, waste disposal areas, heap leach pad(s) are not part of the required infrastructure for the Complex, as ISR operations do not require these types of facilities. Waste disposal is accomplished via deep well injection. EFR has two such wells permitted and in operation at Nichols Ranch.

5.6 Physiography

The Complex is located within the Wyoming Basin physiographic province in the western portion of the Powder River Basin, within the Pumpkin Buttes Mining District. The Pumpkin Buttes are a series of small buttes rising up to nearly 6,000 feet above sea level (ft ASL) in elevation and approximately 1,000 ft above the surrounding plains. The rock capping the top of the buttes is the Oligocene age White River Formation erosional remnant, which is believed to have overlain the majority of the Powder River Basin. The volcanic tuffs in the White River Formation have been cited as the source of uranium in the basin (Davis, 1969). Historic and current land use in the Pumpkin Buttes Mining District includes livestock grazing, mineral development, and oil and gas development.

5.6.1 Nichols Ranch Mining Unit

The Nichols Ranch Mining Unit is situated in a low-lying plain with elevations ranging from roughly 4,600 ft ASL to 4,900 ft ASL. There are two main ephemeral drainages at the site. Both are tributaries of Cottonwood Creek, which drains to the Cheyenne River.

5.6.2 Satellite Properties

5.6.2.1 North Rolling Pin

The North Rolling Pin area consists of sagebrush and native grasses, covering rolling hills, steep walled gullies, and ephemeral streams. Elevations range from approximately 4,800 ft ASL to 5,180 ft ASL.

5.6.2.2 West North Butte, East North Butte and Willow Creek

The West North Butte and East North Butte areas are located on the west and southeast flanks of the North Pumpkin Butte, respectively. The Willow Creek area is located approximately two miles south of the West North Butte deposit.

These areas consist of sagebrush and native grasses, covering rolling hills, steep walled gullies, and flat-topped North Butte. Elevations range from approximately 4,900 ft ASL to 5,800 ft ASL, and generally slope from northeast to southwest.

6.0 HISTORY

The Complex was originally part of a large exploration area encompassing Townships 33 through 50 North of Ranges 69 through 79 West, on the Sixth Principal Meridian. In 1966, Mountain West Mines Inc. (MWM - now Excalibur Industries) began a drilling exploration program in this area. In 1967, MWM entered into an agreement with Cleveland-Cliffs Iron Company (CCI) for further exploration and option if suitable resources were found. CCI exercised its option in 1976 with plans to begin underground mining operations near North Butte, approximately six and a half miles northeast of Nichols Ranch. As economic conditions changed, and with the development of ISR mining technology, CCI's interest in the area waned. By the late 1980s, it began selling select properties or allowing them to revert back to MWM.

6.1 Prior Ownership

Uranerz acquired six uranium properties in the Powder River Basin from a third party in 2005, including the Complex.

In June 2015, EFR acquired all of the outstanding shares of Uranerz. Under that transaction, EFR acquired the Project, the Hank Project, the Reno Creek Property, the West North Butte Property, the North Rolling Pin Property, and the Arkose Mining Venture (a joint venture of ISR mining properties held 81% by Uranerz and 19% by United Nuclear Corp.), uranium sales contracts, and other assets, as well as the shares of Uranerz, which holds those assets. In May 2018, EFR sold its non-core Reno Creek Property to Uranium Energy Corp. In August 2018, EFR acquired royalties on the Project, along with royalties on several operating, standby, and advanced-stage ISR projects in Wyoming owned and operated by Power Resources, Inc., a wholly owned subsidiary of Cameco Corporation.

6.1.1 Nichols Ranch Mining Unit

The Nichols Ranch Mining Unit includes: (i) the Nichols Ranch Plant; (ii) the Nichols Ranch Wellfield; (iii) the Jane Dough area; and (iv) the Hank area, which includes the permitted but not constructed Hank satellite plant and the Hank deposit. A portion of the Jane Dough area is held through the Arkose Mining Venture, in which the EFR has an 81% interest.

6.1.2 Satellite Properties

6.1.2.1 North Rolling Pin

The North Rolling Pin area is located within a large exploration area encompassing Townships 33 through 50 North of Ranges 69 through 79 West, on the Sixth Principal Meridian. In 1966, MWM (now Excalibur Industries) began a successful drilling exploration program in a portion of the larger area. In 1967, MWM entered into an agreement with CCI for further exploration and option if suitable resources were found. CCI exercised its option in 1976 with plans to begin underground mining operations in the vicinity of North Butte. Changing economic conditions and the development of ISR mining technology reportedly ended much of CCI's interest in the area.

In addition to CCI, other uranium exploration companies during the last forty years have controlled property either within or near the North Rolling Pin Property. These included Kerr McGee, Conoco, Texaco, American Nuclear, Tennessee Valley Authority, Rio Algom Mining Corporation (Rio Algom), and Uranerz. The mining claims and leases originally controlled by most of these companies were let go over the years due to market conditions. These property abandonments continued into 2004.

In February 2007, Uranerz purchased the North Rolling Pin claims group from Robert Shook as part of a larger 138 Federal mining claims acquisition. Uranerz subsequently expanded the properties by staking additional claims in the immediate area.

6.1.2.2 West North Butte, East North Butte and Willow Creek

The West North Butte, East North Butte, and Willow Creek areas were originally part of a large exploration area encompassing Townships 33 through 50 North of Ranges 69 through 79 West, on the 6th principal meridian. In 1966, MWM (now Excalibur Industries) began a successful drilling exploration program in a portion of this area. In 1967, MWM entered into an agreement with CCI for further exploration and option if suitable resources were found. CCI exercised its option in 1976 with plans to begin underground mining operations in the vicinity of North Butte. Changing economic conditions and the development of ISR mining technology reportedly ended much of CCI's interest in the area.

In addition to CCI, other uranium exploration companies during the last forty years have controlled property either within or near the Satellite Properties. These included Kerr McGee, Conoco, Texaco, American Nuclear, Tennessee Valley Authority, and Uranerz U.S.A., Inc. Areva NC, via subsidiary Cogema Resources Inc. (Cogema), and Power Resources Inc. (a subsidiary of Cameco Corporation) have retained portions of their original land positions in the area. The mining claims and leases originally controlled by most of these companies were let go over the years due to market conditions. These property abandonments continued into 2004.

WNB, ENB, and WC cover an area of land located on the west, east and south flank of North Butte in Campbell County, Wyoming. Detailed disclosure pertaining to the chain of title of the properties comprising these areas is not known to the Authors or Uranerz representatives and is beyond the scope of this Technical Report. The following is a brief description of what is known about ownership history of these areas.

The locators of the claims acquired rights to the properties comprising the West North Butte area in 1987. In January 2007, Uranerz completed an acquisition of an undivided one-hundred percent interest in the claims comprising the West North Butte area.

The locators of the claims acquired rights to the properties comprising the East North Butte Area in 1987. In January 2007, Uranerz completed an acquisition of an undivided 100% interest in the claims comprising the East North Butte area.

The locators of the claims acquired rights to the properties comprising the Willow Creek area in the 1960s. In December 2005, Uranerz entered into an option agreement to acquire an undivided one-hundred percent interest in the claims comprising the Willow Creek area. The terms of the option agreement were satisfied in 2007 and the transfer of the claims to Uranerz was completed.

6.2 Exploration and Development History

On October 15, 1951, J. D. Love discovered uranium mineralization in the Pumpkin Buttes districts in the Wasatch Formation on the south side of North Pumpkin Butte in the west-central portion of the Powder River Basin. The mineralization was one of eight areas recommended by the U.S. Geologic Survey (USGS) in April 1950 for investigation in the search for uranium bearing lignites and volcanic tuffs. In response to this recommendation, an airborne radiometric reconnaissance of most of these areas was undertaken by the USGS in October 1950. The uranium mineralization discovered by J. D. Love was near an aerial radiometric anomaly identified from this survey (Love, 1952).

6.2.1 Nichols Ranch Uranium Complex

Exploration drilling was conducted in the Jane Dough area, Section 21 and 28, T43N, R76W, between the late 1960s and late 1970s by CCI. Little interest was generated by the completion of 46 holes from this drilling. Between 1968 and 1980 CCI drilled 150 holes and installed 3 water wells on the Nichols Ranch and Jane Dough areas. Texas Eastern Nuclear Inc. completed limited drilling and exploration on Nichols Ranch in 1985. In the early 1990s, Rio Algom also completed limited drilling in the area. In December 2005, Uranerz purchased the Nichols Ranch, Jane Dough, and Hank claims groups as part of a six-property agreement to option from Excalibur Industries. Uranerz then expanded the properties by staking additional claims in the immediate and surrounding areas.

Uranerz Energy Corporation began exploration drilling began on the Nichols Ranch area on July 11, 2006, and continued to June 6, 2015. A total of 1,098 holes (253 exploration holes, 105 monitor wells, and 740 production wells) were drilled during that time. A total of 51 exploration holes were drilled on the Hank area in 2008.

Uranerz received the Source Material License SUA-1597 in July of 2011. Nichols Ranch ISR operations began on April 15, 2014, after completion of a pre-operational inspection by the NRC Region IV office. There were two planned Production Areas (PA1 and PA2) in the Nichols Ranch area. Five header houses and their respective wellfields were installed and in operation in June 2015, when EFR acquired Uranerz, in Production Area #1. Header house #6 was commissioned in November 2015. In 2016, the EFR completed drilling 12 delineation holes and drilling and casing of 86 extraction wells in Header Houses #7 and #8 in Production Area #1. Header House #7 was turned on in March 2016 and Header House #8 was turned on in June 2016. In Production Area #2, 133 extraction and injection wells were drilled and cased. Header House #9 was completed and turned on in March 2017. No drilling or other development activities have been performed since 2017.

In January 2008, Uranerz entered into a JV on the Arkose Project, resulting in an 81% undivided interest in the mineral rights controlled by the JV. Uranerz commenced exploration on the Arkose Project in 2008. A total of 1,971 exploration holes were drilled on the Arkose Mining Venture from April 2008 to August 2012. A portion of the Arkose Mining Venture holdings were subsequently incorporated into the Jane Dough portion of the Nichols Ranch Mining Unit and remain subject to the 81% ownership, as discussed in Section 4.0 of this Technical Report.

6.2.2 Satellite Properties

6.2.2.1 North Rolling Pin

Mining claims were first staked in the North Rolling Pin area by MWM sometime before 1968. Exploration drilling was conducted in the North Rolling Pin area Sections 11, 14 and 15, T43N, R76W, between 1968 and 1982 by CCI. A total of 476 exploration holes were drilled including 10 core holes. CCI was reported to be investigating the NRP area for open pit mining potential but never carried those plans past the exploration phase. In 2008 and 2009, Uranerz drilled 18 exploration holes in Sections 11 and 14. This drilling was performed to evaluate the potential for mineralization below the zones explored by CCI and for confirmation of the previously identified mineralization in the F Sand.

6.2.2.2 West North Butte, East North Butte and Willow Creek

Between 1968 and 1985, CCI drilled approximately 380 exploratory holes within the West North Butte, East North Butte, and Willow Creek areas. From 1983 to 1985, Texas Eastern Nuclear drilled approximately 12 exploratory holes in these areas. From approximately 1990 to 1992, Rio Algom drilled approximately 5 exploratory holes. In 2006, Uranerz completed an acquisition of these areas, and in 2007 and 2008, drilled approximately 127 exploratory holes.

6.3 Historical Resource Estimates

Mineral resource estimates were reported using the Grade-Tonnage (GT) Contour method for the Nichols Ranch Mining Unit in 2015 (Beahm and Goranson, 2015), and Satellite Properties, North Rolling Pin in 2010 (Graves, 2010), and West North Butte, East North Butte and Willow Creek in 2008 (Graves and Woody, 2008) The primary data used in all the evaluation is equivalent uranium values as quantified by downhole geophysical logging reported as % eU_3O_8. Radiometric equilibrium was evaluated and a disequilibrium factor (DEF) of 1 was used. The minimum uranium grade included in the estimate was 0.02% eU_3O_8. Mineral resources were reported at a cut-off of 0.20 GT, which is the cut-off applied at the Nichols Ranch operation during this time.

The SLR QP and EFR do not consider the historical resource estimates completed over West North Butte, East North Butte, and Willow Creek to be current Mineral Resources or Mineral Reserves as defined in S-K 1300 or NI 43-101, nor has EFR or the SLR QP completed sufficient work to confirm these estimates. These estimates (Graves and Woody, 2008) are historical and obsolete and only included here as an indication of mineralization and should not be relied upon (Table 6-1). This resource estimate has been excluded from the current Mineral Resource Estimate.

Resource estimates completed over Nichols Ranch in 2015 (Beahm and Goranson, 2015) and North Rolling Pin in 2010 (Graves, 2010) have been superseded by the Mineral Resource estimates in Section 14.0 of this Technical Report which includes additional new information and analysis.

Resource estimates for the Jane Dough and Hank properties were also completed in 2015 (Beahm and Goranson, 2015). EFR and the SLR QP reviewed these estimates and found them acceptable for reporting Mineral Resources as described in Section 14.0 of this Technical Report.

Table 6-1: Historic Mineral Resource Estimates
Energy Fuels Inc. – Nichols Ranch Project

Project Area	Classification	Sand	Tonnage (ton)	Grade (% eU_3O_8)	Contained Metal (lb U_3O_8)	Attributable Metal (lb U_3O_8)	Reference
West North Butte, East North Butte, and Willow Creek	Measured	A, B/LB, C, and F	-	-	-	-	Graves and Woody, 2008
	Indicated	A, B/LB, C, and F	926,292	0.153	2,837,015	2,837,015	
	Measured + Indicated	**A, B/LB, C, and F**	**926,292**	**0.153**	**2,837,015**	**2,837,015**	
	Inferred	A, B/LB, C, and F	1,116,969	0.120	2,681,928	2,681,928	

Notes:

1. 100% of West North Butte, East North Butte, and Willow Creek are attributed to Uranerz.
2. Mineral resources are reported at GT cut-off of 0.20.

6.4 Past Production

6.4.1 Nichols Ranch Mining Unit

6.4.1.1 Nichols Ranch Area

The Nichols Ranch area includes a formerly operating ISR plant and wellfields, licensed to operate by the NRC and WDEQ. Construction of the Nichols Ranch Plant began in 2011. Plant construction and initial wellfield installation were competed in 2014 and operations were initiated on April 15, 2014. Production of 302,359 lb of uranium oxide was reported from initiation of production through June 2015, prior to EFR acquisition. The Nichols Ranch area is licensed at an annual capacity of two million pounds uranium oxide.

EFR completed construction of an elution and precipitation circuit at the Nichols Ranch Plant in early February 2016. Yellowcake slurry was then transported from the Nichols Ranch Plant to the Mill for drying and packaging. The Nichols Ranch Plant is currently licensed to allow for the construction and operation of a drying and packaging circuit should conditions warrant.

Operations at Nichols Ranch area ceased in 2019 and it is currently on care and maintenance.

6.4.1.2 Jane Dough and Hank

The Jane Dough and Hank areas are included in the Nichols Ranch permit, however, no production has occurred at either area.

6.4.2 Satellite Properties

In the early 1970s there was limited production on the North Rolling Pin property, however no production has occurred on the remaining Satellite Properties.

6.4.2.1 North Rolling Pin

In the early 1970s CCI and Wyoming Mineral Corporation (WMC) conducted research and development (R&D) activities at an ISR test site located in the North Rolling Pin area, including production of an unknown amount of granular yellowcake. It should be noted that production of granular yellowcake at the North Rolling Pin pilot plant did not exceed 500 lb as dictated by the limitation set forth in the Source Material License granted to CCI by the NRC.

Records indicate that CCI applied for a Source Materials License on December 26, 1973, and approval was granted on May 23, 1974 (SUA-1199). Research and development permitting was not required by the State of Wyoming at the time of the operation. The North Rolling Pin pilot plant was located in the northwest corner of Section 14, T43N, R76W. The plant was portable, mounted on two 45-foot mobile trailers and had a rated capacity of 25 gpm. The wellfield consisted of twelve wells: eight were used for the injection and recovery and four were utilized as monitor wells. The lixiviant used in the tests was a low strength ammonium carbonate/bicarbonate solution with a hydrogen peroxide oxidant. The stripping of the uranium from the resin was affected with a chloride elution and the precipitation process utilized hydrochloric acid and ammonia (In-Situ Consulting, 1979). On June 19, 1974, two 5-spot tests were conducted at the site by WMC. The tests ended November 1, 1974, and WMC concluded that the test work demonstrated that the confinement generated by injecting water into wells outside the system that provides leaching agent to the host is possible.

Poor weather in late fall of 1974 cut short the restoration efforts by WMC. CCI hoped the reclamation work already conducted by WMC would satisfy the restoration liability, but post assaying data confirmed above background concentrations in most of the wells and did not show adequate restoration. CCI contracted In-Situ Consulting for technical assistance and continued with groundwater restoration efforts. CCI began field preparation for their restoration efforts in June 1978, which involved the installation of a piping system to all wells, setting pumps, locating generators, fuel tanks, an evaporation pond and bladder tanks (In-Situ Consulting, 1979). In July 1980, CCI was authorized to begin the comprehensive site restoration scheme and on November 5, 1982, the Source Material License (SUA-1199) was terminated based on successful completion of final site restoration and an NRC closeout inspection.

6.4.2.2 West North Butte, East North Butte and Willow Creek

No past production has occurred on these areas.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Complex is located in the Powder River Basin, which is a large structural and topographic depression sub-parallel to the trend of the Rocky Mountains. The Basin is bounded on the south by the Hartville Uplift and the Laramie Range, on the east by the Black Hills, and on the west by the Big Horn Mountains and the Casper Arch. The Miles City Arch in southeastern Montana forms the northern boundary of the Basin.

The Powder River Basin is an asymmetrical syncline with its axis closely paralleling the western basin margin. During sedimentary deposition, the structural axis (the line of greatest material accumulation) shifted westward resulting in the Basin's asymmetrical shape (Figure 7-1). On the eastern flank of the Powder River Basin, sedimentary rock strata dip gently to the west at approximately 0.5° to 3.0°. On the western flank, the strata dip more steeply, 0.5° to 15° to the east with the dip increasing as distance increases westward from the axis. The general surficial geology of this portion of the Powder River Basin is shown on Figure 7-2.

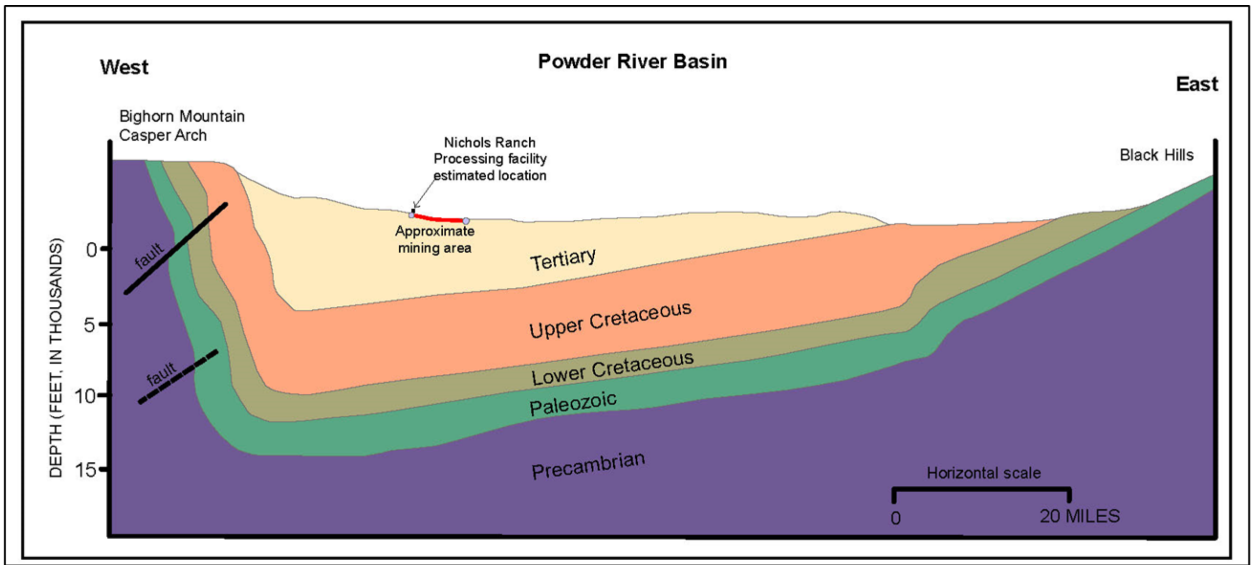


Figure 7-1: Cross Section of Local Geology

The Powder River Basin hosts a sedimentary rock sequence that has a maximum approximate thickness of 15,000 ft along the synclinal axis. The sediments range in age from Recent (Holocene) to early Paleozoic (Cambrian - 500 million to 600 million years ago) and overlie a basement complex of Precambrian-age (more than a billion years old) igneous and metamorphic rocks. Geologically, the Powder River Basin is a closed depression in what was, for a long geologic time period, a large basin extending from the Arctic to the Gulf of Mexico. During the Paleozoic and Mesozoic eras, the configuration of this expansive basin changed as the result of uplift on its margins. By the late Tertiary Paleocene time, marked uplift of inland masses surrounding the Powder River Basin resulted in accelerated subsidence in the southern portion of the basin with thick sequences of arkosic (containing feldspar) sediments being deposited. Arkosic sediments were derived from the granitic cores of the Laramie and Granite Mountains exposed to weathering and erosion by the Laramide uplift. Near the end of Eocene time, northward tilting and deep weathering with minor erosion took place in the basin. Subsidence resumed in the late Oligocene and continued through the Miocene and into the Pliocene. A great thickness of tuffaceous sediments was deposited in the basin during at least a part of this period of subsidence. By the late Pliocene, regional uplift was taking place, leading to a general rise in elevation of several thousand feet. The massive erosional pattern that characterizes much of the Powder River Basin began with the Pliocene uplift and continues to the present.

The White River Formation is the youngest Tertiary unit that still exists in the Powder River Basin. Locally, its only known remnants are found on top of the Pumpkin Buttes. Elsewhere the unit consists of thick sequences of buff-colored tuffaceous sediments interspersed with lenses of fine sand and siltstone. A basal conglomerate forms the resistant cap rock on top of the buttes. This formation is not known to contain significant uranium mineralization in this area.

The Wasatch Formation is the next underlying unit and consists of interbedded mudstones, carbonaceous shales, silty sandstones, and relatively clean sandstones. Near the Pumpkin Buttes, the Wasatch Formation is known to be 1,575 ft thick (Sharp and Gibbons, 1964). The interbedded mudstones, siltstones, and relatively clean sandstones in the Wasatch vary in degree of lithification from uncemented to moderately well-cemented sandstones, and from weakly compacted and cemented mudstones to fissile shales. The Wasatch Formation hosts significant uranium mineralization.

The next underlying unit is the Fort Union Formation. In the Powder River Basin this unit is lithologically similar to the Wasatch Formation. The Fort Union includes interbedded silty claystones, sandy siltstones, relatively clean sandstones, claystones, and coal. The degree of lithification is quite variable, ranging from virtually uncemented sands to moderately well-cemented siltstones and sandstones. The total thickness of the Fort Union in this area is approximately 3,000 ft. The Fort Union hosts significant uranium mineralization at various locations in the basin.

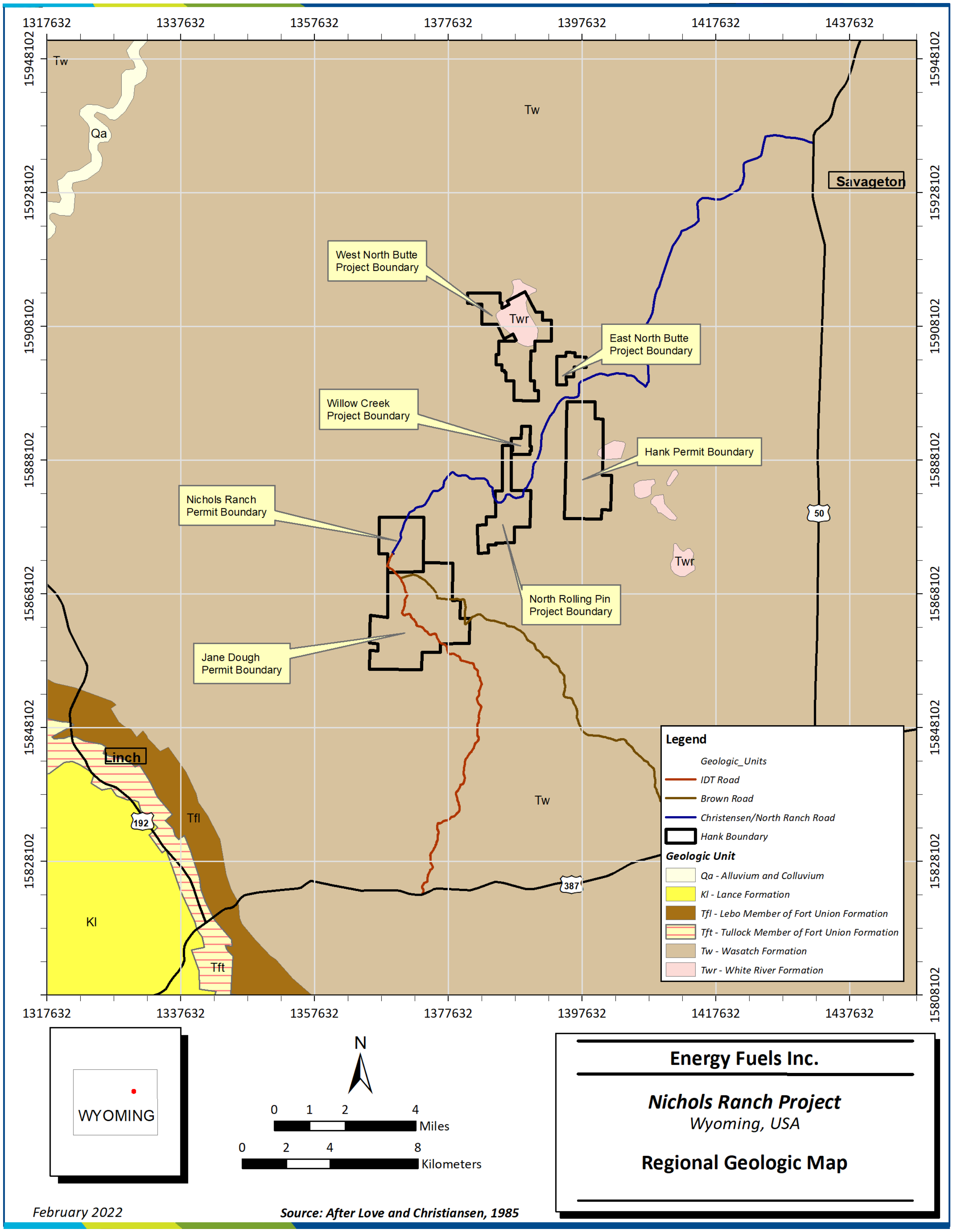


Figure 7-2: Regional Geologic Map

7.2 Local Geology

Uranium mineralization at the Complex deposits is hosted by the Eocene Wasatch Formation. The Wasatch Formation was deposited in a multi-channel fluvial and flood plain environment. The climate at the time of deposition was wet tropical to subtropical with medium stream and river sediment load depositing most medium grained materials. The source of the sediments, as evidenced by abundant feldspar grains in the sandstones, was the nearby Laramie and Granite Mountains.

Within the Complex, there is a repetitive transgressive/regressive sequence of sandstones separated by fine-grained horizons composed of siltstone, mudstone, carbonaceous shale, and poorly developed thin coal seams. The fine-grained materials were deposited in flood plain, shallow lake (lacustrine), and swamp environments. Ultimately, deposition of the Wasatch Formation was a function of stream bed load entering the basin and subsidence from within the basin. However, in the central part of the Powder River Basin, long periods of balanced stability occurred. During these periods the stream gradients were relatively low and allowed for development of broad (0.5 mi to 6.0 mi wide) meander belt systems, associated over-bank deposits, and finer grained materials in flood plains, swamps, and shallow bodies of water. Evidence for depositional stability exists as several coal bed markers with little or no channel scouring are in contact with the major sand horizons (Davis, 1969). The base of the A Sand at Nichols Ranch and Jane Dough is underlain by basal lignite and carbonaceous shales.

7.2.1 Depositional Environment

In a fluvial meandering stream process, the flow channel is sinuous in plan view with the highest flow energy concentrated on the outside edge of the channel as it turns through a meander. This results in cutting into the outside channel wall and caving material into the channel especially during flooding. In cross section view, the outside edge of a meander is the steepest and the inside of the meander is sloped more gently. The inside edge of a meander is where deposition takes place. Finer materials are deposited in the shallower (upper) slow flow region of the inside slope and coarser materials are deposited in the lower region. The major fraction of sand in the Wasatch Formation in the Pumpkin Buttes Mining District is medium grained with lesser fractions of coarse and fine grains (Figure 7-3). This is accompanied with mostly medium scale festoon cross bedding and current lamented cross bedding. These features can only be seen in cores.

The meandering stream environment is a process of cut and fill. Each time a cut occurs, the inside slope fills with sand and sediment. A single increment of this process results in a structure called a point bar. In a typical point bar sedimentation process, grain size and sediment structure are fining upwards in the upstream portion of the single point bar accumulation (Visher, 1972). An accumulation of point bars is sometimes referred to as a meander belt. As the meander process progresses, meander loops eventually migrate down gradient in the direction of flow and can laterally spread out in almost any direction. The size of the complete meander belt system is a function of the size of the valley or basin and stream flow rate, load, and gradient. If the subsidence rate and stream load are in the proper proportion, successive layers of meander belts, or meander belt systems, may form as the stream channel wanders back and forth during subsidence.

Meander belts in the Wasatch Formation are generally 5 ft to 30 ft thick. The A Sand at Nichols Ranch area is made up of three to four stacked meander belts and the F Sand at Hank area has two to three stacked meander belts. Individual meander belt layers will rarely terminate at the same location twice. Meanders have been noted to frequently terminate in the interior of a belt system but are more likely to terminate somewhere closer to the edge of the meander stream valley. The net effect for fluvial sands is to generally thin away from the main axis of the meander belt system. The A Sand meander belt system at Nichols Ranch area is approximately four miles wide. At Hank, the F Sand meander belt system is smaller than Nichols Ranch at approximately one and one-half miles wide.

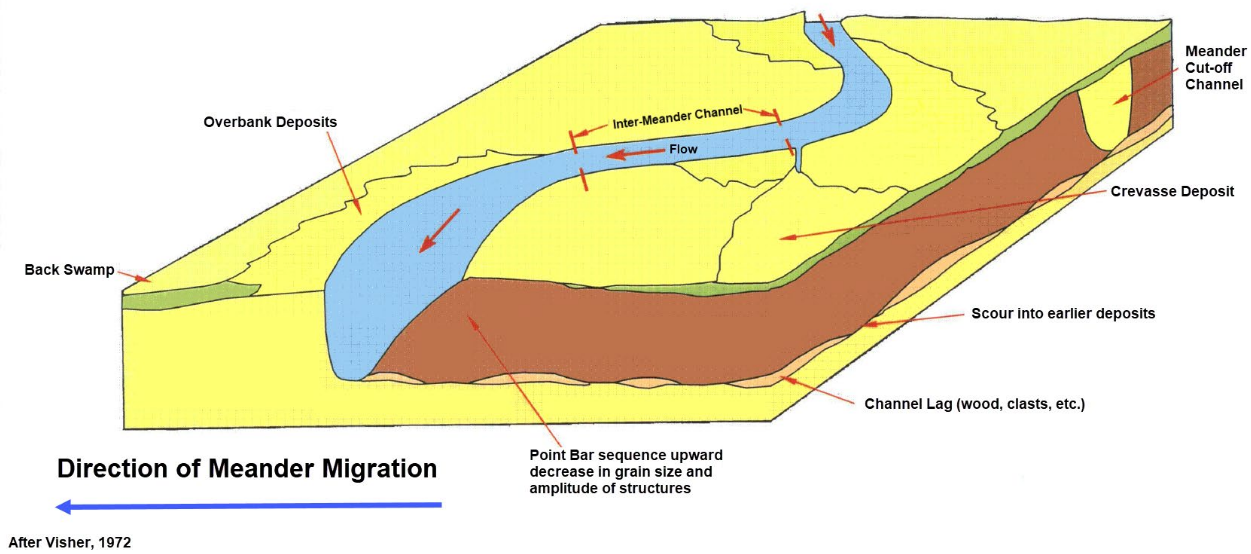


Figure 7-3: Schematic Fluvial Point Bar System

7.3 Property Geology

7.3.1 Nichols Ranch Mining Unit

7.3.1.1 Nichols Ranch and Jane Dough

At Nichols Ranch and Jane Dough, the Eocene Wasatch Formation is exposed at the surface with limited areas of quaternary alluvial and colluvial deposits. Eight fluvial sandstone horizons or units have been identified at Nichols Ranch and Jane Dough. Beginning with the deepest unit, they are the 1, A, B, C, F, G and H Sand units shown on the regional stratigraphic column (Figure 7-4). Separating the sand units are horizons composed of siltstones, mudstones, carbonaceous shales, and poorly developed thin coals. The primary mineralized sandstone unit (A Sand) is in the lower part of the Wasatch Formation, at an approximate average depth from surface of 550 ft. At Nichols Ranch, additional mineralization occurs in the F sand of the Wasatch Formation at a depth of approximately 220 ft. The host sands are primarily arkosic in composition, friable, fine- to coarse-grained, and contain trace amounts of carbonaceous material and organic debris.

For the Mineral Resource estimate and ISR wellfield planning, development, and operations at Nichols Ranch, the A Sand has been divided into 10 sub-units with variable extents both laterally and vertically (Figure 7-5). On an electric log resistivity curve, the grading is apparent where the curve sharply deflects from low to higher resistance and then gradually returns to lower resistance in an upward direction. Other meander belt system sand features such as overbank and crevasse deposits are present as fingers of sand that taper out from a meander termination. These are thin sands without a lot of grain size sorting. Inter-meander channel sands occur between meanders that are migrating in different directions. These sands have more uniform grain size and show on the electric log as a semi-flat curve with only small variations. Tributary and meander cut-off channel sand features form where pre-existing sediments are scoured by a river or stream and subsequently fill with medium and coarse sediments. These channels may cut randomly into meander belts, flood plain or swamp sediments. On the electric resistivity log, channel fills have a massive semi-rounded signature

7.3.1.2 Hank

Hank is approximately six miles east-northeast of Nichols Ranch. Eocene Wasatch Formation is exposed at the surface with limited areas of quaternary alluvial and colluvial deposits. The mineralized sand horizon (F Sand) is in the lower part of the Wasatch Formation at an approximate average depth of 365 ft. The host sands are primarily arkosic in composition, friable, fine- to very coarse-grained, and contain trace amounts of carbonaceous material and organic debris.

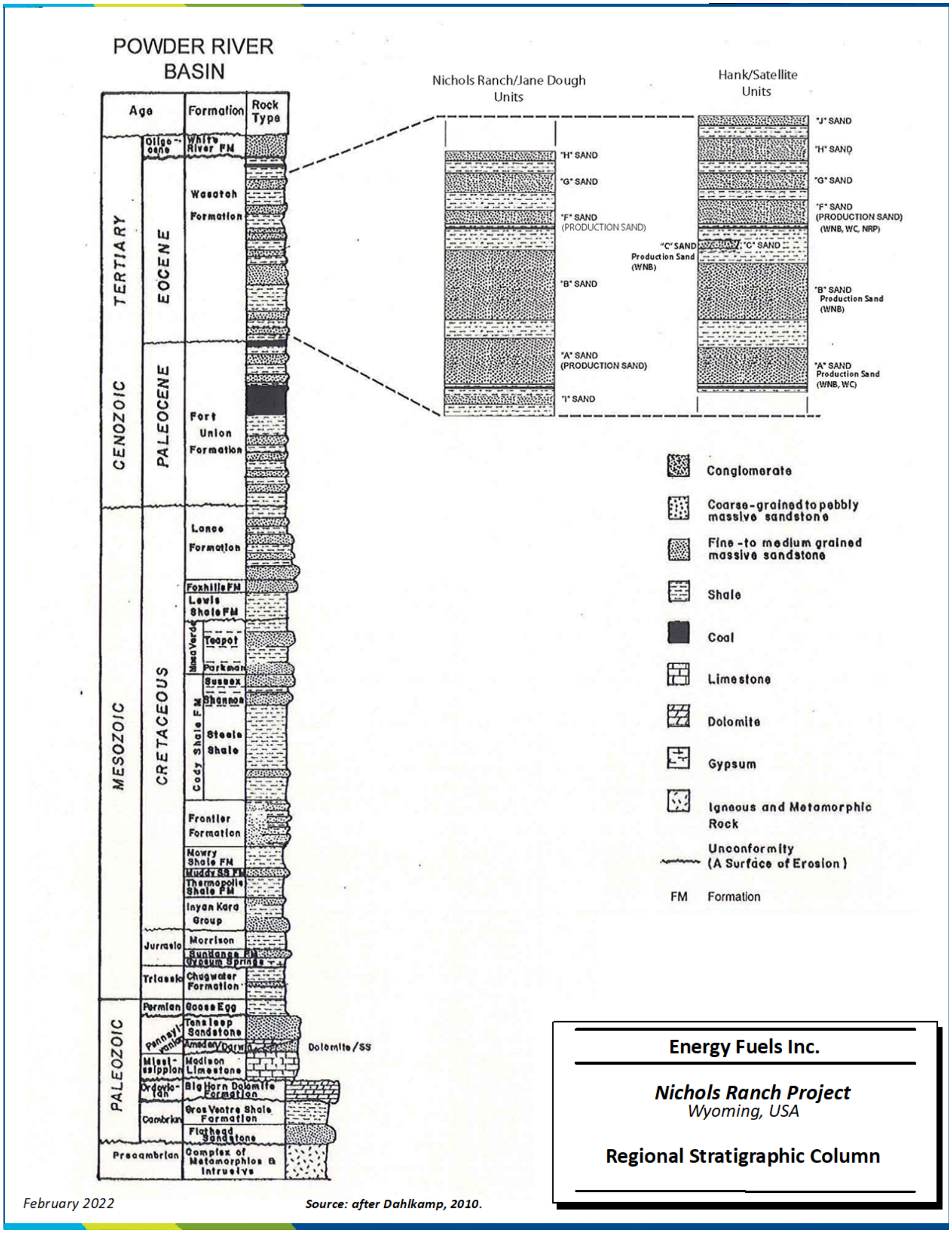


Figure 7-4: Regional Stratigraphic Column

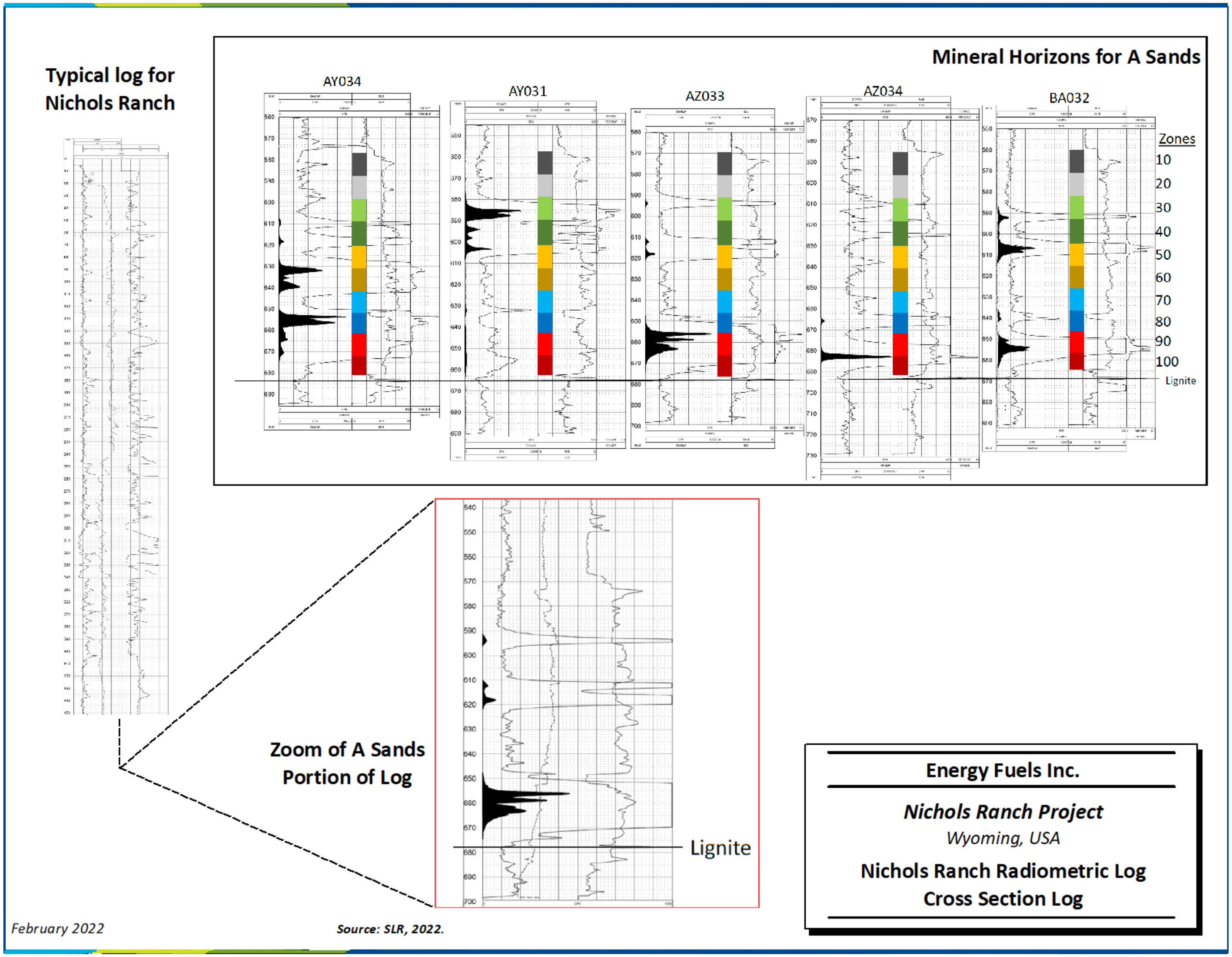


Figure 7-5: Nichols Ranch Radiometric Log Cross Section Log

7.3.2 Satellite Properties

7.3.2.1 North Rolling Pin

At the North Rolling Pin area, the mineralized sand horizon (F Sand) occurs within the Wasatch Formation at an approximate depth from surface ranging from 51 ft to 403 ft and averaging 282 ft to the top of the mineralization (Figure 7-6 and Figure 7-7). Generally, the depth of mineralization decreases from the northeast to the southwest due mainly to topography along which the surface elevation decreases from approximately 5,180 ft to approximately 4,800 ft. The F Sand ranges in thickness from approximately 30 ft to 60 ft, and generally increases in thickness in the southwest portion of Section 11 and thins toward the northeast and southwest in the area. The F Sand primarily consists of two stacked sand sets, termed the Upper and Lower F Sands that each average 20 ft to 25 ft thick. The nature of these sand sets, as described above, is a major control on the mineralization occurring at North Rolling Pin.

