ENERGY FUELS INC.

TECHNICAL REPORT ON THE EZ1 AND EZ2 BRECCIA PIPES, ARIZONA STRIP DISTRICT, U.S.A.

NI 43-101 Report

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June 27, 2012

ROSCOE POSTLE ASSOCIATES INC.
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1 SUMMARY

EXECUTIVE SUMMARY


Energy Fuels is a Toronto, Ontario based uranium and vanadium exploration and mine development company with projects located in the states of Colorado, Utah, Arizona, Wyoming and New Mexico. Energy Fuels' shares are listed on the TSX under the trading symbol 'EFR'.

This report focuses on two deposits (EZ1 and EZ2). The EZ1 and EZ2 deposits have been located and drilled from the surface, but no development work has begun other than preparatory environmental and cultural surveys to support on-going permitting activities. Neither one of the deposits is permitted at this time.

RPA has audited Energy Fuels' Mineral Resource estimates for the EZ1 and EZ2 deposits. These estimates were prepared using historical data. As part of the audit, the raw data and wireframe creation methods were reviewed. In addition, the suitability of the interpolation techniques and search strategies were assessed. Finally, independent resource estimates were created by RPA to compare with the Energy Fuel estimates.

The Mineral Resources are summarized in Table 1-1.
TABLE 1-1  INFERRED MINERAL RESOURCES – DECEMBER 31, 2011

Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Deposit</th>
<th>Tons</th>
<th>Grade eU₃O₈ (%)</th>
<th>Contained U₃O₈ (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ1</td>
<td>110,500</td>
<td>0.51</td>
<td>1,127,000</td>
</tr>
<tr>
<td>EZ2</td>
<td>113,700</td>
<td>0.43</td>
<td>978,000</td>
</tr>
</tbody>
</table>

Notes:
1. Mineral resources were classified in accordance with CIM Definition Standards.
2. Cut-off grade is 0.2% eU₃O₈.
3. Grades were converted from gamma-log data and are therefore equivalent U₃O₈ (eU₃O₈).
4. Grade shell wireframes at 0.2% eU₃O₈ were used to constrain the grade interpolation.
5. All material within the wireframes was included in the estimate.
6. Wireframes were constructed with a minimum drill hole sample length of 6 ft.
7. High grades for EZ1 were cut to 10%.
8. High grades for EZ2 were cut to 5%.

CONCLUSIONS
Energy Fuels’ EZ1 and EZ2 breccia pipes have been drill-tested by 34 and 47 holes, respectively. Uranium values within the holes are recorded using a gamma-logging tool and the interpreted geological solid boundaries are defined using a 0.2% eU₃O₈ cut-off grade. Mineralization is encountered about 1,150 ft (350 m) to 1,500 ft (450 m) below surface. At these depths, the position of the drill holes is uncertain without using better downhole deviation surveys. This affects the position of the samples (values) and the consequent interpretation of the solids. These issues, amongst others, reduce the confidence level for grade continuity so that all of the resources at EZ1 and EZ2 are classified as Inferred. Additional drilling would upgrade parts of the resource to the Indicated category.

ADEQUACY OF PROCEDURES
RPA has reviewed the methods and procedures to collect and compile geological, geotechnical, and assaying information for the EZ1 and EZ2 pipes and found them reasonable and meeting generally accepted industry standards for an exploration property.

ADEQUACY OF DATA
RPA believes that the various companies involved with data collection at the EZ1 and EZ2 pipes have conducted exploration sampling and analysis programs using standard practices, providing generally reasonable results. RPA believes that the resource database can effectively be used in the estimation of Mineral Resources.
COMPLIANCE WITH CANADIAN NI 43-101 STANDARDS

In RPA’s opinion the current drill hole database is sufficient for generating a resource model for use in resource estimation.

At a 0.2% eU$_3$O$_8$ cut-off grade, the Inferred Resource is 110,500 tons at an eU$_3$O$_8$ grade of 0.51% for EZ1 and 113,700 tons at an eU$_3$O$_8$ grade of 0.43% for EZ2.

RPA is of the opinion that the resource estimates have been created using acceptable methodologies. RPA is also of the opinion that the classification of Inferred Resources, as stated in Table 1-1, meets the definitions as required by NI 43-101.

RECOMMENDATIONS

RPA recommends that Energy Fuels:

- Initiate a Preliminary Economic Assessment (PEA) to establish baseline economics and a mine design. No additional drilling or metallurgical testing studies are required for the PEA. The study should include cost estimates for surface and underground facilities, shaft sinking and drifting, definition drilling, and operating costs.

- Continue the permitting process. The primary permits required to develop EZ1 and EZ2 deposits include: Bureau of Land Management Plan of Operations, Arizona Department of Environmental Quality Aquifer Protection Permit, and Air Approval Order. These major permits define project operations and closure requirements. Minor permits include: Septic System, Stormwater Permit, and Utility Corridor Right of Way.

- Collect hole deviation data on any open holes to verify historic downhole orientation data.

- Test the use of restrictive kriging to minimize grade smearing during the interpolation.

BUDGET

RPA recommends the following budget to address the points listed above:
TABLE 1-2  RECOMMENDED PROGRAM AND BUDGET
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Item</th>
<th>US$</th>
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</thead>
<tbody>
<tr>
<td>Scoping Studies (PEA, site investigations, etc.)</td>
<td>350,000</td>
</tr>
<tr>
<td>Permitting Costs (air, water, road, right-of-way etc.)</td>
<td>435,000</td>
</tr>
<tr>
<td>Personnel Costs (Mining Engineer, Geologist, CAD Technician)</td>
<td>300,000</td>
</tr>
<tr>
<td>Subtotal</td>
<td>1,085,000</td>
</tr>
<tr>
<td>Contingency</td>
<td>100,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,185,000</strong></td>
</tr>
</tbody>
</table>

Depending on the conclusions and recommendations of the PEA and subsequent studies, Energy Fuels plans underground drilling after shaft sinking and initial access to the mineralization. In addition to the definition drilling for detailed mine planning, RPA recommends that Energy Fuels:

- Improve the calibration factors between the gamma-logging tool values and the chemical assay values.
- Collect core samples of mineralization for chemical analyses and metallurgical testing.
- Try to quantify uranium remobilization and mineral zonation.
- Assess the significance of the smaller satellite zones and upgrade through drilling or eliminate them from the resource estimates.

TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The EZ1 and EZ2 breccia pipes outcrop within one claim block composed of twelve contiguous claims totalling 248.04 acres (100.32 ha). The claim block, which is located in Mohave County, northern Arizona, is centred at approximately latitude 36°35’16"N and longitude 112°53’12"W.

LAND TENURE

The EZ1 and EZ2 breccia pipe claims are renewed annually and do not expire unless allowed to lapse.
SITE INFRASTRUCTURE
There is no permanent infrastructure on the subject claims.

HISTORY
Exploration in the area started with the identification of uranium mineralization by a US Geological Survey geologist in 1951. This exploration resulted in the discovery of the Orphan mine which produced 4.26 million pounds of U₃O₈ during its life. Extensive exploration in the 1950s did not yield any other economic discoveries.

In the late 1970s, Energy Fuels Nuclear Inc. (EFNI) formed a uranium exploration venture with various Swiss utility companies and acquired significant uranium resources in southeast Utah. At the same time, uranium exploration resumed in the Arizona Strip and Western Nuclear Inc. (Western Nuclear) discovered high-grade mineralization at the Hack Canyon prospect located 25 mi. (40 km) north of the Grand Canyon. In 1980, Energy Fuels acquired this property from Western Nuclear (T. Wetz, personal communication). During this time, EFNI also identified and investigated over 4,000 circular features in northern Arizona and explored 140 of them with deep drilling. In all, 682 deep holes were drilled between 1980 and 1995 for a total of 870,707 ft (265,392 m). EFNI developed seven of the pipes (Hack 1, 2 and 3, Hermit, Pigeon, Kanab North, and Pinenut) and produced approximately 19.1 million pounds of U₃O₈ at an average grade of about 0.60% U₃O₈.