The host sand is primarily arkosic in composition, friable, and contains trace carbonaceous material and organic debris. There are local sandy mudstone/siltstone intervals with the sandstone, and the sand may thicken or pinch-out in some locations. The North Rolling Pin area lies east of the synclinal axis of the Powder River Basin, and the host Wasatch Formation dips approximately one degree to two degrees to the west.

Mineralization was also noted in 27 drillholes that occur in the shallower G Sand of the Wasatch Formation, however, there is limited exploration data in the G Sand. Based on the available data, mineralization in the G Sand is inconsistent and is not included in this Mineral Resource estimate.

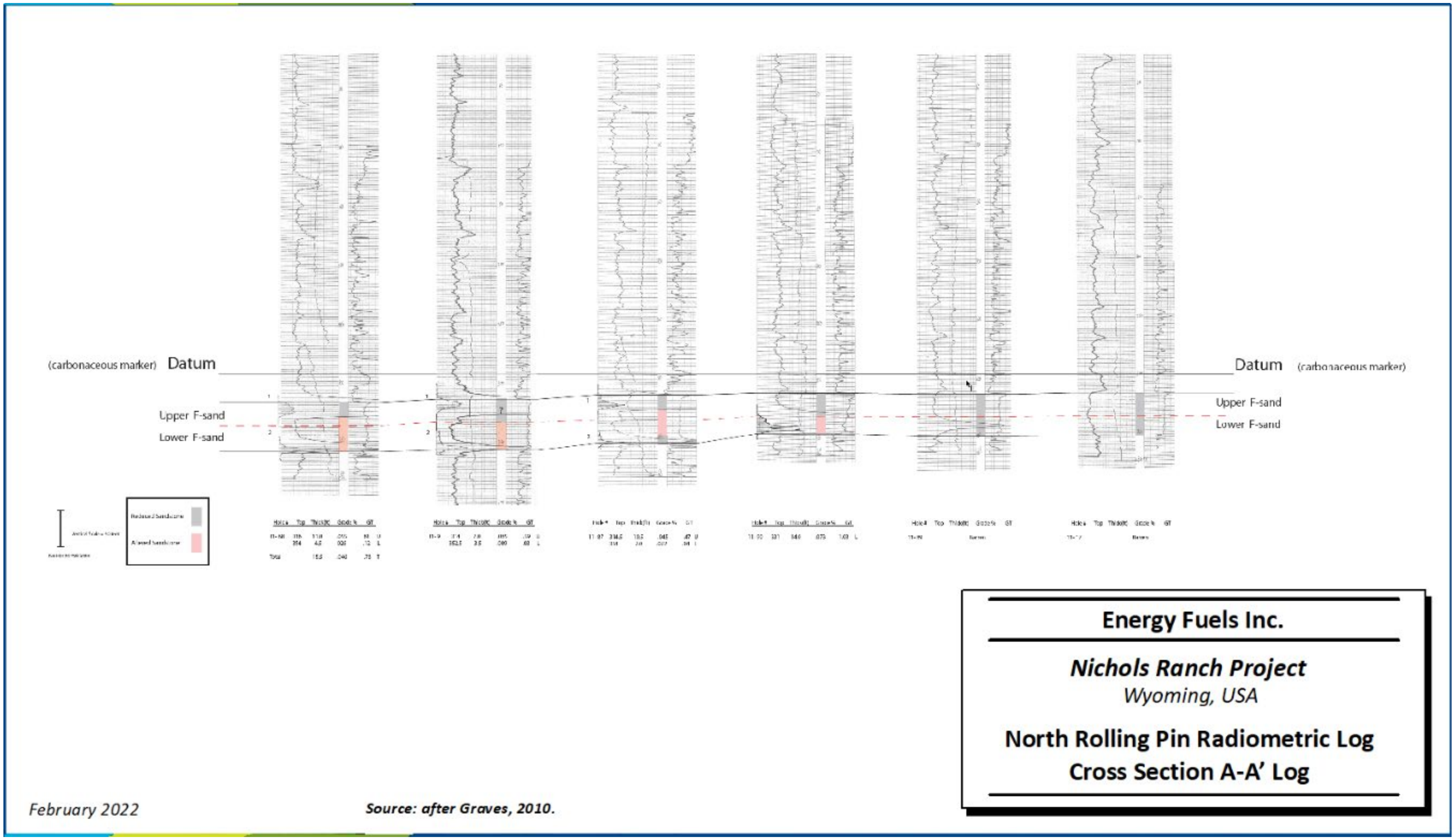


Figure 7-6: North Rolling Pin Radiometric Log Cross Section A-A' Log

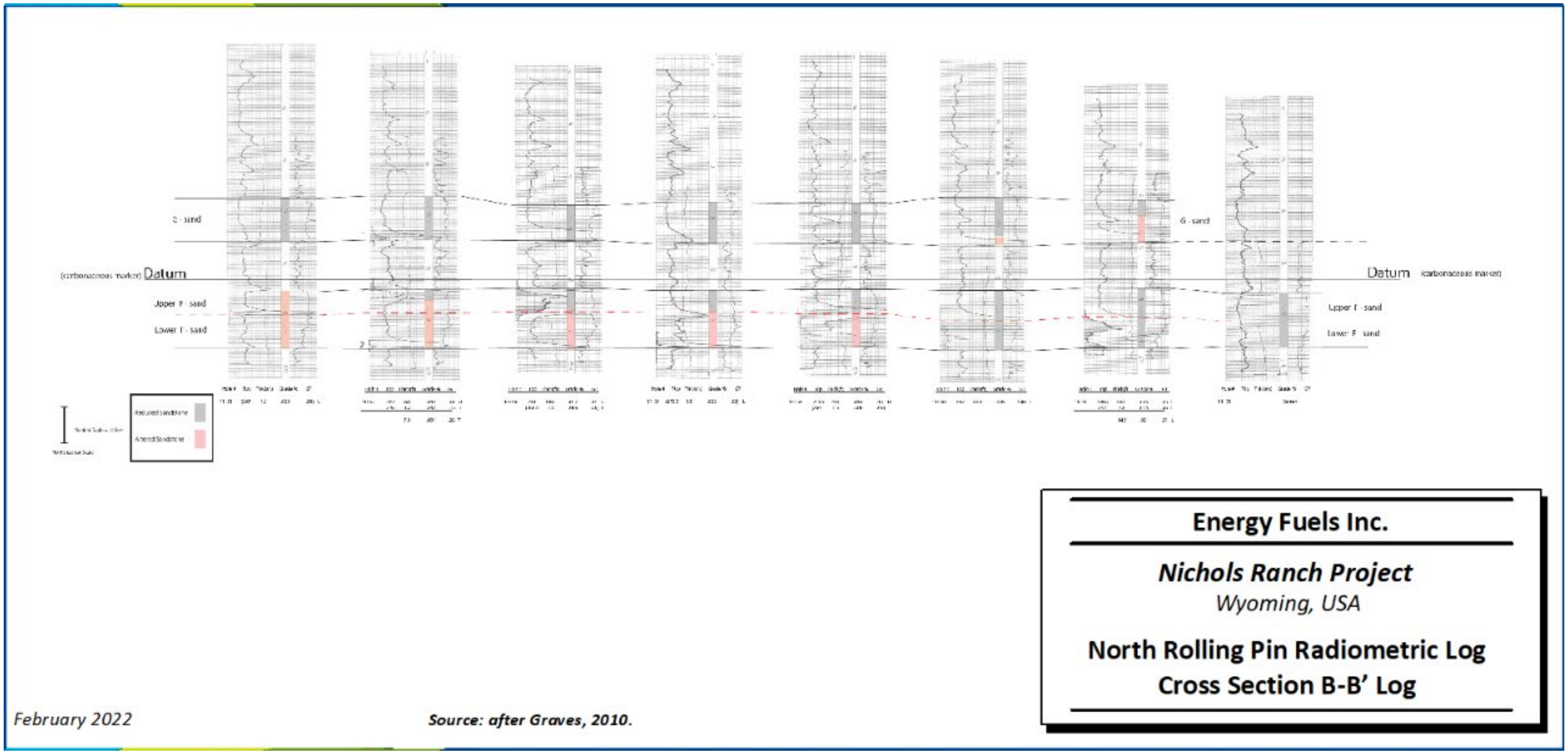


Figure 7-7: North Rolling Pin Radiometric Log Cross Section B-B' Log

7.3.2.2 West North Butte, East North Butte and Willow Creek

The mineralized sand horizons occur within the lower part of the Wasatch Formation, at an approximate depth from surface ranging from 482 ft to 1,012 ft at West North Butte, 540 ft to 660 ft at East North Butte, and 172 ft to 567 ft at Willow Creek. The host sands are primarily arkosic in composition, friable, and contain trace carbonaceous material and organic debris. There are local sandy mudstone/siltstone intervals with the sandstones, and the sands may thicken or pinch-out in some locations. In the WNB and WC area, the dip of the host formation is approximately at one degree to two degrees as the claims are on the east side of the synclinal axis (Berglund, 2006, 2007).

The stratigraphy of the Wasatch consists of alternating layers of sand and shale with lignite marker beds. At the Satellite Properties, there are four primary Wasatch Formation sand members (F, C, B, and A Sands). The F Sand unit is the shallowest, and the A Sand member is the deepest.

Mineral resources are located in the Eocene age Wasatch Formation in what is identified as the A, B, C and F host sand units of the WNB area, the A and B host sands of the ENB area and in the A and F host sand units of the WC area.

7.3.2.2.1 West North Butte

Roll fronts were identified in the F, C, B, Lower B, and A sands in the WNB area (Berglund, 2007). Data from mineralization identified in the F, C, B, Lower B, and A sands were used to develop the resource estimate presented herein. The Lower B sand resource estimate was combined with the B sand for this estimate. The average depth to the mineralization for the F, C, B, lower B, and A sands are approximately 482 ft, 898 ft, 985 ft, 741 ft, and 1,012 ft, respectively. Mineralized thickness ranges from 1 ft to 29 ft, with average grades greater than 0.03% eU_3O_8 and GT>0.2 for the area. Figure 7-8 provides a cross section that illustrates the relative position of the host sand in the WNB area.

7.3.2.2.2 East North Butte

Two roll fronts were identified in the ENB area: the B and A sands (Brown, 2005). Data from mineralization identified in the B and A sands were used to develop the Mineral Resource estimate presented in this Technical Report. The average depth to mineralization for the B and A sands are approximately 540 ft and 660 ft, respectively. Mineralized thickness ranges from one foot to three feet, with an average mineralization thickness greater than 0.03% eU_3O_8 and GT>0.2 of 5.7 ft (per log intercept) for the area. Figure 7-9 provides a cross section that illustrates the relative position of the host sand in the ENB area.

7.3.2.2.3 Willow Creek

Four roll fronts were identified in this WC area (Berglund, 2006): the F sand, the B sand, the Upper A sand, and the Lower A sand. The roll fronts were interpreted using gamma characteristics, the sand boundaries determined from the resistivity logs, and the alteration noted on the lithology logs. Mineralization identified in the F and Lower A sands (referred to as the A sand herein) were used in developing the Mineral Resource estimate presented in this Technical Summary. The average mineralization depths to the F and A sands are approximately 172 ft and 567 ft, respectively. Mineralized thickness ranges from 1 ft to 21.5 ft, with an average mineralization thickness greater than 0.03% eU_3O_8 and GT>0.2 of 9.3 ft (per log intercept) for the area. Figure 7-10 provides a cross section that illustrates the relative position of the host sands in the WC area.

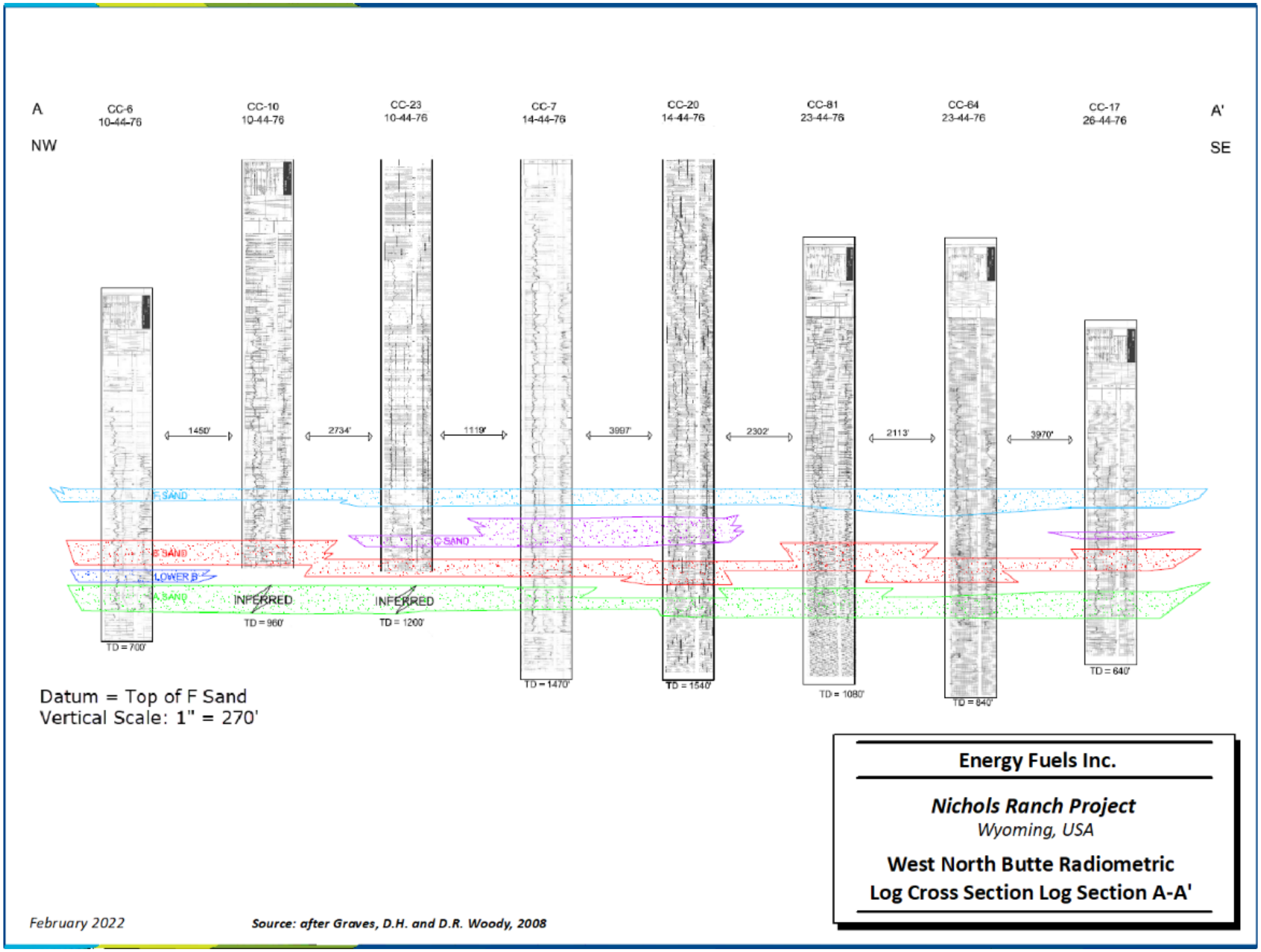


Figure 7-8: West North Butte Radiometric Log Cross Section Log A-A’

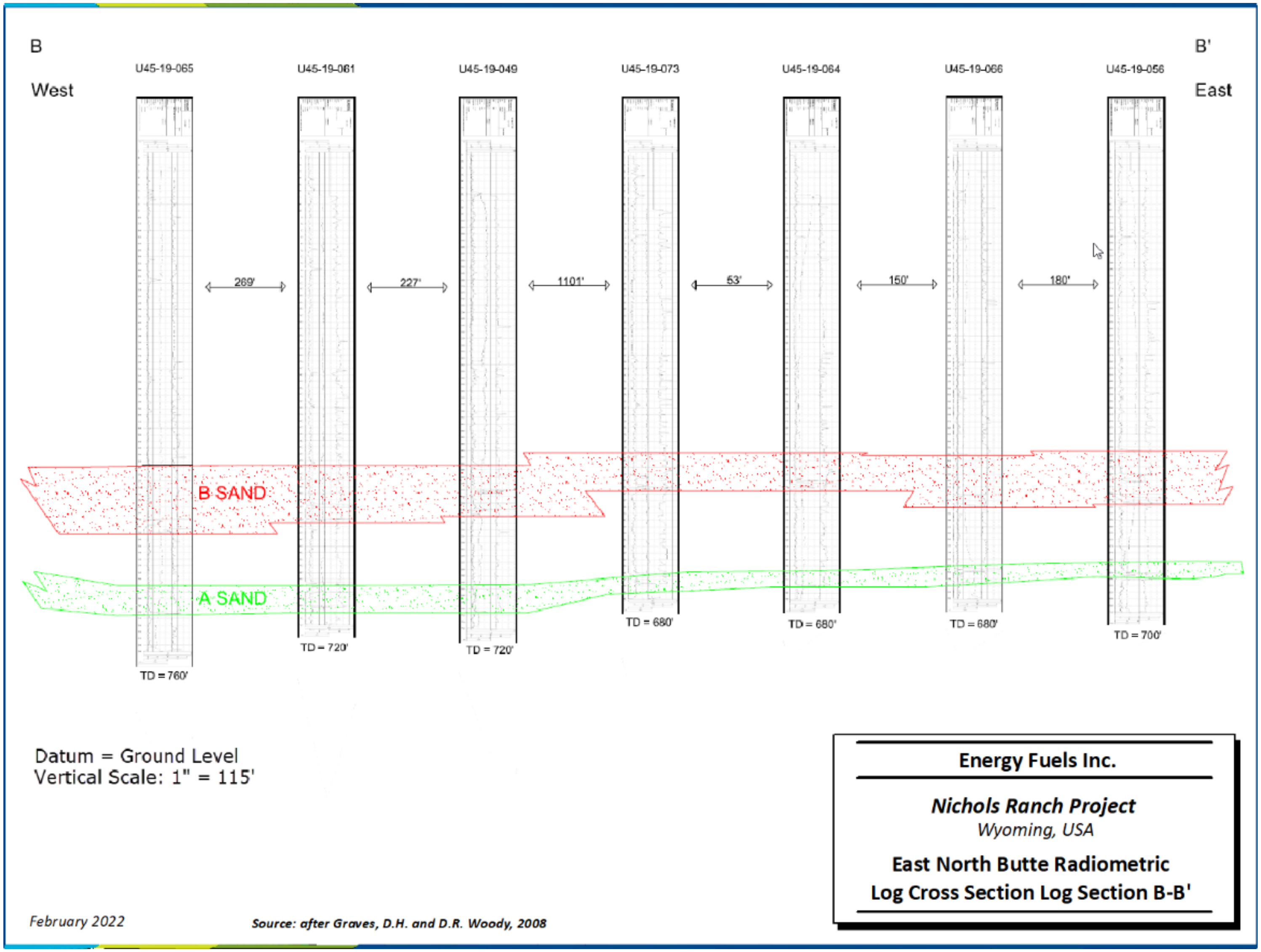


Figure 7-9: East North Butte Radiometric Log Cross Section Log B-B'

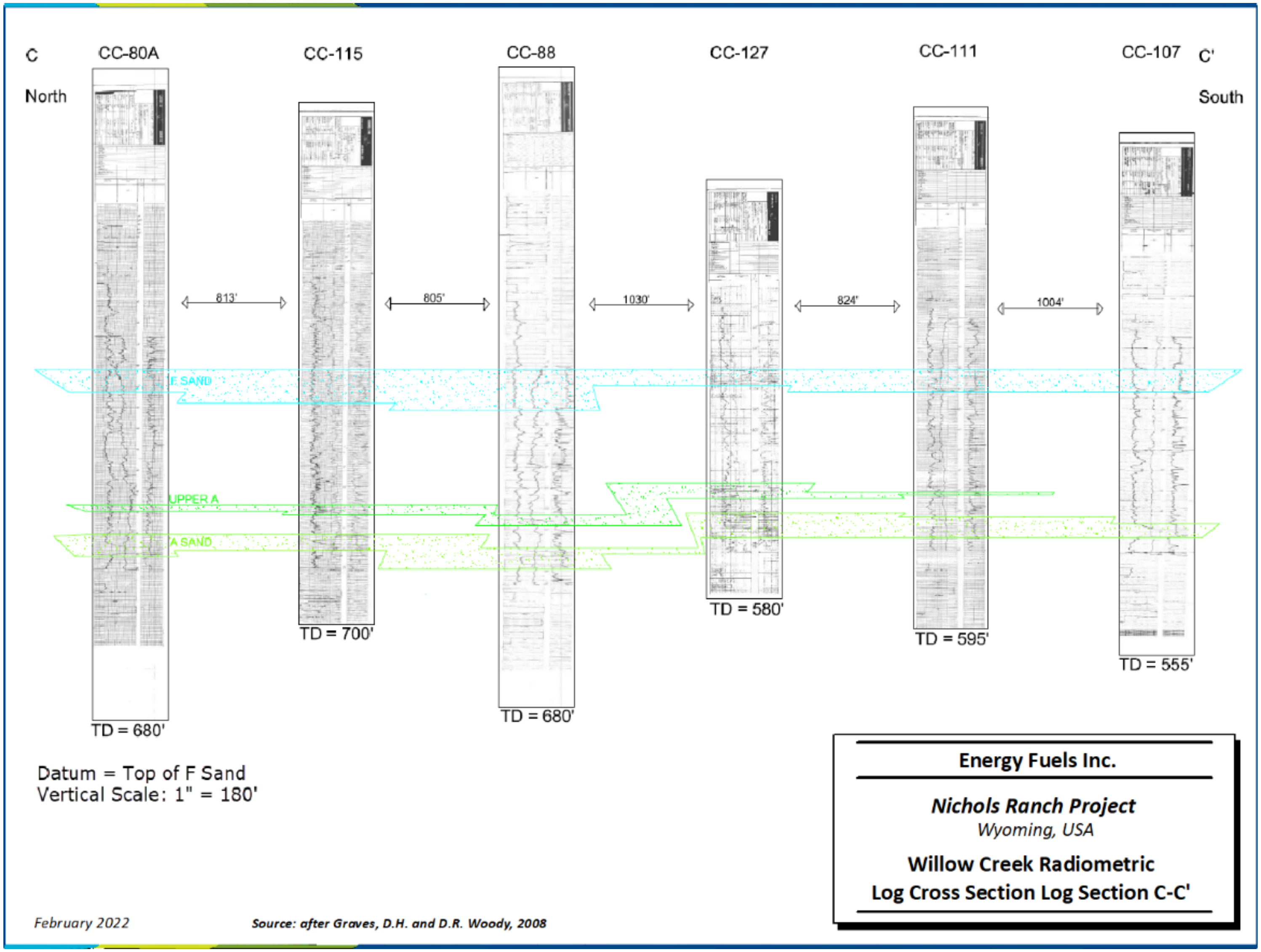


Figure 7-10: Willow Creek Radiometric Log Cross Section Log C-C'

7.4 Mineralization

The uranium mineralization is composed of amorphous uranium oxide, sooty pitchblende, and coffinite, and is deposited in void spaces between detrital sand grains and within minor authigenic clays. The host sandstone is composed of quartz, feldspar, accessory biotite and muscovite mica, and locally occurring carbon fragments. Grain size ranges from very fine to very coarse sand but is medium-grained overall. The sandstones are weakly to moderately cemented and friable. Pyrite and calcite are associated with the sands in the reduced facies. Hematite or limonite stain from pyrite are common oxidation products in the oxidized facies. Montmorillonite and kaolinite clays from oxidized feldspars are also present in the oxidized facies (Uranerz, 2010a). The uranium being extracted is hosted in a sandstone, roll front deposit at a depth ranging from 400 ft to 800 ft.

There are two theories (Uranerz, 2014) as to the origin of uranium in the Powder River Basin and Pumpkin Buttes Mining District. The first theory places the source of uranium from the weathering of the mountain cores which have also been cited as the source for the arkosic host sandstones. The basement rocks of the Granite Mountains, for example, have been determined to have high concentrations of uranium (20 ppm to 30 ppm). It has also been estimated that the granites have lost 70% of their original uranium content. Emplacement of the uranium under this theory would have taken place beginning 40 million to 45 million years ago, shortly after the host sands were deposited in the basins. The second theory places the source of uranium as overlaying Oligocene and Miocene rhyolite volcanic tuffs with uranium leaching into the groundwater system as the volcanic tuffs weathered. The rhyolite volcanic tuffs were the result of volcanic activity to the west. Emplacement of the uranium has been cited as 20 million to 32 million years ago. Since both theories are plausible, some geologists subscribe to a dual theory where each possible source contributed some percentage to the overall uranium occurrence.

Regardless of the source of the uranium, both theories would require a climate with active chemical weathering to breakdown the rock matrix and put the uranium into groundwater solution. One suggested environment for this to occur is the modern-day savanna climate. Savanna climates are characterized by very wet, humid annual periods followed by hot and dry periods. This type of climate produces rapid chemical weathering and high oxidation potentials, which would have been needed to solubilize the uranium and keep it in solution until the groundwater system encountered a reducing, oxygen deficient environment such as the carbon trash rich sands in the Powder River Basin. When the uranium charged groundwater flowed into the reduced sandstone environment, the oxidized uranium precipitated out of solution along the interface between the two chemical environments. The uranium was deposited in 'C' shaped rolls, which are five feet to 30 ft thick, and in plan view may be a few feet to 500 ft wide and tens of miles in length. Along the length of the trace of the chemical roll, ore grade uranium may be found, however, ore is not likely along every mile of the front. During the time that uranium was emplaced, as is true today, the groundwater in the Powder River Basin generally flowed to the north and northwest. As the original uranium-charged groundwater flowed in the host sands, the chemical reductant was consumed and the roll fronts migrated down the hydrologic gradient, leaving in their wake a characteristic yellow to red to brown stain on the sandstone grains. As many as 11 separate roll front systems (Figure 7-11) have been identified in different horizons of the Wasatch Formation in the Powder River Basin area.

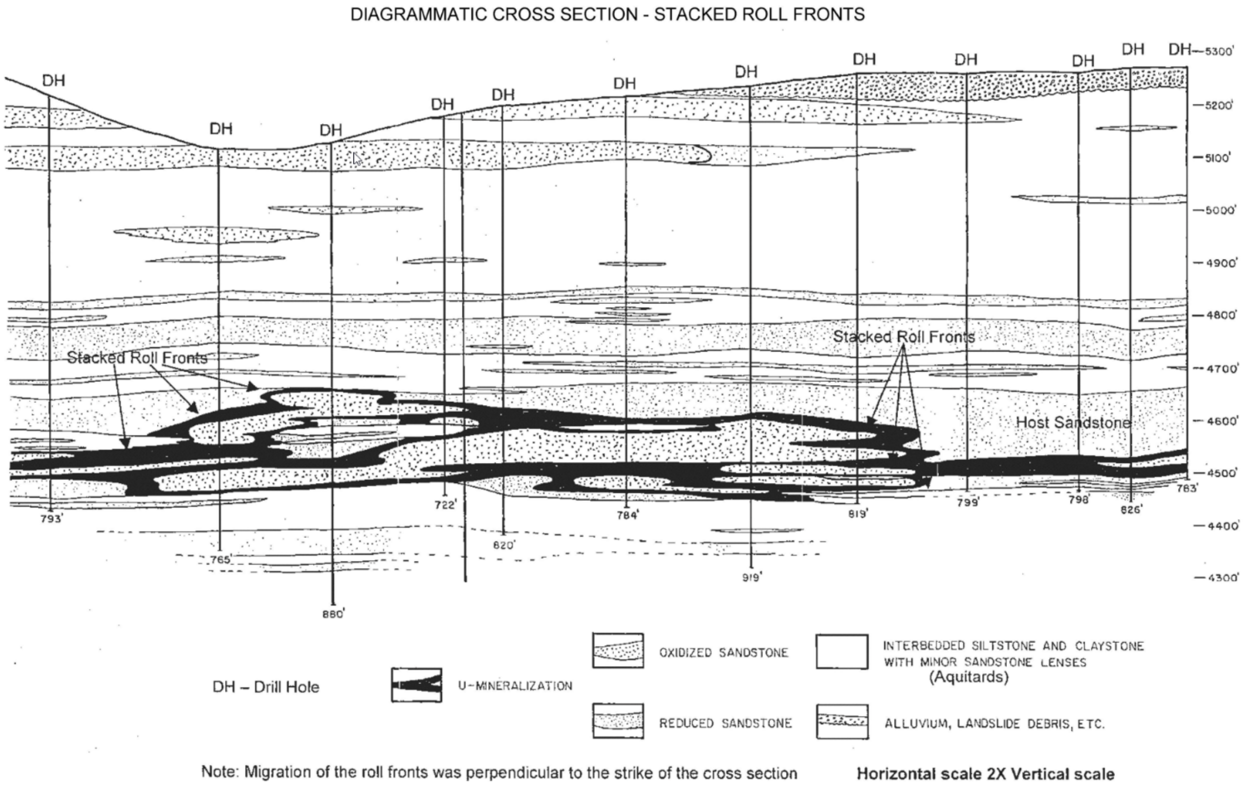


Figure 7-11: Cross Section Stacked Roll Fronts

8.0 DEPOSIT TYPES

Wyoming uranium deposits are typically sandstone roll front uranium deposits as defined in the "World Distribution of Uranium Deposits (UDEPO) with Uranium Deposit Classification", (IAEA, 2009). The key components in the formation of roll front type mineralization include:

- A permeable host formation:
  - Sandstone units of the Wasatch Formation.
- A source of soluble uranium:
  - Volcanic ash flows coincidental with Wasatch deposition containing elevated concentration of uranium is the probable source of uranium deposits for the Pumpkin Buttes Uranium District.
- Oxidizing groundwaters to leach and transport the uranium:
  - Groundwaters regionally tend to be oxidizing and slightly alkaline.
- Adequate reductant within the host formation:
  - Conditions resulting from periodic hydrogen sulfide (H_2S gas) migrating along faults and subsequent iron sulfide (pyrite) precipitation created local reducing conditions.
- Time sufficient to concentrate the uranium at the oxidation/reduction interface.
  - Uranium precipitates from solution at the oxidation/reduction boundary (REDOX) as uraninite (UO_2, Uranium oxide), which is dominant, or coffinite ($USiO_4$, uranium silicate).
  - The geohydrologic regime of the region has been stable over millions of years with groundwater movement controlled primarily by high-permeability channels within the predominantly sandstone formations of the Tertiary.

As depicted on Figure 8-1 and Figure 8-2, roll fronts are formed along an interface between oxidizing groundwater solutions which encounter reducing conditions within the host sandstone unit. This boundary between oxidizing and reducing conditions is often referred to as the REDOX interface or front.

Sandstone uranium deposits are typically of digenetic and/or epigenetic origin formed by low temperature oxygenated groundwater leaching uranium from the source rocks and transporting the uranium in low concentrations down gradient within the host formation where it is deposited along a REDOX interface. Parameters controlling the deposition and consequent thickness and grade of mineralization include the host rock lithology and permeability, available reducing agents, groundwater geochemistry, and time in that the groundwater/geochemical system responsible for leaching; transportation and re-deposition of uranium must be stable long enough to concentrate the uranium to potentially economic grades and thicknesses. Roll front mineralization is common to Wyoming uranium districts including the Powder River Basin, Gas Hills, Shirley Basin, Great Divide Basin, and others, as well as districts in South Texas and portions of the Grants, New Mexico District.

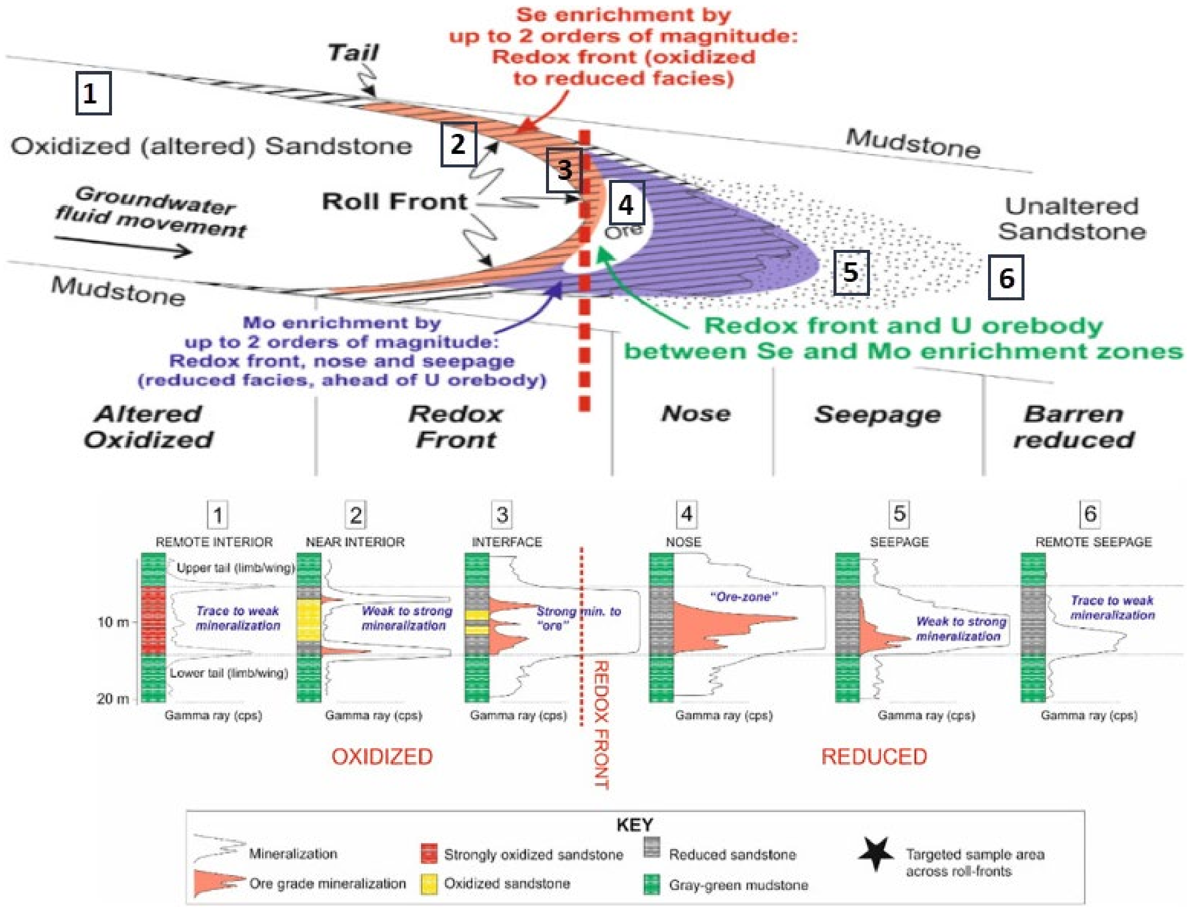


Figure 8-1: Typical Roll Front Cross Section

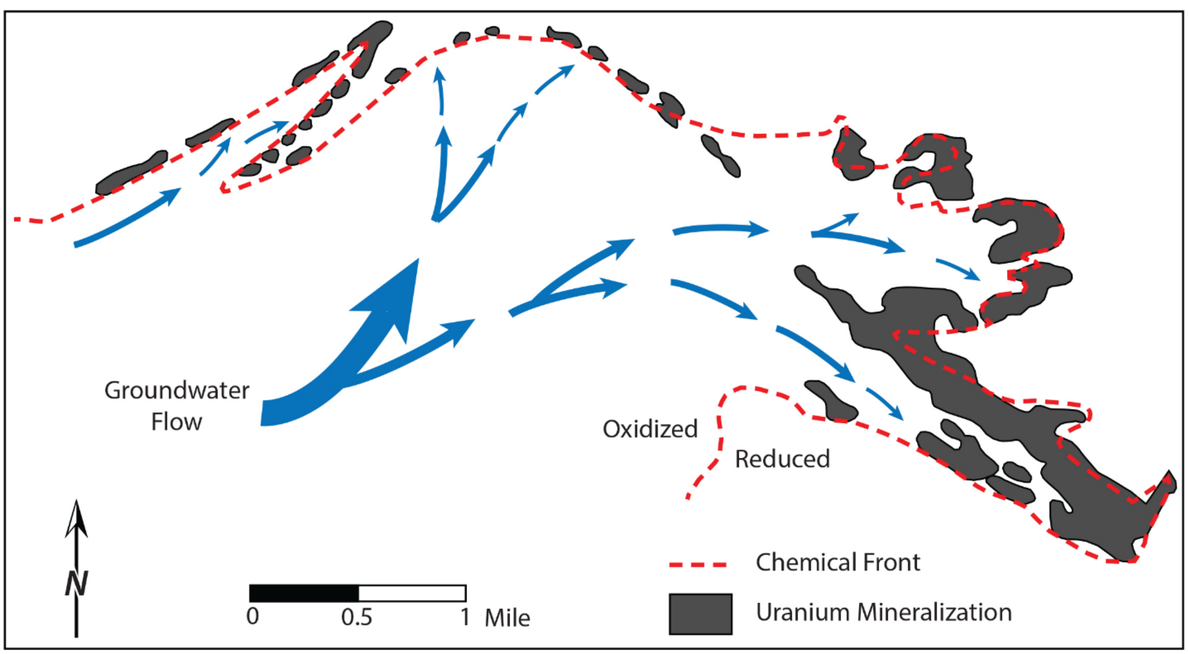


Figure 8-2: Typical Roll Front (REDOX) Boundary

9.0 EXPLORATION

On October 15, 1951, J.D.Love discovered uranium mineralization in the Pumpkin Buttes Mining District in the Wasatch Formation on the south side of North Pumpkin Butte in the west central portion of the Powder River Basin. The mineralization was one of eight areas recommended in April 1950 for investigation in the search for uranium bearing lignites and volcanic tuffs. In response to this recommendation, an airborne radiometric reconnaissance of most of these areas was undertaken by the USGS in October 1950. The uranium mineralization discovered by J. D. Love was in the vicinity of an aerial radiometric anomaly identified from this survey (Love, 1952).

Early mining focused on shallow oxidized areas using small open pit mines. Primary exploration methods included geologic mapping and ground radiometric surveys. Modern exploration and mining in the district have focused on deeper reduced mineralization.

Rotary drilling on the Complex is the principal method of exploration and delineation of uranium mineralization. Drilling can generally be conducted year-round on the Project. Since acquiring the properties in 2015, EFR has conducted no additional exploration other than in-fill/delineation rotary drilling on the properties including wellfield installation at Nichols Ranch.

Hydrogeological and geotechnical information pertaining to the Project is described in Section 16.4 and Section 16.5 of this Technical Report.

10.0 DRILLING

As of the effective date of this Technical Report, EFR and its predecessor companies have completed a total of 3,942 drillholes (Table 10-1) across the Complex over the course of several drilling programs that began in 1960. Of the 3,942 drillholes recorded, EFR's drilling database contains 3,504 drillholes totaling 2,363,890 ft drilled of which 449 totaling 281,126 ft have been completed by EFR since acquiring the Project in 2015 (Figure 10-1 and Figure 10-2). The drill record includes both Rotary and Diamond Drill (DD) drilling, monitor wells, and injection and production wells. No drilling has occurred across the properties since December 5, 2016.

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 1927 UTM Zone 13 and elevation of collar in feet above sea level. Due to the horizontally stratified nature of mineralization, downhole deviation surveys are not typically conducted as all drillholes are vertical.

Table 10-1: Historical Drillhole Summary
Energy Fuels Inc. – Nichols Ranch Project

Property	Historic Drillholes	EFR Drillholes	Total
	Nichols Ranch Mining Unit		
Nichols Ranch	1,328	449	1,777
Jane Dough	786	0	786
Hank	309	0	309
	Satellite Properties		
North Rolling Pin	494	0	494
West North Butte, East North Butte and Willow Creek	576	0	576
Total	**3,493**	**449**	**3,942**

In the opinion of the SLR QP, the drilling, logging, sampling, and conversion and recovery factors at the Project meet or exceed industry standards and are adequate for use in the estimation of Mineral Resources.

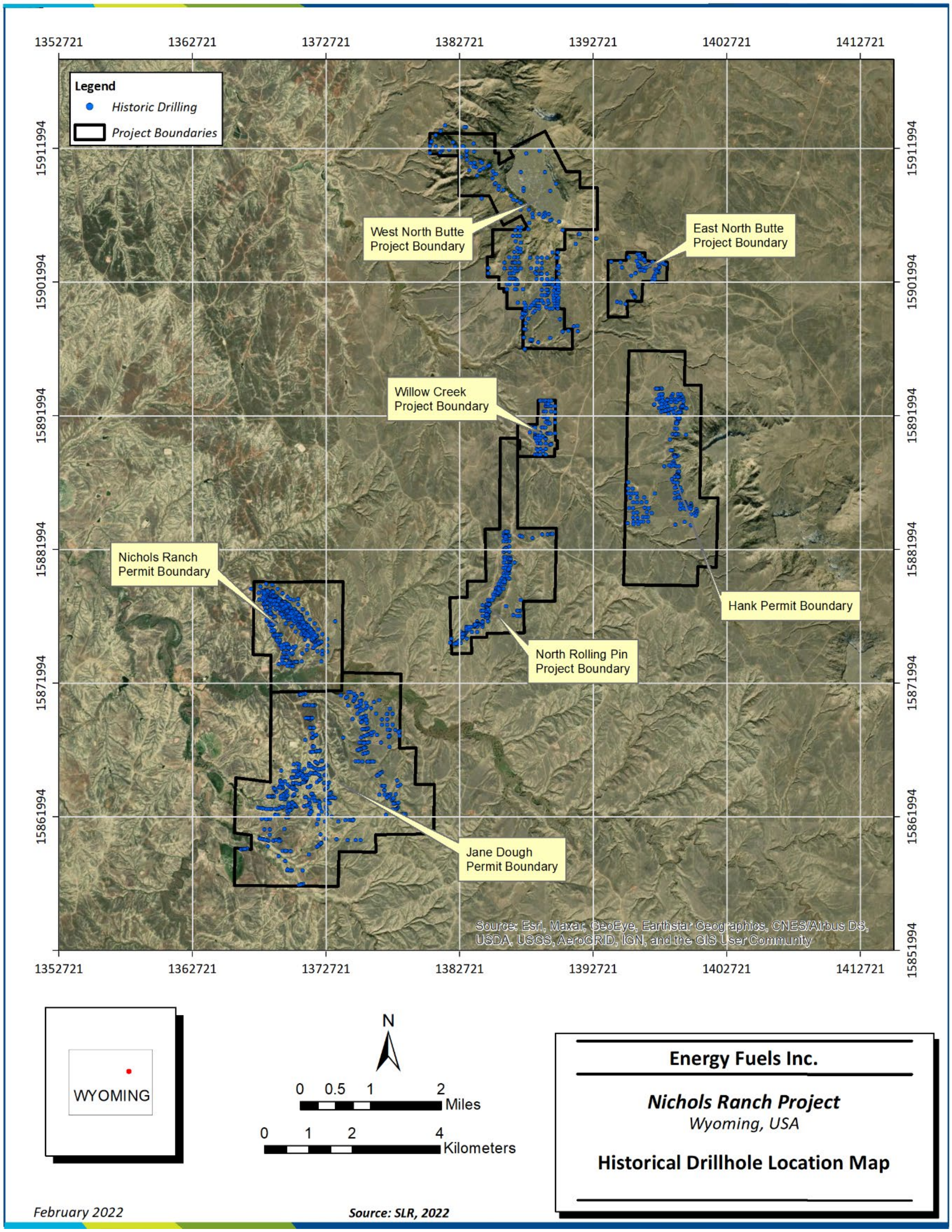


Figure 10-1: Historical Drillhole Location Map

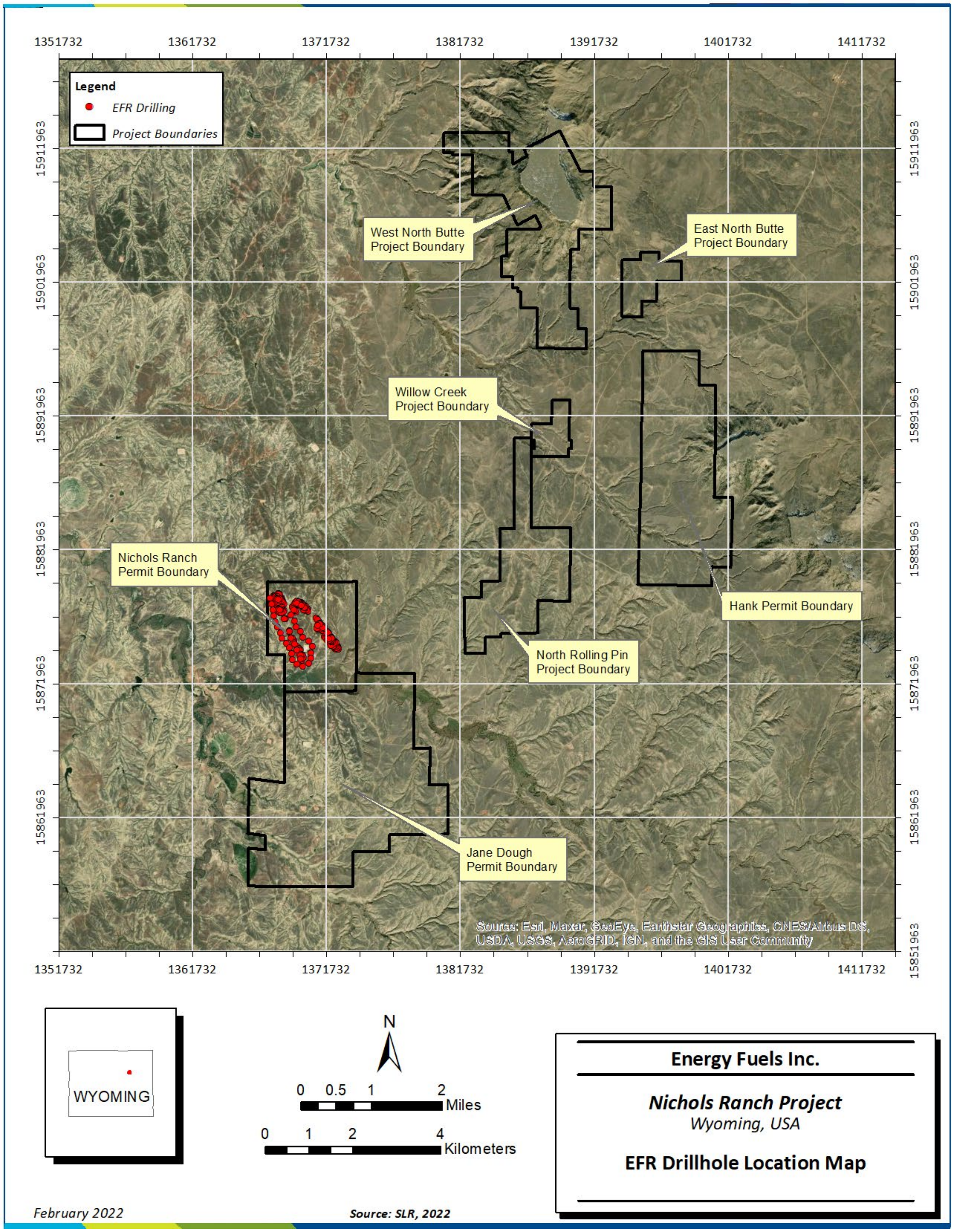


Figure 10-2: EFR Drillhole Location Map

10.1 Nichols Ranch Mining Unit

10.1.1 Historic Drilling 1960 to 2015

Drilling records indicated that between 1960 and 1985, CCI drilled approximately 143 exploratory holes within the Nichols Ranch Mining Unit area. Between 2005 and 2015, Uranerz completed approximately 1,185 exploratory holes which includes 11 DD holes. In total, EFR predecessors drilled 1,328 holes across the Nichols Ranch, Jane Dough and Hank areas.

10.1.2 EFR Drilling 2015 to 2016

EFR has conducted its own exploration of the properties with delineation drilling on the Nichols Ranch area. The drillhole data demonstrates that mineralization is present and is of sufficient quality and density to support mineral resource estimation. Drillhole data is dominantly based on interpretation of downhole geophysical logs typically consisting of natural gamma, resistivity, and SP (Spontaneous Potential). Resistivity and SP were utilized for defining lithology and correlating the logs. Geophysical logging was historically completed by commercial geophysical logging companies. Recent and current geophysical logging is being completed by EFR personnel using modern logging units owned by EFR.

Data in the possession of EFR includes nearly 100% of the total original geophysical and lithologic logs both historic and recent.

10.2 Satellite Properties

Available historical data were developed by previous owners of the Satellite Properties during several drilling programs conducted sporadically between 1968 to 2015. EFR is in possession of most of the historical geophysical and lithologic logs and drillhole location maps but has not conducted its own exploration of the Satellite Properties. Drilling data, comprised primarily of downhole geophysical logs (natural gamma, resistivity, and spontaneous potential), indicate that mineralization is present within the Satellite Properties and define its three-dimensional location. In addition, the historic information includes density and chemistry data from six core holes.

10.2.1 North Rolling Pin

Between 1968 to 2008, CCI and Uranerz completed 494 drillholes across the North Rolling Pin area. The geophysical and lithologic log data from 386 of the 494 drillholes were used in the evaluation of the North Rolling Pin area. It was noted that data from 108 CCI drillholes were missing, and it was concluded (Graves, 2010) that most of these drillholes were left out of the sequence and were not drilled.

The exploration drillholes were spaced approximately 25 ft to 50 ft apart in rows orientated perpendicular to the mineralization trend or in clusters of close spaced drilling. Additional fences were then drilled approximately every 400 to 600 feet along the length of the trend.

Of the data from 386 drillholes, 198 of the holes had mineralization with a GT of 0.2 or greater and were used for the mineral resource estimate completed in 2008 (Graves, 2010).

10.2.2 West North Butte, East North Butte and Willow Creek

Between 1968 and 1985, CCI drilled approximately 256 exploratory holes in West North Butte, 45 in East North Butte, and 131 in Willow Creek). From 1983 to 1985, Texas Eastern Nuclear drilled approximately 12 exploratory holes in the Willow Creek area. From approximately 1990 to 1992, Rio Algom drilled approximately five exploratory holes at Willow Creek. In 2006, Uranerz completed an acquisition of the WNB, ENB, and WC areas, and between 2007 to 2009, drilled 127 exploratory holes (29 in WNB, 82 in ENB, and 16 in WC). Of the 576 drillholes completed, 52 holes (45 in ENB, 7- in WC) were missing geophysical logs and were excluded from the mineral resource estimate completed in 2010 (Graves and Woody, 2010).

The holes were typically spaced approximately 25 feet apart perpendicular to the trend and approximately 400 feet apart parallel to the trend.

10.3 Procedures

10.3.1 Collar Coordinates and Surveying

Drillhole collar locations are recorded on the original drill logs created at the time of drilling, including easting and northing coordinates in local grid (Wyoming State Plane, NAD 27 datum) and elevation of collar in feet above sea level National Geodetic Datum of 1929 (NGVD29).

EFR is using an Astech GPS system for surveying drillhole and well locations. This instrument can measure horizontal coordinates within 0.25 m (0.8 ft). EFR uses on-site control points for static post-processing corrections of the GPS data which slightly increases the accuracy. The SLR QP is of the opinion that, for the deposit type, all survey methods used for the collar locations would be expected to provide adequate accuracy for the drillhole locations.

All drilling is vertical. The dip of the formation is relatively flat, two degrees to three degrees to the northeast. EFR drilling contracts include cost penalties for downhole deviation in excess of 1%. If the downhole deviation exceeds 2%, EFR can require the hole be re-drilled at the contractor's expense. Downhole deviation is measured as part of the geophysical logging and is available for all recent drilling. Given the flat formational dip and restrictions placed on downhole deviation, the variance in thickness measured by geophysical logging and true thickness (less than 1%) will not appreciably affect mineral resource estimation.

10.3.2 Drill Logging

EFR has established standard procedures for drillhole, lithologic, and geophysical logging of rotary drill and diamond drillholes.

10.3.2.1 Rotary Drilling (Rotary)

- Drill cuttings are caught every five feet from surface to total depth.
- These drill cuttings are described by the field geologist using the standard lithologic log developed in-house by EFR.
- Adjusting cutting depths to match the geophysical logs noting sample lag.
- The downhole log (including natural gamma and SP) is then scanned into the data system for future evaluation and record keeping.

10.3.2.2 Diamond Drilling (DD)

- Locating core holes such that they are representative of the deposit.
- Sealing core samples in protective plastics sleeves prior to placing the core into boxes.
- Completion of geophysical logging of the drillhole for natural gamma, resistivity, and SP.
- Minimizing the time between collection of the core and chemical analysis.
- Adjusting the core depths to match the geophysical logs noting sample lag and recovery.
- Completing a detailed lithological log of all drillholes using a standardized lithological log format.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sample Preparation and Analysis

11.1.1 Gamma Logging

The primary assay data used in calculating Mineral Resource estimates for the Complex are downhole geophysical logs. Additional data include limited core assays and Prompt Fission Neutron (PFN) geophysical logging.

Exploration 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 measured with a downhole gamma probe; this process is referred to as gamma logging. While gamma probes do not measure the direct uranium content, the data collected (in counts per second (CPS) can be used along with probe calibration data to determine an equivalent U_3O_8 grade in percent (% eU_3O_8). These grades are very reliable as long as there is not a disequilibrium problem in the area. Disequilibrium will be discussed below. Gamma logging is common in non-uranium drilling and is typically used to discern rock types.

The original downhole gamma logging of surface holes was done on the Bullfrog property by Century Geophysical Corp. (Century) and Professional Logging Services, Inc. (PLS) under contract to Exxon. Atlas also contracted Century for this service. Standard logging suites included radiometric gamma, resistivity, and self-potential measurements, supplemented by neutron-neutron surveys for dry holes. Deviation surveys were conducted for most of the holes. Century used its Compulog system consisting of truck-mounted radiometric logging equipment, including a digital computer. The natural gamma (counts per second, or cps), self potential (millivolts), and resistance (ohms) were recorded at 1/10th foot increments on magnetic tape and then processed by computer to graphically reproducible form. The data were transferred from the tape to computer for use in resource estimation.

Procedures followed by Exxon, Atlas, and Plateau, together with their contractors Century and PLS, were well documented and at the time followed best practices and standards of companies participating in uranium exploration and development. Onsite collection of the downhole gamma data and onsite data conversion limit the possibility of sample contamination or tampering.

11.1.1.1 Calibration

For the gamma probes to report accurate $\%eU_3O_8$ values the gamma probes must be calibrated regularly. The probes are calibrated by running the probes in test pits maintained historically by the AEC and currently by the DOE. There are test pits 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 $\%eU_3O_8$. The dead time 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). The K-factor is simply a calibration coefficient used to convert the DT-corrected CPS to $\%eU_3O_8$.

Quarterly or semi-annual calibration is usually sufficient. Calibration should be done more frequently if variations in data are observed or 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. Typically, these probes take multiple different readings. In uranium deposits, the holes are usually logged for gamma, resistivity, standard potential, and hole deviation. Only gamma is used in the grade calculation. Once the probe is at the bottom of the hole, the probe begins recording as the probe is 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 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, but all, including the AEC method, are based on the two equations given below.

The first equation converts CPS to CPS corrected for the dead time (DT) determined as part of the calibration process

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

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

$$\%eU_3O_8 = 2KN$$

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 drill hole 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.

For all recent drilling Century's Compulog™ software is utilized to convert natural gamma measurement to equivalent % U_3O_8 grade (% eU_3O_8). The output data is provided both electronically and in hard copy by 0.5 ft intervals. This grade data is then summed for thickness and GT for the appropriate mineralized intervals. This procedure is the current industry standard method. Hard copies of all original drillhole data are maintained either at the Nichols Ranch facility or the Casper, Wyoming office. Both facilities are secure.

11.1.2 Prompt Fission Neutron Logging

Natural gamma is the traditional tool used to measure eU_3O_8 grade and evaluate resources but in some sandstone-hosted deposits, uranium is not in equilibrium with its daughters as they are too young, and uranium is still actively mobile. Typical gamma logging tools measure radioactive decay products which develop in the uranium decay chain rather than the uranium-238 (^{238}U) of interest. After a long period of geologic time the decay products measured by gamma logging tools will be directly proportional to the uranium in the ore zone provided that geologic processes have not caused the uranium to be separated from the gamma emitters being measured, such as ^{214}Bi, ^{226}Ra, ^{222}Rn and others (Campbell et al., 2008). The uranium and decay products naturally separate down gradient, with a higher percent of the latter remaining behind in the tails of the roll front and the uranium (in higher percent than the decay products) moving ahead in the nose of the ore body, albeit slower than the groundwater flow rate (Figure 11-1). The gamma log does not indicate the correct grade (actual chemical content) neither up gradient nor down gradient of the ore zone. The grade calculation made from the gamma log can be either higher or lower than what is actually present in these areas (Figure 11-2).

Due to biogeochemical processes, uranium may have moved into an area of low gamma, thus increasing the grade, or out of an area of high gamma, thus decreasing the grade. When this occurs over a wide area, the ore body, or a part thereof, is said to be in disequilibrium. In order to determine actual uranium grades, a representative number of core samples will need to be obtained for laboratory analysis and compared to the eU_3O_8 results for each core hole. This will determine the amount of disequilibrium in the ore zone of the deposit.

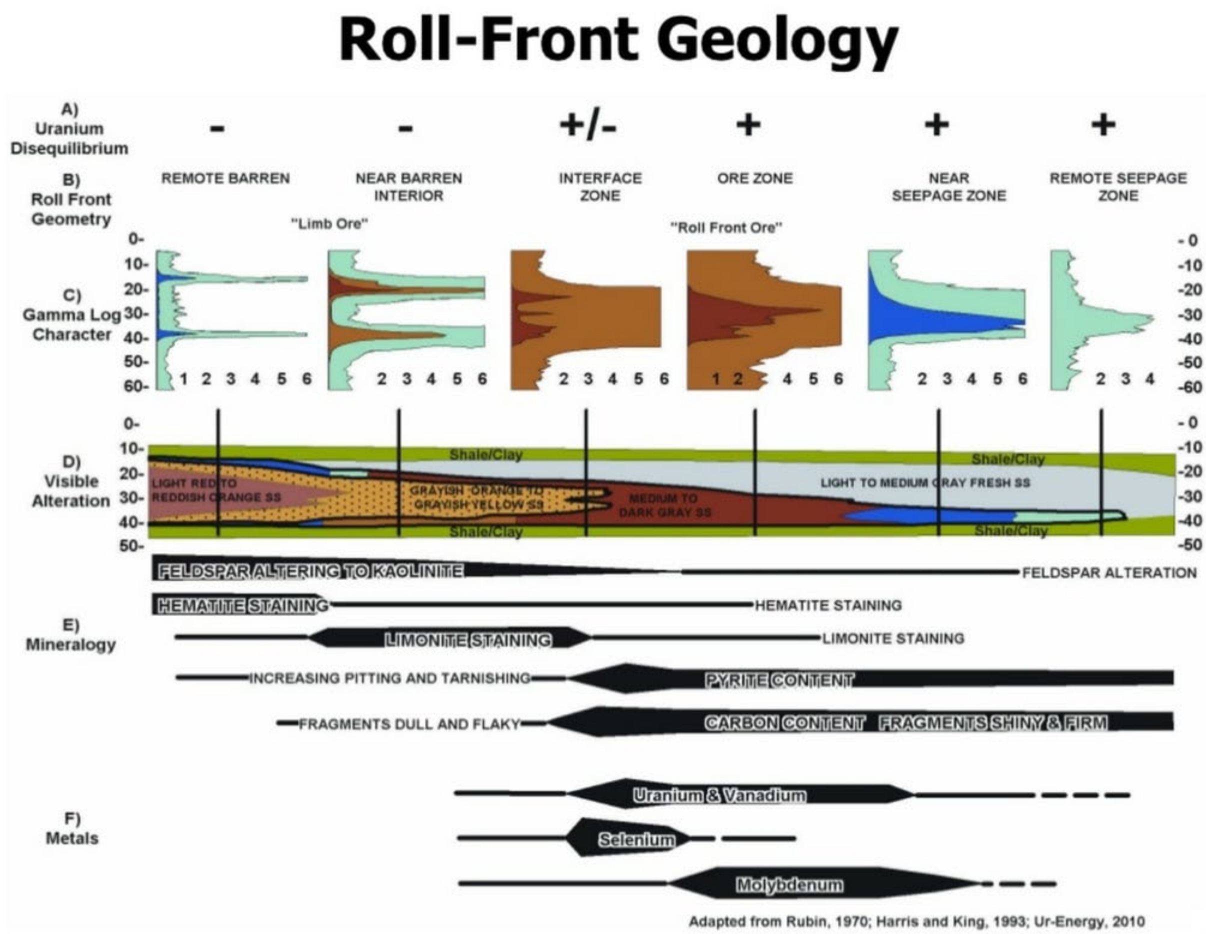
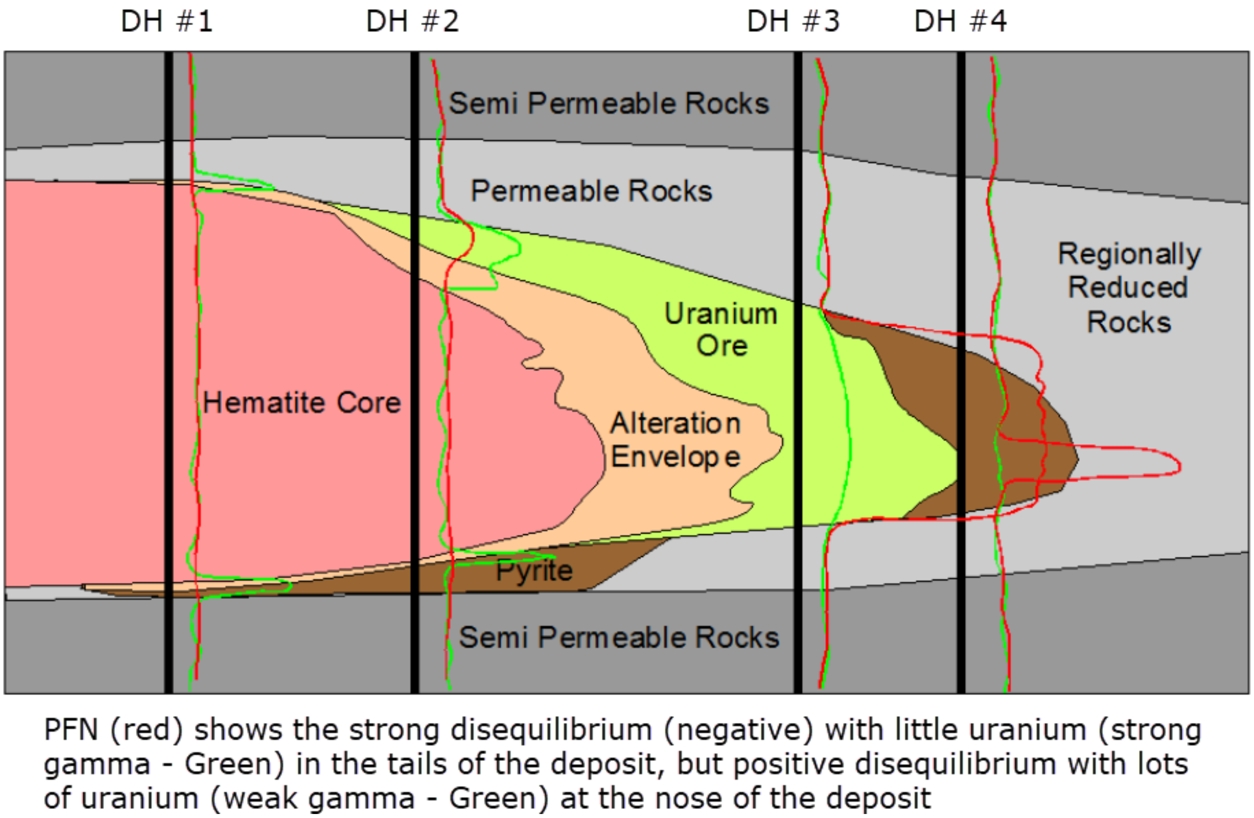


Figure 11-1: Uranium Roll Front Natural Gamma Log Configuration and Associated Geochemistry



Source: After Penney, 2011

Figure 11-2: PFN versus Natural Gamma Trace Response

Prompt Fission Neutron (PFN) was invented by Sandia Laboratories & Mobil R&D in Texas during the 1970s to directly measure in situ ore grade uranium.

The PFN logging tool overcomes the problem of disequilibrium by measuring the uranium-235 (^{235}U) in the formation. In the PFN tool, a pulsed neutron source electronically generates 10^8 14-MeV neutrons per second which ultimately cause fission of ^{235}U in the formation. The thermal and epithermal neutrons returning to the tool from the formation are counted in separate detector channels to provide a measure of ^{235}U free from variations in neutron output and borehole factors common with natural gamma measurements.

In this way PFN is essentially equivalent to other common uranium assay methods such as X-ray diffraction (XRF) completed in a laboratory or field environment and is thus considered to provide direct assay results. The tool has no electric logs (resistivity and self-potential) and so must be run after these logs have been run. The lowest practical grade measurement is approximately 0.02% eU_3O_8. Like the standard gamma tool, the PFN tool must be calibrated by taking measurements in test pits of known grade and porosity.

11.1.3 Core Sampling

There are two main purposes of collecting DD core:

1. Radiometric equilibrium (Section 0) - the condition in which a radioactive species and its successive radioactive products have attained such relative proportions that they all disintegrate at the same numerical rate and therefore maintain their proportions constant.
2. In situ leach amenability studies - intended to demonstrate that the uranium mineralization is capable of being leached using conventional ISR chemistry.

DD core is pulled from the hole by the drilling contractor and laid out in a core box. Core sampling is the primary responsibility of the EFR field geologist. The general process for core sampling is as follows:

- The boxes are to be properly labeled with Hole number and interval contained within the box.
- Measure the core down to the 1/10th of a foot.
- Describe and record the lithology in terms of lithology and oxidation/reduction indications.
- A scintillometer reading is measured for at least every foot and smaller increments when required.
- Cut the core into 2-foot lengths, bag in plastic sleeves, and place in cores boxes to be further processed or stored.
- Split the core vertically on a foot-by-foot basis, retaining half of the core sample in the core box after re-sealing with plastic.
- Complete appropriate Chain of Custody forms which identify the sample by hole number and depth and contain instructions as to the analysis requested as well as any special handling needed. Sign and date the chain of Custody form.
- Deliver the samples to the laboratory and retain a copy of the Chain of Custody which has in turn been signed and dated by the lab.
- Require the laboratory to return the sample results with a copy of the Chain of Custody form.
- Require the laboratory to provide written quality control and assurance procedures (QA/QC) and specify the method and accuracy of the appropriate standard analytical methods and procedures used.
- Check and confirm the analytical results when received to ensure all samples were assayed.
- Select duplicate samples from the reserved core splits for confirmatory analysis if there are any anomalies in the analytical data.

Assays of samples from core drilling were collected by company geologists and submitted to various independent commercial laboratories for analysis prior to EFR ownership. Records and files indicate CCI used Hazen Research, Inc. in Golden, Colorado, in the early 1980s and Uranerz used Energy Laboratories, Inc. (ELI), in Casper, Wyoming in 2007 through 2009 for at least some of this analytical work. Results of these analyses were compared to eU_3O_8 values from gamma logs to evaluate logging tool performance, validity of gamma logging, radiometric equilibrium, and leach amenability studies.

Hazen Research holds certifications from various state regulatory agencies and from the US Environmental Protection Agency (EPA). and ELI is NELAP accredited with certifications USEPA: WY00002; FL-DOH NELAC: E87641; Oregon: WY200001; Utah: WY00002; Washington: C1012.

No diamond drilling has been completed on the properties since 2009.

EFR and the SLR QP recommend that a handheld XRF tool should be considered to replace the scintillometer reading to obtain more precise mineralogical information.

11.1.4 Radiometric Equilibrium

Disequilibrium in uranium deposits is the difference between equivalent (eU_3O_8) grades and assayed U_3O_8 grades. Disequilibrium can be either positive, where the assayed grade is greater than the equivalent grades, or negative, where the assayed grade is less than the equivalent grade. A uranium deposit is in equilibrium when the daughter products of uranium decay accurately represent the uranium present. Equilibrium occurs after the uranium is deposited and has not been added to or removed by fluids after approximately one million years. Disequilibrium is determined during drilling when a piece of core is taken and measured by two different methods, a counting method (closed-can) and chemical assay.

By definition, radiometric equilibrium is radioactive isotopes decay until they reach a stable non-radioactive state. The radioactive decay chain isotopes are referred to as daughters. When all the decay products are maintained in close association with the primary uranium isotope uranium 238 (^{238}U) for the order of a million years or more, the daughter isotopes will be in equilibrium with the parent isotope (McKay et al., 2007). Disequilibrium occurs when one or more decay products are dispersed as a result of differences in solubility between uranium and its daughters.

Disequilibrium is considered positive when there is a higher proportion of uranium present compared to daughters and negative where daughters are accumulated, and uranium is depleted. The disequilibrium factor (DEF) is determined by comparing radiometric equivalent uranium grade eU_3O_8 to chemical uranium grade. Radiometric equilibrium is represented by a DEF of 1, positive radiometric equilibrium by a factor greater than 1, and negative radiometric equilibrium by a factor of less than 1.

Except in cases where uranium mineralization is exposed to strongly oxidized conditions, most of the sandstone roll front deposits reasonably approximate radiometric equilibrium. The nose of a roll front deposit tends to have the most positive DEF and the tails of a roll front would tend to have the lowest DEF (Davis, 1969).

It was concluded in the 2015 Preliminary Economic Assessment (Beahm, 2015) that while the core data collection and assay procedures did follow industry standard procedures, the core data reflected higher GT portions of the deposit and as such were not necessarily representative of the mineralization as a whole. The available PFN data did provide a reasonable representation across the mineralized roll front from oxidized to reduced conditions and in the opinion of the author was more representative than core data for the evaluation of radiometric equilibrium. A comparison of chemical data vs probe data showed that no disequilibrium factor is needed for the Complex.

In previous Nichols Ranch Technical Reports, (Beahm and Anderson (2007), Brown (2009), and Graves (2010) have recommended a DEF factor of 1 based on the nature of the mineral deposit and limited core data. The Hank Technical Report (TREC, 2008) recommended a DEF factor of 1.18 based on limited core data.

In April 2012, Uranerz completed logging of 16 drillholes at Nichols Ranch utilizing PFN. PFN provides direct analysis of the in situ chemical uranium content and is considered by the SLR QP as reliable for the purposes of assessing radiometric equilibrium. Of the 16 PFN holes, 12 had sufficient mineralization for evaluation of radiometric equilibrium. These data are summarized in Table 11-1.

Table 11-1: Radiometric Equilibrium Data
Energy Fuels Inc. – Nichols Ranch Project

Hole ID	Depth (top)	PFN Tool Thick (ft)	PFN Tool Grade (%U_3O_8)	PFN Tool GT	Radiometric (Gamma Log) Thick (ft)	Radiometric (Gamma Log) Grade (%U_3O_8)	Radiometric (Gamma Log) GT	DEF	T.D. (ft)	Deviation (ft)
1A-2	547	16	0.068	1.09	15	0.069	1.04	1.05	567	2.73
1A-3	556	10.5	0.099	1.04	12.5	0.116	1.45	0.72	575	4.69
1A-28	551.5	20.5	0.347	7.12	21	0.396	8.31	0.86	575	5.56
1A-31	541	11.5	0.419	4.82	12	0.251	3.01	1.60	555	5.4
A-39	559	6	0.057	0.34	6.5	0.044	0.29	1.20	569	1.47
1A-44	562.5	6	0.201	1.21	8	0.152	1.22	0.99	569	6.74
1B-1	626.5	7.5	0.066	0.50	8	0.072	0.58	0.85	637	5.34
1B-3	605	8	0.109	0.88	7	0.090	0.63	1.39	620	11.85
1B-4	624.5	7.5	0.060	0.45	7	0.085	0.59	0.76	634	5.77
1B-9	633.5	3.5	0.319	1.40	3.5	0.162	0.57	2.47	640	1.85
1B-16	625.5	16	0.082	1.12	16	0.119	1.90	0.59	644	13.25
1B-17	558.5	8	0.037	0.30	8.5	0.055	0.47	0.64	592	7.53
Total GT				**20.27**			**20.05**	**1.01**		

Since acquiring the Project, EFR has not conducted any PFN logging as past production and assaying have confirmed that radiometric equilibrium is nearly equal to one and not material to the resource estimate.

11.2 Sample Security

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

11.3 In Situ Leach Amenability

Uranium leach amenability studies were conducted on Uranerz uranium core samples between April 22 to April 27, 2007, and January 9 to February 13, 2009. The tests were conducted at ELI's facility in Casper, Wyoming. Leach amenability studies are intended to demonstrate that the uranium mineralization is capable of being leached using conventional ISR chemistry. The tests are designed to present an indication of an ore's reaction rate and the potential uranium recovery.

Analysis of the resulting leach solution indicated leach efficiencies of 65% to 74%. Tails analysis indicated efficiencies of 76% to 79% (Garling, 2013).

The following excepts on the leach amenability procedures were extracted from documents from ELI (ELI, 2007, 2009a, 2009b)

The leach solution was prepared using sodium bicarbonate (2 g/L $NaHCO_3$) as the source of the carbonate complexing agent (formation of uranyldicarbonate (UDC) or uranyltricarbonate ion (UTC)). Hydrogen peroxide is added as the uranium oxidizing agent as the tests are conducted at ambient pressure. A sequential leach "bottle roll" test was conducted on the core interval selected by Uranerz personnel. The tests are not designed to approximate in situ conditions (permeability, porosity, pressure) but are merely an indication of an ore's reaction rate and the potential uranium recovery

The core sample (designation U36-2l-l24C from depth of 467 ft to 473 ft) was dried at approximately 60°C for more than 16 hours in a convection oven and pulverized to less than 10 mesh. The processed core was then analyzed for uranium. Chemical analysis was conducted on a strong mineral acid digest of the dried and pulverized core samples. This digest consists of a 1-gram sub sample digested with 50% nitric acid heated in a water bath at 95°C for more than 16 hours. Following the heating period, the volume is adjusted to a known level, typically 50 mL. Uranium analysis is performed on the solution by Inductively Coupled Argon Plasma (ICP) emission spectroscopy against certified commercial standards.

The Leach Amenability Procedure was then performed. A 200-g sub sample of the dried and pulverized core was placed into a two-litre wide mouth plastic container and a lixiviate comprised of 2.0 g/L HCO_3 ($NaHCO_3$) and 0.5 g/L H_2O_2 was added at an approximate five pore volume liquid to solid ratio. Uranerz dictated the five pore volume charge of 1,000 mL of the lixiviate was added to the 200-gram sub sample. The reaction vessel was then rotated on a TCLP extractor for approximately 16 hours at 30 revolutions per minute (RPM). Then, the entire liquid portion of the leach was separated by filtration (centrifuged only if necessary). The solid portion was reintroduced to the reaction vessel, and a fresh charge of lixiviate was added. This was repeated six times to produce pore volumes 1-5, 6-10, 11-15, 16-20, 21-25, and 26-30. All these pore volumes were analyzed on an ongoing basis for Dissolved Uranium.

Since 2009, no additional leach amenability studies have been conducted on the Project. The SLR QP is of the opinion that this is not material to the Mineral Resource estimate or future operations as actual recovery factors have been established from the previous ISR operations at the Complex. No additional work is required.

11.4 Bulk Density

Limited site-specific data was available for review of bulk density. Previous Technical Reports for the Complex have used bulk density factors ranging from 15.5 cubic feet per ton (ft^3/ton) to 18.3 ft^3/ton. A third-party consultant, BRS, recommended a density of 16 ft^3/ton be used for Nichols Ranch, Jane Dough and Hank areas and another third-party consultant, TREC, recommended a density of 15.5 ft^3/ton be used for North Rolling Pin and West North Butte areas. BRS has direct conventional mining experience within the same and/or very similar geologic settings in Wyoming and has direct knowledge of appropriate bulk density for this level of estimate.

EFR recommended a density of 15.5 ft^3/ton or 16.0 ft^3/ton be used for all Mineral Resource estimations, based on available data and its direct mining experience within the host formation. The difference in densities between 15.5 ft^3/ton and 16 ft^3/ton results in a calculation difference of 3% in the Mineral Resource estimate and is considered by the SLR QP as an acceptable variance.

11.5 Quality Assurance and Quality Control

The primary assay data used to calculate the Mineral Resource estimate for the Complex is downhole radiometric log data. Calibration data for both natural gamma and PFN geophysical logging units are available for both historical and recent drilling.

The SLR QP was not able to review QA/QC of field sampling performed by EFR personnel as the Project is currently under care and maintenance and no drilling activities are currently being conducted. However, examination of previous reports and files shows that EFR and its predecessors utilized training programs, and indicated that field personnel demonstrated basic geological abilities and management oversight operations met or exceeded industry best practices and standards at that time. Exploratory drillhole cutting samples are recovered in a wet or damp condition and soon after they are described by a field geologist. Down hole radiometric logging was checked against the driller's logs. The data are considered accurate and reliable for the purpose of completing a mineral resource estimate of the Project.

When drilling is active, both the natural gamma and PFN logging trucks are calibrated at least every three months. Natural gamma calibration is performed at U.S. Department of Energy (DOE) standard calibration facilities located in Casper, Wyoming. Commercial logging services for both natural gamma and PFN logging are calibrated at the DOE standard facilities located in Casper, Wyoming, and/or Grand Junction, Colorado.

Calibration data for historical drill data was included in the geophysical log header information.

11.6 Conclusions

EFR has conducted no core sampling since acquiring the properties. All reported core sampling was performed by a previous operators CCI and Uranerz. The reported sample preparation and handling of the historic coring cannot be confirmed. The test results from the historical coring programs were not available for review, thus were not included in the calculation of resource quantities.

In the SLR QP's opinion, the historical radiometric logging, analysis, and security procedures at the Complex were adequate for use in the estimation of the Mineral Resources. The SLR QP also opines that, based on the information available, the original gamma log data and subsequent conversion to % eU_3O_8 values are reliable.

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.

Furthermore, there is no evidence that radiometric disequilibrium would be expected to negatively affect the uranium resource estimates of the deposits however the SLR QP recommends that EFR resume using PFN as a QA/QC tool to confirm the disequilibrium factor within the Satellite Properties not yet exposed to ISR mining.

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. Specifically, any data which appears higher or lower than the surrounding data is confirmed by reviewing the original geophysical log. This data review includes confirming that the drill depth was adequate to reflect the mineralized horizon, that the geologic interpretation of host sand is correct, and that the thickness and grade of mineralization is correct.

The primary assay data used to calculate the Mineral Resource estimate for the Nichols Ranch Mining Unit and Satellite Properties is downhole geophysical log data. Calibration data for both natural gamma and PFN geophysical logging units are available for both historical and recent drilling.

The historical geophysical logs were interpreted by EFR using standard procedures for the interpretation of natural gamma logging employing the half amplitude method for the interpretation of historic analog data. The SLR QP reviewed and confirmed drill data contained in various electronic databases and constrained mineral resource estimates above a 0.2 GT.

12.1 Nichols Ranch Mining Unit

12.1.1 Nichols Ranch

The SLR QP visited the Complex on October 28 to 29, 2021. During the visit, the SLR QP reviewed historical plans and sections, geological reports, historical and recent drillhole logs, the digital drillhole database, historical drillhole summary radiometric logs and survey records, and property boundary surveys, and toured site facilities, locations of current installed wellfields, and associated header house complexes. Discussions were held with the EFR technical team who demonstrated a strong understanding of the mineralization types and their processing characteristics, and how the analytical results are tied to the results. The SLR QP did not visit EFR offices in Casper, Wyoming.

EFR maintains a complete set of drillhole data, as well as other exploration data, for the entire project in Microsoft Excel spreadsheets and hard copy logs at the Nichols Ranch facility. Files at the EFR Nichols Ranch office and warehouses were contained in file cabinets, and map files covering the Nichols Ranch area as well as other areas 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.

Certification of database integrity is accomplished by both visual and statistical inspections comparing geology, assay values, and survey locations cross-referenced to historical paper logs. Any discrepancies identified are corrected by the EFR resource geologist referring to hard copy assay information.

Records from the Microsoft Excel database including collar GT intercepts are then extracted for each target and imported into ArcGIS software for geologic modeling and resource estimation. Currently only data from the Nichols Ranch deposit has been imported into the ArcGIS software. All data for the remaining properties remain in Microsoft Excel format or hard copy format.

As part of the data verification process the SLR QP conducted a series of independent verification tests on the drillhole database provided by EFR for the properties acquired from Uranerz in 2015. Verification tests were run to check drill collar coordinates and elevation, radiometric log intercept data, U_3O_8 conversion and calibrations factor, total GT calculations, and redox trend boundaries. The SLR QP did not encounter any significant discrepancies with the Nichols Ranch data in the vicinity of modeled mineralized zones but did identify drillholes with missing coordinates and/or elevations, improper total depth drilled compared to radiometric logs, and radiometric log data with no drill collar information.

The SLR QP did not identify any significant problems with the interpretations and U_3O_8 conversion and calculations and is of the opinion that the calibration factors are acceptable. The SLR QP conducted a review of grade continuity for each mineralized sandstone unit. The SLR QP reviewed 0.5 ft natural gamma radiometric (probe) data and related information to validate the reported grade and grade thickness (GT) values shown on the drillhole intercept maps. Results indicate continuity of mineralization within each sandstone unit in both plan and section in elongate tabular or irregular shapes. The SLR QP is of the opinion that, although continuity of mineralization is variable, drilling confirms that local continuity exists within individual sandstone units.