After acquiring the Hack Canyon property in 1980, EFNI produced 9.5 million pounds of U₃O₈ at an average grade of 0.642% U₃O₈ from three pipes known as Hack 1, Hack 2 and Hack 3. The Kanab North deposit was discovered in 1981 and went into production in 1988. It closed in 1991 after producing approximately 2.8 million pounds of U₃O₈ at an average grade of just over 0.5% U₃O₈. Between 1985 and 1990, Energy Fuels also produced 5.7 million pounds of U₃O₈ from the Pigeon Mine. Similarly, just over 0.5 million pounds of U₃O₈ were produced from the Hermit Mine between 1989 and 1990. Finally, in 1988, prior to placing the Pinenut Mine on standby, EFNI produced 0.5 million pounds of U₃O₈ at an average grade of 1.02% U₃O₈.

In the 1980s, Pathfinder Mines Corporation (Pathfinder) explored the EZ1 and EZ2 deposits. Pathfinder drill-tested the EZ1 pipe with 34 rotary holes for a total of 63,100 ft (19,235 m) and the EZ2 pipe with 47 rotary holes for a total of 76,018 ft (23,169 m).
EFNI entered into a joint-venture with Pathfinder and prepared resource estimates for the two pipes in January and February of 1988.

In 1997, International Uranium Corporation (IUC) acquired most of the assets of the bankrupt EFNI. At the time of the IUC acquisition, the EFNI – Pathfinder joint venture was terminated and control of the EZ1 and EZ2 projects reverted back to Pathfinder. At that time, Pathfinder was owned by Cogema Mining (now known as AREVA).

In 2006, IUC merged with Denison Mines Inc. to form Denison Mines Corp. Denison entered into a separate purchase agreement with Pathfinder in February 2007 to acquire 100% interest in all of the known pipes and related property holdings of Pathfinder (AREVA). Denison acquired all data for the Pathfinder projects through this acquisition, including EZ1 and EZ2. A 1% royalty interest was retained by Pathfinder.

In June 2012, Energy Fuels Inc. acquired all of Denison’s mining assets and operations in the United States.

GEOLOGY

Arizona contains portions of two distinct physiographic provinces, one known as the Basin and Range province (in the southern and western parts of the state) and the other known as the Colorado Plateau province (in most of northern and central Arizona). The Arizona Strip lies within the Colorado Plateau physiographic province.

Outcrops within the Arizona Strip region are predominantly sedimentary and volcanic rocks of upper Paleozoic to Quaternary age, although the breccia pipes area is largely underlain by Mississippian to Triassic age sedimentary rocks. Precambrian rocks outcrop in the lower levels of the Grand Canyon to the south of the study area.

Pliocene volcanic activity is marked by distinct flow-caps to the numerous buttes that rise above the flatter landscape of the region. In addition, historic lava flows cover large areas of the southern part of the district.

Faulting has exerted significant control on the geologic development and geomorphic history of the region. Major structural features, such as the Grand Wash, Hurricane, and Toroweap fault systems, all trend generally north-south with up-thrown sides to the east.
These faults are topographically prominent and display impressive scarps although there are other less prominent fault systems too.

All surface drill holes at the EZ1 pipe were collared in the Triassic Moenkopi Formation and they penetrated an average of 165 ft (50 m) of this formation. Beneath the Moenkopi Formation is the Permian Kaibab Formation which has an average thickness of 485 ft (148 m). The underlying Permian Toroweap Formation averages 260 ft (79 m) in thickness. This is followed by the thin Coconino Sandstone which has an average thickness of 40 ft (12 m). Mineralization in the breccia pipes typically starts in the Coconino Sandstone and continues into the Permian Hermit Formation. Seven drill holes pierced the underlying Permian Supai Formation, but no holes reached the Mississippian Redwall limestone located below the Supai Formation.

The EZ2 breccia pipe is located approximately 4,500 ft (1,372 m) west-northwest of the EZ1 pipe. The stratigraphic units are the same as at the EZ1 pipe and the thicknesses are also similar. Eleven drill holes penetrated the Hermit Formation unit and stopped before the Mississippian Redwall limestone.

**MINERAL RESOURCES**

Mineral Resources as of December 31, 2011 are summarized above in Table 1-1. RPA reviewed the methods, procedures and results of Energy Fuels' resource estimate for the two breccia pipes. As part of its due diligence, RPA also created its own resource model to confirm Energy Fuels' estimate. In terms of total pounds of U₃O₈, the RPA estimates for each breccia pipe are within 5% (EZ1) and 3% (EZ2) of the Energy Fuels values. RPA believes that the resource estimate has been prepared using industry best practices and is therefore acceptable.
2 INTRODUCTION


Energy Fuels is a Toronto, Ontario based uranium and vanadium exploration and mine development company with projects located in the states of Colorado, Utah, Arizona, Wyoming and New Mexico. Energy Fuels’ shares are listed on the TSX under the trading symbol ‘EFR’.

In June 2012 Energy Fuels acquired all of Denison Mine Corp.’s (Denison) mining assets and operations in the United States. For this report, the major assets under consideration are two breccia pipe uranium deposits (EZ1 and EZ2) that are at the permitting stage in anticipation of future production.

SOURCES OF INFORMATION

Significant assistance in the preparation of the report was provided by the staff of the previous owner of the property, Denison. David A. Ryckman, Senior Mine Geologist, provided interpretations of the wireframes for both pipes and created the Denison block models that were used as the basis for the Mineral Resource estimates. In addition, Mr. Ryckman provided drafts of the History, Geology and Mineralization sections of this report and assisted in the preparation of most of the figures.

A site visit was carried out by Mr. David Ross, P.Geo, Principal Geologist with RPA, on July 1, 2008. RPA understands that there has been no additional work on the property since this time. Mr. Ross reviewed the local geology, examined maps and sections and independently confirmed several drill hole collar locations.
During the site visit, discussions were held with:

- David A. Ryckman, Senior Mine Geologist, Denison Mines (USA) Corp.
- David Lipkowitz, Mine Production Engineer, Denison Mines (USA) Corp.
- John Stubblefield, Area Manager, Denison Mines (USA) Corp.

This report was prepared by Christopher Moreton, P. Geo., Senior Consulting Geologist, and David Ross, P. Geo., Principal Geologist. Both are employees of RPA and both are Independent Qualified Persons (QPs). The documentation reviewed, and other sources of information, are listed at the end of this report in Section 27 (References).
**LIST OF ABBREVIATIONS**

Units of measurement used in this report conform to the Imperial system. All currency in this report is US dollars (US$) unless otherwise noted.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Symbol</th>
<th>Description</th>
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</thead>
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<td>micron</td>
<td>km²</td>
<td>square kilometre</td>
</tr>
<tr>
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<td>degree Celsius</td>
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</tr>
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<tr>
<td>cal</td>
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<td>d</td>
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<td>min</td>
<td>minute</td>
</tr>
<tr>
<td>dia.</td>
<td>diameter</td>
<td>MASL</td>
<td>metres above sea level</td>
</tr>
<tr>
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<tr>
<td>G</td>
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<td>Gal</td>
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<td>tpa</td>
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<tr>
<td>in</td>
<td>inch</td>
<td>tpd</td>
<td>metric tonne per day</td>
</tr>
<tr>
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<td>US$</td>
<td>United States dollar</td>
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<td>USgpm</td>
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<td>wmt</td>
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<td>yd³</td>
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<tr>
<td>yr</td>
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</tr>
</tbody>
</table>
3 RELIANCE ON OTHER EXPERTS

This report has been prepared by Roscoe Postle Associates Inc. (RPA) for Energy Fuels Inc. (Energy Fuels). The information, conclusions, opinions, and estimates contained herein are based on:

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

For the purpose of this report, RPA has relied on ownership information provided by Energy Fuels. RPA has not researched property title or mineral rights for the EZ1 and EZ2 breccia pipes and expresses no opinion as to the legal ownership status of the property. RPA, has reviewed the status of several claims on the web site of the National Integrated Land System of the Bureau of Land Management (https://www.geocommunicator.gov/GeoComm). For these claims RPA has verified the information noted in Section 4 below.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party’s sole risk.
4 PROPERTY DESCRIPTION AND LOCATION

The EZ1 and EZ2 Breccia Pipes Complex is located in the Arizona Strip District (Figures 4-1 and 4-2), a region bounded by the Grand Canyon to the south and the Utah state border to the north.