Of the total 1,777 drillholes reported drilled across the Nichols Ranch deposit, the EFR database is missing data from 96 records or roughly 5.7% (Table 12-1). The discrepancies and uncertainty identified by the SLR QP do not affect the Mineral Resource estimate. The SLR QP recommends that the missing data be corrected prior to the next in-fill drilling programs or resource updates.

Table 12-1: EFR Drilling Database
Energy Fuels Inc. – Nichols Ranch Project

Property	Historic # Drillholes (1960–2015)	EFR Drillholes (2015–2019)	Total # Drillholes	EFR Database		
				# of Records	Missing #	Missing %
Nichols Ranch Mining Unit						
Nichols Ranch	1,328	449	1,777	1,681	-96	-5.4%
Jane Dough	786	0	786	771	-15	-1.9%
Hank	289	0	289	299	10	3.5%
Satellite Properties						
North Rolling Pin	494	0	494	379	-115	-23.3%
West North Butte, East North Butte and Willow Creek	576	0	576	374	-202	-35.1%
Total	**3,473**	**449**	**3,922**	**3,504**	**-418**	**-10.7%**

The remaining property data used to support this current Mineral Resource estimate has been reviewed and disclosed previously in Canadian NI 43-101 Technical Reports for the Jane Dough, Hank, and Satellite Properties. Those data verification efforts carried out by the TREC and Uranerz in 2008, 2010, and 2015 and reviewed and audited by the SLR QP are summarized in the following subsections.

12.1.2 Jane Dough and Hank (Beahm and Goranson, 2015)

During a site visit on February 19, 2015, Douglas Beaham, an independent qualified person, examined the original hard copy drillhole files for the Jane Dough and Hank deposits at the Uranerz office in Casper, Wyoming. Uranerz provided electronic scans of all geophysical and lithological logs for the drillholes used in the 2015 Technical Report along with electronic data summaries. The 2015 mineral resource estimate presented herein was developed based on geophysical data, grade calculations, lithological logs, and cross sections from 213 CCI and 857 Uranerz drillholes. The data was considered accurate and reliable for the purpose of completing a mineral resource estimate. A total of 1,075 drillholes (786 from the Jane Dough deposit and 289 from the Hank deposit) were spot checked. Specifically, any data which appeared higher or lower than the surrounding data was confirmed by reviewing the original geophysical log. This data review included confirming that the drill depth was adequate to reflect the mineralized horizon, that the geologic interpretation of host sand was correct, and that the thickness and grade of mineralization was correct. It was reported (Beahm and Goranson, 2015) that although some discrepancies were found in the data and were corrected prior to the mineral resource estimate, the data was generally found to be accurate and representative of the mineralization in the areas.

The SLR QP did not identify any significant problems with the interpretations and U_3O_8 conversion and calculations and is of the opinion that the calibration factors are acceptable. The SLR QP conducted a review of grade continuity for each mineralized sandstone unit. The SLR QP reviewed 0.5 ft natural gamma radiometric (probe) data and related information to validate the reported grade and grade times thickness (GT) values shown on the drillhole intercept maps. Results indicate continuity of mineralization within each sandstone unit in both plan and section in elongate tabular or irregular shapes. The SLR QP is of the opinion that although continuity of mineralization is variable, drilling confirms that local continuity exists within individual sandstone units.

Of the total 1,075 drillholes reported drilled across the Jane Dough and Hank deposits, the EFR database is missing data from 15 records from Jane Dough and has additional 10 holes at Hank, or less than 0.5% (Table 12-1). The discrepancies and uncertainty identified by the SLR QP with the EFR database do not affect the Mineral Resource estimate completed in 2015.

12.2 Satellite Properties

12.2.1 North Rolling Pin Data Verification (Graves, 2010)

The 2010 NI 43-101 compliant Technical Report of the North Rolling Pin deposit was authored by Douglas Graves, an independent qualified person. Graves, P.E., visited the site on November 19, 2008. Historic drilling records indicate that a total of approximately 494 rotary drillholes were completed across the NRP property. Geophysical and lithologic log data from 386 of the 494 drillholes were reviewed and audited by Graves. These data were used to identify the sand host, mineralization depth, and grade and thickness of mineralization. The grade calculation data were checked for accuracy of depth, thickness, grade, and host sandstone identification and were compared with the geophysical logs. Each geophysical log header was checked against the data summary sheet to confirm the drillhole number and location, and the material grade summaries presented on the geophysical logs were compared with the data summary sheets, and the data were confirmed. The drillhole locations were plotted and checked for accuracy by comparison with the original drillhole map, corrections were applied to some drillholes, and then confirmed.

Data was assumed to have been collected in a manner consistent with standard industry practices at the time. Logging of each drillhole utilized the same basic methodology that has been used for over 50 years in the uranium industry. The radiometric logs were generally run with analog equipment prior to 1980 and more recent logging utilizes digital equipment. It is assumed that the appropriate logging tool “k” factor was developed for the historic geophysical logging equipment. The radiometric logging information was considered accurate and reliable by the Douglas Graves (Graves, 2010) for the purpose of developing the resource estimate.

Of the 368 geophysical logs from CCI drilling and 18 logs from Uranerz drilling in North Rolling Pin, 198 had mineralization using a minimum 0.2 GT cutoff. The 2010 mineral resource estimate presented herein was developed based on geophysical data, grade calculations, lithological logs, and cross sections from 188 CCI and 10 Uranerz drillholes. The data was considered accurate and reliable for the purpose of completing a mineral resource estimate.

As part of the data verification process, the SLR QP conducted a series of independent verification tests on the drillhole database provided by EFR for the properties acquired from Uranerz in 2015. Verification tests were run to check drill collar coordinates and elevation, radiometric log intercept data, U_3O_8 conversion and calibrations factor, total GT calculations, and REDOX trend boundaries.

The SLR QP did not encounter any significant discrepancies with the North Rolling Pin database, agrees with previous verification work, and considers the data accurate and reliable for the purpose of reporting a mineral resource estimate

12.2.2 West North Butte, East North Butte and Willow Creek (Graves and Woody, 2008)

The 2008 NI 43-101 compliant Technical Report of the West North Butte, East North Butte, and Willow Creek deposits was authored by Douglas Graves and Donald Woody, both independent qualified persons. The Authors visited the site on November 19, 2008, to observe the on-going uranium exploration activities being conducted by Uranerz on the properties.

It is reported that both Graves and Woody conducted a detailed review of 573 (285 WNB, 127 ENB, and 164 WC) exploratory holes drilled within the area. These data were used to identify the sand host, mineralization depth, and grade and thickness of mineralization. Historically, six core samples were collected for density determination and chemical analyses (Hazen, 1980). Density testing indicated an average in-place density of 15.5 ft^3/ton. U_3O_8 testing indicated grades ranging from .050% to 0.235%, however, these test results could not be correlated to gamma logs.

Historical data were assumed to have been collected in a manner consistent with standard industry practices at the time, and the Authors considered the historical information accurate and reliable for the purposes of completing a mineral resource estimate. It is assumed that appropriate k factor calibration was performed for the geophysical logging equipment. Most historical electric and lithologic logs are available for review, but historical core and original drill cutting samples are no longer available.

The 2008 mineral resource estimate was developed based on all geophysical and lithological data from 573 exploratory holes drilled within the WNB, ENB, and WC areas.

As part of the data verification process, the SLR QP conducted a series of independent verification tests on the drillhole database provided by EFR for the properties acquired from Uranerz in 2015. Verification tests were run to check drill collar coordinates and elevation, radiometric log intercept data, U_3O_8 conversion and calibrations factor, total GT calculations, and REDOX trend boundaries. The SLR QP encountered significant discrepancies with the EFR West North Butte, East North Butte, and Willow Creek database that included:

- Missing collar coordinate information from 202 of the 573 reported drillholes used in the 2008 resources estimate
- Missing digital files of drillhole uranium intercept values and eU_3O_8 conversion calculations
- Unassigned coordinates to GT contour maps and sand unit designations

The SLR QP consider the EFR database for the West North Butte, East North Butte, and Willow Creek deposits incomplete and unreliable for the purpose of auditing or validating the 2008 mineral resource estimate. The SLR QP is of the opinion that the although the resource estimate completed in 2008 adhered to industry best practices and standards at the time, the inability to validate the model excludes it from the current resource estimate discussed in Section 14.0 of this Technical Report . Until EFR validates and certifies the drilling database, the resource estimate should be regarded as historical and should not be relied upon.

12.3 Limitations

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

12.3.1 Conclusions

Nichols Ranch had near-continuous production for over five years beginning in 2014. There has been adequate drilling to develop the Mineral Resource models that have been used in the GT contour models and for successful mine planning. 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.

EFR has not completed a thorough verification of drilling data reported on the West North Butte, East North Butte, and Willow Creek areas. The SLR QP opines that, although the resource estimate completed in 2008 (Graves and Woody, 2008) adhered to industry best practices and standards at the time, the inability for EFR or the SLR QP to validate the model excludes it from the current resource estimate discussed in Section 14.0 of this Technical Report . The resource estimate should be regarded as historic and should not be relied upon until EFR completes validation of the historic drilling.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Metallurgical Testing

The ISR method used at the Complex is a standard method for uranium recovery in the Western United States. Pilot testing and actual production from other uranium deposits in the Powder River Basin indicated that the uranium located at the Complex would be amenable to ISR production. No site-specific metallurgical testing is available for the Complex, however, initial production began at the Nichols Ranch portion of the Complex in 2014, and uranium was successfully produced until the Complex was put on standby at the end of 2019.

After five years of commercial production (2014 to 2019) via ISR utilizing an alkaline lixiviant, the ISR factor based on actual production was 68%. This factor was derived from the estimated pounds under a production well pattern and how many pounds were produced from that pattern. For example, if 100,000 lb of U_3O_8 were estimated to be under pattern and 70,000 lb of U_3O_8 were produced, ISR factor would be 71%. Figure 13-1 shows the production history of uranium by ISR at Nichols Ranch since 2014.

Based on this historical production (Table 13-1 and Figure 13-1) a recovery factor on similar uranium deposits in the Wasatch Formation should use a recovery factor of 71%. This would include both the Jane Dough and Hank deposits as well as the Satellite Deposits described in this Technical Report.

Table 13-1: Past Production 2014 to 2021
Energy Fuels Inc. – Nichols Ranch Project

Year	Production (lb U_3O_8)	Cumulative (lb U_3O_8)	Recovery Total (%)
2014	199,509	199,509	11.7
2015	272,844	472,353	27.8
2016	334,700	807,053	47.5
2017	258,554	1,065,607	62.7
2018	140,191	1,205,798	70.9
2019	69,626	1,275,424	75.0
2020	630	1,276,054	75.0
2021	535	1,276,589	75.1

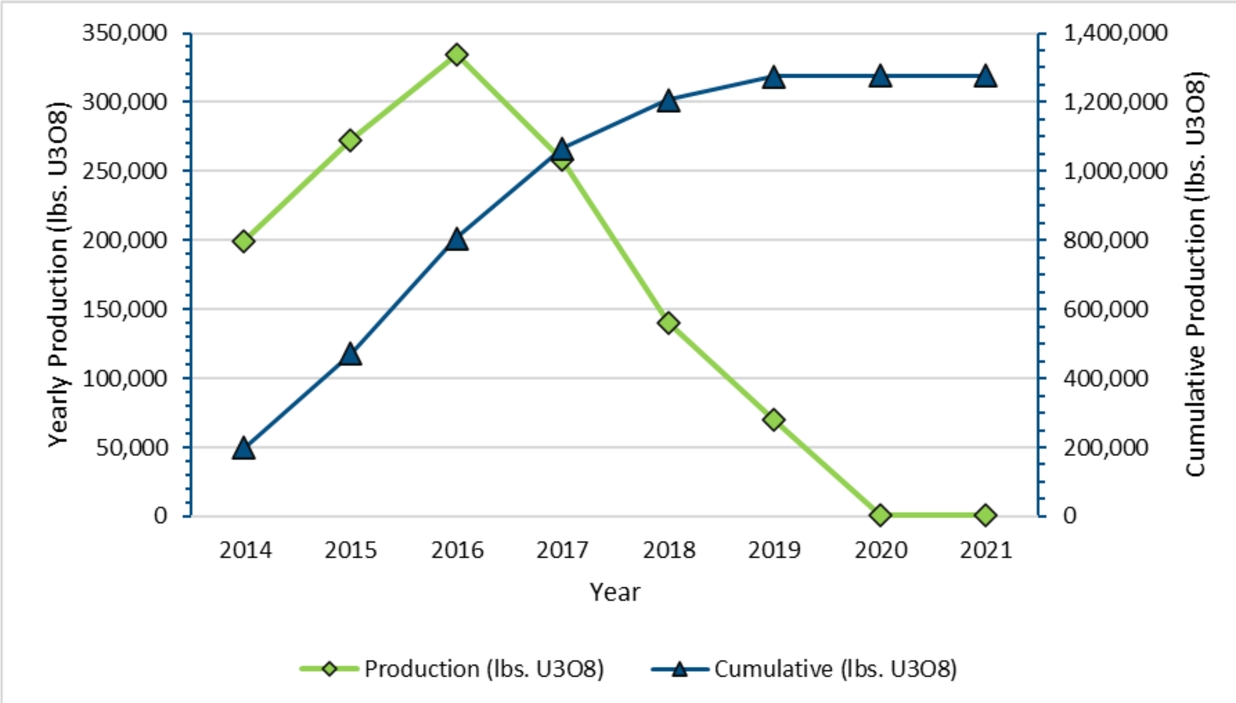


Figure 13-1: Nichols Ranch Production (2014 to 2021)

13.2 Opinion of Adequacy

It is the SLR's QP opinion that the successful historical operation of the ISR supersedes any metallurgical testing program and the available operating data is more than adequate to support the stated recovery.

14.0 MINERAL RESOURCE ESTIMATES

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 which are incorporated by reference in NI43-101. The SLR QP also follows the CIM issued Best Practice Guidelines for Uranium Mineral Resource and Mineral Reserve estimation (CIM, 2003).

The SLR QP has reviewed and accepted the Mineral Resource estimate prepared by EFR for the Complex. Resource estimates were completed with the following effective dates using the GT contour method and audited by the SLR QP for accuracy and completeness:

- Nichols Ranch Mining Unit:
  - Nichols Ranch by EFR in 2021
  - Jane Dough and Hank by Uranerz in 2015
- Satellite Properties:
  - North Rolling Pin by TREC in 2010

The effective date of this Mineral Resource estimate is December 31, 2021. The U_3O_8 Mineral Resource for the Complex is presented in Table 14-1 at a GT cut-off grade of 0.20 %-ft and have been depleted as of December 31, 2021. The total production from Nichols Ranch is 1,276,589 lb eU_3O_8 as of December 31, 2021.

Total Measured and Indicated Resources for the Complex are 3.294 million tons (Mst) at an average grade of 0.106% eU_3O_8 containing 6.988 Mlb eU_3O_8, of which 6.182 Mlb is attributable to EFR. Additional Inferred Resources total 0.65 Mst at an average grade of 0.097% eU_3O_8 containing 1.256 Mlb eU_3O_8, of which 1.176 Mlb is attributable to EFR.

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 14-1: Mineral Resource Estimate for the Nichols Ranch Uranium Complex – Effective Date December 31, 2021
Energy Fuels Inc. – Nichols Ranch Project

Project Area	Classification	Tonnage (ton)	Grade (% eU_3O_8)	Contained Metal (lb U_3O_8)	EFR Attrib. Basis (%)	EFR Attributable (lb U_3O_8)	Recovery (%)
Nichols Ranch Mining Unit + Satellite Properties	Total Measured	11,000	0.187	41,140	100.0	41,140	71.0
	Total Indicated	3,283,000	0.106	6,946,693	88.4	6,141,663	60.4
	Total Measured + Indicated	**3,294,000**	**0.106**	**6,987,833**	**88.5**	**6,182,803**	**60.4**
	Total Inferred	650,000	0.097	1,256,000	93.6	1,176,200	60.4

Notes:

1. SEC S-K 1300 definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.
2. Measured Mineral Resource includes reduction for production through December 31, 2021.
3. Mineral Resources are 100% attributable to EFR for Nichols Ranch, Hank, and North Rolling Pin, and are in situ.
4. Mineral Resources are 81% attributable to EFR and 19% attributable to United Nuclear Corp in parts of Jane Dough, and are in situ.
5. Mineral Resource estimates are based on a GT cut-off of 0.20%-ft
6. The cut-off grade is calculated using a metal price of $65/lb U_3O_8, operating costs of $19.28/lb U_3O_8, and 60.4% recovery (based on 71% process recovery and 85% under wellfield).
7. Mineral Resources are based on a tonnage factory of 15.0 ft^3/ton (Bulk density 0.0667 ton/ft^3 or 2.13 t/m^3).
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
9. Numbers may not add due to rounding.

14.2 Resource Database

The basis of the Nichols Ranch Mining Unit and Satellite Properties Mineral Resource estimates was gamma logs collected by EFR and its predecessors. The resource databases as of the effective date of this Technical Report includes data from 3,504 drillholes totaling over 2.36 million ft of drilling completed through 2016 of the 3,942 historical drillholes reported drilled across the properties (Table 14-2).

Table 14-2: Summary of Available Drillhole Data
Energy Fuels Inc. – Nichols Ranch Project

Property	Operator	Number of Drillholes	Total Depth Drilled (ft)
	Nichols Ranch Mining Unit		
Nichols Ranch	Cleveland Cliffs	82	50,552
	Uranerz	1,150	735,403
	EFR	449	281,126
Nichols Ranch Total		**1,681**	**1,067,081**
Jane Dough	Cleveland Cliffs	45	46,714
	Uranerz	726	468,074
Jane Dough Total		**771**	**514,788**
Hank	Cleveland Cliffs	168	252,000
	Uranerz	131	123,526
Hank Total		**299**	**375,526**
Nichols Ranch Mining Unit Total		**2,751**	**1,957,395**
	Satellite Properties		
North Rolling Pin	Cleveland Cliffs	379	114,495
North Rolling Pin Total		**379**	**114,495**
West North Butte	Cleveland Cliffs	263	263,000
	Uranerz	111	29,000
West North Butte Total		**374**	**292,000**
Satellite Total		**753**	**406,495**
Total		**3,504**	**2,363,890**

The SLR QP's audit of the missing historic drillholes records and files supplied for review by EFR concluded that most of these drillholes were either not actually drilled, intercepted no mineralization, and/or are missing radiometric downhole data and excluded from the EFR database. The actual number of records used in previous resource estimation technical reports for the Satellite Properties (Graves and Woody, 2008; Graves, 2010) are in agreement. The SLR QP is of the opinion that the EFR drillhole database for the Nichols Ranch Mining Unit and Satellite Properties excluding West North Butte, East North Butte and Willow Creek deposits is valid and suitable to estimate Mineral Resources. West North Butte, East North Butte and Willow Creek deposits are excluded from the Mineral Resource statement.

14.3 Geological Interpretation

Mineral Resource calculations are based on chemically equivalent uranium grades. A minimum grade cut-off of 0.02% U_3O_8 and minimum GT of 0.20 was used in the calculations along with a bulk dry density of 15.5 ft^3/ton or 16 ft^3/ton, as subsequently discussed in Section 14.8.

GT contouring is a method used to project similar GT values within the same geologic zone or unit across a reasonable distance of control. GT contours are built off the REDOX boundary within the sand host. The REDOX boundary is interpreted by the geologist and defines the shape of the ore body/roll front by distinguishing altered and unaltered sands within the zone of interest. Detail is controlled by the density of the drilling. Contours are more generalized with wider spaced drilling and become more detailed as drill spacing becomes more densely populated along the REDOX boundary. GT contouring is an accepted practice in roll front uranium geology.

14.4 Drill Data Statistics

14.4.1 Nichols Ranch Mining Unit

14.4.1.1 Mineralization Thickness

Mineralization is a typical Powder River Basin type roll front deposit, as described in Section 7.4. Specifically, at the Nichols Ranch Mining Unit, an upper and lower unit of the A Sand hosts mineralization within the Nichols Ranch and Jane Dough areas and the F Sand hosts mineralization within portions of Nichols Ranch. Individual sand units are approximately 25 ft to 50 ft thick; however, the mineralization in any sand rarely exceeds 15 ft. No F sand mineralization is reported in the current Mineral Resource estimate at Nichols Ranch.

The range and averages for thickness and GT of mineralization for Nichols Ranch, Jane Dough, and Hank are provided in Table 14-3.

Table 14-3: GT Summaries
Energy Fuels Inc. – Nichols Ranch Project

Deposit	Cut-off GT	Avg. GT	Avg. Thick (ft)	Min GT	Max GT	Min Thick (ft)	Max Thick (ft)
Nichols Ranch	0.2	0.94	6.4	0.2	12.1	1	28
	0.5	1.46	8.2	0.5	12.1	1	28
Jane Dough	0.2	0.78	7	0.2	6.33	1	42
	0.5	1.16	9	0.5	6.33	1	42
Hank	0.2	0.72	7.6	0.2	3.22	1	27.5
	0.5	1.13	10.3	0.2	3.22	2	27.5

14.4.1.2 Grade

Table 14-4 shows the number of drillhole assays per range of GT values for Nichols Ranch, Jane Dough, and Hank.

Table 14-4: Drillhole Results
Energy Fuels Inc. – Nichols Ranch Project

Deposit	Barren or Trace Mineralization	>0.02 e%U_3O_8, <0.2 GT	0.2–0.5 GT	>0.5 GT
Nichols Ranch	367	302	274	690
Jane Dough	433	160	87	106
Hank	168	21	37	63

Figure 14-1 and Figure 14-2 present the Nicholas Ranch PA1 and PA2 GT maps, respectively.

Figure 14-3 and Figure 14-4 present the Jane Dough and Hank mineralized trend and GT contour maps, respectively.

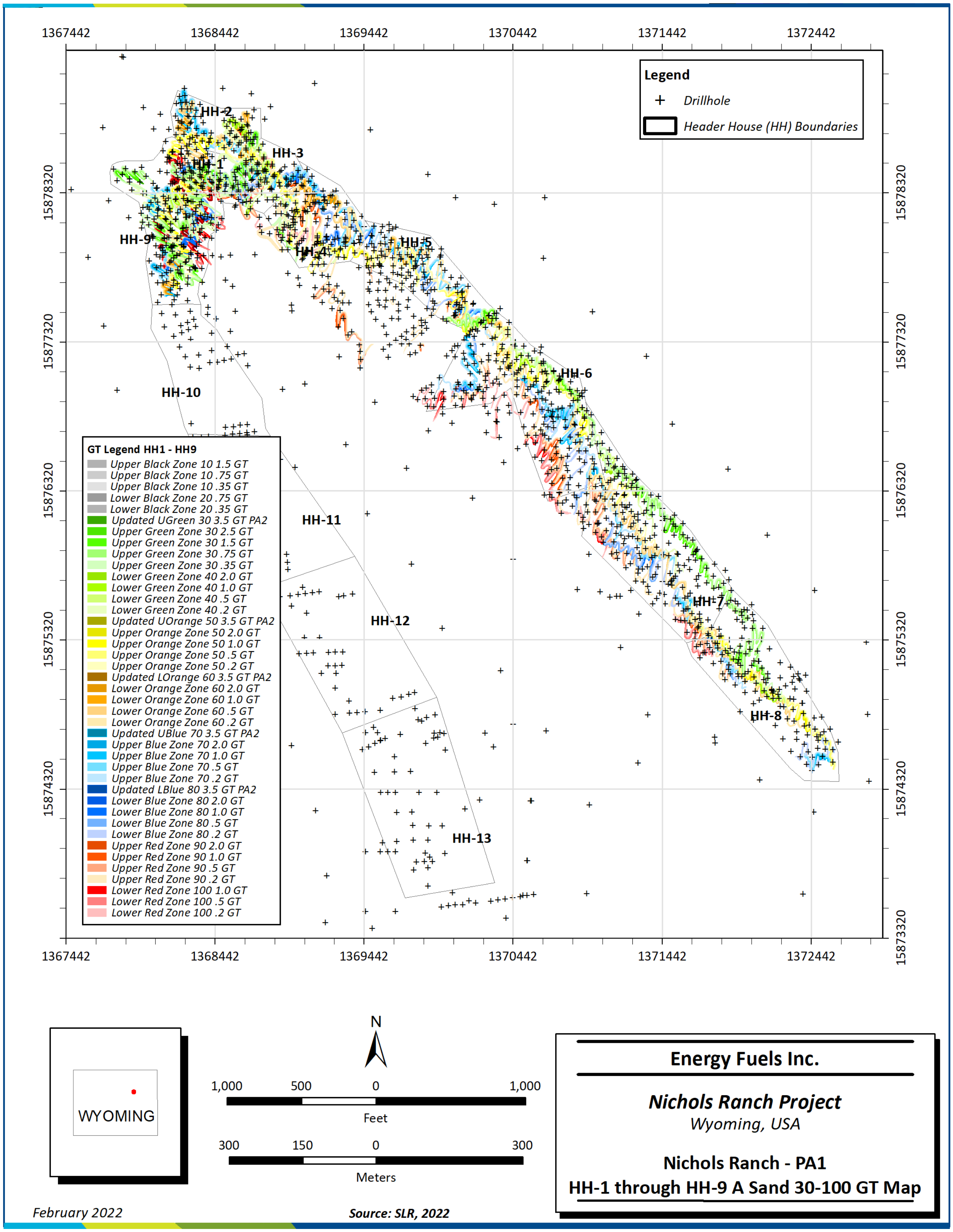


Figure 14-1: Nichols Ranch - PA1 HH-1 through HH-9 A Sand 30 -100 GT Map

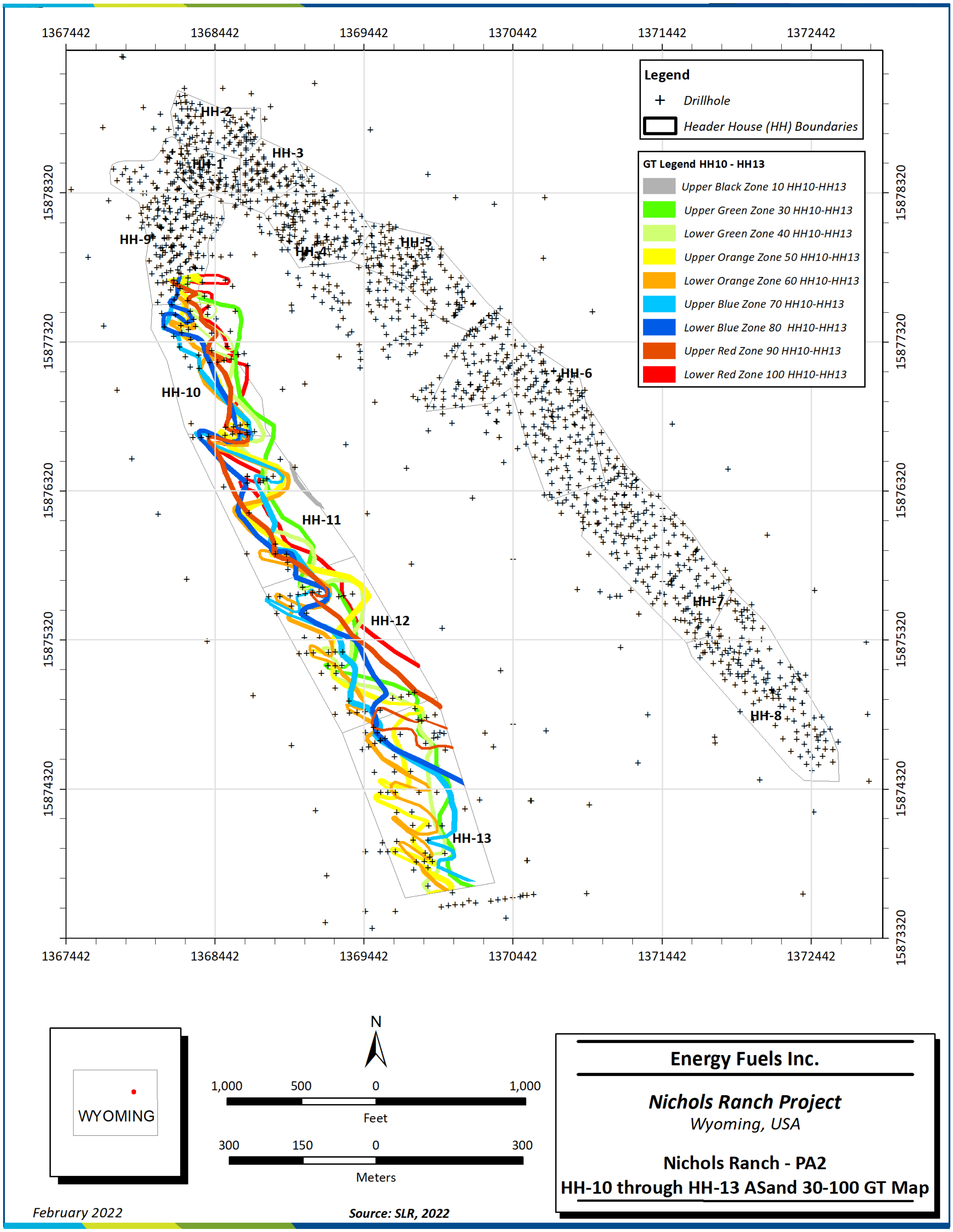


Figure 14-2: Nichols Ranch – PA2 HH-10 through HH-13 A Sand 30 -100 GT Map

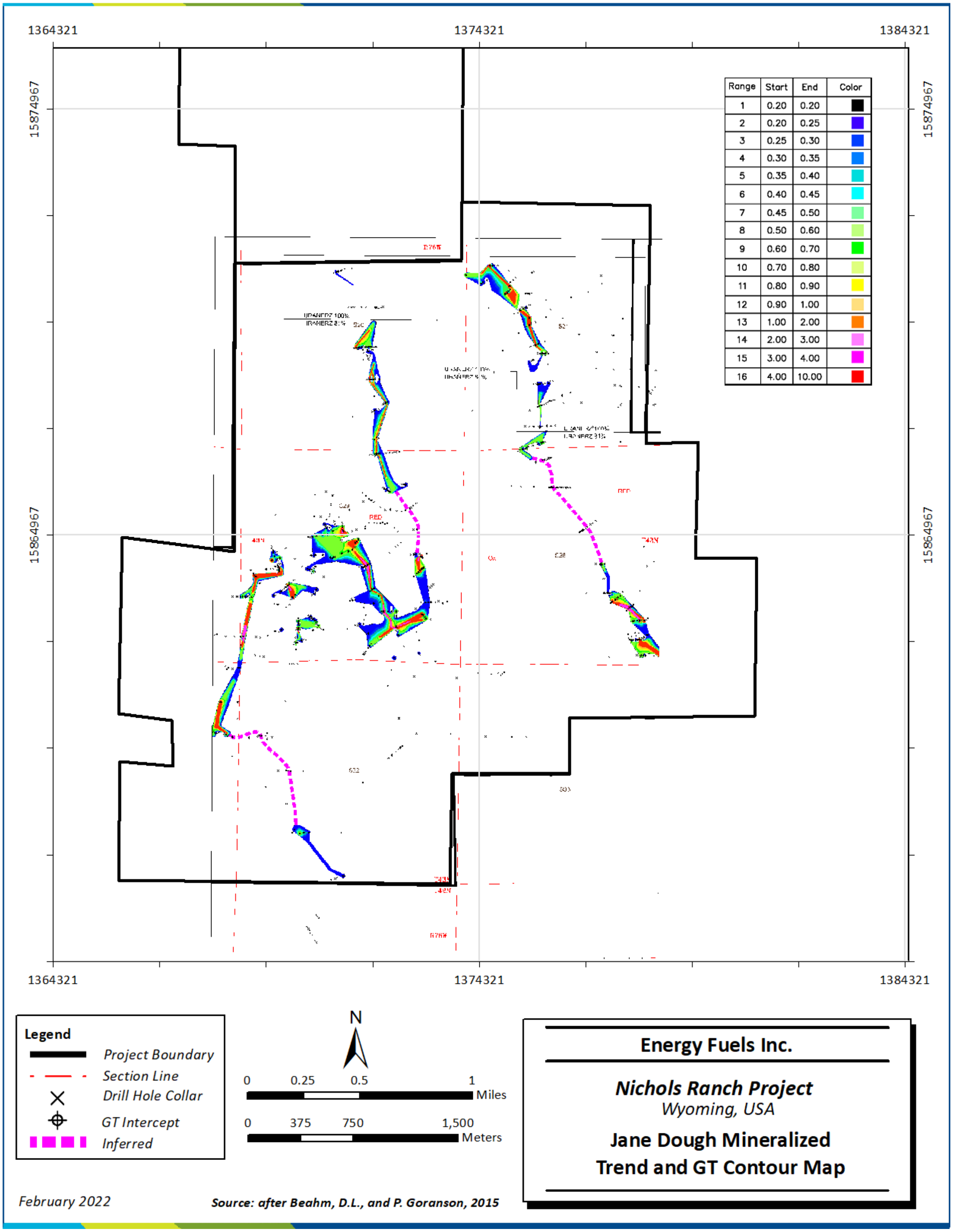


Figure 14-3: Jane Dough Mineralized Trend and GT Contour Map

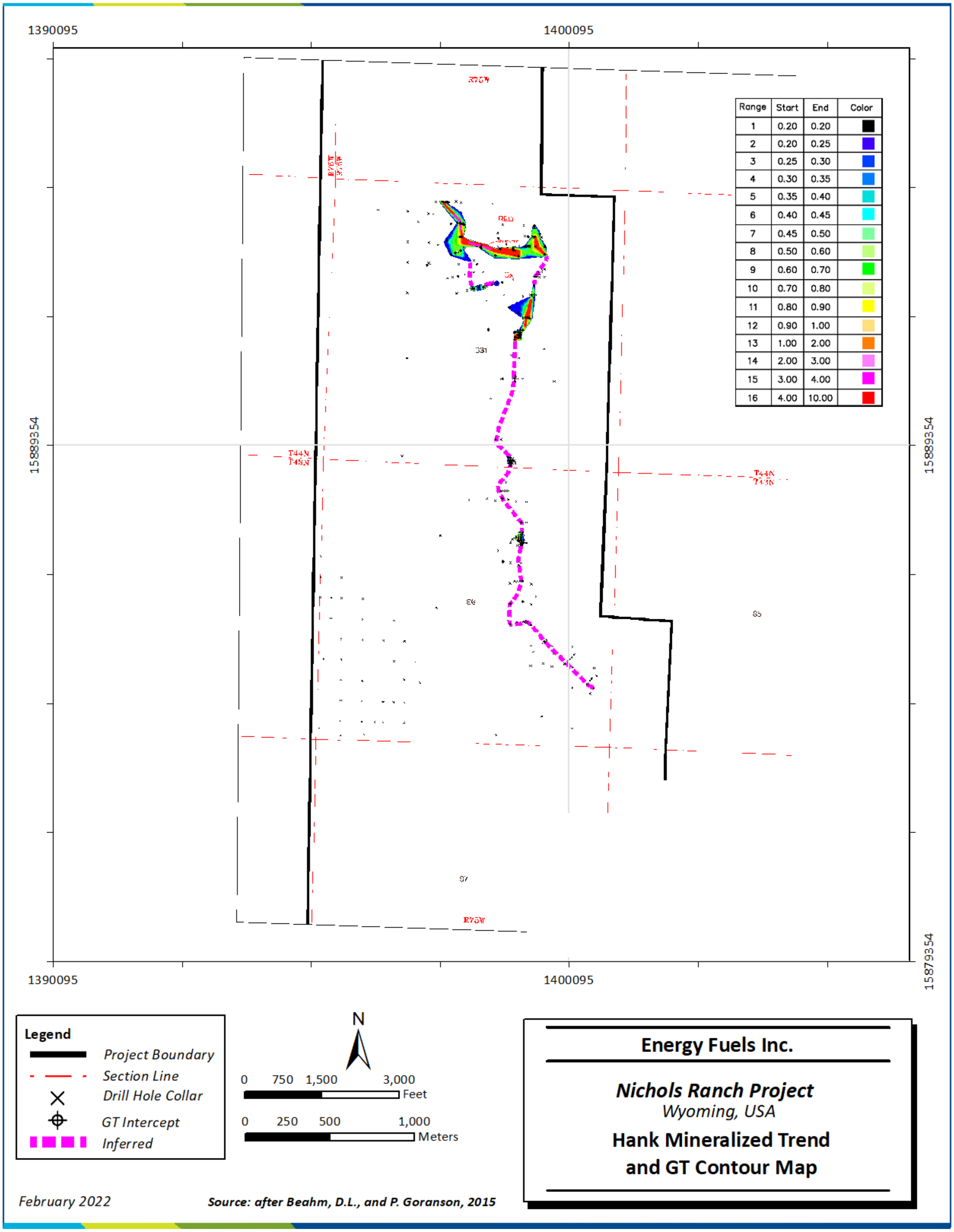


Figure 14-4: Hank Mineralized Trend and GT Contour Map

14.4.2 Satellite Properties

14.4.2.1 North Rolling Pin

14.4.2.1.1 Mineralization Thickness

Mineralized F Sand intercept thickness ranges from 1 ft to 30 ft, with an average mineralization thickness of 12.5 ft, for grades greater than 0.03% eU_3O_8 and GT greater than 0.2. The average mineralized thickness for the Upper F Sand is 7.6 ft and for the Lower F Sand is 10.1 ft.

14.4.2.1.2 Grade

The average grade of the North Rolling Pin Upper and Lower F Sand Measured Resource, based on eU_3O_8 (radiometric equivalent weight percent) for GT greater than 0.20 is 0.062% eU_3O_8; the average grade of the Indicated Resource is 0.052% eU_3O_8. The combined Measured and Indicated Resources average grade is 0.058% eU_3O_8. The Inferred average grade at GT cut-off of 0.20 was 0.042% eU_3O_8. Figure 14-5 and Figure 14-6 present the North Rolling Pin mineralized trend and GT contour maps for the northern and southern portions, respectively.

14.4.2.1.3 Trend Length

Exploration drillhole “fences” are spaced approximately 400 ft to 600 ft along trend and approximately 25 ft to 50 ft between holes is common in clusters of drilling or along fences perpendicular to the trend. The mineralization trend within the Upper F and Lower F Sands appears to be discontinuous with several mineral resource bodies being separated by regions of minimal mineralization, or barren of mineralization, as defined by drilling along the reduction/oxidation boundary in the F Sand. The exploratory drilling defines discontinuous mineralized trends for the Upper F Sand of approximately 7,200 ft, and approximately 10,800 ft in length for the Lower F Sand mineralization trend.

14.4.2.1.4 Trend Width

Using a minimum GT value of 0.20, the trend width of the Upper F Sand, measured across the strike of the trend ranges from 20 ft to 140 ft, averaging approximately 60 ft. The Lower F Sand trend varies in width from 20 ft to 160 ft, and averages approximately 70 ft.

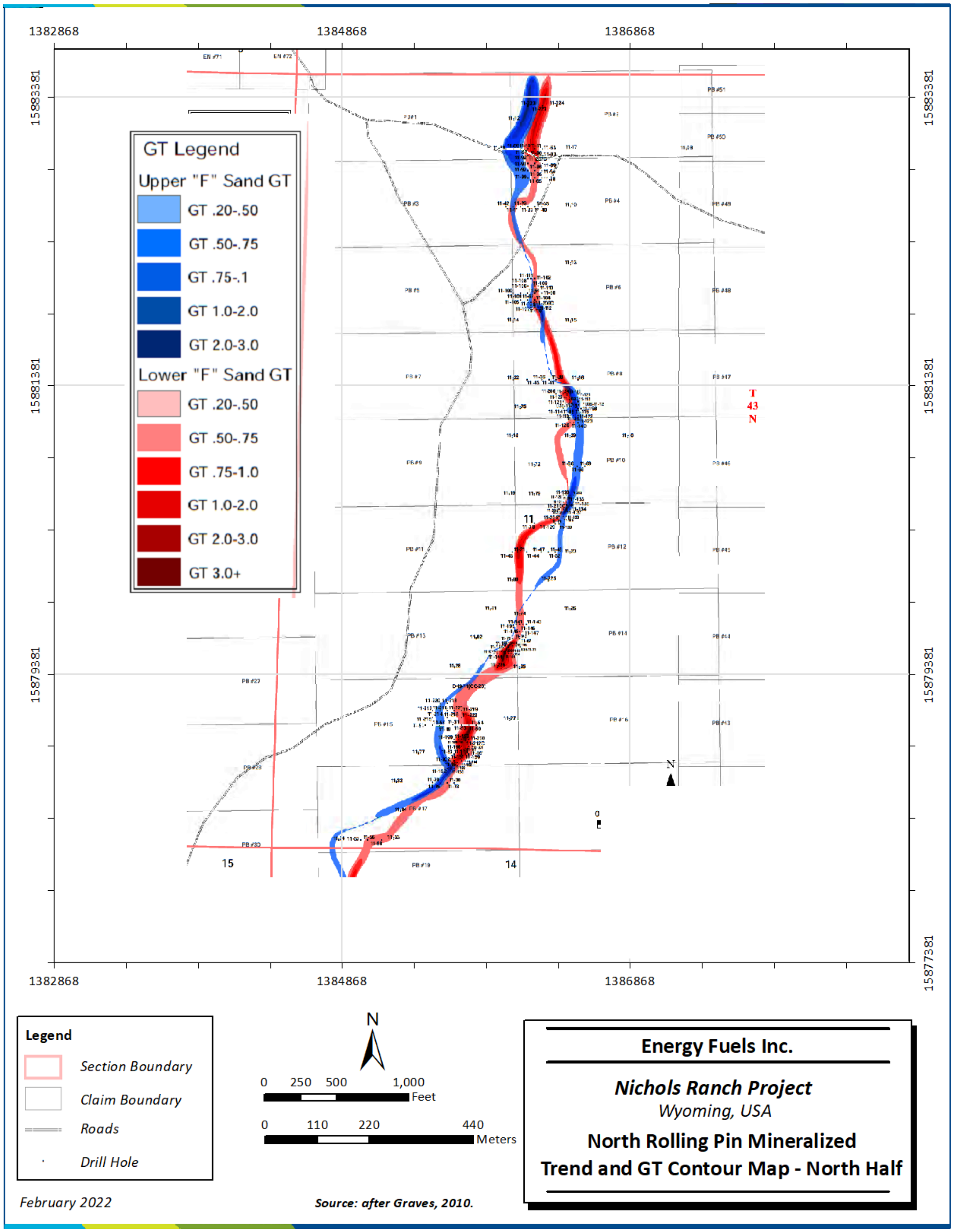


Figure 14-5: North Rolling Pin Mineralized Trend and GT Contour Map - North Half

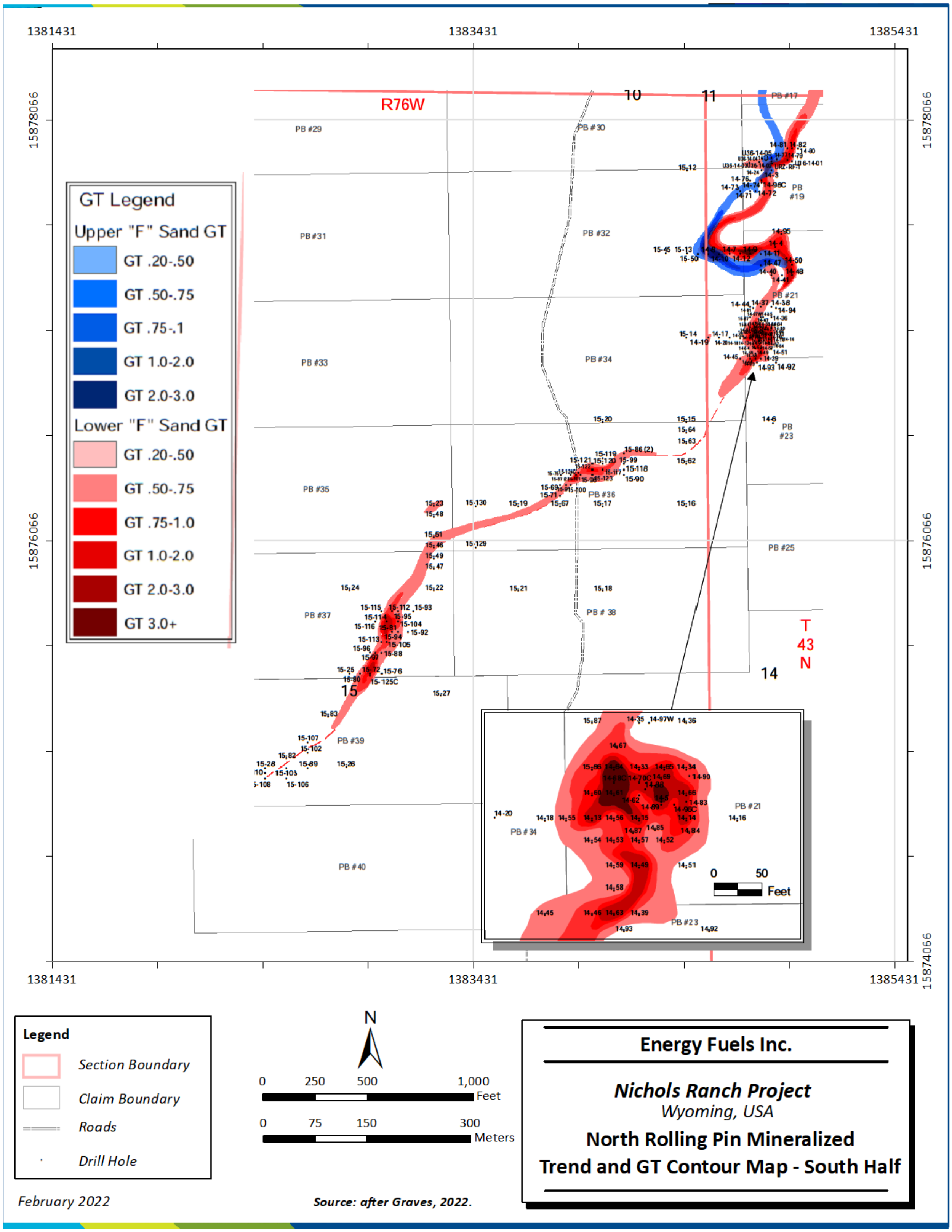


Figure 14-6: North Rolling Pin Mineralized Trend and GT Contour Map - South Half

14.5 Treatment of High-Grade Assays

14.5.1 Capping Levels

Unlike conventional uranium mining, applying capping levels are not applicable to ISR mining techniques.

14.5.2 High Grade Restriction

Unlike conventional uranium mining, applying high-grade restriction searches are not applicable to ISR mining techniques.

14.6 Compositing

Unlike conventional uranium mining, compositing is not applicable to ISR mining techniques.

14.7 Search Strategy and Grade Interpolation Parameters

Mineral Resources have been estimated using the GT (Grade x Thickness) contour method for each of the mineral sandstone horizons or units identified across the deposits (1, A, B, C, F, G and H). The uranium resource can generally be defined by existing drilling information which is of sufficient density and continuity to identify a meandering discontinuous mineralized trend. The grade and mineralized zone thickness were obtained from historical and recent drilling.

The GT contour method is well suited for estimating tonnage and average grades of relatively planar mineralized bodies. It is a smoothing technique that allows the geologist to apply judgment regarding the variability of the mineralization within the plane of the mineralized body. This technique is particularly effective in generating a realistic landscape of metal values along the plane of the mineralized body and limiting the effect of local high values. The technique is best applied to estimate tonnage and average grade of relatively planar bodies, i.e., where the two dimensions of the mineralized body are much greater than the third dimension (Agnerian and Roscoe, 2001). For these types of deposits, the contour method can provide a clear view of the “mineralization landscape” with “peaks and valleys” along the plane of the mineralization. Due to the two-dimensional nature of the contour method, data from drillhole intersections means the reported averaged assay grade is across the entire thickness of the mineralized body being considered. If necessary, the average intersection value is diluted to a specified minimum thickness.

The rationale for all Mineral Resource estimation methods is that there is continuity of mineralization from one sample point to another, whether they are drillhole pierce points, underground workings, surface trenches, or wellfields. When a mineral deposit has been tested by many drillholes, the estimate of tonnage and average grade by all of the conventional methods will likely be similar. When a deposit has been tested by a relatively few widely spaced or irregularly spaced drillholes, however, the estimates by various methods may vary greatly and a few high-grade or wide intercepts may have a large influence on the average grade or tonnage of the deposit. The contour method can be effective in reducing the influence of high-grade or wide intersections as well as the effects of widely spaced, irregularly spaced, or clustered drillholes. This is particularly the case for roll front uranium deposits. It can also be applied to estimate Mineral Reserves by deleting certain portions of the Mineral Resources estimated by the same method, such as clipping the edges of the contoured area, deleting certain parts of the tonnage estimate as pillars and sills and/or applying economic factors to the Mineral Resources.

The Mineral Resource estimates were calculated using GT contours with a minimum grade cut-off of 0.03% eU_3O_8 and a minimum mineralization thickness of 1.0 feet. The GT values of the subject sand intervals for each hole were plotted on a drillhole map and contour lines were drawn along the mineralization trend using ArcGIS software. The contour map was developed from the calculated GTs for various GT ranges. The areas within the GT contour boundaries, up to certain distances from the drillhole and to certain maximum areas of influence, were used for calculating estimates for resources. All resources were limited to the extent of the 0.2 GT boundaries. The contained pounds of uranium were calculated using the following formula:

Mineral Resource, pounds = (Area, ft^2) X (GT, %-ft) X (20 lb) X (DEF) / (RD, ft^3/ton)

- Area (ft^2) = Area of influence in square feet (measured from contour interval)
- GT (percent x feet) = Material grade in percent times feet thickness of mineralization (GT multiplied by 20 lb to convert from short tons to pounds as 1% of a short ton equals 20 lb)
- DEF (1.00) = Disequilibrium factor (1.00)
- RD (15.5) = Rock density (15.5 ft^3/ton)

Tonnage was calculated based on grade, pounds and a tonnage conversion factor for a given GT contour area.

14.8 Bulk Density

The SLR QP reviewed 11 records of bulk density determinations from 11 holes (four Nichols Ranch, four Jane Dough, and three Hank) collected in 2006 and 2008. Of the 11 records, coordinates (location) of seven (one Nichols Ranch, four Jane Dough, and two Hank) are contained within the EFR drillhole database, of which only six have recorded density measurements (Table 14-5).

Table 14-5: Bulk Density Measurements
Energy Fuels Inc. – Nichols Ranch Project

Area	Drillhole ID	Date (MM/DD/YYYY)	Comment	Sample Depth (ft)	Density (ft^3/ton)
Nichols Ranch	U06-099	8/23/2006	Coordinates Unknown: No density analysis record.	-	-
	U06-100	12/8/2006	Core from 465-530. Lost core from 495-508	524	17.6
	U06-101	12/8/2006	Coordinates Unknown: Core from 630-658	633	17.2
	URZN1-2	12/8/2006	Coordinates Unknown: Core from 502-534. missing from 512-518, 517-520	510	12.5
Jane Dough	U36-21-124C	11/19/2008	Core 465-477 recovered 12’. No density analysis record.	-	-
	U36-21-125C	11/19/2008	Core 580-582 recovered 12', No density analysis record.	-	-
	A36-29-125C	11/26/2008	Core 530-545 recovered 14.3', No density analysis record.	-	-

Area	Drillhole ID	Date (MM/DD/YYYY)	Comment	Sample Depth (ft)	Density (ft^3/ton)
	A36-29-132C	12/2/2008	Core 603-618 recovered 15', No density analysis record.	-	-
	U06-104	12/8/2006	Core 455-478	461	17.9
Hank	U06-105	12/8/2006	Core 370-392.5	379	18.2
	URZHF-1	12/8/2006	Coordinates Unknown: Core 360-380	369	18.9
			Average Density (ft^3/ton):		**17.1**

Bulk density records range for 12.5 ft^3/ton to 18.9 ft^3/ton with an average of 17.1 ft^3/ton, which agrees with values used in previous estimates. Previous Technical Reports for the Complex have used density factors ranging from 15.5 ft^3/ton to 18.3 ft^3/ton. A third-party consultant, BRS, recommended a density of 16 ft^3/ton be used for the Nichols Ranch, Jane Dough, and Hank areas. Another third-party consultant, TREC, recommended a density of 15.5 ft^3/ton be used for North Rolling Pin and West North Butte areas. The difference in densities between 15.5 ft^3/ton and 16 ft^3/ton calculates a difference of 3% in the resource estimate and is considered by the SLR QP to be an acceptable variance.

The Mineral Resources estimated in this PEA use a tonnage factor of 15.5 ft^3/ton. This is the typical tonnage factor used by most operators in the Powder River Basin for mineralized intervals in the Wasatch Formation sandstone unit. This tonnage factor was derived by the major operators from years of actual mining.

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 adjacent mining operations, the SLR QP recommends conducting additional density determinations, particularly in the mineralized zones, to confirm and support future resource estimates.

14.9 Radiometric Equilibrium Factor

Based on the available data and the geologic setting of the mineral deposits at Nichols Ranch, Jane Dough, Hank, North Rolling Pin, West North Butte, East North Butte, and Willow Creek, EFR concluded that the use of a DEF factor of 1.0 was appropriate for resource estimation.

The SLR QP is of the opinion that, based on the information available, the original gamma log data and subsequent conversion to eU_3O_8% values are reliable but slightly conservative estimates of the uranium U_3O_8 grade. This is supported by past production uranium recoveries and historical reported DEF for uranium deposits in the Powder River Basin. Furthermore, there is no evidence that radiometric disequilibrium would be expected to negatively affect the uranium resource estimates of the Nichols Ranch Mining Unit and Satellite Properties. Disequilibrium however can be expected to vary slightly across the deposits, as is common in low-grade roll front uranium deposits, and the SLR QP recommends that EFR consider running additional PFN probes in the future, particularly in the Satellite Properties.

14.10 Cut-Off Grade and GT Parameters

14.10.1 Nichols Ranch Mining Unit

EFR and its predecessor Uranerz established minimum grade, thickness, and GT parameters based on conventional Powder River Basin uranium mining practices and recent operating costs at Nichols Ranch. Various economic and mining parameters including metal price, metallurgical recoveries, operating costs, and other operational constraints (Table 14-6) enter into the final cut-off grade and/or GT to calculate the in-ground mineral resources during the economic evaluation stage of the individual projects.

Table 14-6: Nichols Ranch Project Cut-off Grade
Energy Fuels Inc. – Nichols Ranch Project

Item	Unit	Quantity
Metal Price	US$/lb U_3O_8	65.00
Process Plant Recovery	%	71
Total OPEX (includes G&A)	US$/lb U_3O_8	19.28

ISR (also referred to as In-situ Leach (ISL)) deposits differ from "conventional" deposits in that no physical rock is mined and processed, but rather solution is pumped through a geologic formation, the mineral of interest is dissolved, and a "loaded" solution is pumped through a process facility and the mineral of interest is recovered. There are a number of additional factors including porosity and permeability of the rock formation that influence the production area of the deposit. In ISR mining, tons of rock are not moved and therefore a grade associated with that ton of material cannot be applied as a traditional cut-off grade. ISR operations typically use two values, a minimum geologic grade associated with the deposit to define the extent of mineralization. Then, an economic GT cut-off is applied, and the project is evaluated for those pounds contained from an economic standpoint. Traditionally, this GT is selected based on other similar operations or by extended pilot testing. The cut-off criteria used by EFR at their ISR facility at Nichols Ranch is a minimum geologic grade cut-off of 0.02% eU_3O_8 and minimum economic GT cut-off of 0.20. The SLR QP is familiar with cut-off criteria as applied for similar operations and concurs that a minimum GT cut-off of 0.20 meets criteria for reasonable economic extraction via ISR given the depths and general operating conditions at the Complex.

The average depth below the surface to the base of the mineralization ranges from approximately 560 ft in the Nichols Ranch and Jane Dough areas and 390 ft in the Hank area. Table 14-7 shows average thickness values of the A-Sand at Nichols Ranch.

Table 14-7: Average Intercept Thickness Nichols Ranch A-Sand Zone
Energy Fuels Inc. – Nichols Ranch Project

Sand Unit	Zone	# Intercepts	Total Zone Thickness (ft)	Avg. Zone Thickness (ft)	Total # Intercepts	Total Thickness (ft)	Avg. Thickness (ft)
A-10	PA1 HH9	-	-	-	2	4.5	2.25
	PA2	2	4.5	2.25			

Sand Unit	Zone	# Intercepts	Total Zone Thickness (ft)	Avg. Zone Thickness (ft)	Total # Intercepts	Total Thickness (ft)	Avg. Thickness (ft)
A-20	PA1 HH9	15	49.0	3.27	19	63.5	3.34
	PA2	4	14.5	3.63			
A-30	PA1 HH9	74	345.0	4.66	96	425.5	4.43
	PA2	22	80.5	3.66			
A-40	PA1 HH9	61	273.0	4.48	85	360.5	4.24
	PA2	24	87.5	3.65			
A-50	PA1 HH9	53	295.0	5.57	89	441.5	4.96
	PA2	36	146.5	4.07			
A-60	PA1 HH9	45	240.5	5.34	99	449.5	4.54
	PA2	54	209.0	3.87			
A-70	PA1 HH9	69	390.0	5.65	103	533.5	5.18
	PA2	34	143.5	4.22			
A-80	PA1 HH9	37	188.0	5.08	67	320.5	4.78
	PA2	30	132.5	4.42			
A-90	PA1 HH9	72	419.5	5.83	99	531.5	5.37
	PA2	27	112.0	4.15			
A-100	PA1 HH9	56	253.5	4.53	77	307.0	3.99
	PA2	21	53.5	2.55			

14.10.2 Satellite Properties:

Two GT cut-off grades were used previously to evaluate the reported resources in this Technical Report, both using a minimum grade cut-off of 0.03% eU_3O_8. The 0.20 GT was used to present an appropriate value relative to current ISR operations and is recommended for reporting purposes. The 0.50 GT has been used to highlight the areas of highest mineralization and value if economics dictate the need for lower operating costs.

14.11 Mineral Resource Classification

Classification of Mineral Resources as defined in S-K 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, considering 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 PEA 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 drillhole 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:
    - Resources were estimated using the GT contour method by projecting average width and GT along a measured REDOX trend defined by drillholes. Appropriate average width and GT applied to each specific mineral resource area was determined from drillhole data. The GT contour method is commonly used in the uranium industry and refers to the estimated grade multiplied by estimated thickness. In many uranium deposits, thin uranium mineralization can be mined due to those zones being higher grade. The GT method allows this information to be accurately calculated and displayed.
    - Mineralization is correlated within laterally continuous sands at Nichols Ranch. All mineralization at Nichols Ranch is within the Wasatch Formation which has been broken into eight fluvial sandstone horizons or units identified as the 1, A, B, C, F, G and H Sand units.

Mineral Resources for the Project were classified as either Measured, Indicated, or Inferred Mineral Resources as detailed in the following subsections.

14.11.1 Measured Mineral Resources

The Nichols Ranch area was an active ISR mine. Within the defined wellfields, which correspond to the areas for which Measured Mineral Resources have been estimated, detailed delineation drilling or well installation require a drillhole spacing of less than 100 ft.

14.11.2 Indicated Mineral Resources

Indicated Mineral resources are defined to be those areas where the location of the REDOX front can be reasonably defined by drill data and where along a continuously mapped REDOX front there are drillholes that intersect the mineralized front and reasonably confirm the presence on mineralization which has reasonable prospect for economic extraction. For the Complex, drillhole spacing in areas for which EFR estimated indicated mineral resources ranges from less than 100 ft spacing to as much as 800 ft along the REDOX front.

14.11.3 Inferred Mineral Resources

Inferred Mineral Resources for the Complex are those areas for which EFR calculated have a drillhole spacing exceeding 800 ft along trend provided that there is geologic evidence that the REDOX front is present and its location can reasonably be assumed.

The SLR QP is of the opinion that the Mineral Resource classification criteria used is reasonable and appropriate for disclosure.

14.12 GT Model Validation

The SLR QP received the project data from EFR for independent review as a series of Microsoft Excel spreadsheets, ArcGIS software, and associated digital files. The SLR QP used the information provided to validate the Mineral Resource interpolation, tons, grade, and classification.

Drillhole collar locations and GT values were confirmed by plotting drill collar coordinates, GT intercepts, oxidation-reduction boundary, and well pattern grid layout within the Header House 1 and Header House 3 zones within the Production Area #1 portion of the Nichols Ranch deposit (Figure 14-7).

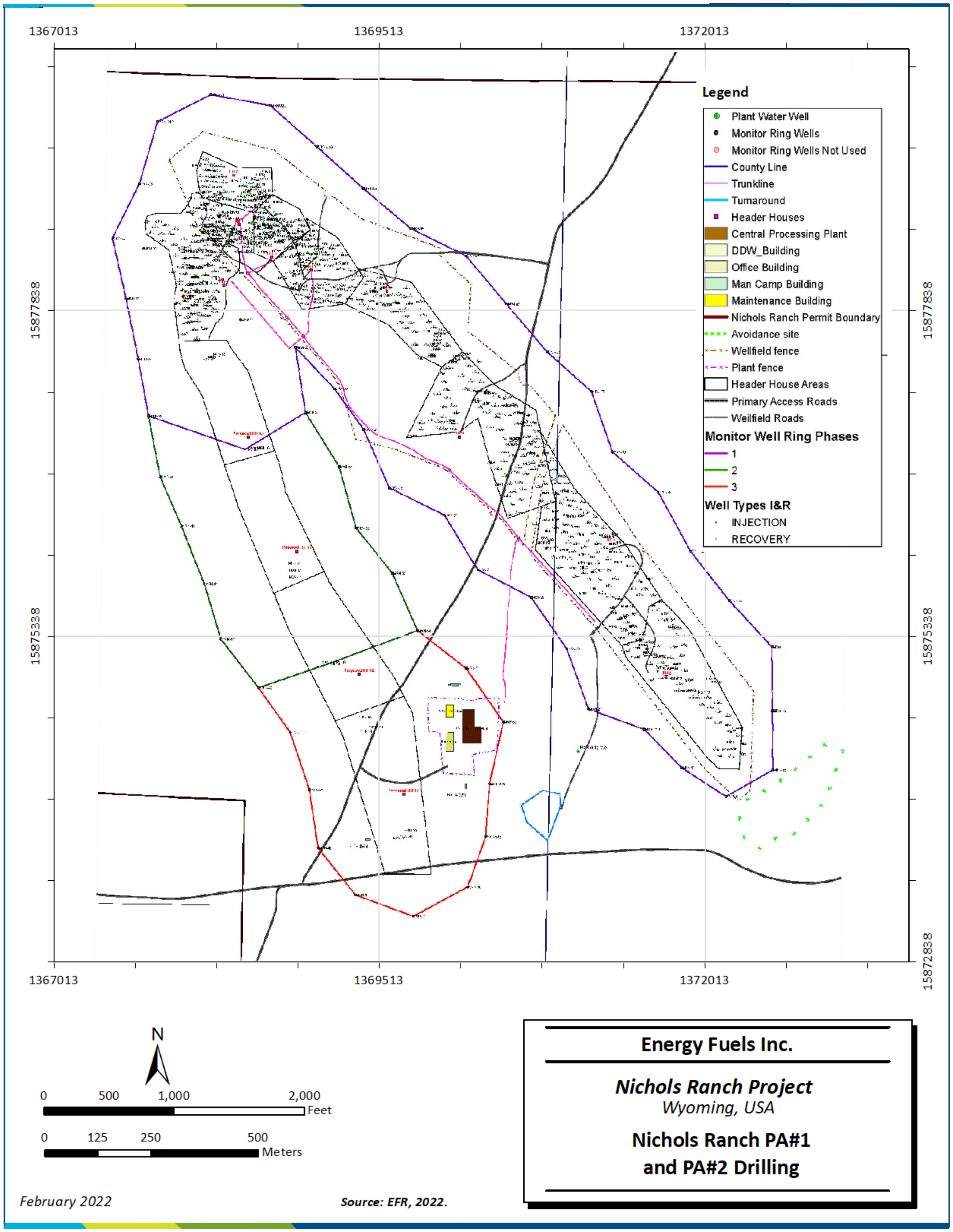


Figure 14-7: Nichols Ranch PA1 and PA2 Drilling

14.13 Mineral Resource Reporting

The Nichols Ranch Mining Unit and Satellite Properties Mineral Resource estimate is summarized by area at a GT cut-off grade of 0.20 %-ft in Table 14-8. In the SLR QP's opinion, the assumptions, parameters, and methodology used for the Nichols Ranch 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 1.0 and Section 26.0 of this Technical Report, 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 14-8: Mineral Resource Estimate for the Nichols Ranch Uranium Complex – Effective Date December 31, 2021
Energy Fuels Inc. – Nichols Ranch Project

Classification	Project Area	Sand	Tonnage (tons)	Grade (% eU_3O_8)	Contained Metal (lb U_3O_8)	EFR Attrib. Basis (%)	EFR Attributable (lb U_3O_8)	Recovery (%)
Measured	Nichols Ranch	A	11,000	0.187	41,140	100.0	41,140	71.0
	Jane Dough		0	0.000	0	0.0	0	0.0
	Hank		0	0.000	0	0.0	0	0.0
Total Measured			**11,000**	**0.187**	**41,140**	**100.0**	**41,140**	**71.0**
Indicated	Nichols Ranch	A	359,000	0.166	1,189,693	100.0	1,189,693	60.4
	Jane Dough	A	1,892,000	0.112	4,237,000	81.0	3,431,970	60.4
	Hank	F	450,000	0.095	855,000	100.0	855,000	60.4
	North Rolling Pin	F	582,000	0.057	665,000	100.0	665,000	60.4
Total Indicated			**3,283,000**	**0.106**	**6,946,693**	**88.4**	**6,141,663**	**60.4**
Total Measured + Indicated			**3,294,000**	**0.106**	**6,987,833**	**88.5**	**6,182,803**	**60.4**
Inferred	Jane Dough	A	188,000	0.112	420,000	81.0	340,200	60.4
	Hank	F	423,000	0.095	803,000	100.0	803,000	60.4
	North Rolling Pin	F	39,000	0.042	33,000	100.0	33,000	60.4
Total Inferred			**650,000**	**0.097**	**1,256,000**	**93.6**	**1,176,200**	**60.4**

Notes:

1. SEC S-K 1300 definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.
2. Measured Mineral Resource includes reduction for production through December 31, 2021.
3. Mineral Resources are 100% attributable to EFR for Nichols Ranch, Hank, and North Rolling Pin, and are in situ.
4. Mineral Resources are 81% attributable to EFR and 19% attributable to United Nuclear Corp in parts of Jane Dough, and are in situ.
5. Mineral Resource estimates are based on a GT cut-off of 0.20 %-ft
6. The cut-off grade is calculated using a metal price of \$65/lb U_3O_8,, operating costs of \$19.28/lb U_3O_8, and 60.4% recovery (based on 71% process recovery and 85% under wellfield).
7. Mineral Resources are based on a tonnage factory of 15.0 ft^3/ton (Bulk density 0.0667 ton/ft^3 or 2.13 t/m^3).
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
9. Numbers may not add due to rounding.

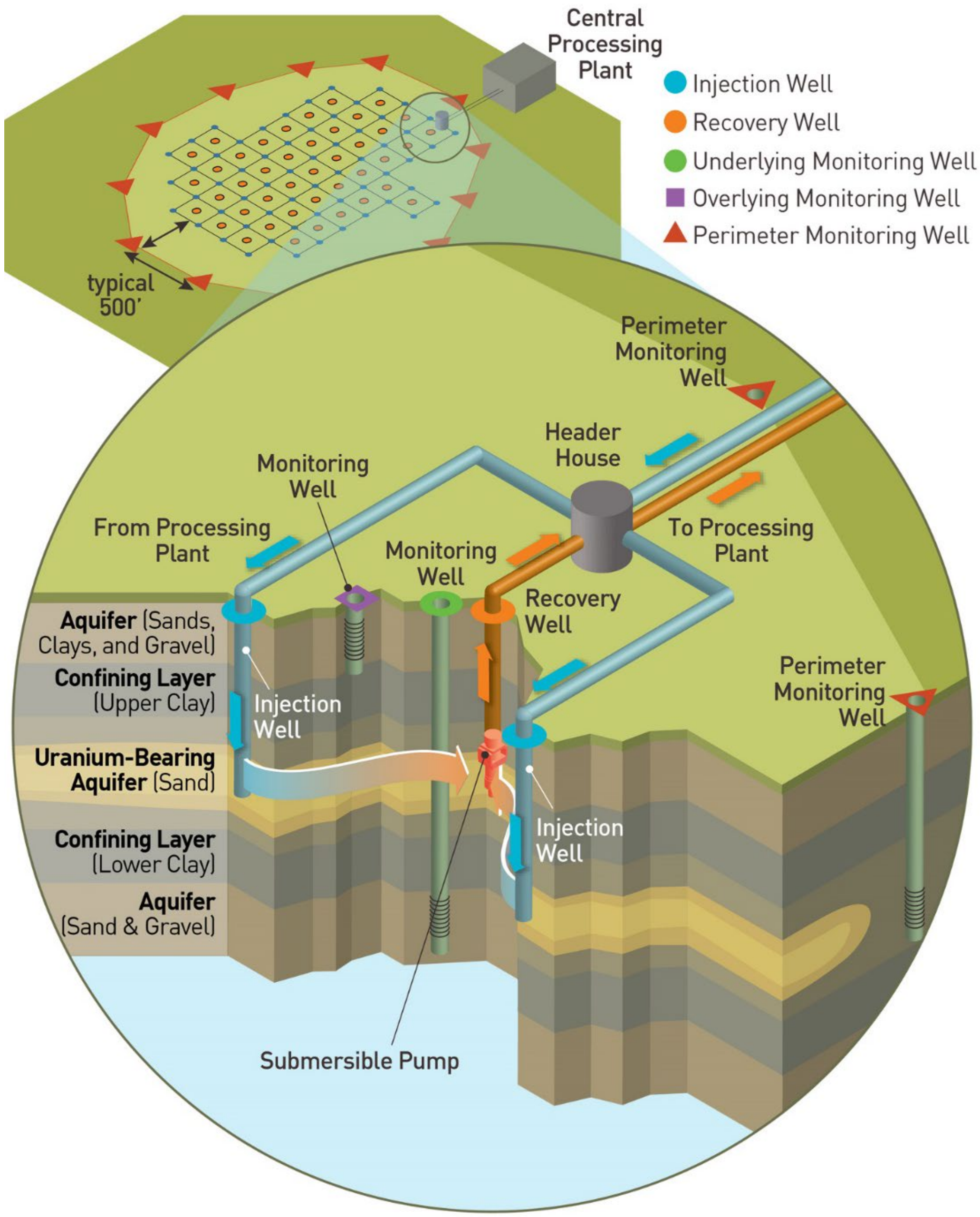
15.0 MINERAL RESERVE ESTIMATES

There are no current Mineral Reserves at the Project.

16.0 MINING METHODS

16.1 Introduction

This PEA is based on ISR mining of the uranium mineralization at the Complex using alkaline lixiviant. EFR conducted ISR mining at the Complex, specifically the Nichols Ranch area, from 2014 through 2019. Figure 16-1 below is a general schematic of the ISR process.



Source: NRC, 2016

Figure 16-1: Schematic of the ISR Process

ISR is an injected-solution mining process that reverses the natural processes that originally deposited the uranium in the sandstones. On-site groundwater is fortified with gaseous oxygen and introduced to the zones of uranium mineralization through a pattern of injection wells. The solution dissolves the uranium from the sandstone host.

The uranium-bearing solution is brought back to surface through production wells where the uranium is concentrated at a central processing plant and dried into yellowcake for market.

ISR mining and milling utilizes the five steps described below. The first three steps describe the mining process while steps 4 and 5 describe the milling (i.e., processing and refinement).

3. A solution called lixiviant (typically containing water mixed with oxygen and/or hydrogen peroxide, as well as sodium bicarbonate or carbon dioxide) is injected through a series of wells into the mineralized zones to dissolve and to complex the uranium.
4. The lixiviant with uranium in solution is then collected in a series of recovery wells, from which it is pumped to a processing plant, where the uranium is extracted from the solution through an ion-exchange process.
5. Once the uranium has been extracted, the lixiviant is fortified and reused in the wellfield. Typically, 99% of the solution is reused. The remaining percentage is waste which is disposed of in deep injection wells within EPA exempted aquifers.
6. The uranium extract is then further purified, concentrated, and dried to produce a material, which is called "yellowcake" because of its yellowish color.
7. Finally, the yellowcake is packed in 55-gallon drums to be transported to a uranium conversion facility, where it is processed through the stages of the nuclear fuel cycle to produce fuel for use in nuclear power reactors.

At the Nichols Ranch Plant, the concentrated uranium, in a slurry form, is loaded into a slurry trailer and shipped to the Mill in Blanding, Utah, for drying and packaging.

16.2 Mining Method

For the production schedule described in this Technical Report, the mineralized zones at the Nichols Ranch area, Jane Dough area, and Hank area will be divided into individual production areas where injection and recovery wells will be installed. As is typical with the other IRS mining commercial operations, the wells will be arranged in variations of 5-spot patterns. In some situations, a line-drive pattern or staggered line-drive pattern may be employed. Horizontal and vertical excursion monitor wells are and will be installed at each wellfield as dictated by geologic and hydro-geologic parameters, and as approved by the WDEQ/LQD. The facilities have been and will be constructed according to acceptable engineering practices.

16.3 Mining Operations

16.3.1 Uranium Recovery

The proposed uranium ISR process involves the dissolution of the water-soluble uranium compound from the mineralized host rock at neutral pH ranges. It consists of two steps:

- First, the uranium is oxidized from the tetravalent to the hexavalent state with oxygen as an oxidant.

- Second, a chemical compound such as a sodium hydrogen carbonate ($NaHCO_3$) or sodium bicarbonate is used to aid in complexing the uranium in the solution, if needed. The uranium rich solution (typically 20 mg/L to 250 mg/L with occasional higher or lower excursions) is transferred from the production wells to the processing facility nearby for uranium concentration with ion exchange resin.

16.3.2 Lixiviant Composition

The lixiviant for an alkaline ISR uranium process is a dilute carbonate/bicarbonate aqueous solution that is fortified with an oxidizing agent. During the injection of lixiviant, oxygen will be added to oxidize the uranium underground. Carbon dioxide is provided to adjust the pH to avoid calcium carbonate and calcium sulfate precipitation. Additionally, carbon dioxide dissolved in water provides another source of the carbonate/bicarbonate ions. Finally, sodium carbonate/bicarbonate may be used to adjust the carbonate/bicarbonate concentration.

The barren solution that leaves the uranium ion exchange system will be refortified with chemicals prior to the re-injection into the mineralized zone of the aquifer. The process continues until the economics become unfavorable.

16.3.3 Chemical Reactions

Oxidation of tetravalent uranium is achieved by using oxygen or hydrogen peroxide. For economic reasons, oxygen is widely used in commercial applications. EFR will utilize oxygen as the primary oxidant; however, hydrogen peroxide may be used if needed to increase the oxidation potential in the lixiviant if there are chemical or physical conditions that will reduce the effectiveness of the addition of gaseous oxygen.

The end product of the carbonate/bicarbonate complexing process can be identified as uranyldicarbonate, $[UO_2(CO_3)2]2-$ (UDC), at neutral pH ranges and as uranyltricarbonate, $[UO_2(CO_3)3]4-$ (UTC), at more alkaline pH ranges.

The chemical reactions for the alkaline recovery process are listed as follows:

Oxidation: $UO_2 + ½ O_2 = UO_3$

$UO_2 + H_2O_2 = UO_3 + H_2O$

Complexing: $UO_3 + 2HCO_3- = [UO_2(CO_3)2]2- + H_2O$

$UO_3 + 2HCO_3- + CO_3- = [UO_2(CO_3)3]4- + H_2O$

The ion exchange process utilizes polystyrene resin that is designed to provide exchange sites that are highly selective for the capture of uranium from the pregnant lixiviant. A strong base resin will be used for the ion exchange of either the uranyldicarbonate complex, $[UO_2(CO_3)2]2-$ (UDC), or the uranyltricarbonate complex, $[UO_2(CO_3)3]4-$ (UTC), in the process plant.

The chemical reactions are listed as follows:

$[UO_2(CO_3)2]2- + R2+ = R[UO_2(CO_3)2]$

$[UO_2(CO_3)3]4- + 2R2+ = R_2[UO_2(CO_3)3]$

R denotes the active site on the ion exchange resin.

16.4 Hydrogeology Data

16.4.1 Summary of Previous Work

Before the injection of leaching solutions was first initiated, the following information was submitted to the appropriate local and federal agencies as part of previous permitting efforts (Uranerz, Addendum MP-G, 2010; Addendum MPI, 2015):

- Results of analytical and numerical modeling for each mining area. These results were used in the wellfield design within the production zone and impact assessment and/or hydraulic connection with overlying and underlying adjacent aquifers/aquitards.
- Results of aquifer testing, which were used to evaluate the following:
  - Hydraulic connection of perimeter monitor wells with production unit ore zone wells.
  - Hydraulic properties of the ore zone aquifer.
  - The presence or absence of hydrologic boundaries in the ore zone.
  - Hydrologic communication between the ore zone aquifer and monitor well ring, and its interaction with overlying and underlying aquifers.
- Well completion reports (annual reports reviewed from 2011 to 2020).
- Active production and monitoring wells survey data.
- Potentiometric (2011 to 2020) surface maps for the ore zones to be mined, the overlying and underlying aquifers. This includes approximated groundwater flow directions, hydraulic gradients, and seasonal fluctuations of water levels inferred from the potentiometric surfaces.
- Structural contour maps of the ore hosting zone, and overlying and underlying aquifers/aquitards.
- Baseline water quality of the upper and lower aquifers and monitor well upper control limits.
- Baseline water quality of the perimeter monitor ring and upper control limits.
  - Statistical assessment of the water quality was presented per the WDEQ/LQD guidance.
- Average baseline water quality of the production unit.
  - A table of groundwater monitoring and sampling parameters was prepared and reached between EFR and the WDEQ.
- Restoration target values (RTVs).
  - RTVs were calculated from the water quality data collected from the ore zone monitoring wells.
  - RTVs will be used for groundwater restoration evaluations within the production area.

16.4.2 Overview

Multiple rounds of hydrogeologic characterizations have been performed in the Complex and surrounding areas in connection with recoverable uranium deposits, ISR mining methods, and groundwater resources. These studies have generated data, including water quality data, aquifer properties, historical pumping rates, numerical and analytical modeling, etc. (Hodson et al., 1973; Whitehead, 1996; Uranerz, 2010; 2019; EFR, 2020).

The Nichols Ranch Mining Unit consists of three mining areas: the Nichols Ranch area, Jane Dough area, and the Hank area. These mining areas are located in the Cottonwood and Willow Creek drainages. On a regional scale, groundwater occurs in the Quaternary alluvial aquifer underlying major drainages as well as deeper bedrock aquifers. The Wasatch Formation, the uppermost geologic unit, comprises regional aquifers. Groundwater in the Wasatch aquifers generally flows to the north and northwest in the mining areas. The aquifers and confining units of interest in the mining areas from top and bottom are within the Wasatch Formation (Figure 7-1).

Analytical (WELFLO, Walton (1989) and numerical modeling (MODFLOW, Harbaugh and McDonald, 1996) simulations were conducted to understand the extent of interaction between the "ore"-hosting sands and adjacent aquifers and aquitards. Modeling also was used to evaluate operational drawdown, gradient changes, recovery, horizontal wellfield flare, and vertical flare in the aquifers of interest and adjacent aquitards.

16.4.2.1 Site Hydrogeology

The SLR QP visited the Complex from October 27 to 29, 2021. Subsequently, 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, information gathered during the site visit, and other publicly available to highlight the following main findings.

The potentially economic mineralization primarily occurs in two sandstone members of the Wasatch Formation, designated as the A Sand in the Nichols Ranch and Jane Dough areas, and the F Sand in the Hank Unit (Figure 7-4). These two "ore"-hosting members are generally separated by the B and C sandstones and adjacent aquitards. The aquitards are labeled by combining the two adjoining sandstone units (i.e., BC Aquitard). The "ore" zones for the Nichols Ranch, Jane Dough, and the Hank areas are approximately 300 ft below ground surface (bgs) to 700 ft bgs, 400 ft bgs to 600 ft bgs, and 200 ft bgs to 600 ft bgs, respectively. The local aquifer Sand Units are described sequentially in geochronological order, 1, A, B, C, F, G, and H Sandstones (Figure 16-2).

Permeability properties and water quality of the groundwater hosted in these aquifer units are also known. The transmissivity, which is defined as hydraulic conductivity multiplied by aquifer thickness, and yield from the Wasatch Formation are also highly variable, with a yield of up to a few hundred gallons per minute when a large thickness of saturated sands is completed in a well. The water quality in these aquifers would also generally be good, with a total dissolved solid (TDS) concentration typically from <1,000 milligrams per litre (mg/L) to <2,000 mg/L.

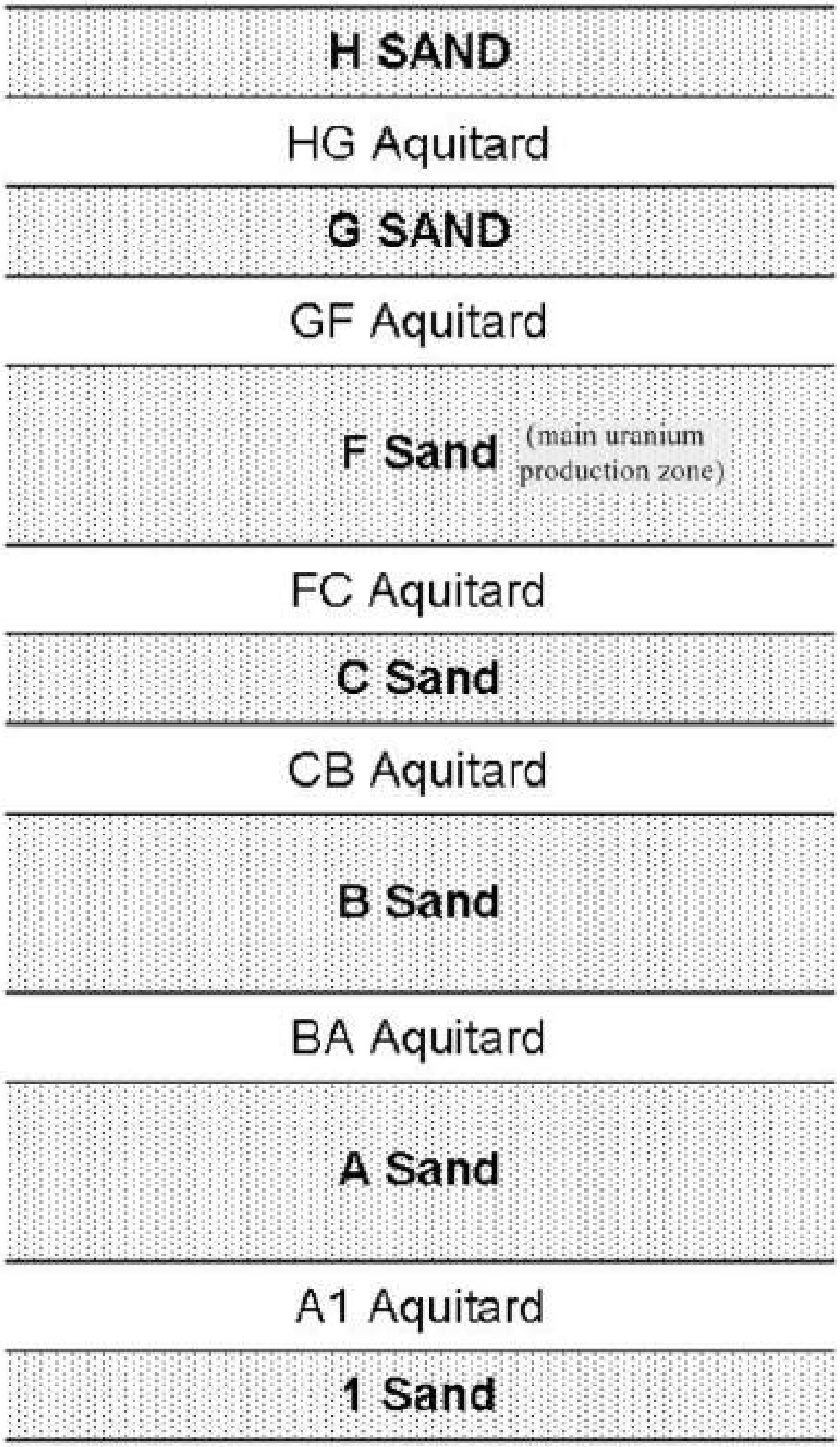
16.4.2.1.1 Hydrogeological Characteristics of the Major Units of Interest

The depth at which groundwater is first encountered across the Project area varies and depends on surface topography. The hydraulic properties of the recovery aquifers and associated underlying and overlying aquifers have been evaluated in the Project area using both multiwell pumping tests and single-well tests (BLM, 2015). Summary of the detailed aquifer properties estimated through numerous single well and multiwell pump tests are provided in Uranerz (2010). Aquifers suitable for ISR mining of uranium are by their nature confined, minimizing the possibility of cross-aquifer contamination.