The project claims are located within portions of the 7.5 minute USGS quadrangle map Wild Band Pockets, 1988, Mohave County, Arizona, 30 mi. (49 km) southwest of Fredonia, Arizona (Table 4-1). The property is irregularly shaped and extends for 1.3 miles (2.1 km) in an east-west direction and 0.41 miles (0.66 km) in a north-south direction. Its approximate centre is latitude 36°35’16"N and longitude 112°53’12"W.

### TABLE 4-1 TENURE DATA(1)

<table>
<thead>
<tr>
<th>Claim Name</th>
<th>Quarter</th>
<th>Location</th>
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<th>Date</th>
<th>Area (ha)</th>
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<td>1981-11-20 1982-02-11 8.36</td>
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<td>6W</td>
<td>AMC 155824</td>
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<tr>
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<td>10 37N</td>
<td>6W</td>
<td>AMC 155826</td>
<td>1981-11-21 1982-02-11 8.36</td>
</tr>
</tbody>
</table>

1. Renewed yearly
2. BLM: Bureau of Land Management

Annual fees must be paid to maintain unpatented mining claims, but work expenditures are not required. Holders of unpatented mining claims are generally granted surface access to conduct mineral exploration and mining activities.
ENVIRONMENTAL PERMITTING REQUIREMENTS

ENVIRONMENT
A uranium-bearing breccia pipe in this area typically requires a surface disturbance of less than 20 acres (8 ha). Generally, there is only a minimal impact on the local groundwater because most of the mines are dry. Nonetheless, permitting, development and mine operations in the Grand Canyon area are liable to be contentious.

The extraction of uranium from the Bureau of Land Management (BLM) unpatented mining claims needs to comply with all applicable BLM regulations (Federal Mining Law at 43 CFR sub-part 3809, Surface Management Program) and Arizona Department of Environmental Quality (ADEQ) rules and regulations. Denison began the application process to develop this project in accordance with the BLM multiple-use mandate and the goals and objectives of the President's National Energy Plan.

The proposed disturbance for the EZ pipes will be between 20 acres and 40 acres. A series of permits and approvals will be required from the BLM, ADEQ, Mohave County and other agencies. All permit applications are in process.
Figure 4-1

**EZ1 and EZ2 Breccia Pipes**

**Location of Arizona Strip Breccia Pipes**

EZ2 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.

EZ1 and EZ2 Breccia Pipes
and Proposed Infrastructure

PERMITTING

Baseline data collection has been completed for flora and fauna of the area. Denison initiated permitting activities for the EZ projects and a number of formal permit applications are in process. Energy Fuels plans to continue this process. These include:

- A Plan of Operations (Plan) has been submitted (January 19th, 2009) to the BLM. The Plan describes all aspects of the proposed mine projects during the construction, operations, closure, and final reclamation phases. A reclamation cost estimate is included in the Plan and, after approval of the Plan, Energy Fuels will be required to post financial surety in the amount approved for final reclamation. Upon finalization of the Plan and approval by the BLM, an Environmental Impact Statement (EIS) will be conducted to review the possible impacts to the environment and biota resulting from the proposed mining operations. Public review and comment on the Plan and the EIS is a normal part of the BLM procedure. The BLM has accepted the PO for the EZ1/EZ2 deposits as complete and review is underway.

- The initial design work was completed by Denison on the proposed mine surface facilities installation. This includes a water storage reservoir and surface water control features which will be incorporated into an Aquifer Protection Permit to be issued by the ADEQ.

- Emissions from the proposed mine operations for an Approval Order for an Air Permit from ADEQ. The permit was issued by ADEQ in March 2011.

- A Storm Water Permit is required from ADEQ to manage storm water run-off and control diversion or containment.

- Prior to construction, a National Emissions Standards for Hazardous Air Pollutant Plan needs to be provided to the US Environmental Protection Agency. This plan deals mainly with radon protection and monitoring plans for underground mining.

- If a site water supply well is required for mine dust suppression, a water well permit and water rights allocation is required from the Arizona Department of Water Resources.

- Prior to site construction a septic permit will be required from Mohave County, Arizona.

- A Right of Way for the project power line will be required from Mohave County. The BLM Rights of Way for the power line and the access road are included under the Plan.

- In July 2009, the BLM issued a Notice of Proposed Withdrawal (2009 Notice) under which it proposed that a total of approximately one million acres of public lands around the Grand Canyon National Park be withdrawn from location and entry under the Mining Law of 1872, subject to valid existing
rights, for a period of two years. BLM stated that the purpose of the
withdrawal, if determined to be appropriate, would be to protect the Grand
Canyon watershed from any adverse effect of locatable hardrock mineral
exploration and mining. This timeframe was extended an additional six
months in July 21, 2011 to complete the EIS studies. In January 2012, the
Secretary of the Interior implemented the withdrawal proposed in the 2009
Notice, subject to valid existing rights, for a 20 year period. Whether or not
a mining claim is valid must be determined by a Mineral Examination
conducted by BLM or the US Forest Service. To confirm Energy Fuels’ rights
to proceed with the development and mining on its existing valid rights, a
Mineral Examination will be prepared by the BLM for the EZ Complex. The
Mineral Examination is currently underway for the EZ Complex and all
required information has been supplied to the BLM.

- Initiation of an EIS Scoping is awaiting finalization of the Mineral Examination
  review by BLM.

Energy Fuels will continue to seek all necessary permits and regulatory approvals for the
EZ deposits.

There are no known environmental liabilities.
5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

The EZ1 and EZ2 uranium breccia pipes are located approximately 30 mi. (49 km) southwest of Fredonia, Arizona. From Fredonia the project can be reached by taking Highway 389 (west) for six miles (ten kilometres) to the Mt. Trumbull road. From this point the property is located 26 mi. (42 km) south-southwest along a gravel/dirt road. The EZ2 pipe is located 4,500 ft (1,372 m) west of the EZ1 pipe.

CLIMATE

The climate in northern Arizona is semi-arid, with cold winters and hot summers. January temperatures range from about 7°F (-14°C) to 57°F (14°C) and July temperatures range from 52°F (11°C) to 97°F (36°C). Annual precipitation, mostly in the form of rain with local snow, is approximately 12 inches (30 cm).

LOCAL RESOURCES

The region north of the Grand Canyon is sparsely populated and the infrastructure for the area is not well developed. The largest community within 65 mi. (100 km) of the northern breccia pipes is Fredonia, Arizona, which has a population of about 1,000. Fredonia is accessible over state and federal highways from Las Vegas, Nevada, 220 mi. (360 km) to the west, and Flagstaff, Arizona, 200 mi. (325 km) to the southeast. A municipal airfield is maintained at Kanab, Utah, which is located 7 mi. (12 km) to the north of Fredonia.

The nearest operational railway line is in Utah approximately 96 mi. (155 km) northwest of Fredonia. The closest commercial centres in the area are the towns of St. George and Cedar City, Utah, both approximately 88 mi. (140 km) to the northwest by road.
PHYSIOGRAPHY

Northern Arizona is part of the Colorado Plateau, a region of the western United States characterized by semi-arid, high-altitude, gently sloping plateaus dissected by steep-walled canyons, volcanic mountain peaks, and extensive erosional escarpments. The breccia pipes north of the Grand Canyon are within the Kaibab and Kanab Plateaus which are smaller plateaus within the Colorado Plateau. Elevations on the northern plateaus range from 4,000 ft (1,200 m) to 9,000 ft (2,750 m). Vegetation on the plateaus is primarily open pinion-juniper woodland and shrubs.
6 HISTORY

Uranium exploration and mining of breccia pipe uranium deposits began in 1951 when a US Geological Survey geologist noted uranium mineralization on the dump of an old copper prospect on the South Rim of the Grand Canyon. Although the prospect was inside the Grand Canyon National Park it was located on fee-land predating the park’s creation. A mining firm acquired the prospect and developed a significant high-grade uranium mine known as the Orphan Mine. By the time mining ended in the early 1960s, 4.26 million pounds of U\textsubscript{3}O\textsubscript{8} and minor amounts of copper and silver had been produced.