- **Surficial Aquifer-H Sand:** This unit is the surficial aquifer in the Project area, with depth to groundwater ranging between 50 ft to approximately 200 ft (Uranerz, 2012). Potentiometric data indicates that the groundwater gradient is in a westerly direction. The Willow Creek and Dry

Willow Creek alluvial materials in the Project area are not expected to contain water except during short periods of time after runoff events.

- **Uranium Bearing Aquifer (Hank Unit) -F Sand:** This unit is approximately 20 ft to 120 ft thick and 200 ft bgs to 600 ft bgs. The water levels in the F Sand fall below the base of the overlying GF aquitard in the northern portion and slightly above in the southern portion (Figure 16-2). The hydraulic conductivity of the F Sand in the Hank Unit varied greatly from 0.14 ft/day to 9.4 ft/day, with an average of 0.6 ft/day in this area. The water level in the production zone at the Hank Unit is near the top of the sand, therefore, the F Sand is not fully saturated. Accordingly, the F Sand aquifer is unconfined. The primary storage property for an unconfined aquifer is specific yield and estimated to be approximately 0.05 ft/day for the F Sand in this area. The F Sand is underlain by the FC aquitard (45 ft to 110 ft thick) and C Sand. The C Sand has been designated as the aquifer underlying the production zone in areas present. The C Sand is approximately 10 ft to 60 ft thick and discontinuous. The B Sand underlies the "ore" zone where it is not present. The hydraulic conductivity of the C Sand is approximately 0.025 ft/day (Uranerz, 2012 and BLM, 2015).
- **Uranium Bearing Aquifer (Nichols Ranch and Jane Dough Areas) -A Sand:** The primary mineralized sand horizons are in the lower part of the Wasatch, at an approximate average depth of 550 ft and average thickness of 100 ft. At Nichols Ranch, some mineralization also occurs in the Wasatch at a depth of approximately 400 ft (150 ft thickness). Transmissivities for the A Sand vary from 13.5 ft^2/day to 61.6 ft^2/day. A value of 46.9 ft^2/day is thought to be the most representative of the A Sand. Horizontal hydraulic conductivity varies from 0.18 ft/day to 0.7 ft/day and a value of 0.5 ft/day is thought to best represent the A Sand. Groundwater in the A Sand flows northwest with an average value of 0.0033. Based on this gradient, an effective porosity of 0.05, and an average hydraulic conductivity of 0.5 ft/day, the average groundwater flow rate is estimated to be 0.033 ft/day (Uranerz, 2012 and BLM, 2015).



Source: Uranerz, 2012.

Figure 16-2: Relevant Geologic/Hydrogeologic Units in the Vicinity of the Project Area

16.5 Geotechnical Data

No geotechnical work has been completed at either the Complex or Satellite Properties. All Mineral Resources will be extracted using ISR wellfields and therefore do not require the completion of geotechnical work typically done for conventional mining.

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16.6 Life of Mine Plan

EFR has divided the Nichols Ranch Mining Unit into three separate project areas, Nichols Ranch, Jane Dough, and Hank. These areas are descriptive of distinct areas within the areas held by EFR and the Arkose Mining Venture. The Nichols Ranch area consists of the Nichols Ranch Plant and two production areas, PA1 and PA2. PA1 began production in March 2014 with eight active production header houses; one header house has been constructed at PA2. Two of the four permitted deep disposal wells have been constructed and were in operation at the Nichols Ranch area until mining operations ceased in 2019.

The permitted and licensed Jane Dough area is adjacent to the south of the Nichols Ranch area and contains properties held by the Arkose Mining Venture and 100% by EFR. It will be developed as an adjacent property through a pipeline to the Nichols Ranch Area. Two production areas (PA1 and PA2) are planned for the Jane Dough area.

The Hank area is 100% EFR owned and is located approximately six miles east of the Nichols Ranch area. It is fully licensed and permitted to operate as a satellite to the Nichols Ranch area.

The life of mine (LOM) schedule, shown in Table 16-1, summarizes the primary production followed by wellfield restoration and reclamation. Final decommissioning is planned to occur with the completion of restoration with the final production area.

Within a production wellfield, the basic component of mine development and production is the production pattern. A pattern consists of one recovery well and one or more injection wells that feed it. Injection wells can be and often are shared by multiple recovery wells and function as distribution points for injection flow. In a similar manner, the recovery wells act as collection points for production solutions that are gathered at the header houses prior to transfer by pipeline to the recovery or the processing facilities. The Hank area will be developed in a similar manner. The Hank Unit is licensed as a satellite recovery facility and its design throughput of 2,500 gpm would be additive to the throughput generated from the Nichols Ranch and Jane Dough areas.

It is proposed that the remainder of PA2 on the Nichols Ranch area, as well as PA1 and PA2 on the Jane Dough area would be developed in such a way as to reach and maintain the plant permitted throughput capacity of 3,500 gpm. In other words, as the production (as related to head grade) from the initial header houses decreases below economic limits, replacement production patterns from additional header houses will be placed into operation to maintain the desired flow rate and head grade.

The Nichols Ranch Plant, and the allocation of resources to the production areas within Nichols Ranch, Jane Dough and Hank areas, is designed to produce between 300,000 and 500,000 lb U_3O_8 per year for several years. It is estimated that approximately 4.0 million lb U_3O_8 will be recovered from all three areas of the Nichols Ranch Mining Unit.

Table 16-1: Nichols Ranch Area Life of Mine Plan (Attributable to EFR)
Energy Fuels Inc. – Nichols Ranch Project

Years	Units	LOM	1	2	3	4	5	6	7	8	9	10	11	12
Nichols Ranch	klb	718	648	70	-	-	-	-	-	-	-	-	-	-
Jane Dough	klb	2,277	-	428	251	526	456	311	305	-	-	-	-	-
Hank	klb	1,028	-	-	-	-	-	-	10	307	415	158	138	-
Total Produced	klb	4,023	648	498	251	526	456	311	315	307	415	158	138	-
Flow Rate	gpm	2,912	2,640	3,281	3,333	3,137	3,055	3,333	3,291	3,308	3,030	1,952	1,670	-
Head Grade	mg/L	33	56	35	17	38	34	21	22	21	31	18	13	-
Working Days	days	365	365	365	365	365	365	365	365	365	365	365	365	-
Total Sold		4,023	648	498	251	526	456	311	315	307	415	158	138	-

16.7 Mine Equipment

Due to the nature of the ISR process, the principal mine equipment is focused on the production wellfields. As stated earlier, the most basic components of the wellfield are the recovery and injection wells that comprise the basic production patterns. Each well is constructed using a drillhole to the mineralized portion of the aquifer using a conventional mud rotary drill rig. Each well will be cased with a polyvinyl chloride (PVC) pipe that is sized and sufficiently pressure rated, and the annulus between the drillhole and the casing will be grouted from the bottom to top using a beneficiated cement slurry as a seal. Each well will be under-reamed and will be completed with or without a screen and filter pack, depending on geologic conditions. Following a mechanical integrity test, the wells will be configured for use. Each recovery well will be fitted with a downhole submersible pump and each injection well will be configured with downhole tubing to facilitate oxygen addition. Each well, whether injection or recovery, will be connected to the appropriate surface facilities within a header house.

Header houses are used to distribute barren solutions or barren lixiviant to injection wells and collect pregnant solutions from recovery wells. Each header house is connected to two trunk lines, with one receiving barren lixiviant from the Nichols Ranch Plant and one delivering pregnant lixiviant to the Nichols Ranch Plant. A typical header house will include manifolds, valves, flow meters, pressure gauges, filters, instrumentation, and oxygen supply for incorporation into the barren lixiviant for injection, as required. Each header house may service between 60 and 120 wells, injection, and recovery, depending on the characterization of the mineralization and the production pattern geometry.

Pipelines between the header houses and the Nichols Ranch Plant will be used to transport wellfield solutions. Flows and pressures will be controlled at the header houses and monitored at both the recovery plant and the header houses. High density polyethylene (HDPE), PVC, stainless steel, or equivalent piping is used in the wellfield and has been selected to meet design operating conditions. The lines from the plant, header houses, and individual wells (injection and recovery) will be buried for freeze protection and to minimize pipe movement.

16.8 Mine Workforce

It is planned that nine staff will be employed at the wellfield during operations for wellfield development, construction projects, and operations.

17.0 RECOVERY METHODS

17.1 Introduction

The Nichols Ranch Plant is licensed and designed to have four major solution circuits: 1) the recovery circuit, 2) the elution circuit, 3) the precipitation and filtration circuit, 4) the drying and packaging circuit. The first three solution circuits are constructed and operated from 2014 to 2019. Due to the absence of the on-site drying and packaging circuit, the Project proposes to truck the U_3O_8 produced on-site to the Mill near Blanding, Utah, for drying and drumming for final delivery to end users. The Mill is approximately 643 road miles from the Complex.

The recovery circuit includes the flow of lixiviant from the wellfield to the sand filters, or directly to the ion exchange (IX) columns, and back to the wellfield. The uranium that is liberated underground is extracted in the ion exchange system of the process plant. The bleed from the circuit is permanently removed from the lixiviant flow to create a “cone of depression” in the wellfield’s static water level and ensure that the lixiviant is contained by the inward movement of groundwater within the designated recovery area. The bleed is disposed of by means of injection into two deep, approved, Class I – Non Hazardous disposal wells. The volume of the concentrated bleed is approximately 0.5% to 1.5% of the circulating lixiviant flow for the Nichols Ranch and Jane Dough areas and projected to be 2.5% to 3.5% for the Hank area.

The elution circuit consists of transferring the uranium loaded resin bed contained in an IX column into an elution column and to circulate a briny-carbonated solution through the resin bed to remove the uranium from the ion exchange resin until it is completely stripped. The barren or eluted ion exchange resin is then transferred back from the elution column to the IX column.

The uranium concentration in the eluate will be built up at a controlled concentration range of between 20 g/L to 40 g/L. This uranium rich eluate is ready for the de-carbonation process that occurs in the uranium precipitation circuit.

The precipitation and filtration circuit starts when the eluate is treated with acid to destroy the carbonate portion of the dissolved uranium complex. In addition to adding the acid slowly, a common defoamer may be used to reduce the foaming activity. The precipitation reagents, hydrogen peroxide and sodium hydroxide, are added to the eluate to start precipitating uranium yellowcake. The yellowcake slurry is then filtered, washed, and loaded into a slurry trailer. When full, the yellowcake slurry trailer is transported by road to the Mill in Blanding, Utah, where it will be unloaded, dried, and drummed for final delivery to end users.

17.2 Chemical Reactions

17.2.1 Elution Process and Resin Handling

The ion exchange resin is ready for elution when it is fully loaded with uranium. The elution process reverses the loading reactions for the ion exchange resin and strips the uranium from the resin. The eluant will be an aqueous solution containing salt and sodium carbonate and/or sodium bicarbonate.

The chemical reactions are listed as follows:

$$R\,[UO_2(CO_3)2] = [UO_2(CO_3)2]2- + R2+$$

$$R2[UO_2(CO_3)3] = [UO_2(CO_3)3]4- + 2R2+$$

The elution circuit at the Nichols Ranch Plant is designed to also accept and elute uranium loaded resin from other satellite operations. Two Department of Transportation approved trailers are used to transport the resin to other processing facilities or EFR's own satellite facilities. The resin is hydraulically removed from the trailer and screened to remove formation sand and other debris.

17.2.2 Yellowcake Production

Yellowcake is produced from the rich eluates that are recovered from the loaded ion exchange resin. The eluate from the elution circuit is de-carbonated by lowering the pH below 2 with hydrochloric acid. The yellowcake product will be precipitated with hydrogen peroxide and a base such as sodium hydroxide or ammonia.

De-carbonation: $[UO_2(CO_3)2]2- + 4H+ = UO_22+ + 2CO_2 + 2H_2O$

$[UO_2(CO_3)3]4- + 6H+ = UO_22+ + 3CO_2 + 3H_2O$

Precipitation: $UO_22+ + H_2O_2 + 4H_2O = UO_4{\cdot}4H_2O + 2H+$

The precipitated yellowcake slurry is transferred to a filter press where excess liquid will be removed. Following a freshwater wash step that will flush the dissolved chlorides, the resulting product cake is pumped to the yellowcake slurry trailer. Once full, the slurry trailer will be transported to the Mill to be dried.

17.3 Flow and Material Balance

The ion exchange system for the Nichols Ranch Plant is licensed to accommodate flow rates up to 3,500 gpm. To contain the lixiviant within the designated wellfield recovery area, a small portion of the barren solution is withdrawn from the ion exchange circuit. The amount of bleed is estimated to be in the average range of 1% of the overall flow rate or equivalent to approximately 35 gpm.

The bleed solution is mainly disposed of directly through the two deep disposal wells but can be used to rinse and clean-up freshly eluted resin, make-up fresh eluant in the elution circuit, back wash sand filters, and wash yellowcake if necessary. A nominal flow and material balance for the Nichols Ranch Plant is presented in Figure 17-1. The flow shown is an example capacity for the facilities and does not represent any design or regulatory limits.

The processing facilities are typical for this service and industry standard, as such It is SLR QP's opinion that processing facilities are suitable for purpose.

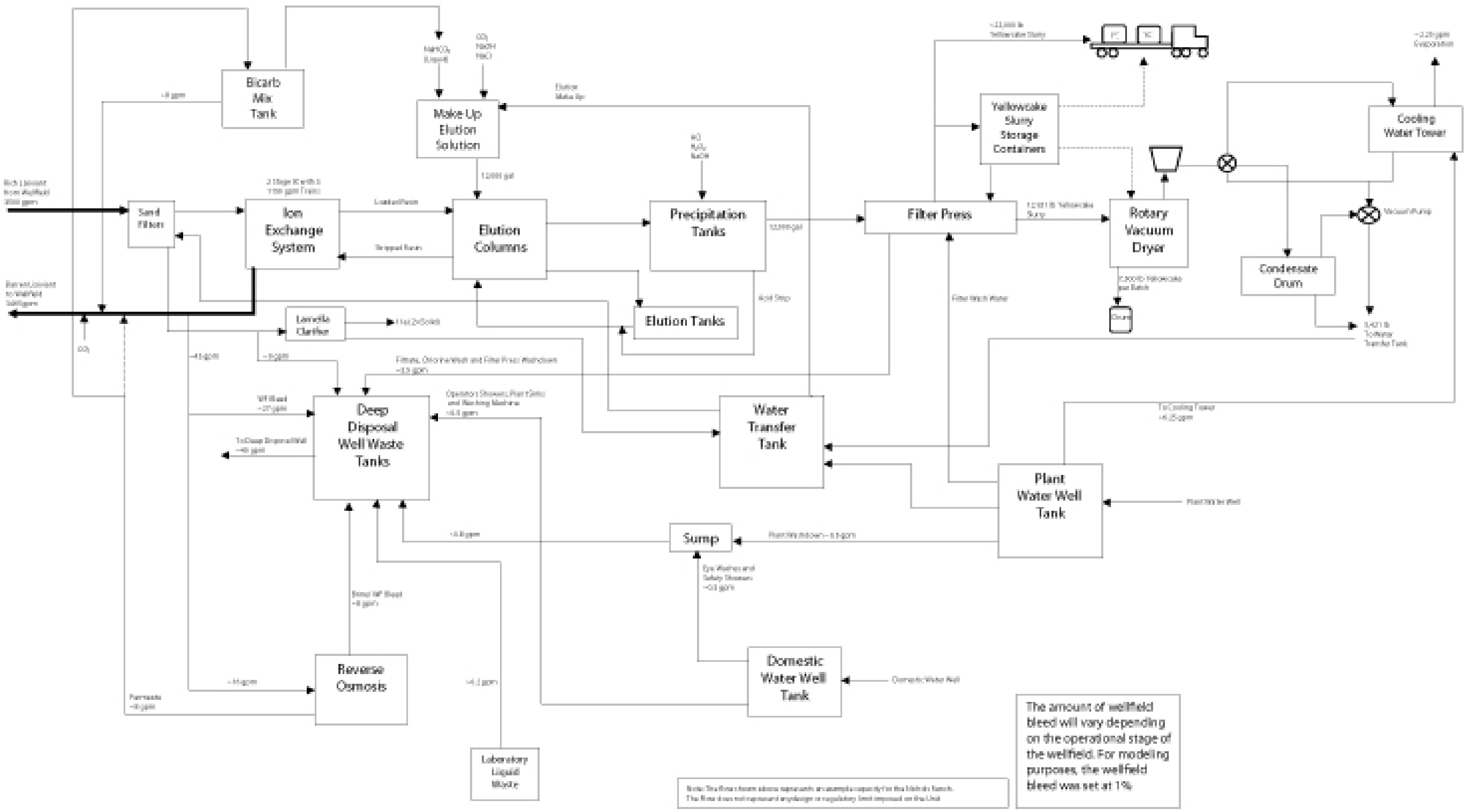


Figure 17-1: Nichols Ranch Plant Flow Sheet

17.4 Sources of Plant Liquid Effluents and Disposal Methods

Liquid effluents are expected to be generated from pumping test water, process bleed, process solutions, wash-down water, and restoration water. The water generated during pumping tests is expected to satisfy Wyoming Department of Environmental Quality, Water Quality Division (WDEQ/WQD) Class IV groundwater standards at a minimum and has minimal potential radiological impact on soils or surface water.

The process bleed and wash-down water are transferred to waste tanks and then to a deep disposal well. This deep disposal well has been constructed and operated in a manner similar to other operating deep disposal wells at similar ISR uranium sites. EFR has permitted four and constructed two deep disposal wells at the Nichols Ranch area and has permitted four disposal wells and constructed none at the Hank area. These deep disposal wells were permitted through the WDEQ. As required, the disposal wells have been completed in approved formations and operated according to permit requirements. All the deep disposal wells have also received an aquifer exemption from the EPA that is included with the Underground Injection Control (UIC) Class I – Non-Hazardous permit issued by the WDEQ.

The Jane Dough area will not require additional disposal wells since it will be operated directly through the Nichols Ranch Plant and will be able to use the existing disposal well capacity.

The restoration water will be treated by reverse osmosis or other purification technology. The treated restoration water will be re-injected into the process with the restoration water bleed transferred to the deep disposal well.

It is SLR QP's opinion that the current installed equipment will not exceed or require modifications to the existing infrastructure for future operations.

17.5 Plant Workforce

It is planned that ten staff, consisting of one manager and nine operators, will be employed at the Nichols Ranch Plant during operations.

17.6 White Mesa Mill Drying/Packaging Operation

As outlined in Section 17.2, slurried yellowcake product will be trucked 643 road miles to the Mill in Blanding, Utah, where it will be dried and packaged for final delivery to end users. The Mill has been in operation since 1981 with the required equipment using a proven process to produce 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).

The Mill is currently on a reduced operating schedule processing materials as they become available. The Mill is currently processing Rare Earth Element (REE) materials in part of the circuit, functioning essentially as a pilot plant, therefore the facility is sufficiently staffed to initiate U_3O_8 production relatively quickly.

18.0 PROJECT INFRASTRUCTURE

18.1 Introduction

The Complex previously operated from 2014 to 2019. The basic infrastructure (power, water, and transportation) necessary to support an ISR mining operation has been established at the Nichols Ranch area. This basic infrastructure can also support Jane Dough and Hank areas. Jane Dough is immediately proximate to Nichols Ranch. Hank is approximately six miles northeast of Nichols Ranch and would require additional infrastructure.

18.2 Access Roads

The proximity of the Complex to paved roads will facilitate transportation of equipment, supplies, personnel, and product to and from the Complex. Although the population within 50 mi of the subject property consists mainly of rural ranch residences, personnel required for exploration, construction, and operation are available in the nearby towns of Wright, Midwest, Edgerton, Gillette, Buffalo, and Casper, Wyoming.

18.3 Power

Power transmission lines are located on or near parts of the Project. EFR has secured power from the local electrical service provider to accommodate all operational needs.

18.4 Water Supply

Non-potable water will be supplied by wells. Water extracted as part of ISR operations will be recycled for reinjection. Typical ISR mining operations also require a disposal well for limited quantities of fluids that cannot be returned to the production aquifers. Deep disposal wells are permitted and installed for the Nichols Ranch Plant.

18.5 Tailings

Tailings storage areas, waste disposal areas, and heap leach pads will not be a part of the infrastructure for the Complex, as ISR operations do not require these types of facilities. Solutions from the wellfields are recirculated within the wellfield. The waste stream bleed from the system is injected into the deep disposal wells.

18.6 Mine Support Facilities

The permitted option for Hank includes construction and operation of a satellite plant facility similar to that at Nichols Ranch. If constructed, the Hank plant would consist of an ion exchange circuit and lixiviant make-up circuit, bleed treatment, and disposal well. Most of the process equipment would be housed in an approximate 80 ft by 160 ft metal building with eave heights less than 40 ft, with some of the bulk chemical storage tanks located outside of the process building. Carbon dioxide would be added to the lixiviant as the fluid exits the Hank satellite facility and returns to the header houses, where oxygen and/or sodium bicarbonate could be added prior to injection into the wellfield. If operated as a satellite facility, Hank would ship resin to a central processing plant for final processing and packaging of yellowcake.

The other major option for the development of Hank would be to convey fluids from Hank to the Nichols Ranch Plant. This option would have additional permitting requirements for the pipeline and capital and operating expenditures related to the transfer of solutions between Nichols Ranch and Hank. These costs would be offset by reduced capital and operating expenditures related to the construction and operation of the satellite plant and disposal well(s).

The preferred alternative for the purposes of this PEA is operation of Hank as an adjacent property through pipelines to the Nichols Ranch Plant.

Figure 18-1 provides an aerial view of the infrastructure immediate to the Nichols Ranch Plant. Figure 18-2 provides the infrastructure layout of PA1 and PA2.

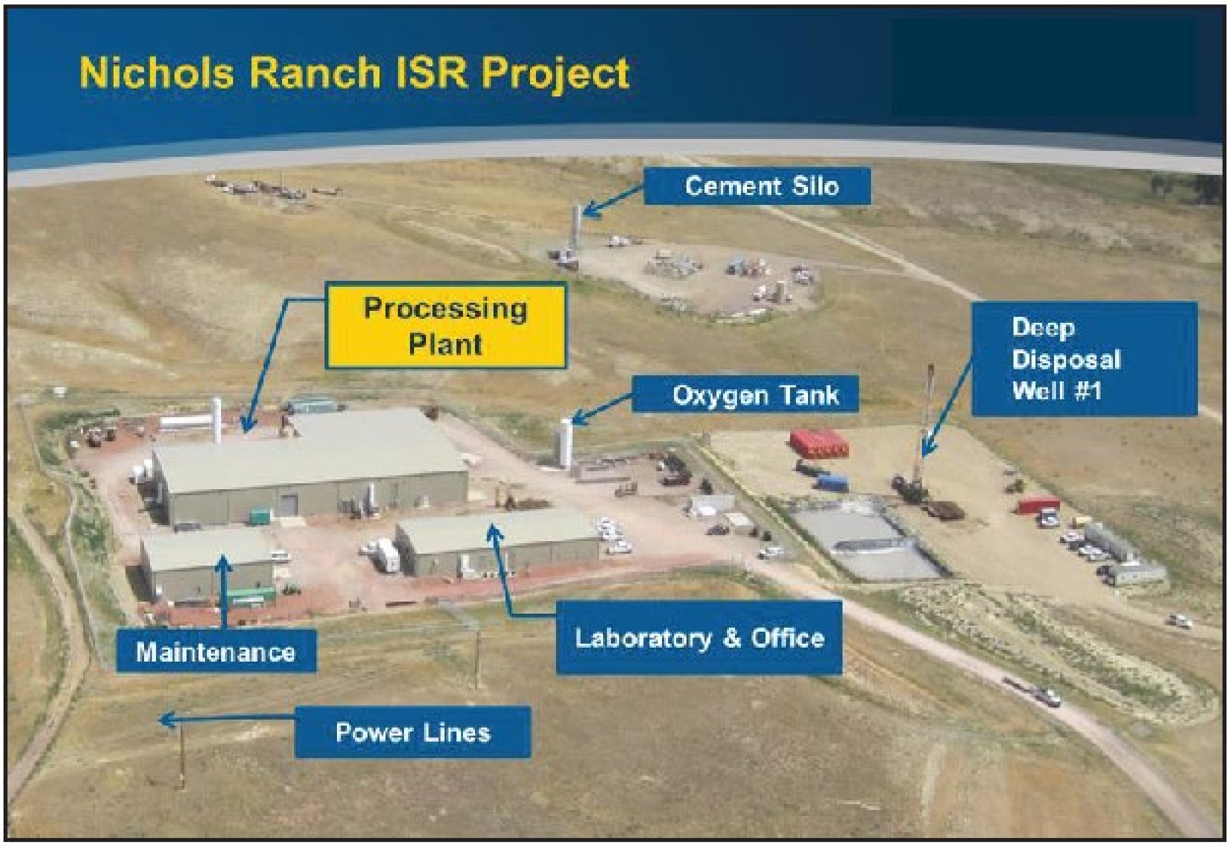


Figure 18-1: Aerial View of Infrastructure Around the Nichols Ranch Processing Plant

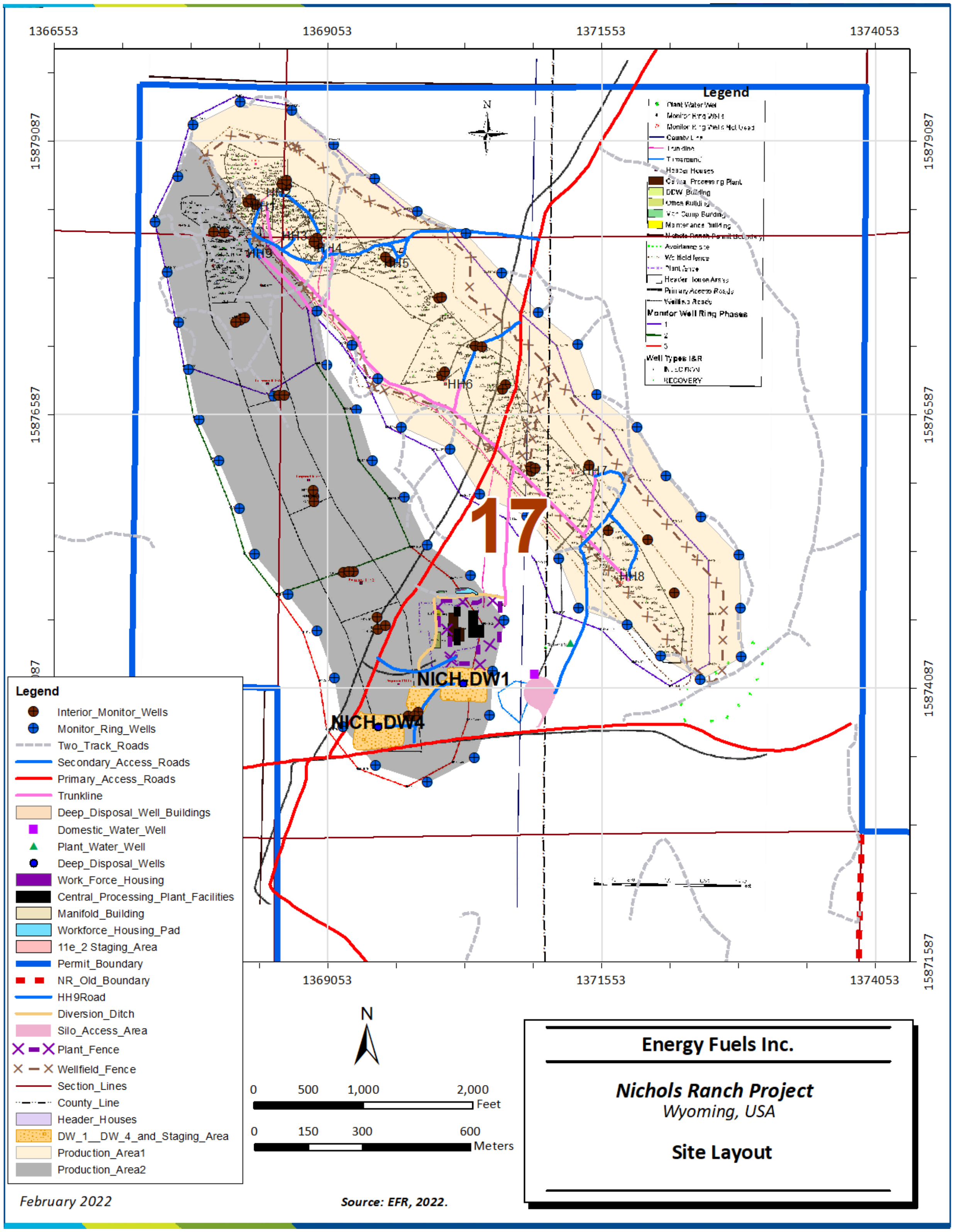


Figure 18-2: Site Layout

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 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 prioritize 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.

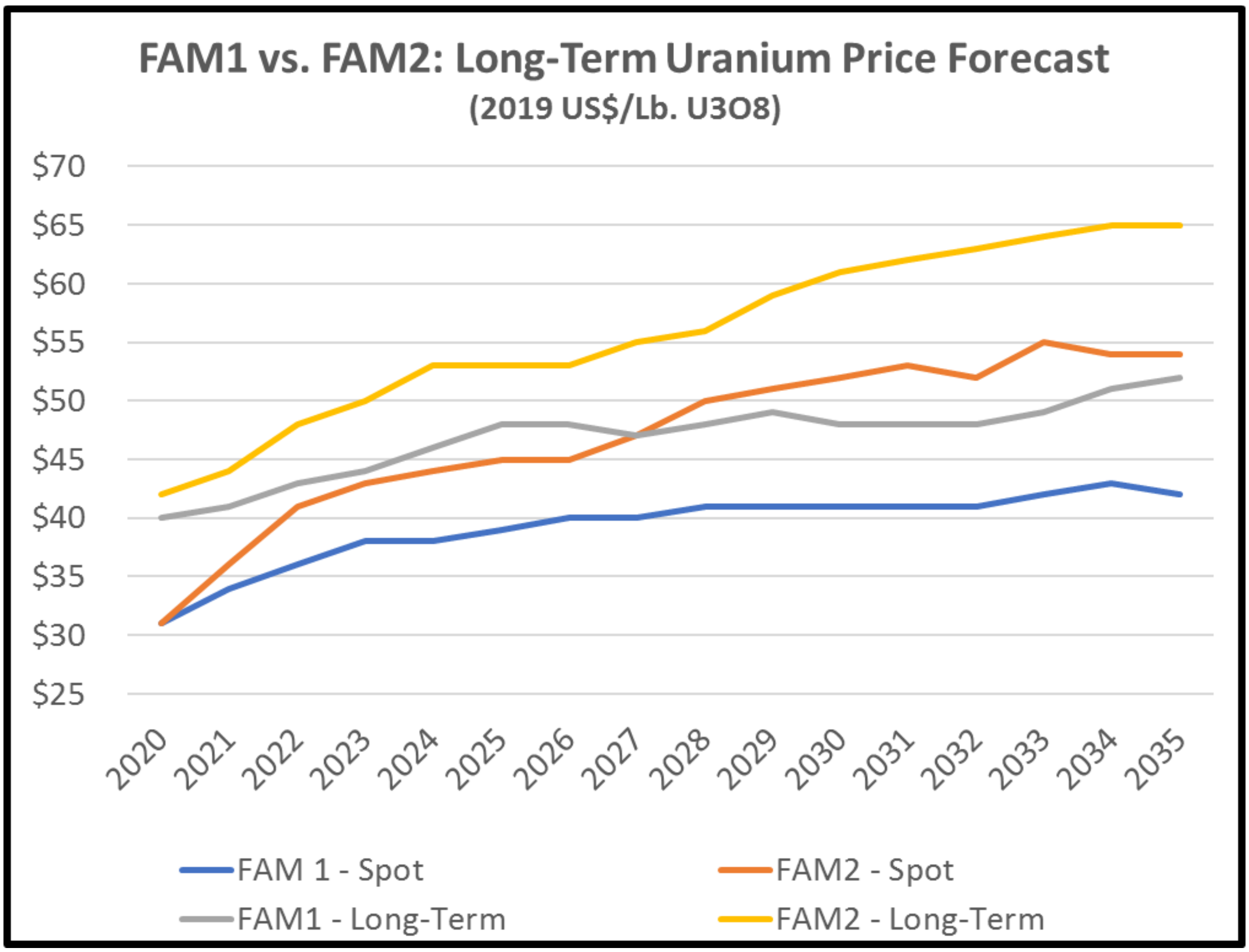


Figure 19-1: Long Term Uranium Price Forecast

Consensus forecasts collected by the SLR QP are in line with the FAM2 – Spot prices in Figure 19-1. 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.

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 Summary

The Complex is located within the Powder River Basin of Wyoming approximately 80 mi northeast of Casper, Wyoming. The Powder River Basin is one of the largest uranium mining districts in Wyoming and currently accounts for most of the Wyoming's uranium production. Current uranium production in the Powder River Basin of Wyoming and at Nichols Ranch is completed via ISR mining methods. ISR mining began at the Nichols Ranch area in 2014. The Complex is currently on care and maintenance.

Nichols Ranch, Jane Dough, and the Hank areas are fully licensed and permitted for ISR mining and processing by major licenses and permits issued by the NRC, the WDEQ/LQD, the WDEQ/WQD, and the Wyoming Department of Environmental Quality, Air Quality Division (WDEQ/AQD). Portions of the Hank area, totaling 280 acres, are on public lands managed by the BLM. This area is permitted for operation by the BLM and a FONSI and Decision Record were issued in July 2015. Nichols Ranch and the Hank areas consist of 3,370 acres and Jane Dough has approximately an additional 3,680 acres which have been approved and amended to the permitted Project boundary.

20.2 Environmental Studies

Extensive environmental studies including air quality, soil and geology, hydrogeology and hydrology, ecology (wildlife and vegetation), and archaeology have been completed for Nichols Ranch, Jane Dough, and Hank areas. These studies have been conducted to support the permitting of the ISR mining and processing plant. There are no ongoing environmental studies, beyond compliance-based data collection and reporting.

20.2.1 Baseline Studies

EFR conducted monitoring including groundwater, surface water, air quality, and waste to detail baseline environmental conditions at the mine site to support permitting efforts. Background water quality within the mineralized zone, overlying and underlying aquifers, and surficial aquifer was characterized to establish the Upper Control Limits (UCLs) for excursion monitoring during operations and the Restoration Target Values (RTVs).

Baseline studies are performed on an as needed basis for the installation of new facilities including wellfields, roads, Hank satellite plant, and new monitoring locations.

20.2.1.1 Hank and Jane Dough Area Groundwater Characterization

Background water quality within the mineralized zones, overlying and underlying aquifers, and surficial aquifer will be characterized prior to operation of the Hank and Jane Dough areas. This baseline study will result in the establishment of the UCLs to allow for excursion monitoring during operations and the RTV.

20.3 Project Permitting

Nichols Ranch operates within applicable State of Wyoming permitting requirements and will operate in accordance with the BLM approved Plan of Operations for the Hank Unit.

The Complex operates under the following primary permits:

- Radioactive Source Material License No. SUA-1597
- Air Quality Permit CT-8644
- Permit to Mine No. 778
- Aquifer Exemption(s)
- Wellfield Authorization(s)
- Hank Unit Plan of Operations, Environmental Assessment and Decision Record
- Class I Underground Injection Control Permit (Deep Well Disposal) No. 10-392
- Wyoming Pollutant Discharge Elimination System (WYPDES) Stormwater Permit(s)

Table 20-1presents a list of active permits including the approving authority, validity period and expiry dates, status (current, canceled or superseded), and indicating if renewal is required or not. The list of approved legal permits for the Complex provided to the SLR QP by EFR addresses the following aspects:

- Air Emissions
- Groundwater Discharge
- Surface Water Discharge
- Radioactive Material Handling
- Water Appropriation
- Reclamation Planning and Bonding

Table 20-1: Environmental Permits for Operation
Energy Fuels Inc. – Nichols Ranch Project

Authority	Obligation/Licence	Date of Issue MM/(DD/YYYY)	Expiration Date (MM/DD/YYYY)	Status
	Environmental Certifications			
NRC WDEQ/LQD	Radioactive Source Material License, Amendment No. 5	3/22/2017	Renewal Application submitted May 2021	Active (Timely Renewal)
WDEQ/LQD	Hank and Nichols Permit to Mine	12/29/2010	N/A	Active
WDEQ/LQD	Jane Dough Amendment Permit to Mine	3/17/2017	N/A	Active
WDEQ/LQD	Wellfield Authorization(s)	Various	N/A	Active
WDEQ/WQD	Nichols and Hank Deep Disposal Well Class I UIC Permit (10-392)	10/22/2012	10/22/2022	Active
WDEQ/WQD	Stormwater Discharge Permit for Industrial Activities WYPDES/(WYR001394)	3/1/2018	8/31/2022	Active
WDEQ/WQD	Stormwater Discharge Permit for Large Construction Activities WYPDES (WYR104331)	9/11/2020	8/1/2025	Active
WDEQ/WQD	Public Water Supply (WY5601665)	6/27/2013	NA	Active
WDEQ/AQD	Air Quality Permit (CT-8644)	10/2/2009	NA	Active
Johnson County	Permit to Construct Septic Leach Field	11/17/2016	NA	Active
BLM	Decision Record	7/17/2015	NA	Active
EPA	Nichols Ranch and Hank Aquifer Exemption	11/8/2012	NA	Active
EPA	Jane Dough Aquifer Exemption	1/10/2017	NA	Active
Johnson County	On-site Waste Disposal Permit	1/17/2012	NA	Active
Wyoming State Engineer	Permit to Appropriate Ground Water for ISR	Various	PA1-A through PA1-H expire 12/31/2022	Active
Wyoming State Engineer	Permit to Appropriate Ground Water for Processing, Dust Suppression, etc. (204846, 199792, 201105)	Various	199792 and 201105 expire 12/31/2031	Active
Wyoming State Engineer	Permit to Appropriate Ground Water for Potable Water System (201694, 203597)	Various	201694 expires 12/31/2026 and 203597 expires 12/31/2024	Active

Notes:

1. Effective September 30, 2018, the State of Wyoming became an Agreement State under the Atomic Energy Act (as amended) for the regulation of uranium mills and uranium ISR facilities, and regulation of the Source Material License was transferred from the NRC to WDED/LQD

20.4 Environmental Requirements

EFR is committed to the operation of its facilities in a manner that prioritizes the safety of its workers, contractors and community, the protection of the environment and the principles of sustainable development.

20.4.1 Monitoring and Reporting

20.4.1.1 Air Quality

Air quality monitoring and reporting is conducted in accordance with the Radioactive Source Material License No. SUA-1597 and the Permit to Mine. Monitoring has been conducted from the beginning of operations to present; monitoring is conducted at various frequencies, from continuously to annually, based on operational status. Monitoring includes air particulates, gamma, and radon.

20.4.1.2 Hydrogeology

Groundwater monitoring and reporting is conducted in accordance with multiple permits including the Permit to Mine and the UIC Permit. Monitoring is conducted at various frequencies and has been conducted from the beginning of operations to present. Groundwater monitoring locations include injection and production wells, perimeter and vertical monitoring wells, and domestic and livestock wells. Monitoring includes injection rates, injection pressures, injection volumes, annular and operating pressures, groundwater elevation and water quality. Reporting to WDEQ/WQD is conducted quarterly and annually.

20.4.1.3 Surface Hydrology

Surface water sampling and reporting is conducted in accordance with multiple permits. Monitoring is conducted at various frequencies and has been conducted from the beginning of operations to present. Reporting to WDEQ/LQD is conducted quarterly and annually.

Stormwater monitoring is conducted in accordance with Stormwater Discharger Permit for Industrial Activities WYPDES permit. Monitoring is conducted on a semi-annual basis and during storm events.

20.4.1.4 Soil and Sediment

Soil and sediment sampling and reporting is conducted in accordance with multiple permits at various locations in the vicinity of the air particulate sampling stations and pre-operational baseline sampling locations on an annual basis. The samples are analyzed for various radionuclides. Monitoring has been conducted from the beginning of operations to present. Reporting to WDEQ/LQD is conducted quarterly and annually.