In the late 1970s, Energy Fuels Nuclear Inc. (EFNI) formed a uranium exploration venture with various Swiss utility companies and acquired significant uranium resources in southeast Utah. In addition, it permitted and built a 2,000 tpd mill at Blanding, Utah to process Colorado Plateau ore. At the same time, exploration for uranium resumed in the Arizona Strip and Western Nuclear Inc. (Western Nuclear) discovered high-grade mineralization at the Hack Canyon prospect located 25 mi. (40 km) north of the Grand Canyon. In 1980, EFNI acquired this property from Western Nuclear (T. Wetz, personal communication). During this time, EFNI also identified and investigated over 4,000 circular features in northern Arizona and explored 140 targets with deep drilling. In all, 682 deep holes were drilled between 1980 and 1995 for a total of 870,707 ft (265,392 m). EFNI developed seven of the pipes (Hack 1, 2 and 3, Pigeon, Hermit, Kanab North and Pinenut) and produced approximately 19.1 million pounds of U\textsubscript{3}O\textsubscript{8} at an average grade of about 0.60% U\textsubscript{3}O\textsubscript{8}.

After acquiring the Hack Canyon property in 1980, EFNI also produced 9.5 million pounds of U\textsubscript{3}O\textsubscript{8} at an average grade of 0.642% U\textsubscript{3}O\textsubscript{8} from three pipes known as Hack 1, Hack 2 and Hack 3. The Kanab North deposit was discovered in 1981 and went into production in 1988. It closed in 1991 after producing approximately 2.8 million pounds of U\textsubscript{3}O\textsubscript{8} at an average grade of just over 0.5% U\textsubscript{3}O\textsubscript{8}. Between 1985 and 1990 EFNI also produced 5.7 million pounds of U3O8 from the Pigeon Mine. Similarly, just over 0.5 million pounds of U\textsubscript{3}O\textsubscript{8} were produced from the Hermit Mine between 1989 and 1990. Finally, in 1988, prior to placing the Pinenut Mine on standby, EFNI produced 0.5 million pounds of U\textsubscript{3}O\textsubscript{8} at an average grade of 1.02% U\textsubscript{3}O\textsubscript{8}.
In the 1980s, Pathfinder Mines Corporation (Pathfinder) explored the EZ1 and EZ2 deposits. Pathfinder drill-tested the EZ1 pipe with 34 rotary holes for a total of 63,100 ft (19,235 m) and the EZ2 pipe with 47 rotary holes for a total of 76,018 ft (23,169 m). EFNI entered into a joint-venture agreement with Pathfinder and prepared resource estimates for the two pipes in January and February of 1988.

In 1997, International Uranium Corporation (IUC) acquired most of the assets of bankrupt EFNI. At the time of the IUC acquisition, the EFNI – Pathfinder joint venture was terminated and control of the EZ1 and EZ2 projects reverted back to Pathfinder. In 1997, Pathfinder was owned by Cogema Mining (now known as AREVA).

In 2006, IUC merged with Denison Mines Inc. to form Denison Mines Corp. Denison entered into a separate purchase agreement with Pathfinder in February 2007 to acquire a 100% interest in five Pathfinder (AREVA) deposits. These deposits are known as EZ1, EZ2, What, DB1, and Moonshine Springs. A 1% royalty interest on these properties was retained by Pathfinder.

In June 2012, Energy Fuels Inc. acquired all of Denison’s mining assets and operations in the United States.

Mine development has not begun at either EZ1 or EZ2 other than initial site surveys and mine preparation planning procedures necessary for the acquisition of the required permits.

**HISTORICAL MINERAL RESOURCES**

In 1988 uranium Mineral Resource estimates on the Arizona Strip breccia pipes were compiled by EFNI’s exploration department in accordance with parameters developed specifically for breccia pipe resource estimates. These parameters were based on EFNI’s previous experience with breccia pipes in the region and are shown in Table 6-1.
EFNI established the following method of estimation for reserves:

“Ore zones for the reserve calculations are prepared by entering the probe data into the GAMLOG program, where mineable ore zones for each drill hole are established using the cut-off and dilution parameters as defined above. The mineralized portion(s) of each drill hole is divided into 10-ft thick levels; thickness, grade, and top elevation are computed for each drill hole intercept for each level. If a zone is greater than 10 ft thick, or occurs across level divisions, the half-foot intervals included in the applicable level are averaged to establish the grade for the appropriate segment of the intercept. These divided intercepts are not required to satisfy the minimum grade and thickness parameters for each portion, but they must satisfy the criteria as a whole” (Mathisen, 1985).

Mineralization was classified by EFNI into proven, probable and possible categories based on the distance from the mineralized drill hole. Proven was based on a 25 ft diameter around the drill hole, probable was based on distances up to 50 ft and possible included mineralization interpolated from more widely-spaced holes.
EFNI estimated the historical resources (Table 6-2) in the late 1980s prior to the implementation of NI 43-101. These resources are historical in nature and they should not be relied upon.

**TABLE 6-2 PROVEN, PROBABLE AND “POSSIBLE” MINERAL RESERVES**

<table>
<thead>
<tr>
<th>Deposit</th>
<th>Tons</th>
<th>eU₃O₈ (%)</th>
<th>eU₃O₈ (Pounds)</th>
</tr>
</thead>
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<tr>
<td>EZ1</td>
<td>40,363</td>
<td>0.541</td>
<td>436,404</td>
</tr>
<tr>
<td>EZ2</td>
<td>50,485</td>
<td>0.424</td>
<td>428,252</td>
</tr>
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</table>

Notes:
1. As estimated by EFNI - February 1988
2. These estimates are historical and should not be relied upon

Pathfinder Mines Corporation (PMC) also prepared resource estimates for its claims in the Arizona Strip and classified mineralization into Proven, Indicated and Inferred categories based on the distances from the mineralized drill hole. Proven was based on an area around the drill hole four times greater than that used by EFNI. Indicated was based on an area between drill holes which approximated ten times that used by EFNIs while Inferred included mineralization interpolated from even wider drill hole spacing.

PMC estimated the historical resources for the EZ1 and EZ2 breccia pipe deposits in February 2004 (COGEMA Internal Memorandum) as shown in Table 6-3. Denison Mines Corp. agreed to purchase these deposits from PMC in 2007. Details of the method for calculating the resources reported in Table 6-3 were not provided to Energy Fuels. These resources are historical in nature and they should not be relied upon.

**TABLE 6-3 INDICATED MINERAL RESERVES**

<table>
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<tr>
<th>Deposit</th>
<th>Tons</th>
<th>eU₃O₈ (%)</th>
<th>eU₃O₈ (Pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ1</td>
<td>106,000</td>
<td>0.664</td>
<td>1,411,000</td>
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<tr>
<td>EZ2</td>
<td>216,000</td>
<td>0.440</td>
<td>1,905,000</td>
</tr>
</tbody>
</table>

Notes:
1. As estimated by Pathfinder Mines Corporation - 2004
2. These estimates have not been audited and should not be relied upon
HISTORICAL RESOURCE ESTIMATE COMPARISON WITH ACTUAL PRODUCTION

In its Preliminary Feasibility Report for the Canyon project (dated December 11, 1984), EFNI provided historical reserves/resources estimates for various pipes based on surface drilling only. In a previous study (Pool and Ross, 2007) RPA has compared the reserve/resource estimates with the actual production results (Table 6-4).

These estimates are not compliant with NI 43-101 but are included to illustrate that surface drilling typically does not provide sufficient information to reliably estimate the total resource that might be available.

TABLE 6-4 ENERGY FUELS RESOURCE ESTIMATES VS. ACTUAL PRODUCTION

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<tr>
<th>Pipe</th>
<th>Surface Drilling Estimate</th>
<th>Production</th>
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<tr>
<td></td>
<td>Tons</td>
<td>Grade (% U₃O₈)</td>
</tr>
<tr>
<td>Hack #1*</td>
<td>132,400</td>
<td>0.37</td>
</tr>
<tr>
<td>Hack #2*</td>
<td>125,400</td>
<td>0.57</td>
</tr>
<tr>
<td>Hack #3*</td>
<td>21,250</td>
<td>0.40</td>
</tr>
<tr>
<td>Pigeon*</td>
<td>164,700</td>
<td>0.75</td>
</tr>
<tr>
<td>Kanab N</td>
<td>83,300</td>
<td>0.45</td>
</tr>
<tr>
<td>Pinenut**</td>
<td>150,000</td>
<td>0.50</td>
</tr>
<tr>
<td>Hermit*</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

* Not included in the Energy Fuels portfolio. These properties were reclaimed by EFNI.
** Pinenut has remaining resources estimated at 86,000 tons at an average grade of 0.54% U₃O₈.
7 GEOLOGICAL SETTING AND MINERALIZATION

REGIONAL GEOLOGY

Parts of two distinct physiographic provinces are found within Arizona: the Basin and Range province in the southern and western margins of the state, and the Colorado Plateau province in most of northern and central Arizona. The Arizona Strip lies within the Colorado Plateau province.

Outcrops within the Arizona Strip region are predominantly sedimentary and volcanic rocks of upper Paleozoic to Quaternary age, although the breccia pipes area is largely underlain by Mississippian to Triassic age sedimentary rocks (Figure 7-1). Precambrian basement outcrops in the lower levels of the Grand Canyon located to the south of the study area.

The region has experienced volcanic activity since the Pliocene. A number of lava-capped buttes rise above the landscape, and lava flows cover large areas of the southern part of the district. Faulting has exerted significant control on the geologic development and geomorphic history of the region. Major structural features are the Grand Wash, Hurricane, and Toroweap fault systems, all trending generally north-south with the upthrown side to the east. These faults are topographically prominent, showing impressive scarps.
Precambrian: Walcott (1894); Noble (1914); Noble and Hunter (1917); Nankoweap: Van Gundy (1951); Mazatzal Revolution: Wasserburg and Lanphere (1965); Paleozoic: Noble (1922); Cambrian: McKee (1945); Mississippian: McKee (1960); McKee and others (1969); Permian: McKee (1938); summary in Maxson (1961); Gisne (1971); Plio-Pleistocene basalt: McKee and others (1968); Hamblin and Best (1970) see also Four Corners Geological Society Guidebook 5 (1969). Precambrian fossil Chuaria: Ford and Breed (1972), (1973).

Figure 7-1

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.
Stratigraphic Column for the Grand Canyon and Vicinity

June 2012
PROPERTY GEOLOGY

EZ1
The EZ1 deposit has an easily recognizable surface exposure (Figure 7-2). All surface drill holes were collared in the Triassic Moenkopi Formation (TRM) and penetrated an average of 165 ft (50 m) of this formation. Underlying the TRM is the Permian Kaibab Formation (PK) with an average thickness of 485 ft (148 m). The Permian Toroweap Formation (PT) beneath the PK averages 260 ft (79 m) in thickness. This is followed by the thin Coconino Sandstone (PC) which has an average thickness of 40 ft (12 m). Mineralization in the breccia pipes typically starts in the PC and continues into the Permian Hermit Formation (PH) where solution stoping created brecciation of this thinly-bedded unit. Where the drilling intersects the PH at EZ1, the average thickness is 828 ft (252.4 m). Seven drill holes pierced the Permian Supai Formation (PS) but no holes reached the Mississippian Redwall limestone (below the PS unit).

EZ2
The surface exposure of the EZ2 breccia pipe is considerably more subdued and it could easily be overlooked (Figure 7-3). The drill rig was able to set-up on a flat to gently sloping glade on the west side of the upper reaches of the Wild Band Valley. EZ2 is located 4,379 ft (1,335 m) west-northwest of the EZ1 pipe.

All of the drill holes were collared in the TRM (the same as EZ1) which, at EZ2, has an average thickness of 250 ft (76 m). The TRM overlies about 365 ft (111 m) of PK. Underlying the PK is the PT which averages 425 ft (129 m) in thickness. The PT is succeeded by the PC unit which has an average thickness of 50 ft (14 m). Only 11 drill holes penetrated the PH unit and these holes passed through an average of 830 ft (253 m) of this formation. Of the eleven holes which pierced the PS, none reached the Mississippian Redwall limestone below the PS.
FIGURE 7-2  EZ1 BRECCIA PIPE PHOTOS

Vehicle is parked just outside of west rim of collapse structure.

At south rim of collapse structure as exposed at the surface.
MINERALIZATION

Uranium mineralization in the breccia pipe deposits occurs largely as blebs, streaks, small veins and fine disseminations of uraninite-pitchblende (UO₂). Mineralization is generally confined to the matrix material, but it may also extend into the breccia fragments, particularly where these fragments are of Coconino sandstone. An extensive suite of anomalous elements has also been reported, including: silver, arsenic, barium, cadmium, cobalt, chromium, cesium, copper, mercury, molybdenum, nickel, lead, antimony, selenium, strontium, vanadium and zinc (Wenrich, 1985). In addition, many of the rare earth elements are consistently enriched in uranium-mineralized samples. Within some pipes copper occurs in sufficient concentrations to be economic whereas significant gold is only known in the Copper Mountain mine. Silver is almost always anomalously high and some of the pipes carry potentially economic grades.
Within many pipes, there is a mineralogical zonation in and around the uranium mineralization. For example, detailed work at the Hack-2 deposit highlighted a pyrite-rich cap overlying the main mineralization that was followed (in descending order) by a cobalt-nickel zone, a molybdenum-barium-zinc zone, and a lead-rich zone.

Pipes are surrounded by bleached zones, a feature that is particularly notable in the Hermit Formation where unaltered red sediments contrast sharply with the grey-green bleached material. Age-dating and disequilibrium determinations indicate that remobilization of uranium has occurred. Uranium concentrations in the upper levels of a pipe tend to be in equilibrium with gamma-log and chemical analyses giving similar results. With depth however, disequilibrium in the deposits increases with chemical assays returning higher values than those suggested by gamma-log determinations.

U-Pb age-dating of mineralization indicates a range of ages from 101 to 260 million years. The older age suggests that the earliest uranium mineralization event occurred during the Permian Period which contradicts the geological model.

Table 7-1 provides a summary of the mineralization at EZ1 and EZ2.

### TABLE 7-1 DESCRIPTIVE SUMMARY OF MINERALIZATION

**Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes**

<table>
<thead>
<tr>
<th>Distance Apart</th>
<th>Vertical Mining Interval</th>
<th>Horizontal Mining Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EZ1</strong></td>
<td>4469 ft from EZ2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upper Zone (all Hermit):</td>
<td>Widest ore at 3768 level at 182 ft</td>
</tr>
<tr>
<td></td>
<td>4,026 to 3,626 ft (1,170 to 1,560 ft deep).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower Zone (all Supai):</td>
<td>Widest ore at 3100 level at 45 ft</td>
</tr>
<tr>
<td></td>
<td>3,373 to 3,042 ft (1,812 to 2,143 ft deep)</td>
<td></td>
</tr>
<tr>
<td><strong>EZ2</strong></td>
<td>4469 ft from EZ1</td>
<td>Widest ore at 4140 level at 300 ft</td>
</tr>
<tr>
<td></td>
<td>Upper Zone (Coconino deposit):</td>
<td>Mostly ring ore diameter = 282 ft wide (access drift only?)</td>
</tr>
<tr>
<td></td>
<td>4,169 to 3,185 ft (952 to 1,153 ft deep)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Middle Zone (all Hermit):</td>
<td>Widest ore at 3690 level at 130 ft (consistent large plug)</td>
</tr>
<tr>
<td></td>
<td>3,954 to 3,781 ft (1,194 to 1,356 ft deep)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower Zone (all Hermit):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3,722 to 3,624 ft (1,417 to 1,512 ft deep)</td>
<td></td>
</tr>
</tbody>
</table>

**EZ1**

Uranium mineralization within EZ1 occurs at two distinct vertical intervals, referred to here as the Upper zone and the Lower zone. The Upper zone is contained within a
vertical interval of approximately 400 ft (120 m) between the elevations of 4,026 ft and 3,636 ft (1,227 m to 1,105 m). The elevations correspond to depths below surface of 1,170 ft and 1,560 ft (357 m and 475 m), respectively. At its widest point, the Upper zone has a diameter of 183 ft (55.5 m). The Lower zone occurs between the elevations of 3,373 ft and 3,042 ft (1,028 m to 927 m) and covers an interval of 331 ft (101 m). The elevations correspond to depths below surface of 1,812 ft (552 m) and 2,143 ft (653 m), respectively. At its widest point, the Lower zone has a diameter of 45 ft (13.7 m).

The geometry of the Upper zone is controlled by the regional structure. Initially, it plunges to the southeast at about -57° along an azimuth of 135° until it reaches a depth of 1,400 ft (427 m). At this point it changes to a vertical attitude down to a depth of 1,560 ft (475 m). Because there are no barren drill holes to the southeast of the Upper zone, there is the potential for additional drill intersections to the southeast (in plan view) along an azimuth of ~135°.