20.4.2 Compliance

From the time of construction to the effective date of this Technical Report, the Complex has experienced two minor compliance issues. Both issues pertained to the Permit to Mine issued by WDEQ/LQD and were resolved quickly under normal regulatory procedures.

20.4.3 Mine Closure Plan

The reclamation plan that presents EFR's plans and estimated costs for the restoration of groundwater, decontamination and decommissioning of the Nichols Ranch Plant site and wellfields, surface reclamation and decommissioning, and post-reclamation monitoring was revised in September 2019. The objective of the reclamation plan is to return the subsurface and surface of the Nichols Ranch, Hank, and Jane Dough areas to conditions compatible with the pre-mining uses. All affected groundwater will be restored to a condition of use equal to or exceeding that which existed prior to Project construction. All lands disturbed by the Nichols Ranch Plant and mining will also be restored to their pre-mining use of livestock grazing and wildlife habitat.

Groundwater restoration includes groundwater sweeping, groundwater treatment, and monitoring. Following groundwater restoration, well abandonment will occur in accordance with WDEQ/LQD regulations. The Nichols Ranch Plant site and wellfield decommissioning consists of decontamination of elements of the Nichols Ranch Plant site, as needed, and the dismantling and selling, where possible, of equipment for future use. Surface reclamation including roads and wellfields consists of surface preparation (regrading, ripping, etc.), the placement of salvaged topsoil, and revegetation.

20.4.4 Reclamation Cost Estimate and Bonds

Financial assurance instruments are held by the State for drilling, ISR mining, and uranium processing. The bonds are required to insure reclamation and restoration of the affected lands and aquifers in accordance with federal and state regulations and permit requirements. The current approved surety estimate is $6,668,575 and detailed in Table 20-2. The Company has continuously maintained a bond amount of $6,800,000 since the Project was permitted and licensed.

Table 20-2: Reclamation Bonds
Energy Fuels Inc. – Nichols Ranch Project

Program/Permit	Amount (US$)	Date Approved (MM/DD/YYYY)
WDEQ/LQD Permit to Mine and NRC Source Materials License	6,668,575	3/4/2021
WDEQ/LQD Drilling Notification DN336	50,000	8/29/2017

20.5 Social and Community

EFR is committed to the operation of its facilities in a manner that prioritizes the safety of its workers, contractors and community, the protection of the environment, and the principles of sustainable development. The surrounding communities have a long history of working with and for the region's mining and mineral resource industry, and their support for the Project has been strong.

The Fraser Institute Annual Survey of Mining Companies, 2020, ranks Wyoming as 2nd out of 77 jurisdictions using a Policy Perception Index, which indicates a very favorable perception by the mining industry towards Wyoming mining policies. The SLR QP not aware of environmental, permitting, or social/community, factors which would materially affect the Mineral Resource estimates.

21.0 CAPITAL AND OPERATING COSTS

The capital and operating cost estimates for ISR mining and yellowcake production at the Nichols Ranch Mining Unit are based on factored costs from other operations, judgment, and analogy. Although there was some commercial production experience at Nichols Ranch area from 2014 to 2019, the change in the cost basis for this Technical Report, due to the proposed reduction in overall U_3O_8 production rates and the requirement for cost escalation, makes the accuracy, in the SLR QP's opinion, an American Association of Cost Engineers (AACE) International Class 4 cost estimate with an accuracy range of 15% to -30% to +20% to +50%.

21.1 Capital Costs

Capital costs estimated for the Project will include the development of wellfields in the Nichols Ranch, Jane Dough, and Hank areas, additional trunk lines, and pipeline network to the Hank area, and the completion of the central processing plant at the Nichols Ranch area. Capital costs do not include those capital costs associated with milling, as the Mill will only be used for drying and packing yellowcake from the Complex.

For this Technical Report, the SLR QP adjusted the original 2015 capital cost estimate by the following methodologies:

- Adjustment of 2015 costs to reflect reduction in production scale from the 2015 schedule (6.3 Mlb) to 2021 (4.0 Mlb) using the "0.6 capital rule"; and
- Escalation of adjusted 2015 costs to first quarter (Q1) 2021 US dollar basis using subscription-based Mining Cost Services (MCS) cost indices (Infomine, 2021). The SLR QP is of the opinion that the inflationary indices since Q1 2021 are too volatile to apply against a long lived asset.

Table 21-1 summarizes the capital costs adjusted for the smaller 4.0 Mlb production schedule and cost escalation in Q1 2021 US dollar basis. The two methodologies are described in further detail below.

Table 21-1: Base Case Capital Cost Estimate Summary
Energy Fuels Inc. – Nichols Ranch Project

Capital Cost Area	Cost (US$ 000)
Wellfield Development	61,327
Trunkline	227
Soft Costs	12,721
Plant – CPP Buildout	4,990
Plant – Hank Pipeline	2,177
Total Sustaining Capital	**81,442**
Restoration/Decommissioning	20,664
Grand Total	**102,105**

21.1.1 SLR Capital Cost Adjustments

The 2015 capital cost estimate of $114.3 million supported a production schedule that included 100% of Nichols Ranch, Jane Dough, and Hank Mineral Resources, which totalled 6.3 Mlb U_3O_8. The new base case production schedule in this Technical Report totals 4.0 Mlb (37% lower than the 2015 schedule) and accounts for the mined depletion through 2019 at Nichols Ranch and only the 81% of EFR attributable pounds of U_3O_8 at Jane Dough.

To scale the 2015 capital cost estimate of $114.3 million to reflect the currently envisioned smaller scale operation, the SLR QP used the 0.6 capital cost rule as follows:

$$Scaled\ 2015\ Costs = \$114.3\ M * \left(\frac{4.0}{6.3}\right)^{0.6}$$

Thus, the scaled 2015 capital cost estimate of $87.1 million for the smaller 4.0 Mlb operation is $27.2 million or 23.8% lower as shown in Table 21-2.

Table 21-2: SLR Capital Cost Scale Adjustment Summary
Energy Fuels Inc. – Nichols Ranch Project

Capital Cost Area	Units	2015 Estimate	Scaled 2015 Estimate	Variance
Production Target	Mlb	6.3	4.0	(2.3)
Wellfield Development	US$ (000)	67,596	51,488	(16,108)
Trunkline	US$ (000)	250	190	(60)
Soft Costs	US$ (000)	14,021	10,680	(3,341)
Plant – CPP Buildout	US$ (000)	5,500	4,189	(1,311)
Plant – Hank Pipeline	US$ (000)	2,400	1,828	(572)
Total Sustaining Capital	US$ (000)	**89,767**	**68,376**	**(21,391)**
Restoration/Decommissioning	US$ (000)	24,561	18,708	(5,854)
Grand Total	US$ (000)	**114,327**	**87,084**	**(27,243)**
% Variance				(23.8%)

21.1.2 SLR Capital Cost Escalation Methodology

The SLR QP subsequently escalated the adjusted 2015 capital cost estimate cost of $87.1 million to Q1 2021 US dollar basis using subscription-based MCS cost indices dated July 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 Mill capital cost indices were chosen as, in the SLR QP's view, ISR mining and processing is composed mainly of pumping and reagent activities found in mill operations compared to classic mining scenarios. The only exceptions were for minor payroll costs during decommissioning, which use a mine labor factor, and for bonding costs, which were assumed to remain unchanged. The capital cost escalation factors are presented in Table 21-3 with the 2021 escalated capital cost presented in Table 21-4.

Table 21-3: SLR Capital Cost Escalation Factors
Energy Fuels Inc. Nichols Ranch Project

Capital Cost Area	MCS Source	2015 Index	March 2021 Index	% Change
Wellfield Development	Table 5 Mill	101.0	120.3	19.1
Trunkline	Table 5 Mill	101.0	120.3	19.1
Soft Costs	Table 5 Mill	101.0	120.3	19.1
CPP Buildout	Table 5 Mill	101.0	120.3	19.1
Hank Pipeline	Table 5 Mill	101.0	120.3	19.1
Bonding	None	1.0	1.0	None
Groundwater Restoration	Table 5 Mill	101.0	120.3	19.1
Decommissioning	Table 5 Mill	101.0	120.3	19.1
Payroll	Table 2 - "A"	26.7	28.6	7.3

Table 21-4: SLR 2021 Escalated Base Case Capital Cost Summary
Energy Fuels Inc. – Nichols Ranch Project

Capital Cost Area	Units	Scaled 2015 Estimate	Escalated Q1 2021 Estimate	Variance (US$ 000)
U_3O_8 Production Target	Mlb	4.0	4.0	-
Wellfield Development	US$ (000)	51,488	61,327	9,839
Trunkline	US$ (000)	190	227	37
Soft Costs	US$ (000)	10,680	12,721	2,041
Plant - CPP Buildout	US$ (000)	4,189	4,990	801
Plant - Hank Pipeline	US$ (000)	1,828	2,177	349
Total Sustaining Capital	US$ (000)	**68,376**	**81,442**	**13,066**
Restoration/Decommissioning	US$ (000)	18,708	20,664	1,956
Grand Total	US$ (000)	**87,084**	**102,105**	**15,021**
% Variance				17.2%

The escalation effect on capital costs from 2015 to Q1 2021 is estimated to be 17.2%, or $15.0 million for the Complex over the scaled 2015 capital costs at 4.0 Mlb production schedule. The SLR QP notes that the current capital cost estimate of $102.1 million is still 10% lower than the original 2015 capital cost estimate of $114.3 million, wholly due to reduction in scale of the operation.

21.2 Operating Costs

The LOM average operating cost includes mining, on-site yellowcake production with hauling cost to the Mill located near Blanding, Utah, general and administration, and freight of the product from the Mill to a point of sale, along with various royalties and taxes which are described in more detail in Section 22.0. Table 21-5 summarizes the operating cost estimates used for the base case in this PEA in Q1 2021 US dollar basis.

Table 21-5: Operating Cost Estimate
Energy Fuels Inc. – Nichols Ranch Project

Item	US$ (000)	$/lb Produced
Wellfield	11,575	2.88
Processing	39,494	9.81
Deep Well Disposal	656	0.16
G & A	25,865	6.43
Total Site Operating Costs	**77,590**	**19.28**
Product Transport to Market	1,533	0.38
Total Production Costs	**79,123**	**19.66**
Ad Valorem Tax	10,583	2.63
WY Severance Tax	6,408	1.59
Royalties	4,717	1.17
Total Operating Costs	**100,832**	**25.06**

To arrive at the current operating cost estimate in Table 21-5, and similar to the capital cost adjustment, the SLR QP adjusted the original 2015 operating cost estimate by the following methodologies describe in more detail below:

- Adjustment of 2015 costs to reflect reduction in production scale from 2015 (6.3 Mlb) to 2021 base case production schedule (4.0 Mlb) production totals by lowering fixed costs by 15%; and
- Escalation of adjusted 2015 costs to Q1 2021 US dollar basis using MCS cost indices. The SLR QP is of the opinion that the inflationary indices since Q1 2021 are too volatile to apply against a long lived asset.

21.2.1 SLR Operating Cost Adjustments

To better reflect the smaller scale 4.0 Mlb operation, the SLR QP first developed a fixed and variable operating cost structure using the 2015 production schedule and US dollar cost basis. The SLR QP then adjusted the costs based on experience and judgment by lowering the fixed operating dollar cost component by 15% but keeping the variable cost inputs the same. Table 21-6 shows the overall impact of approximately 37.4% increase in operating costs from \$11.71/lb U_3O_8 to \$16.02/lb U_3O_8 on a 2015 US dollar cost basis from these adjustments.

Table 21-6: 2015 Site Operating Cost Scale Adjustment
Energy Fuels Inc. – Nichols Ranch Project

Item	2015 (6.3 Mlb) Costs (Est)		Scaled 2015 (4 Mlb) Costs		$/lb % Change
	US$ (000)	$/lb produced	US$ (000)	$/lb produced	
Total Fixed Costs	46,368	7.32	39,422	9.80	33.9
Total Variable Costs	28,010	4.42	25,890	6.43	45.5
Total Site Operating Costs	**74,182**	**11.71**	**65,311**	**16.23**	**38.6**

21.2.2 SLR Operating Cost Escalation Methodology

After adjusting the operating costs for the smaller production schedule, the SLR QP escalated those adjusted operating costs from 2015 US dollar basis to Q1 2021 US dollar basis using MCS cost indices dated July 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 21-7.

Table 21-7: 2021 SLR Operating Cost Escalation Factors
Energy Fuels Inc. – Nichols Ranch Project

Operating Cost Area	MCS Source	2015 Index	March 2021 Index	% Change
Wellfield	Table 5 Mill	95.7	116.2	21.4
Processing	Table 5 Mill	95.7	116.2	21.4
Deep Well Disposal	Table 5 Mill	95.7	116.2	21.4
G&A	Table 2 - "A"	26.65	28.59	7.3
Product Transport to Market	Table 2 - "S"	143.5	170.4	18.7

The operating cost escalation by area is presented in Table 21-8.

Table 21-8: SLR 2021 Escalated Base Case Operating Cost Summary
Energy Fuels Inc. – Nichols Ranch Project

Operating Cost Summary	Scaled 2015 Cost (US$ 000)	Escalated Q1 2021 Cost (US$ 000)	Variance (US$ 000)
Wellfield	9,533	11,575	2,150
Processing	32,527	39,494	7,413
Deep Well Disposal	540	656	116
G & A	22,711	25,865	3,154
Total Site Operating Costs	**65,311**	**77,590**	**12,833**
Product Transport to Market	1,291	1,533	241
Total Production Costs	**66,602**	**79,123**	**12,521**
% Variance			18.8%

Note:

1. Q1 2021 G&A expenses in Section 22 include an extra allowance of $1.5 million for preproduction activity in Year -1 that is not included in Tables 21-7 and 21-8 as this cost was not in the original 2015 cost estimate.

The escalation effect on direct operating costs during this five year period from 2015 through Q1 2021 is estimated to be approximately 17.5% for the Complex over the adjusted 2015 capital costs at 4.0 Mlb production schedule.

21.2.3 Workforce Summary

The operation will employ a total of 25 employees at the site, as presented in Table 21-9. It is assumed that corporate-related functions such as administration, finance, human resources, and procurement will be done from EFR's Lakewood, Colorado, head office.

Table 21-9: Workforce Summary
Energy Fuels Inc. – Nichols Ranch Project

Category	Total
Drilling, Wellfield Development and Surface Reclamation	
Manager	1
Wellfield Development	1
Geologist	1
Subtotal	3
Projects, Construction & Maintenance	
Manager	1
Construction Supervisor	1
Wellfield Construction Technician	1
Maintenance	1
Subtotal	4
Plant Operations	
Manager	1
Operators	9
Subtotal	10
Wellfield Operations	
Manager	1
Utility Technician	1
Subtotal	2
General and Administrative	
Mine Manager	1
Environmental, Safety, and Health (ESH) Manager	1
Radiation Safety Officer (RSO)	1
Radiation Safety Technician (RST)	1
Environmental Technician	1
Lab Technician	1
Subtotal	6
Grand Total	**25**

22.0 ECONOMIC ANALYSIS

An economic analysis was performed using the assumptions presented in this Technical Report. The SLR QP notes that, unlike Mineral Reserves, Mineral Resources do not have demonstrated economic viability. This PEA is preliminary in nature, and includes Inferred Mineral Resources that are considered too geologically speculative 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 Nichols Ranch base case cash flow is based on Measured, Indicated, and Inferred Mineral Resources (the latter being 17% of the total). An alternative case with only Measured and Indicated Mineral Resources is also presented in this Technical Report.

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 in this Technical Report for the Nichols Ranch Mining Unit (Nichols Ranch, Jane Dough, and Hank areas), and is summarized in the Section 22.1.2. A summary of the key criteria is provided below.

22.1.1.1 Revenue

- Mineral Resource used for LOM planning: 3.3 Mst at 0.114% eU_3O_8 with 7.54 Mlb contained U_3O_8 (6.66 Mlb contained U_3O_8 attributable to EFR)
- Project Areas mined (with % ownership): Nichols Ranch (100%), Jane Dough (81%), and Hank (100%) for net attributable basis of 88.3%
- An estimated 85% of the Mineral Resource will be under pattern with 71% U_3O_8 recovery, equating to an effective resource recovery of 60.4%, or 4.02 Mlb recovered U_3O_8 attributable to EFR
- A total of 17% of the LOM tonnage is Inferred Mineral Resource
- Average LOM flow rate: 3,016 gallons per minute (gpm)
- Average LOM pregnant leach solution (PLS) concentration: 33 milligrams U_3O_8 per liter (mg/L)
- Sold U_3O_8: 4.02 Mlb attributable to EFR
- Avg annual U_3O_8 sales: 393 klb/y
- Metal price: US$65.00/lb U_3O_8
- Concentrate shipping cost from the Mill to customer: $760/ton U_3O_8 or $0.38/lb U_3O_8

22.1.1.2 Capital and Operating Costs

- One year of preproduction period for wellfield development for production in Year 1. All other infrastructure necessary to resume operations at the Complex is already constructed.
- Mine life of 11 years
- LOM sustaining capital costs of $81.4 million in Q1 2021 US dollar basis

- LOM site operating cost (including preproduction wellfield and G&A costs but excluding product transport to market cost, royalties, Ad Valorem tax, and Wyoming severance tax) of $76.7 million, or $19.28/lb U_3O_8 produced, on Q1 2021 US dollar basis
- LOM Restoration/decommissioning costs of $20.7 million in Q1 2021 US dollar basis.

22.1.1.3 Royalties and Production Taxes

- Royalties for the Project are applicable to approximately 30% of the Nichols Ranch and Jane Dough Mineral Resources in the production schedule. Royalties are estimated using a rate of 8% of gross revenue generated over these areas.
- The Ad Valorem (or Gross Products) tax varies by county and is exclusively a volume based assessment.
- The current Wyoming state severance tax for the privilege of extracting uranium is 4% of Gross Product value above $60.00/lb U_3O_8. However, after the allowable wellhead deduction the effective severance tax rate can range from 0% to 5% of gross revenue, depending on the price paid. For the Project, it is estimated at approximately 2.45% of gross revenue over LOM.

22.1.1.4 Income Taxes

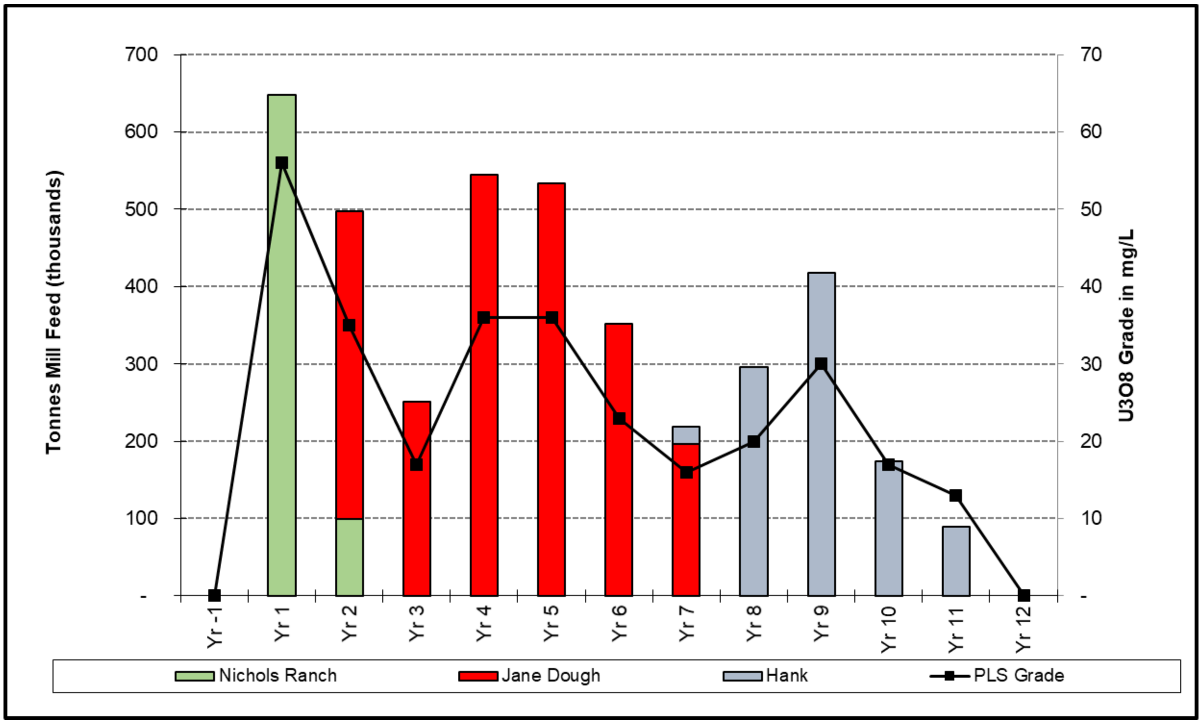
The economic analysis includes the following assumptions for corporate income taxes (CIT):

- Unit of Production depreciation method was used with total allowance of $81.4 million taken during LOM
- Percentage depletion method was used with total allowance of $31.0 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%
- Wyoming has no corporate income tax

22.1.2 Cash Flow Analysis

The SLR QP notes 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 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 SLR QP notes that with the future exploration drilling planned at the Complex, it would be reasonable to expect a significant amount of Inferred Mineral Resources to become converted into the Indicated category through a subsequent resource model.

The Project production schedule, with one year of preproduction, and as currently envisioned with 17% Inferred Mineral Resources and 83% combined Measured and Indicated Mineral Resources is shown in Figure 22-1 and the resulting after-tax free cash flow profile is shown in Figure 22-2.



Note:

1. PLS = Pregnant Leach Solution

Figure 22-1: Base Case Annual U_3O_8 Production by Area

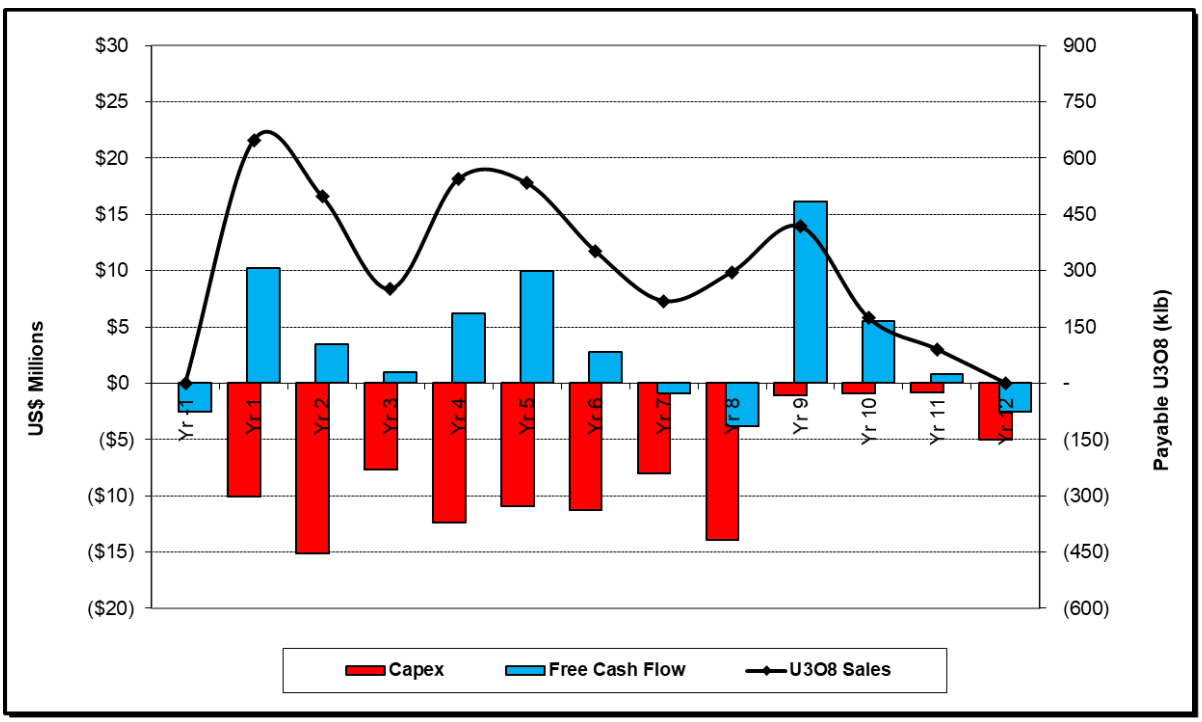


Figure 22-2: Base Case Project After-Tax Metrics Summary

Table 22-1 presents a summary of the Nichols Ranch base case economics at an U_3O_8 price of $65.00/lb. The full annual cash flow model is presented in Appendix 1 of this Technical Report. On a pre-tax basis, the undiscounted cash flow totals $58.6 million over the mine life. The pre-tax NPV at a 5% discount rate is $46.1 million. On an after-tax basis for the base case, the undiscounted cash flow totals $41.1 million over the mine life. The after-tax NPV at 5% discount rate is $31.5 million. The SLR QP notes that after-tax IRR is not applicable as the Nichols Ranch Plant at the Complex is already constructed and already operated for a number of years. Capital identified in the economics is for sustaining operations and plant rebuilds as necessary.

Table 22-1: Base Case After-Tax Cash Flow Summary
Energy Fuels Inc. – Nichols Ranch Project

Item	Unit	Value
U_3O_8 Price	$/lb	65
U_3O_8 Sales	Mlb	4.02
Total Gross Revenue	**US$ M**	**262**
Wellfield Costs	US$ M	(12)
Processing Costs	US$ M	(39)
Deep Well Disposal Costs	US$ M	(1)
G&A Costs	US$ M	(26)
Product Transport to Market Cost	US$ M	(2)
Production Taxes/Royalties	US$ M	(22)
Total Operating Costs	**US$ M**	**(101)**
Operating Margin	**US$ M**	**161**
Operating Margin	US$ M	62%
Corporate Income Tax	US$ M	(17)
Operating Cash Flow	**US$ M**	**143**
Sustaining Capital	**US$ M**	(81)
Restoration/Decommissioning	**US$ M**	(21)
Total Capital	**US$ M**	**(102)**
Pre-tax Free Cash Flow	US$ M	58.6
Pre-tax NPV @ 5%	**US$ M**	**46.1**
After-tax Free Cash Flow	US$ M	41.1
After-tax NPV @ 5%	**US$ M**	**31.5**

Table 22-2 shows the average annual U_3O_8 sales for the base case during the 11 years of operation (and one year of preproduction expense) is 393 klb U_3O_8per year at an average All-in Sustaining Cost (AISC) of \$50.43/lb U_3O_8 (or \$45.30/lb U_3O_8 excluding Restoration/ Decommissioning costs).

Table 22-2: Base Case All-In Sustaining Costs Composition
Energy Fuels Inc. – Nichols Ranch Project

Item	Cost (US\$ M)	Unit Cost (US\$/lb U_3O_8)
Mining	12	2.88
Process	39	9.81
Deep Well Disposal	1	0.16
G & A	26	6.43
Subtotal Site Costs	78	**19.28**
Product Transport to Market	2	0.38
Total Direct Cash Costs	79	**19.66**
Production Taxes/Royalties	22	5.39
Total Cash Costs	**101**	**25.06**
Sustaining Capital	81	20.24
Restoration/Decommissioning	21	5.14
Subtotal Sustaining Costs	102	**25.37**
Total All-in Sustaining Costs	203	**50.43**
U_3O_8 Sales (Mlb)		4.02
Average U_3O_8 Sales per Year (klb)		393

Figure 22-3 shows the annual AISC trend during the base case mine operations against an overall average AISC of \$50.43/lb U_3O_8 over the 11-year LOM. The AISC variations are mainly due to changes in grades and mine schedule. The AISC metric can range from \$24/lb U_3O_8 to \$75/lb U_3O_8 through the Project life.

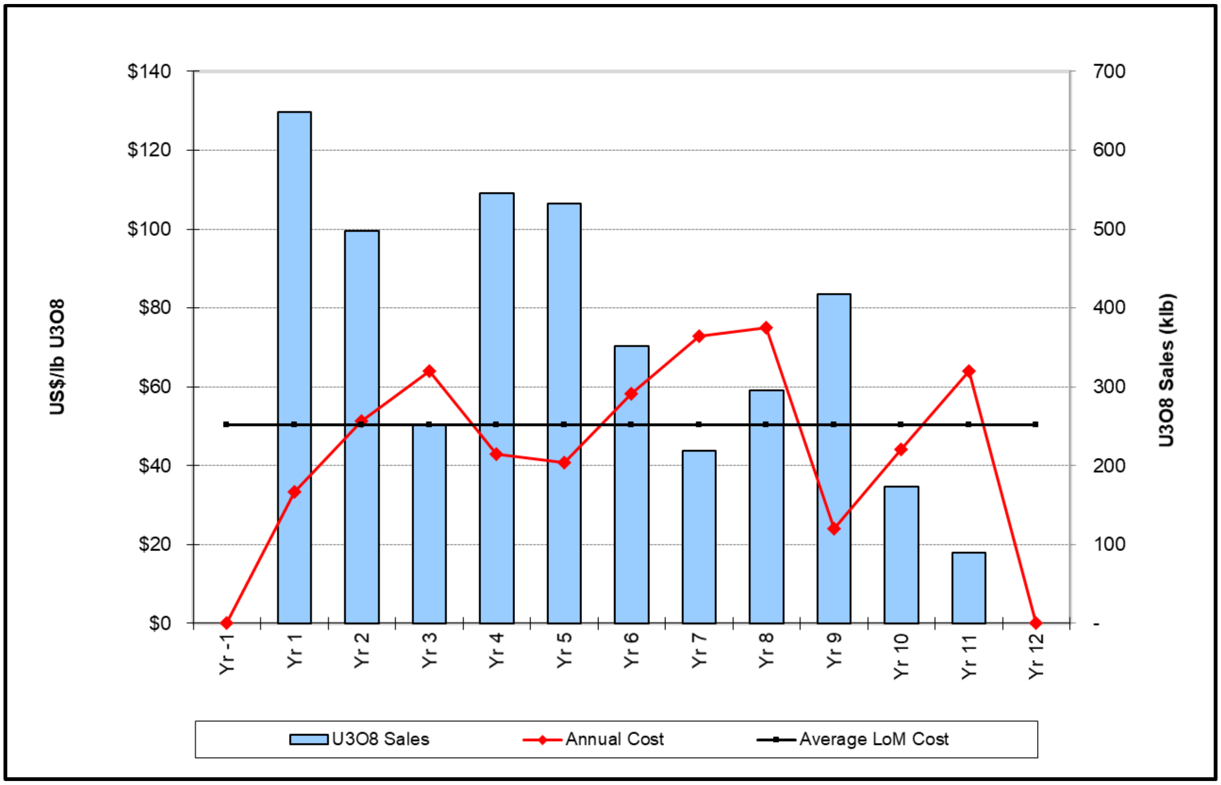


Figure 22-3: Base Case Annual AISC Curve Profile

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
- Net Recovery: -20%/+20% (percentage under pattern and metallurgical recovery)
- Operating cost per ton milled: -30%/+50% (AACE International Class 4 range)
- Capital cost: -30%/+50% (AACE International Class 4 range)

The after-tax cash flow sensitivities for the base case are shown in Table 22-3 and Figure 22-4. The Project is most sensitive to uranium price and recovery, and only slightly less sensitive to operating cost and capital cost at an AACE International Class 4 accuracy level. The sensitivities to pounds of U_3O_8 and metal price are nearly identical. The SLR QP notes that head grade variations in ISR mining are difficult to measure at this PEA stage and thus were not included in this sensitivity analysis.

Table 22-3: Base Case After-Tax Sensitivity Analysis
Energy Fuels Inc. – Nichols Ranch Project

Factor Change	U_3O_8 Price (US$/lb)	NPV at 5% (US$ M)
0.69	45.00	(18)
0.85	55.00	7
1.00	**65.00**	**31**
1.15	75.00	55
1.31	85.00	78
Factor Change	**Net Recovery (%)**	**NPV at 5% (US$ M)**
0.80	48.3	0
0.90	54.4	16
1.00	**60.4**	31
1.10	66.5	47
1.20	72.5	62
Factor Change	**Operating Costs (US$/ton milled)**	**NPV at 5% (US$ M)**
0.70	13.69	48
0.85	16.49	40
1.00	**19.28**	**31**
1.25	23.94	18
1.50	28.60	4
Factor Change	**Capital Costs (US$ M)**	**NPV at 5% (US$ M)**
0.70	71	54
0.85	87	43
1.00	**102**	**31**
1.25	128	13
1.50	153	(6)

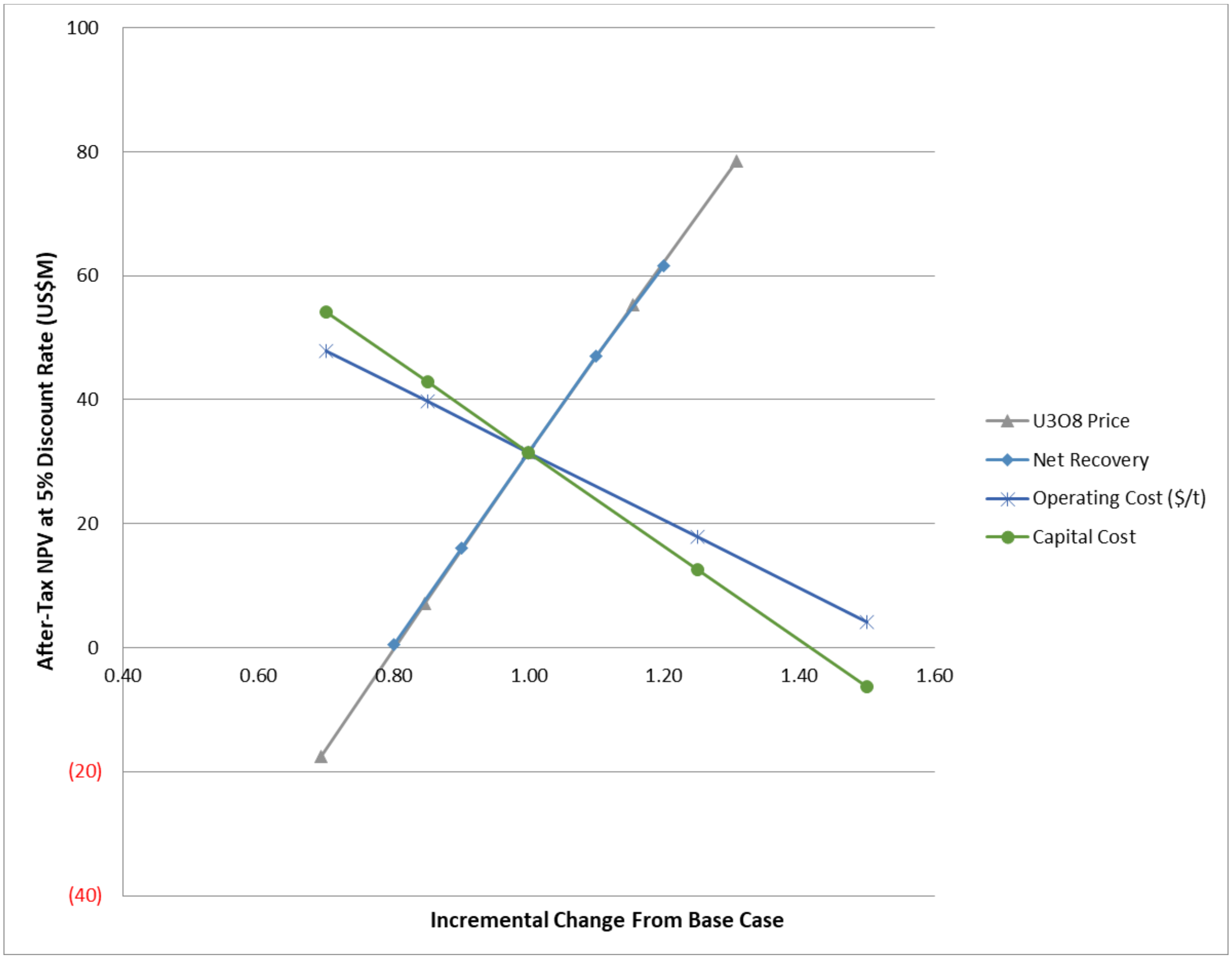


Figure 22-4: Base Case After-tax NPV 5% Sensitivity Analysis

22.2 Alternate Case (Measured and Indicated Mineral Resources Only)

The SLR QP also undertook an analysis of an alternative case, considering only combined Measured and Indicated Mineral Resources (83% of the base case production schedule). The SLR QP notes 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 PEA is based will be realized.

Using the same cost parameters and ISR mining and processing assumptions as the base case, the alternate case production schedule generates 3.36 Mlb U_3O_8 over a nine year mine life as shown in Figure 22-5.

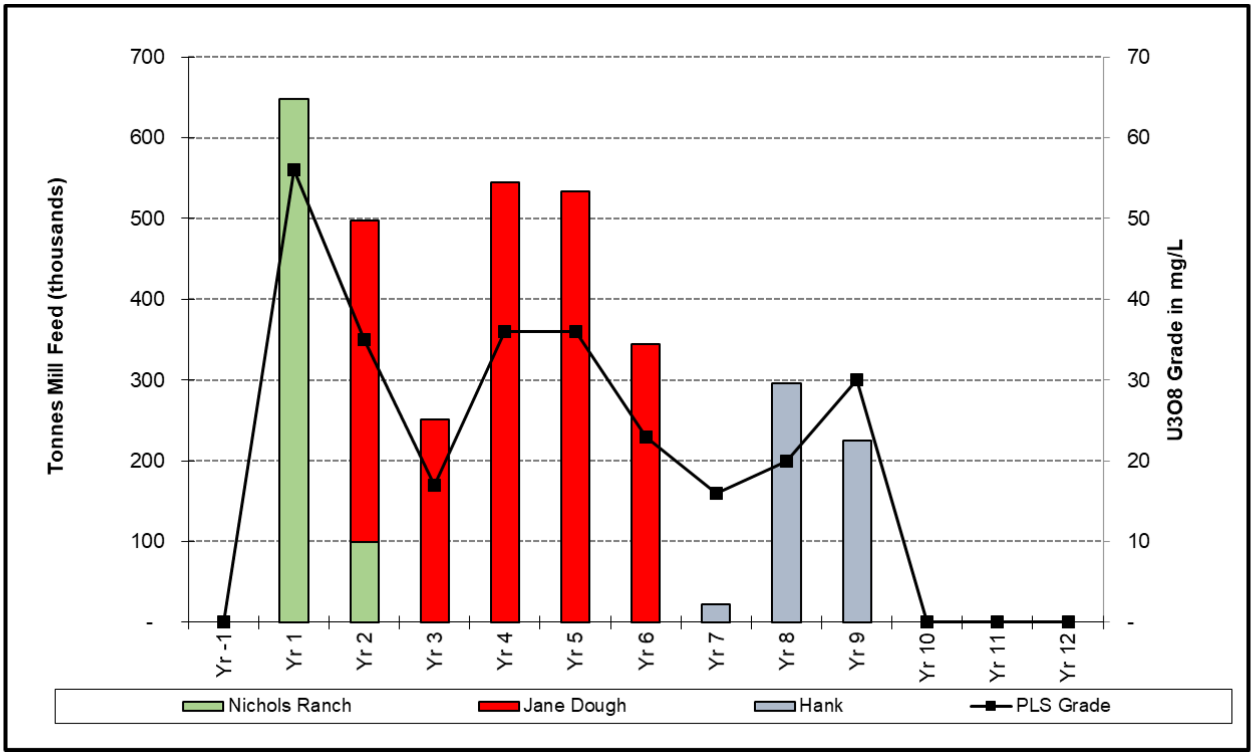


Figure 22-5: Alternate Case Annual U_3O_8 Production by Area

Table 22-4 presents a summary of the Nichols Ranch alternate case economics at an U_3O_8 price of \$65.00/lb. The full annual cash flow model is presented in Appendix 1 of this Technical Report. On a pre-tax basis, the undiscounted cash flow totals \$43.7 million over the mine life. The pre-tax NPV at a 5% discount rate is \$37.4 million. On an after-tax basis, the undiscounted cash flow totals \$27.4 million over the mine life. The after-tax NPV at 5% discount rate is \$23.7 million.

Table 22-4: Alternate Case After-Tax Cash Flow Summary
Energy Fuels Inc. – Nichols Ranch Project

Item	Unit	Value
U_3O_8 Price	$/lb	65
U_3O_8 Sales	Mlb	3.36
Total Gross Revenue	**US$ M**	**219**
Wellfield Costs	US$ M	(10)
Processing Costs	US$ M	(33)
Deep Well Disposal Costs	US$ M	(1)
G&A Costs	US$ M	(21)
Product Transport to Market Cost	US$ M	(1)
Production Taxes/Royalties	US$ M	(19)
Total Operating Costs	**US$ M**	**(85)**
Operating Margin	**US$ M**	**133**
Operating Margin	US$ M	61%
Corporate Income Tax	US$ M	(16)
Operating Cash Flow	**US$ M**	**117**
Sustaining Capital	**US$ M**	(73)
Restoration/Decommissioning	**US$ M**	(17)
Total Capital	**US$ M**	**(90)**
Pre-tax Free Cash Flow	US$ M	43.7
Pre-tax NPV @ 5%	**US$ M**	**37.4**
After-tax Free Cash Flow	US$ M	27.4
After-tax NPV @ 5%	**US$ M**	**23.7**

Table 22-5 shows the average annual U_3O_8 sales for the alternate case during the nine years of operation are 418 klb U_3O_8 per year at an average AISC of $52.00/lb U_3O_8 (or $47.05/lb U_3O_8 excluding Restoration/Decommissioning costs).