The geometry of the Lower zone appears to reflect the increased porosity of the Esplanade Sandstone and consists of a narrow vertical plug occupying the lower throat of the breccia pipe. This plug has an average width of 37 ft (11.3 m).

**EZ2**

Uranium mineralization at EZ2 occurs at three distinct zones: an Upper zone, a Lower zone and a diffuse, Middle zone, half way between the Upper and Lower. The Upper zone consists of a large, mostly stratiform deposit, located primarily within the Coconino Sandstone. A single satellite deposit is also included in the Upper zone. The larger Upper zone is mushroom-like in shape and occurs between the elevations 4,169 ft (1,271 m) and 3,185 ft (971 m). It has a maximum width (in plan view) of 303 ft (92 m) when measured parallel to the longer axis of the zone; the shorter dimension is 269 ft (82 m). The pipe-like part of the Upper zone averages 57 ft (17.4 m) in diameter.

The Middle zone is made up of two central deposits surrounded by multiple “ring” deposits. One of the deposits within the ring has a much greater volume when compared to the other nine satellite bodies and it may represent potentially significant mineralization in the ring fracture system. This entire array of deposits occurs between the elevations 3,954 ft and 3,781 ft (1,205 m and 1,152 m) and appears to be
encompassed by a ring fracture system that is 350 ft (107 m) in diameter. This size is not atypical for breccia pipes of this region.

The Lower zone consists of a central deposit occupying the throat of the pipe and one small, fracture-associated satellite ore body. The central ore body (in this Lower zone) occurs between the elevations 3,722 ft and 3,624 ft (1,134 m and 1,104 m) and also takes the form of a mushroom-like structure. The long dimension of the zone is 161 ft (49 m) and 140 ft (42.7 m) along its minor axis. The average diameter of the pipe-like structure at the base of the Lower zone is 68 ft (20.7 m).

The satellite deposit in the Lower zone is represented by an arcuate solid approximately 20 ft (6 m) long and 10 ft (3 m) tall with a thickness in plan view of 7 ft (2.1 m).
8 DEPOSIT TYPES

Paleozoic sedimentary rocks of northern Arizona are host to thousands of breccia pipes. Rocks cut by these pipes range in age from the Mississippian Redwall Limestone through to the younger Triassic Chinle Formation. These rocks encompass about 4,000 ft (1,200 m) of stratigraphic section of erosion yet no single pipe has been observed that cuts through the entire section as erosion and other factors come into play. No pipe is known to occur above the Chinle Formation or below the Redwall Limestone.

Breccia pipes within the Arizona Strip are near vertical, circular to elliptical bodies of broken rock (Figure 8-1). This broken rock is composed of slabs, fragments and rotated angular blocks of the surrounding and/or stratigraphically higher formations. Many geologists consider the pipes to have been formed by solution collapse of the underlying carbonate rocks (such as the Redwall Limestone). The blocks and slabs are set in a matrix of finer-grained material from the surrounding and overlying rock formations. In most instances, the matrix has been cemented by silicification and calcification.

Breccia pipes consist of three interrelated features: a basinal or structurally shallow depression at surface; a breccia pipe underlying the structural depression; and annular fracture rings around the margins of the pipes. Annular fracture rings are commonly, but not always, mineralized. The structural depression may have diameters greater than 0.5 mi. (800 m), whereas the breccia pipe diameters typically range from 200 ft (60 m) to 300 ft (90 m), up to 600 ft (180 m).

Mineralized breccia pipes discovered to date often occur in clusters or trends. Spacing between pipes ranges from some hundreds of feet within a cluster to several miles within a trend. Pipe location may have been controlled by deep-seated faults but karstification of the Redwall Limestone in Mississippian and Permian times is considered to have been a key control of breccia pipe formation in the region.
Figure 8-1

Modified after Wenrich, Billingsley, and Huntoon, 1986.

Energy Fuels Inc.

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.

Typical Cross-Section of a Breccia Pipe
9 EXPLORATION

Energy Fuels has not carried out any exploration on the properties since their acquisition.

Exploration for breccia pipes in northern Arizona typically begins with a search for circular depressions at surface. This search is supported by geologic mapping, interpretation of satellite imagery and/or aerial photographs, thermal infrared imagery, geochemical testing and certain geophysical methods (such as resistivity, Very Low Frequency (VLF) and time domain electromagnetic tools). Other techniques sometimes used include geobotany, microbiology, and biogeochemistry. All of these methods are utilized to identify surface expressions of the underlying breccia pipes. The key element of the process is to define the central core of the pipe for drilling from the surface since this area is typically associated with the centre of the collapse.
10 DRILLING

Energy Fuels has not drilled any holes on the two deposits since it acquired the property.

Previous operators, as described in Section 6 History, used shallow drilling programs to locate the centre of a collapse feature which could assist in defining the throat of the underlying breccia pipe. The basic tool for exploring breccia pipes in northern Arizona is deep rotary drilling, supplemented by core drilling. Typically, prospective pipes were first tested with three drill holes. If no mineralization was present, then the drilling effort was abandoned.

Drilling holes within the breccia pipes is a difficult process. Substantial depths, small targets, which are approximately 200 ft (61 m) in diameter, and non-homogeneous rock formations, combine to limit the accuracy of the holes. Cavernous and brecciated sediments at depth can result in the loss of drilling fluid circulation so that much of the drilling is conducted “blind”. Periodic “spot cores” are taken to determine whether or not the holes are within the target structure or have drifted away from the pipe. Most pipes cannot be completely drill-defined from surface due to deviation from the desired targets. All drill holes are normally surveyed for deviation and logged with gamma logging equipment.

If surface drilling is encouraging, a vertical shaft is sunk or drilled to its ultimate depth and underground drill stations are established at various levels to provide platforms for further exploration and definition drilling. Drilling from underground stations typically uses large-bore percussion drills. The resulting holes, drilled out to as much as 200 ft (61 m), are then gamma logged and surveyed as a supplement to surface drilling.
11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Industry best practices for uranium exploration in the western United States are commonly based on the gamma-logging process with a number of additional checks, including: 1) frequent calibration of logging tools, 2) core drilling and chemical analysis of core as a check on gamma-log values and the potential for disequilibrium; 3) possible closed-can analysis as an adjunct to chemical assays; and 4) possible gamma logging by different tools and/or companies.

Energy Fuels used the GAMLOG computer program to interpret gamma-ray logs for EZ1 and EZ2. The GAMLOG program was developed by the U.S. Atomic Energy Commission. The essence of the method is an iterative process by which U₃O₈ grades are determined for a series of 0.5-foot or one-foot layers which can be considered to comprise the zone under analysis. The objective of the iterative process is to find a grade for each separate layer such that an imaginary set of separate gamma-ray anomalies (one from each separate layer) could be composited to form an overall anomaly which would closely match the real anomaly under analysis (Scott, 1962). RPA accepts the validity of the GAMLOG program.

There are no specific provisions for security of data or samples other than those employed for confidentiality. The previous companies involved in the project, EFNI and Pathfinder, are deemed to have met or exceeded industry standards for their exploration programs.

SAMPLING METHOD AND APPROACH

All the historical drill holes on Energy Fuels’ Arizona Strip breccia pipe properties were gamma-logged and surveyed for down-hole deviation. These data provide the basic building blocks to estimate Mineral Resources. Core holes were drilled to supplement this data and to provide samples for disequilibrium studies and metallurgical testing. This process was consistent with industry standards at the time and the work carried out by EFNI and Pathfinder is judged by RPA to have been of suitable quality.
All of the basic data for the estimation of Mineral Resources at the EZ1 and EZ2 deposits, originally by EFNI and more recently by Denison, were derived directly by gamma-log interpretation. Historically, EFNI completed numerous checks on this data by means of chemical assays, closed-can assays, and various beta gamma analyses, but the records for these auxiliary analyses and checks are scattered and incomplete. Nevertheless, all available data and reports indicated that the gamma-logging process provides acceptable results.