Table 22-5: Alternate Case All-in Sustaining Costs Composition
Energy Fuels Inc. – Nichols Ranch Project

Item	US$ M	US$/lb U_3O_8
Mining	10	2.9
Process	33	10.0
Deep Well Disposal	1	0.2
G & A	21	6.4
Subtotal Site Costs	**65**	**19.4**
Product Transport to Market	1	0.4
Total Direct Cash Costs	**66**	**19.8**
Production Taxes/Royalties	19	5.5
Total Cash Costs	**85**	**25.3**
Sustaining Capital	73	21.7
Restoration/Decommissioning	17	5.0
Subtotal Sustaining Costs	**90**	**26.7**
Total All-in Sustaining Costs	**175**	**52.00**
U_3O_8 Sales (Mlb)		3.36
Average U_3O_8 Sales per Year (klb)		418

The after-tax cash flow sensitivities for the alternate case are shown in Figure 22-6 and are similar in magnitude to the base case with the Project being most sensitive to uranium price and recovery, and only slightly less sensitive to operating cost and capital cost at a AACE International Class 4 level of accuracy.

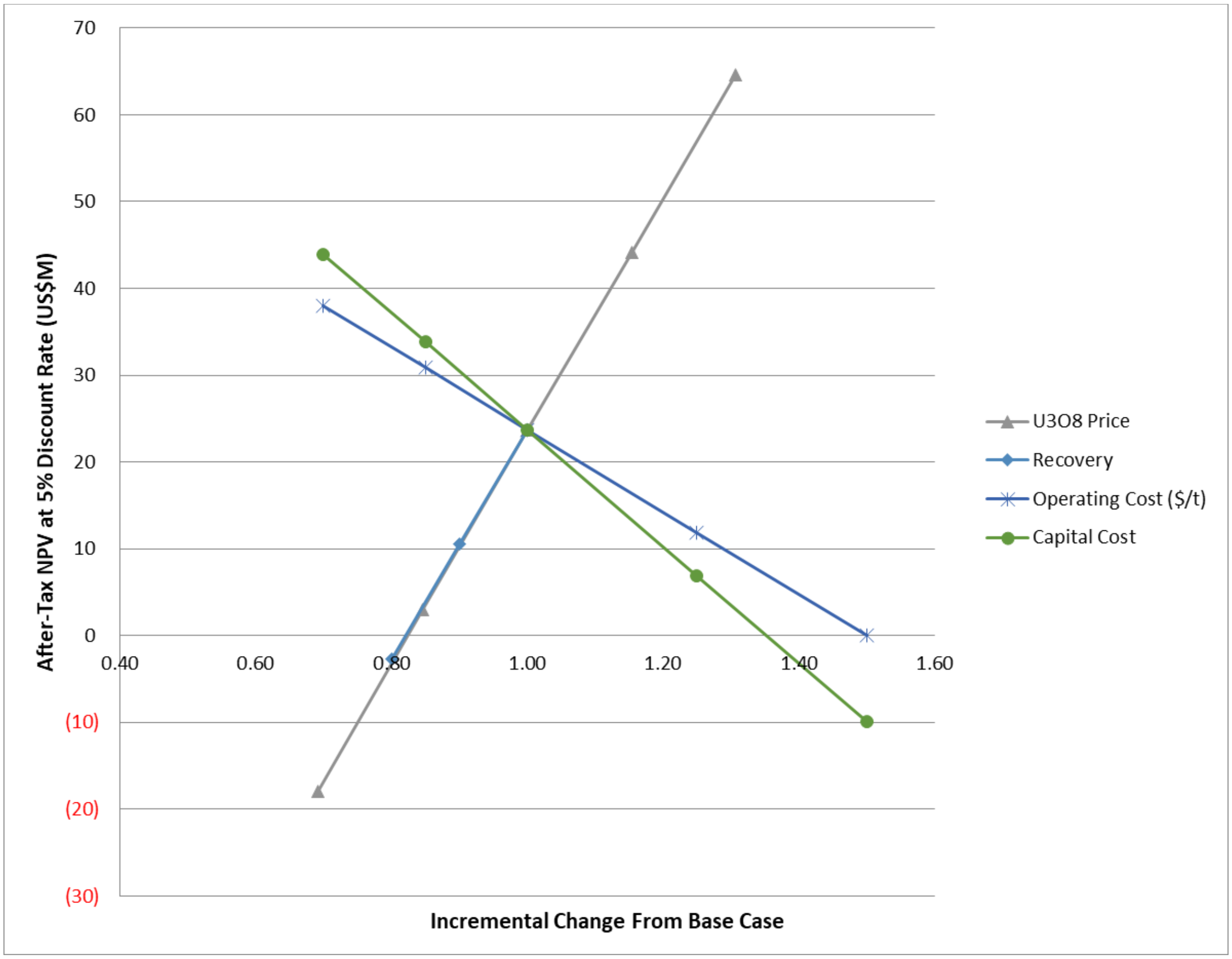


Figure 22-6: Alternate Case After-tax NPV 5% Sensitivity Analysis

23.0 ADJACENT PROPERTIES

The Complex is located within the Pumpkin Buttes Mining District, which was the first commercial uranium production district in Wyoming. Uranium was first discovered in the Pumpkin Buttes in 1951. Through 1967, intermittent production from approximately 55 small mines produced 36,737 tons of mined product containing 208,143 lb of uranium (Breckenridge et al., 1974). This early mining focused on shallow oxidized areas by small open pit mines. Primary exploration methods included geologic mapping and ground radiometric surveys. Modern exploration and mining in the district have focused on deeper reduced mineralization.

Significant mine developments located near the Nichols Ranch property and within and or near the Pumpkin Butte Mining District in which EFR has no material interest include:

More recent ISR tests and operating uranium production near the Complex include:

- The Willow Creek Project (formerly known as the Irigaray and Christensen Ranch Project), a commercial ISR mine, now controlled by Uranium Energy Corp, and located seven miles north of Nichols Ranch, has produced over 4.5 Mlb of U_3O_8 and is currently undergoing renovations in preparation for the resumption of operations.
- CCI had a small ISR pilot plant, located approximately three miles south of the Willow Draw project and four miles southeast of the Nichols Ranch/Jane Dough areas, which reportedly produced approximately 12,000 lb eU_3O_8 (Beahm and Anderson, 2007).
- The Ruth pilot test located six miles southwest of North Rolling Pin produced 32,000 lb U_3O_8.
- The Cameco Smith Ranch-Highland Mine is located approximately 45 miles from the Project. Smith Ranch-Highland Mine utilizes ISR for uranium extraction and has been in production since 1997.
- The Cameco North Butte Project located immediately north of Hank.

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 Nichols Ranch 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 offer the following conclusions by area.

25.1 Geology and Mineral Resources

- The effective date of the Mineral Resource estimate is December 31, 2021. Estimated uranium grades are based on radiometric probe grades using GT contour methodology.
- Mineral Resources for the Complex are reported at a GT cut-off grade of 0.20 %-ft and have been depleted as of December 31, 2021.
- The total production from Nichols Ranch is 1,276,589 lb eU_3O_8 as of December 31, 2021.
- Total Measured + Indicated Resources for the Complex are 3.29 Mst at an average grade of 0.106% eU_3O_8 containing 6.99 Mlb eU_3O_8. Additional Inferred Resources total 650,000 tons at an average grade of 0.097% eU_3O_8 containing 1.25 Mlb eU_3O_8.
- There is a low risk of depletion of chemical uranium compared to radiometrically determined uranium at the Complex. Furthermore, there is no evidence that radiometric disequilibrium would be expected to negatively affect the uranium resource estimates of the deposits. PFN geophysical logging provides direct analysis of the in situ chemical uranium content and is considered by the SLR QP as reliable for the purposes of assessing radiometric equilibrium
- The SLR QP is of the opinion the historical radiometric logging, analysis, and security procedures at the Complex were adequate for use in the estimation of the Mineral Resources. The SLR QP also opines that, based on the information available, the original gamma log data and subsequent conversion to % eU_3O_8 values are reliable.
- 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 drilling and radiometric logging data and GT interpretations in Nichols Ranch Mining Unit.
    - Nichols Ranch had near-continuous production for over five years beginning in 2014. There has been adequate drilling to develop the Mineral Resource models that have been used in the GT contour models and for successful mine planning. The Mineral Resource models at Nichols Ranch performed well during production, and the SLR QP is of the opinion that the database verification procedures for the remaining properties included in the Mineral Resource estimate (Nichols Ranch, Jane Dough, Hank, and North Rolling Pin) comply with industry best practices and standards and are deemed suitable for use in mineralized material estimation.
- Significant discrepancies were identified with the coordinated location and GT contour interpretations for West North Butte, East North Butte, and Willow Creek.
    - EFR has not completed a thorough verification of drilling data reported on the West North Butte, East North Butte, and Willow Creek deposits. The SLR QP opines that although the resource estimate completed in 2008 adhered to industry best practices and standards at the time, the inability for EFR or the SLR QP to validate the model excludes it from the current

resource estimate discussed in Section 14.0 of this Technical Report. The resource estimate should be regarded as historic and not relied upon until EFR completes validation of the historic drilling.

- Descriptions of recent drilling programs, logging, and sampling procedures have been well documented by EFR, with no significant discrepancies identified.
- The QA/QC procedures undertaken support the integrity of the database used for Mineral Resource estimation.
- The resource database is valid and suitable for Mineral Resource estimation under S-K 1300 and NI 43-101 standards.
- In the SLR QP's opinion, the assumptions, parameters, and methodology used for the Nichols Ranch Mining Unit and North Rolling Pin Mineral Resource estimate are 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 Methods

- The Complex is currently on care and maintenance status.

25.3 Mineral Processing

- The Nichols Ranch Plant is licensed and designed to have four major solution circuits: 1) the recovery circuit, 2) the elution circuit, 3) the precipitation and filtration circuit, 4) the drying and packaging circuit. The Nichols Ranch Unit processing plant is currently constructed and operated with the first three solution circuit installed.
- Due to the absence of the on-site drying and packaging circuit, the Project proposes to truck the U_3O_8 produced on-site 643 road miles to the Mill near Blanding, Utah, for drying and drumming for final delivery to end users.
- The Mill has been in operation since 1981 and is equipped with the required equipment using a proven process for the production of 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 V_2O_5.
- The Mill is currently on a reduced operating schedule processing materials as they become available. The Mill is currently processing REE materials in part of the circuit, functioning essentially as a pilot plant, therefore the facility is sufficiently staffed to initiate U_3O_8 production relatively quickly.

25.4 Infrastructure

- The Complex and the Mill are in historically important, uranium-producing regions of eastern Wyoming and southeastern Utah, respectively. All the regional infrastructure necessary to mine and process commercial quantities of U_3O_8 is in place.
- EFR has operated the Mill tailings cells since 1981, under the requirements of the Utah Department of Environmental Quality Radioactive Materials License.

25.5 Environment

- Nichols Ranch, Jane Dough, and the Hank Unit are fully licensed and permitted for ISR mining by major licenses and permits issued by the NRC, the WDEQ/LQD, and the WDEQ/AQD. The Hank Unit is also permitted for operation by a Decision Record issued by the Bureau of Land management (BLM).
- EFR has strong relationships with state and federal regulatory agencies and has a positive record of environmental performance at Nichols Ranch.
- The SLR QP is not aware of environmental, permitting, or social/community factors which would materially affect the Mineral Resource estimates.

26.0 RECOMMENDATIONS

The SLR QPs offer the following recommendations by area:

26.1 Geology and Mineral Resources

The SLR QP offers the following recommendations regarding the data supporting the drillhole database at the Project:

1. Transition from a Microsoft Excel database to acQuire or a similar database.
2. Verify all drilling data collar coordinates as Wyoming NAD27 UTM zone 13 coordinates. EFR should also consider moving to an updated coordinate system, such as WGS 84, for use in online graphic programs.
3. Create 3D geologic models of the Wasatch Formation and individual Sand Units for use in verifying and auditing uranium mineralization.
4. Use a handheld XRF tool to replace the scintillometer reading in order to obtain more precise mineralogical information.
5. Resume using PFN as a QA/QC tool to confirm disequilibrium within the Satellite Properties not yet exposed to ISR mining.

In addition, the SLR QP provides the following deposit specific recommendations:

26.1.1 Nichols Ranch Mining Unit

26.1.1.1 Nichols Ranch

The SLR QP makes the following recommendations regarding advancing the Project with Production Planning and Development for PA2:

1. Conduct drilling of 55 delineation to better define the mineralized trends in PA2 to meet a minimum 100 ft grid spacing.
2. Based on the results of the 55 delineation holes, drill and install 120 development wells, associated header houses and manifold to main production pipeline for the remaining four wellfields.

Additional plant upgrades are not required to put PA2 into production. The proposed budget for bringing PA2 into production is shown in Table 26-1.

Table 26-1: PA2 Wellfield Development
Energy Fuels Inc. – Nichols Ranch Project

Item	Cost (US$)
Drilling (Delineation - 55 holes)	$110,000
Drill and Install Wellfield (120 wells)	$1,800,000
Header House and Manifold Construction	$390,000
Total	$2,300,000

26.1.1.2 Jane Dough

1. Complete exploration and delineation drilling at Jane Dough, in concurrence with ongoing delineation and production well drilling at Nichols Ranch, starting in the areas most proximate to Nichols Ranch and proceeding southward.
2. Complete an Engineering study to define the most efficient infrastructure for production.
3. Install monitor wells and conduct pump tests for state and federal permit/license requirements in a phased approach as drilling will define multiple Pas.

26.1.1.3 Hank

1. Complete additional drilling at Hank to access, define, and upgrade classification of the Mineral Resource.
2. After drilling, complete the economic evaluation of the Hank area project.

26.1.2 Satellite Properties

26.1.2.1 North Rolling Pin

1. Install additional monitor wells for future EFR hydrologic studies. Determine groundwater levels and conduct pump tests to evaluate groundwater quality and impact on possible ISR mining.
2. Complete additional delineation drilling to meet a minimum 100 ft grid spacing.
3. Conduct additional radiological disequilibrium studies using PFN, DFN logging, and/or core assays to develop a site-specific model. Also, conduct a bench scale leach tests to determine amenability to ISR.
4. Complete environmental baseline studies for preparation of state and federal permit/license applications.
5. After drilling, complete an economic evaluation of the North Rolling Pin project.
6. Update the current drilling database with all possible historical holes.

26.1.2.2 West North Butte, East North Butte, and Willow Creek

1. Update, verify, and certify the drilling database and ensure that all drilling, both historical and recent, is included.
2. Prepare an updated resource estimation upon completion of updating and verifying the database to make 2008 resource estimations current.
3. Install additional monitor wells for future EFR hydrologic studies. Determine groundwater levels and conduct pump tests to evaluate groundwater quality and impact on possible ISR mining.
4. Complete additional drilling to access the mineral resource.
5. Conduct additional radiological disequilibrium studies using PFN, DFN logging, and/or core assays to develop a site-specific model. Also, conduct bench scale leach tests to determine amenability to ISR.
6. Complete environmental baseline studies for preparation of state and federal permit/license applications.
7. After drilling, complete an economic evaluation of the West North Butte, East North Butte, and Willow Creek project.

26.2 Mining Methods

1. Consistent with the state and federal regulations requirements, environmental monitoring and analysis programs should be implemented to continually collect water level and water quality data when the mine site becomes fully operational.

26.3 Mineral Processing

1. Continue the intermittent Mill operations with maintenance program.
2. Evaluate the Nichols Ranch Plant’s historical operating data to determine possible flow sheet 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 Nichols Ranch Project , Campbell and Johnson Counties, Wyoming, USA”, with an effective date of December 31, 2021, was prepared and signed by:

(Signed & Sealed) ***Grant A. Malensek***

Dated at Lakewood, CO
February 22, 2022
Amended: February 8, 2023

Grant A. Malensek, M.Eng., P.Eng.
Senior Principal Mining Engineer, SLR

(Signed & Sealed) ***Mark B. Mathisen***

Dated at Lakewood, CO
February 22, 2022
Amended: February 8, 2023

Mark B. Mathisen, C.P.G.
Principal Geologist, SLR

(Signed & Sealed) ***Jeremy Scott Collyard***

Dated at Lakewood, CO
February 22, 2022
Amended: February 8, 2023

Jeremy Scott Collyard, PMP, MMSA QP
Mining & Minerals Sector Lead, SLR

(Signed & Sealed) ***Jeffrey L. Woods***

Dated at Sparks, NV
February 22, 2022
Amended: February 8, 2023

Jeffrey L. Woods, MMSA QP
Principal Consulting Metallurgist,
Woods Process Services

(Signed & Sealed) ***Phillip E. Brown***

Dated at Evergreen, CO
February 22, 2022
Amended: February 8, 2023

Phillip E. Brown, C.P.G., R.P.G.
Principal Consulting Hydrogeologist,
Consultants in Hydrogeology

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 Nichols Ranch Project, Campbell and Johnson Counties, Wyoming, 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 Nichols Ranch Project on October 28, 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, the 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, and amended this 8th day of February, 2023,

(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 Nichols Ranch Project, Campbell and Johnson Counties, Wyoming, USA" with an effective date of December 31, 2021 prepared for Energy Fuels Inc., do hereby certify that:

1. I am a 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 Nichols Ranch Project on October 28, 2021.
6. I am responsible for Sections 1.1.1.1, 1.1.2.1, 1.3.1 to 1.3.7, 2, 3, 4.1, 4.2, 4.4, 4.5, 5.1 to 5.4, 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 to 1.3.7, 2, 3, 4.1, 4.2, 4.4, 4.5, 5.1 to 5.4, 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, and amended this 8th day of February, 2023,

(Signed & Sealed) ***Mark B. Mathisen***

Mark B. Mathisen, C.P.G.

29.3 Jeremy Scott Collyard

I, Jeremy Scott Collyard, PMP, MMSA QP, as an author of this report entitled “Technical Report on the Nichols Ranch Project, Campbell and Johnson Counties, Wyoming, USA” with an effective date of December 31, 2021 prepared for Energy Fuels Inc., do hereby certify that:

1. I am the United States Mining and Minerals Sector Lead and a Director Environmental Scientist with SLR International Corporation, of Suite 100, 1658 Cole Boulevard, Lakewood, CO, USA 80401.
2. I am a graduate of the University of Montana in 2022 with a B.S. degree in Forestry.
3. I am a registered Qualified Person with the Mining and Metallurgical Society of America (MMSA) (QP No. 1544QP). I have worked as an environmental scientist in the mining sector for a total of 18 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Previous involvement in the preparation of NI 43-101 reports.
    - My past experience as an Associate – Senior Environmental Scientist, MWH Americas, Inc./Stantec responsible for environmental permitting and compliance in the mining and industrial sector. Responsible for mine closure planning, cost estimating, and implementation.
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 Nichols Ranch Project on October 28, 2021.
6. I am responsible for Sections 1.1.1.5, 1.3.12, 4.3, 4.6, 20, and 25.5, 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 1.1.1.5, 1.3.12, 4.3, 4.6, 20, and 25.5 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, and amended this 8th day of February, 2023,

(Signed & Sealed) *Jeremy Scott Collyard*

Jeremy Scott Collyard, PMP, MMSA QP

29.4 Jeffery L. Woods

I, Jeffery L. Woods, MMSA QP, as an author of this report entitled "Technical Report on the Nichols Ranch Project, Campbell and Johnson Counties, Wyoming, 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, NV 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.
5. I visited the Nichols Ranch Project on October 28, 2021, and the White Mesa Mill on November 11, 2011.
6. I am responsible for Section 1.1.1.3, 1.1.1.4, 1.1.2.3, 1.1.2.4, 1.3.9, 1.3.10, 5.5, 13, 17, 18, 25.3, 25.4, 26.3, and 26.4, 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, the Sections 1.1.1.3, 1.1.1.4, 1.1.2.3, 1.1.2.4, 1.3.9, 1.3.10, 5.5, 13, 17, 18, 25.3, 25.4, 26.3, and 26.4, in 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 of February, 2022, and amended this 8th day of February, 2023,

(Signed & Sealed) *Jeffrey L. Woods*

Jeffery 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 Nichols Ranch Project, Campbell and Johnson Counties, Wyoming, 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 Section 1.1.1.2, 1.1.2.2, 1.3.8, 16, 25.2, and 26.2, 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, the Sections 1.1.1.2, 1.1.2.2, 1.3.8, 16, 25.2, and 26.2 in 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 of February, 2022, and amended this 8th day of February, 2023,

(Signed & Sealed) *Phillip E. Brown*

Phillip E. Brown, C.P.G., R.P.G.

30.0 APPENDIX 1

Table 30-1: Base Case Annual Cash Flow Model
Energy Fuels Inc. –Nichols Ranch Project

Project Timeline For Discounting				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Commercial Production Timeline in Years				-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	12	11	10	9	8	7	6	5	4	3	2	1	-1	-2	-3
Market Prices																		
U_3O_8		$/lb	$65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Physicals																		
Nichols Ranch (No Inferred)	2,146	klb	747	-	648	99	-	-	-	-	-	-	-	-	-	-	-	-
Jane Dough (9% Inferred)	3,096	klb	2,277	-	-	399	251	545	533	352	197	-	-	-	-	-	-	-
Hank (48% Inferred)	1,092	klb	1,000	-	-	-	-	-	-	-	22	296	418	174	90	-	-	-
Total Production (17% Inferred)	6,334	klb	4,024	-	648	498	251	545	533	352	219	296	418	174	90	-	-	-
Satellite Flow Rate		gpm	3,016	-	2,640	3,281	3,333	3,437	3,420	3,425	3,124	3,390	3,189	2,360	1,572	-	-	-
Average Concentration		mg/L	33	-	56	35	17	36	36	23	16	20	30	17	13	-	-	-
Total Sales		klb	4,024	-	648	498	251	545	533	352	219	296	418	174	90	-	-	-
Cash Flow																		
Gross Revenue		**$000s**	**261,560**	-	**42,120**	**32,370**	**16,315**	**35,425**	**34,645**	**22,880**	**14,235**	**19,240**	**27,170**	**11,310**	**5,850**	-	-	-
Wellfield Costs	$2.88	$000s	(11,575)	(1,075)	(1,076)	(1,082)	(1,094)	(1,092)	(1,093)	(1,058)	(1,089)	(1,066)	(970)	(880)	-	-	-	-
Processing Costs	$9.81	$000s	(39,494)	-	(4,115)	(4,045)	(3,455)	(4,237)	(4,199)	(3,750)	(3,276)	(3,594)	(3,802)	(2,802)	(2,219)	-	-	-
Deep Well Disposal Costs	$0.16	$000s	(656)	-	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	-	-	-
G&A Costs	$6.43	$000s	(25,865)	(1,500)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	-	-	-
Site Operating Costs	**$19.28**	**$000s**	**(77,590)**	**(2,575)**	**(7,466)**	**(7,402)**	**(6,824)**	**(7,603)**	**(7,566)**	**(7,082)**	**(6,640)**	**(6,934)**	**(7,047)**	**(5,956)**	**(4,494)**	-	-	-
Product Transport to Market Cost	$0.38	$000s	(1,533)	-	(247)	(190)	(96)	(208)	(203)	(134)	(84)	(113)	(159)	(65)	(33)	-	-	-
Ad Valorem Tax	$2.63	$000s	(10,583)	-	(1,704)	(1,310)	(660)	(1,433)	(1,402)	(926)	(576)	(778)	(1,099)	(458)	(237)	-	-	-
WY Severance Tax	$1.59	$000s	(6,408)	-	(1,032)	(793)	(400)	(868)	(849)	(561)	(349)	(471)	(666)	(277)	(143)	-	-	-
Royalties	$1.17	$000s	(4,717)	-	(1,011)	(777)	(392)	(850)	(831)	(549)	(307)	-	-	-	-	-	-	-
Total Cash Costs	**$25.06**	**$000s**	**(100,832)**	**(2,575)**	**(11,460)**	**(10,472)**	**(8,371)**	**(10,963)**	**(10,851)**	**(9,252)**	**(7,956)**	**(8,296)**	**(8,971)**	**(6,756)**	**(4,907)**	-	-	-
Operating Margin		**$000s**	**160,728**	**(2,575)**	**30,660**	**21,898**	**7,944**	**24,462**	**23,794**	**13,628**	**6,279**	**10,944**	**18,199**	**4,554**	**943**	-	-	-
EBITDA		**$000s**	**160,728**	**(2,575)**	**30,660**	**21,898**	**7,944**	**24,462**	**23,794**	**13,628**	**6,279**	**10,944**	**18,199**	**4,554**	**943**	-	-	-
Depreciation/Amortization Allowance		$000s	(81,442)	-	(1,591)	(3,044)	(2,326)	(7,390)	(9,731)	(8,674)	(6,616)	(12,733)	(17,981)	(7,485)	(3,872)	-	-	-
Depletion Allowances		$000s	(32,586)	-	(8,442)	(6,488)	(2,308)	(7,100)	(6,448)	(1,800)	-	-	-	-	-	-	-	
Earnings Before Taxes		**$000s**	**46,701**	**(2,575)**	**20,627**	**12,367**	**3,309**	**9,973**	**7,615**	**3,155**	**(337)**	**(1,790)**	**217**	**(2,931)**	**(2,929)**	-	-	-
Federal Income Taxes		$000s	(17,499)		(5,572)	(3,925)	(1,025)	(3,401)	(2,764)	(812)	-	-	-	-	-	-	-	-
Net Income		**$000s**	**29,201**	**(2,575)**	**15,055**	**8,442**	**2,284**	**6,572**	**4,851**	**2,343**	**(337)**	**(1,790)**	**217**	**(2,931)**	**(2,929)**	-	-	-
Non-Cash Add Back - Depreciation/Amortization		$000s	81,442	-	1,591	3,044	2,326	7,390	9,731	8,674	6,616	12,733	17,981	7,485	3,872	-	-	-
Non-Cash Add Back - Depletion		$000s	32,586	-	8,442	6,488	2,308	7,100	6,448	1,800	-	-	-	-	-	-	-	-
Working Capital		$000s	(0)	-	(4,718)	651	1,767	(2,421)	(104)	1,175	863	(859)	(964)	1,847	702	2,469	(21)	(389)
Operating Cash Flow		**$000s**	**143,229**	**(2,575)**	**20,371**	**18,624**	**8,686**	**18,640**	**20,926**	**13,991**	**7,142**	**10,085**	**17,235**	**6,401**	**1,645**	**2,469**	**(21)**	**(389)**
Sustaining Capital		$000s	(81,442)	-	(9,879)	(14,716)	(6,710)	(11,274)	(9,781)	(9,889)	(6,667)	(12,525)	-	-	-	-	-	-
Restoration/Decommissioning		$000s	(20,664)	-	(229)	(430)	(1,001)	(1,144)	(1,167)	(1,355)	(1,346)	(1,417)	(1,068)	(922)	(860)	(4,992)	(4,733)	-
Total Capital		**$000s**	**(102,105)**	-	**(10,108)**	**(15,146)**	**(7,712)**	**(12,419)**	**(10,948)**	**(11,244)**	**(8,013)**	**(13,942)**	**(1,068)**	**(922)**	**(860)**	**(4,992)**	**(4,733)**	-
CF Adj. - JV Allocations		**$000s**	-															

Project Timeline For Discounting				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Commercial Production Timeline in Years				-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	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
a) Pre-Tax																		
Free Cash Flow		$000s	**58,623**	(2,575)	15,834	7,404	1,999	9,623	12,742	3,559	(871)	(3,857)	16,167	5,479	786	(2,523)	(4,755)	(389)
Cumulative Free Cash Flow		$000s		(2,575)	13,259	20,663	22,662	32,285	45,027	48,586	47,715	43,858	60,025	65,504	66,290	63,767	59,012	58,623
NPV @ 5%		$000s	**46,091**	(2,453)	14,362	6,396	1,645	7,540	9,508	2,530	(590)	(2,486)	9,925	3,204	437	(1,338)	(2,401)	(187)
Cumulative NPV @ 5%		$000s		(2,453)	11,910	18,305	19,950	27,490	36,998	39,528	38,938	36,451	46,377	49,580	50,018	48,680	46,278	46,091
b) After-Tax																		
Free Cash Flow		$000s	**41,124**	(2,575)	10,263	3,478	974	6,222	9,978	2,747	(871)	(3,857)	16,167	5,479	786	(2,523)	(4,755)	(389)
Cumulative Free Cash Flow		$000s		(2,575)	7,687	11,166	12,140	18,362	28,340	31,087	30,216	26,358	42,525	48,005	48,790	46,267	41,513	41,124
NPV @ 5%		$000s	**31,499**	(2,453)	9,309	3,005	801	4,875	7,446	1,953	(590)	(2,486)	9,925	3,204	437	(1,338)	(2,401)	(187)
Cumulative NPV @ 5%		$000s		(2,453)	6,856	9,861	10,662	15,537	22,983	24,935	24,345	21,859	31,784	34,988	35,425	34,087	31,686	31,499
Operating Metrics																		
Mine Life		Years	**11**															
Wellfield Cost		$ /lb Prod.	$2.88	$0.00	1.66	2.17	4.36	2.00	2.05	3.01	4.97	3.60	2.32	5.06	-	-	-	-
Processing Cost		$ /lb Prod.	$9.81	$0.00	6.35	8.12	13.77	7.77	7.88	10.65	14.96	12.14	9.10	16.10	24.66	-	-	-
Deep Well Disposal		$ /lb Prod.	$0.16	$0.00	0.09	0.12	0.24	0.11	0.11	0.17	0.27	0.20	0.14	0.34	0.66	-	-	-
G&A		$ /lb Prod.	$6.43	$0.00	3.42	4.45	8.82	4.06	4.16	6.29	10.11	7.48	5.30	12.73	24.61	-	-	-
Site Cash Operating Costs		**$ /lb Prod.**	**$19.28**	**$0.00**	**11.52**	**14.86**	**27.19**	**13.95**	**14.20**	**20.12**	**30.32**	**23.42**	**16.86**	**34.23**	**49.93**	-	-	-
Product Transport to Market		$ /lb Prod.	$0.38	$0.00	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.37	-	-	-
Ad Valorum Tax		$ /lb Prod.	$2.63	$0.00	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	-	-	-
Severance Tax		$ /lb Prod.	$1.59	$0.00	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	-	-	-
Royalties		$ /lb Prod.	$1.17	$0.00	1.56	1.56	1.56	1.56	1.56	1.56	1.40	-	-	-	-	-	-	-
Total Cost		$ /lb Prod.	**$25.06**	**$0.00**	**17.69**	**21.03**	**33.35**	**20.12**	**20.36**	**26.28**	**36.33**	**28.03**	**21.46**	**38.83**	**54.53**	-	-	-
Sales Metrics																		
U_3O_8 Sales		klb	**4,024**	-	648	498	251	545	533	352	219	296	418	174	90	-	-	-
Total Cash Cost		$ / lb Sold	**25.06**	-	17.69	21.03	33.35	20.12	20.36	26.28	36.33	28.03	21.46	38.83	54.53	-	-	-
Total AISC (Before Restoration/Decommissioning)		$ / lb Sold	**45.30**	-	32.93	50.58	60.09	40.80	38.71	54.38	66.77	70.34	21.46	38.83	54.53	-	-	-
Total AISC (After Restoration/Decommissioning)		$ / lb Sold	**50.43**	-	33.28	51.44	64.08	42.90	40.90	58.23	72.92	75.13	24.02	44.13	64.08	-	-	-
Avg. ROM Annual U_3O_8 Sales		klb/yr	**393**															

Table 30-2: Alternate Case Annual Cash Flow Model
Energy Fuels Inc. –Nichols Ranch Project

Project Timeline For Discounting				1	2	3	4	5	6	7	8	9	10	11	12	13
Commercial Production Timeline in Years				-1	1	2	3	4	5	6	7	8	9	10	11	12
Time Until Closure In Years		US$ & Imperial Units	LOM Avg / Total	10	9	8	7	6	5	4	3	2	1	-1	-2	-3
Market Prices																
U_3O_8		$/lb	$65	65	65	65	65	65	65	65	65	65	65	65	65	65
Physicals																
Nichols Ranch (No Inferred)	2,146	klb	747	-	648	99	-	-	-	-	-	-	-	-	-	-
Jane Dough (No Inferred)	3,096	klb	2,072	-	-	399	251	545	533	344	-	-	-	-	-	-
Hank (No Inferred)	1,092	klb	543	-	-	-	-	-	-	-	22	296	225	-	-	-
Total Production (No Inferred)	6,334	klb	3,362	-	648	498	251	545	533	344	22	296	225	-	-	-
Satellite Flow Rate		gpm	3,249	-	2,640	3,281	3,333	3,437	3,420	3,425	3,124	3,390	3,189	-	-	-
Average Concentration		mg/L	35	-	56	35	17	36	36	23	16	20	30	-	-	-
Total Sales		klb	3,362	-	648	498	251	545	533	344	22	296	225	-	-	-
Cash Flow																
Gross Revenue		**$000s**	**218,530**	**-**	**42,120**	**32,370**	**16,315**	**35,425**	**34,645**	**22,360**	**1,430**	**19,240**	**14,625**	**-**	**-**	**-**
Wellfield Costs	*$3.21*	$000s	(10,801)	(1,075)	(1,075)	(1,076)	(1,082)	(1,094)	(1,092)	(1,093)	(1,058)	(1,089)	(1,066)	-	-	-
Processing Costs	*$9.96*	$000s	(33,481)	-	(4,115)	(4,045)	(3,455)	(4,237)	(4,199)	(3,730)	(2,785)	(3,594)	(3,322)	-	-	-
Deep Well Disposal Costs	*$0.16*	$000s	(536)	-	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	-	-	-
G&A Costs	*$6.38*	$000s	(21,435)	(1,500)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	(2,215)	-	-	-
Site Operating Costs	***$19.71***	**$000s**	**(66,253)**	**(2,575)**	**(7,465)**	**(7,396)**	**(6,812)**	**(7,605)**	**(7,566)**	**(7,097)**	**(6,118)**	**(6,957)**	**(6,662)**	**-**	**-**	**-**
Product Transport to Market Cost	*$0.38*	$000s	(1,281)	-	(247)	(190)	(96)	(208)	(203)	(131)	(8)	(113)	(85)	-	-	-
Ad Valorem Tax	*$2.63*	$000s	(8,842)	-	(1,704)	(1,310)	(660)	(1,433)	(1,402)	(905)	(58)	(778)	(592)	-	-	-
WY Severance Tax	*$1.59*	$000s	(5,354)	-	(1,032)	(793)	(400)	(868)	(849)	(548)	(35)	(471)	(358)	-	-	-
Royalties	*$1.31*	$000s	(4,398)	-	(1,011)	(777)	(392)	(850)	(831)	(537)	-	-	-	-	-	-
Total Cash Costs	***$25.62***	**$000s**	**(86,128)**	**(2,575)**	**(11,459)**	**(10,466)**	**(8,359)**	**(10,965)**	**(10,851)**	**(9,217)**	**(6,219)**	**(8,320)**	**(7,698)**	**-**	**-**	**-**
Operating Margin		**$000s**	**132,402**	**(2,575)**	**30,661**	**21,904**	**7,956**	**24,460**	**23,794**	**13,143**	**(4,789)**	**10,920**	**6,927**	**-**	**-**	**-**
EBITDA		**$000s**	**132,402**	**(2,575)**	**30,661**	**21,904**	**7,956**	**24,460**	**23,794**	**13,143**	**(4,789)**	**10,920**	**6,927**	**-**	**-**	**-**
Depreciation/Amortization Allowance		$000s	(73,116)	-	(1,710)	(3,271)	(2,619)	(8,495)	(11,603)	(10,932)	(942)	(19,058)	(14,487)	-	-	-
Depletion Allowances		$000s	(30,318)	-	(8,442)	(6,488)	(2,219)	(7,100)	(5,572)	(497)	-	-	-	-	-	-
Earnings Before Taxes		**$000s**	**28,968**	**(2,575)**	**20,509**	**12,146**	**3,118**	**8,866**	**6,619**	**1,714**	**(5,731)**	**(8,138)**	**(7,560)**	**-**	**-**	**-**
Federal Income Taxes		$000s	(16,282)		(5,552)	(3,888)	(988)	(3,193)	(2,396)	(265)	-	-	-	-	-	-
Net Income		**$000s**	**12,687**	**(2,575)**	**14,957**	**8,258**	**2,130**	**5,673**	**4,223**	**1,449**	**(5,731)**	**(8,138)**	**(7,560)**	**-**	**-**	**-**
Non-Cash Add Back - Depreciation/Amortization		$000s	73,116	-	1,710	3,271	2,619	8,495	11,603	10,932	942	19,058	14,487	-	-	-
Non-Cash Add Back - Depletion		$000s	30,318	-	8,442	6,488	2,219	7,100	5,572	497	-	-	-	-	-	-
Working Capital		$000s	0	-	(4,720)	699	1,776	(2,399)	(84)	1,255	2,293	(2,311)	505	3,343	(15)	(344)
Operating Cash Flow		**$000s**	**116,120**	**(2,575)**	**20,389**	**18,716**	**8,744**	**18,869**	**21,314**	**14,133**	**(2,496)**	**8,609**	**7,432**	**3,343**	**(15)**	**(344)**
Sustaining Capital		$000s	(73,116)	-	(8,869)	(13,211)	(6,024)	(10,122)	(8,781)	(8,878)	(5,985)	(11,245)	-	-	-	-
Restoration/Decommissioning		$000s	(16,646)	-	(205)	(386)	(899)	(1,027)	(1,048)	(1,216)	(1,209)	(1,266)	(830)	(4,368)	(4,191)	-
Total Capital		**$000s**	**(89,762)**	**-**	**(9,075)**	**(13,597)**	**(6,923)**	**(11,149)**	**(9,829)**	**(10,094)**	**(7,194)**	**(12,511)**	**(830)**	**(4,368)**	**(4,191)**	**-**
CF Adj. - JV Allocations		**$000s**	-													

Project Timeline For Discounting				1	2	3	4	5	6	7	8	9	10	11	12	13
Commercial Production Timeline in Years				-1	1	2	3	4	5	6	7	8	9	10	11	12
Time Until Closure In Years		US$ & Imperial Units	LOM Avg / Total	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
a) Pre-Tax																
Free Cash Flow		$000s	**42,640**	(2,575)	16,867	9,006	2,808	10,913	13,882	4,304	(9,690)	(3,902)	6,602	(1,025)	(4,205)	(344)
Cumulative Free Cash Flow		$000s		(2,575)	14,291	23,298	26,106	37,019	50,901	55,205	45,515	41,613	48,215	47,190	42,985	42,640
NPV @ 5%		$000s	**36,760**	(2,453)	15,299	7,780	2,311	8,550	10,359	3,059	(6,559)	(2,515)	4,053	(599)	(2,342)	(183)
Cumulative NPV @ 5%		$000s		(2,453)	12,846	20,626	22,936	31,487	41,846	44,904	38,346	35,831	39,884	39,284	36,943	36,760
b) After-Tax																
Free Cash Flow		$000s	**26,358**	(2,575)	11,315	5,118	1,821	7,720	11,486	4,039	(9,690)	(3,902)	6,602	(1,025)	(4,205)	(344)
Cumulative Free Cash Flow		$000s		(2,575)	8,739	13,858	15,679	23,398	34,884	38,923	29,233	25,331	31,933	30,908	26,703	26,358
NPV @ 5%		$000s	**23,075**	(2,453)	10,263	4,421	1,498	6,049	8,571	2,870	(6,559)	(2,515)	4,053	(599)	(2,342)	(183)
Cumulative NPV @ 5%		$000s		(2,453)	7,810	12,232	13,729	19,778	28,349	31,219	24,661	22,145	26,199	25,599	23,258	23,075
Operating Metrics																
Mine Life		Years	**9**													
Wellfield Cost		$ /lb Prod.	$3.21	$0.00	1.66	2.16	4.31	2.01	2.05	3.18	48.10	3.68	4.74	-	-	-
Processing Cost		$ /lb Prod.	$9.96	$0.00	6.35	8.12	13.77	7.77	7.88	10.84	126.59	12.14	14.76	-	-	-
Deep Well Disposal		$ /lb Prod.	$0.16	$0.00	0.09	0.12	0.24	0.11	0.11	0.17	2.71	0.20	0.26	-	-	-
G&A		$ /lb Prod.	$6.38	$0.00	3.42	4.45	8.82	4.06	4.16	6.44	100.68	7.48	9.84	-	-	-
Site Cash Operating Costs		**$ /lb Prod.**	**$19.71**	**$0.00**	**11.52**	**14.85**	**27.14**	**13.95**	**14.19**	**20.63**	**278.08**	**23.50**	**29.61**	-	-	-
Product Transport to Market		$ /lb Prod.	$0.38	$0.00	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	-	-	-
Ad Valorum Tax		$ /lb Prod.	$2.63	$0.00	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	-	-	-
Severance Tax		$ /lb Prod.	$1.59	$0.00	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	-	-	-
Royalties		$ /lb Prod.	$1.31	$0.00	1.56	1.56	1.56	1.56	1.56	1.56	-	-	-	-	-	-
Total Cost		$ /lb Prod.	**$25.62**	**$0.00**	**17.68**	**21.02**	**33.30**	**20.12**	**20.36**	**26.79**	**282.68**	**28.11**	**34.21**	-	-	-
Sales Metrics																
U_3O_8 Sales		klb	**3,362**	-	648	498	251	545	533	344	22	296	225	-	-	-
Total Cash Cost		$ / lb Sold	**25.62**	-	17.68	21.02	33.30	20.12	20.36	26.79	282.68	28.11	34.21	-	-	-
Total AISC (Before Restoration/Decommissioning)		$ / lb Sold	**47.37**	-	31.37	47.54	57.31	38.69	36.83	52.60	554.74	66.10	34.21	-	-	-
Total AISC (After Restoration/Decommissioning)		$ / lb Sold	**52.32**	-	31.69	48.32	60.89	40.58	38.80	56.14	609.68	70.37	37.90	-	-	-
Avg. ROM Annual U_3O_8 Sales		klb/yr	**418**													

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