RPA notes that all gamma-log values are listed as eU₃O₈ numbers. The “e” preceding U₃O₈ indicates that the respective grades are “equivalent” U₂O₈ grades based on the correlation between gamma-ray intensity, as measured by the gamma logging tools, and uranium content. Such is not always the case and the correlation must always be checked by chemical and radiometric assays of core samples or by direct neutron activation. EFNI performed extensive checks on core and the available results seem to confirm the general correlation, but detailed test results are not available for review. In layman’s terms, the “e” prefix indicates that somewhat less reliance can be placed on the reported grades than if sufficient data were available to provide greater assurance on the correlation. It is at least partially for this reason that Mineral Resources listed herein are classified as Inferred.

No chemical assays for the EZ1 and EZ2 deposits were available for examination by RPA.
12 DATA VERIFICATION

Data verification in uranium exploration in the western United States takes the form of a combination of logging tool calibration, chemical assays on core, and various checks by other logging units and outside laboratories. Most of this verification process is internal and company specific. Independent verification has not been part of the industry standard process. EFNI and Pathfinder operations in the Arizona Strip are judged by RPA to have met or exceeded industry standards at the time.

Complete sets of drill hole data, such as gamma logs and chemical assay data, were not available for the EZ1 and EZ2 deposits. However, all of the gamma logs were available for inspection by Denison geologists and confirm the validity of a vast majority of these data. The checks by Denison geologists included visual confirmation of selected gamma logs and comparison of those logs with tabulated data. Certain items of data could not be confirmed due to a lack of chemical assay data for EZ1 and EZ2.

It should be stressed that chemical assay data for the EZ1 and EZ2 deposits are missing. This contributes to the classification of the resources as Inferred.

RPA and Energy Fuels conclude that, although not all data were available for checking, EFNI and Pathfinder followed standard industry practices of the time and that the results of those practices are likely to be a reasonable guide to mineralization available for resource estimation work.

RPA is of the opinion that the available data are insufficient to make a definitive judgement on the differences between gamma values and chemical assays. We recommend additional work to confirm the correlation between chemical assays and gamma values.
13 MINERAL PROCESSING AND METALLURGICAL TESTING

Energy Fuels has not carried out any metallurgical studies on the EZ1 or EZ2 deposits. However, Energy Fuels has located an historical study by Stephenson (1988) of the Lucky Mc Mine in which an analysis of the core from drill hole EZ1-25 was completed. The results of this study are presented in Table 13-1.

TABLE 13-1 METALLURGICAL EVALUATION OF HIGH CaCO₃ URANIUM ORES
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Grind</th>
<th>28 Mesh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention</td>
<td>24 hours</td>
</tr>
<tr>
<td>Free Acid</td>
<td>80g/L H₂SO₄</td>
</tr>
<tr>
<td>EMF</td>
<td>420 MV</td>
</tr>
<tr>
<td>Temp</td>
<td>80°C</td>
</tr>
</tbody>
</table>

Stephenson's recommendations are summarized below:

“The considerable amount of testing done at the Lucky Mc on the EZ-1 Hole 25 core leads me to believe the leach parameters as set forth in the referenced Energy Fuels memorandum are close to the minimal optimum conditions to achieve an extraction rate in the mid to lower 90% range. It would not be economically acceptable to blend breccia pipe material with ore from the Gas Hills [Plateau Type Deposits]. Should both be milled in the same plant, they would have to be campaigned.”

Energy Fuels plans to campaign the breccia mineralization in order to maximize recoveries and reduce costs.
14 MINERAL RESOURCE ESTIMATE

GENERAL STATEMENT

RPA has audited the Mineral Resource estimates completed by Energy Fuels for the EZ1 and EZ2 deposits. These Mineral Resource estimates were prepared using historical data. As part of the audit, the raw data and wireframe creation methods were reviewed. In addition, the suitability of the interpolation techniques and search strategies were assessed. Finally, independent resource estimates were created by RPA to compare with the Energy Fuels estimates.

For the wireframe, Energy Fuels composited the raw \( \text{eU}_3\text{O}_8 \) values within the database at 2 ft intervals and interpolated the values to generate a preliminary block model. A grade shell (0.2% \( \text{eU}_3\text{O}_8 \)) was superimposed upon the block model values to generate the wireframe. This wireframe was cross-checked with both historic and contemporaneous geological section data. RPA has reviewed this methodology and comments are made in the appropriate sections below.

<table>
<thead>
<tr>
<th>Deposit</th>
<th>Tons</th>
<th>Grade ( \text{eU}_3\text{O}_8 )</th>
<th>Contained ( \text{U}_3\text{O}_8 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ1</td>
<td>110,500</td>
<td>0.51</td>
<td>1,127,000</td>
</tr>
<tr>
<td>EZ2</td>
<td>113,700</td>
<td>0.43</td>
<td>978,000</td>
</tr>
</tbody>
</table>

Notes:
1. Mineral resources were classified in accordance with CIM Definition Standards.
2. Cut-off grade is 0.2% \( \text{eU}_3\text{O}_8 \).
3. Mineral resources have not been demonstrated to be economically viable.
4. Grades were converted from gamma-log data and are therefore equivalent \( \text{U}_3\text{O}_8 \) (\( \text{eU}_3\text{O}_8 \)).
5. Grade shell wireframes at 0.2% \( \text{eU}_3\text{O}_8 \) were used to constrain the grade interpolation.
6. All material within the wireframes was included in the estimate.
7. Wireframes were constructed with a minimum drill hole sample length of 6 ft.
8. High grades for EZ1 were cut to 10%.
9. High grades for EZ2 were cut to 5%.

RPA has independently estimated the resources for each breccia pipe using similar parameters to those used by Energy Fuels. The resource estimates are within 5% (EZ1) and 3% (EZ2) of the Energy Fuels values shown in Table 14-1 above. RPA believes that resource estimate was prepared using industry best-practices and is acceptable.
EZ1 DEPOSIT RESOURCE ESTIMATE

RESOURCE DATABASE AND VALIDATION

The Energy Fuels EZ1 database contained 34 drill hole records, each with downhole survey data, eU₃O₈ values, coded lithology, and collar information. Energy Fuels converted the collar coordinates into the Arizona State Plane Coordinate System, NAD83 AZ State Plane West Zone.

RPA imported the same data (collars, eU₃O₈ values, survey and lithologies) into its modelling software package. RPA did not have access to the hard copy drill logs, or the gamma-log readings, to confirm the accuracy of the values in the database. Database integrity checks were performed and minor modifications were made. One drill hole (EZ1-30) was modified – the downhole length was increased by 1 ft to match the downhole survey data – and two eU₃O₈ values were removed (negative values in EZ1-006). Table 14-2 is a summary of the records in the EZ1 database. The 34 EZ1 drill holes have a cumulative length of 63,111 ft (19,236 m).

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Number of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collar</td>
<td>34</td>
</tr>
<tr>
<td>Survey</td>
<td>21,458</td>
</tr>
<tr>
<td>Values</td>
<td>72,555</td>
</tr>
<tr>
<td>Lithology</td>
<td>134</td>
</tr>
</tbody>
</table>

The 72,555 eU₃O₈ values reflect gamma-log readings from the mineralized zones within the breccia pipe. The readings were taken at a consistent 0.5 ft sample interval. Readings were also taken in other parts of the holes but the values were not recorded if they fell below a threshold of 0.15% eU₃O₈ (set by the software for the tool).

Descriptive statistics for the EZ1 assay dataset are shown in Tables 14-3 (Energy Fuels) and 14-4 (RPA). RPA does not include zero grade values in the statistical treatment. This explains the variance between the two statistical summaries.
TABLE 14-3  RAW eU₃O₈ STATISTICS FOR EZ1 (ENERGY FUELS)
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

Energy Fuels
Mean 0.025
Median 0.002
Standard Deviation 0.234
Variance 0.055
Minimum 0.000
Maximum 29.423
Count 72,555

TABLE 14-4  RAW eU₃O₈ STATISTICS FOR EZ1 (RPA)
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

RPA
Mean 0.031
Median 0.002
Standard Deviation 0.262
Variance 0.068
Minimum 0.001
Maximum 29.423
Count 57,756

It is RPA’s opinion that the database is suitable for a resource estimate of the EZ1 pipe.

CUT-OFF GRADE
As of April 2009, the estimated operating costs for uranium production (mining, haulage and milling) from breccia pipe operations was about $200 per ton of material processed. This cost breaks down as follows:

- Trucking $64.00/ton
- Milling $52.00/ton
- Mining $84.00/ton

Using these production costs, as well as a reasonable price for uranium at the time ($53 per pound), the minimum break-even cut-off grade was 0.189% U₃O₈. This number was rounded-up to 0.2% eU₃O₈. Both Energy Fuels and RPA used this cut-off value to report their resource estimates.
GEOLOGICAL INTERPRETATION AND 3D MODELLING

Energy Fuels composited the eU₃O₈ values to 2 ft intervals and interpolated the values to generate a preliminary block model. A grade shell (0.2% eU₃O₈) was generated from the block model and both vertical and plan-view sections were cut through the interpolated values (at 10 ft intervals). Digital geological interpretations (3D rings) were created and cross-checked with the available historic geological section data. A new solid was created where the gap between suitable intercepts in a drill hole exceeded 6 ft in core length. The tops and bottoms of the preliminary wireframe solids were manually contoured and snapped to the end of the composite intervals on the drill holes.

In many instances, horizontal strings were constructed at intermediate levels (between the 10 ft levels) to aid in contouring the grade to the end of the composite interval. This process created five wireframes (Figure 14-1). Two areas of mineralization are defined, one referred to as the upper zone, which is hosted by the Hermit Formation, and one referred to as the lower zone, which is hosted by the Supai Formation. A 350 ft vertical gap with values below the cut-off grade separates the upper and lower areas of the deposit.

The Energy Fuels wireframes were used without modification by RPA to constrain their resource estimates. It is noted that RPA did not have access to the historic geological sections used to support Energy Fuels’ wireframe interpretation. RPA estimated the individual tonnages of the EZ1 solids which range in size from 163 tons to 103,380 tons (for a total of 114,125 tons).
Energy Fuels Inc.

**EZ1 and EZ2 Breccia Pipes**

*Arizona Strip District, U.S.A.*

Interpreted EZ1

Gradeshell Wireframes

*Figure 14-1*

EZ1 STATISTICS FOR GEOLOGICAL SOLIDS
Each of the five solids in the EZ1 breccia pipe has been assigned a unique rock code. Table 14-5 displays the descriptive statistics for eU₃O₈ values within each solid.

<table>
<thead>
<tr>
<th>Rock Code</th>
<th>Lens Name</th>
<th>Average</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>Number of values</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>Lower 01</td>
<td>0.167</td>
<td>0.01</td>
<td>0.613</td>
<td>0.136</td>
<td>0.019</td>
<td>123</td>
</tr>
<tr>
<td>120</td>
<td>Lower 02</td>
<td>0.124</td>
<td>0</td>
<td>0.84</td>
<td>0.149</td>
<td>0.022</td>
<td>162</td>
</tr>
<tr>
<td>130</td>
<td>Lower 03</td>
<td>0.335</td>
<td>0.021</td>
<td>1.829</td>
<td>0.421</td>
<td>0.177</td>
<td>28</td>
</tr>
<tr>
<td>140</td>
<td>Lower Main</td>
<td>0.379</td>
<td>0</td>
<td>29.423</td>
<td>1.501</td>
<td>2.253</td>
<td>565</td>
</tr>
<tr>
<td>150</td>
<td>Upper Main</td>
<td>0.436</td>
<td>0</td>
<td>9.534</td>
<td>0.879</td>
<td>0.772</td>
<td>2722</td>
</tr>
</tbody>
</table>

The two largest solids have the highest number of values and the highest averages.

EZ1 CAPPING
Figure 14-2 is a cumulative frequency plot of the raw eU₃O₈ values in the EZ1 dataset. A few high value outliers create a positively skewed distribution, although the effects of these outliers can be mitigated by capping them at a specific grade level. Capping levels of 8% eU₃O₈ were used by RPA (see the population break in Figure 14-3), although Energy Fuels used a 10% eU₃O₈ capping level. Energy Fuels’ capping level set back two values to 10% eU₃O₈, while the RPA capping set back five values. Table 14-6 shows the descriptive statistics for the capped datasets used by Energy Fuels and RPA.

RPA recommends further investigation of the capping levels when additional data are available.
Figure 14-2

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.

EZ1 Cumulative Distribution
Plot of All Raw eU₃O₈ Grades

Figure 14-3

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.

EZ1 Cumulative Distribution Plot of Raw Grades Above 0.1% \( \text{eU}_3\text{O}_8 \)

TABLE 14-6  DESCRIPTIVE STATISTICS OF CAPPED EU₃O₈ VALUES FOR EZ1

Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th></th>
<th>Energy Fuels</th>
<th></th>
<th>RPA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.024</td>
<td></td>
<td>0.031</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>0.002</td>
<td></td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.198</td>
<td></td>
<td>0.224</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>0.039</td>
<td></td>
<td>0.050</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000</td>
<td></td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>9.534</td>
<td></td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>72,553</td>
<td></td>
<td>57,756</td>
<td></td>
</tr>
</tbody>
</table>

Note that RPA does not include zero values in the statistical treatments of the data, so the comparable values in Table 14-6 are different.

EZ1 COMPOSITING

All of the eU₃O₈ gamma-log data were recorded in 0.5 ft sample lengths. The data were composited to 2 ft run length intervals prior to the grade interpolation. Table 14-7 shows the descriptive statistics for the composites created for the EZ1 wireframes. The statistics are the same for both Energy Fuels and RPA.

Since full-solid compositing was not used, there are 34 remnants (4% of the total) that are less than 2 ft in length. Only one of these remnants is greater than the 0.2% eU₃O₈ cut-off grade. In this particular case, RPA believes that the inclusion of the remnants in the block model interpolation does not significantly affect the estimate.
TABLE 14-7  DESCRIPTIVE STATISTICS OF COMPOSITE eU$_3$O$_8$ VALUES FOR EZ1
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Energy Fuels/RPA Data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.390</td>
</tr>
<tr>
<td>Median</td>
<td>0.129</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.770</td>
</tr>
<tr>
<td>Variance</td>
<td>0.594</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000</td>
</tr>
<tr>
<td>Maximum</td>
<td>8.069</td>
</tr>
<tr>
<td>Count</td>
<td>916</td>
</tr>
</tbody>
</table>

EZ1 DENSITY

Energy Fuels used a historical tonnage factor of 13 ft$^3$/ton (which converts to a density of 2.46 g/cc). A value of 153.85 pounds per cubic foot was used as a density value for all rock codes in the EZ1 wireframes.

EZ1 INTERPOLATION

RPA used Inverse Distance Squared (ID$^2$) for the EZ1 breccia pipe, which is the same as Energy Fuels’ interpolation routine. In addition, a Nearest Neighbour (NN) model was created as a cross-check on the ID$^2$ interpolation. In both cases, the search strategy restricted the interpolation to those blocks within the wireframes. The various parameters are listed in Table 14-8.

TABLE 14-8  EZ1 AND EZ2 INTERPOLATION AND SEARCH STRATEGY
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

| Search Ellipse | X (ft) | 40 ft radius |
|               | Y (ft) | 40 ft radius |
|               | Z (ft) | 40 ft radius |

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Spherical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum samples per hole</td>
<td>10</td>
</tr>
<tr>
<td>Minimum samples per estimate</td>
<td>2</td>
</tr>
<tr>
<td>Maximum samples per estimate</td>
<td>10</td>
</tr>
</tbody>
</table>

Variography was not tried with the EZ1 dataset. Since a category model would not be created, there was no need for an analysis of grade continuity (see below).
Nevertheless, RPA recommends investigating the applicability of variography to the dataset, particularly after more holes have been drilled.

There is no apparent preferred spatial orientation to the uranium mineralization within the pipes. In addition, variography was not attempted, so there is no information on grade continuity criteria in the pipes. As a consequence, an omni-directional search ellipse strategy seems appropriate at this time (see comments on Grade Comparisons though).

**EZ1 BLOCK MODELLING**

RPA used Gemcom Software (version 6.1.4) to create its resource estimate. Energy Fuels created its resource estimate with Vulcan software.

RPA created a block model with the same dimensions as the one created by Energy Fuels. Each block is 5 ft by 5 ft by 5 ft with 2.5 ft by 2.5 ft by 2.5 ft sub-blocks. The model origin is at coordinates 944800 ft E., 2048200 ft N. and 4,500 ft elevation in the NAD 83 Arizona State Plane Coordinate System, West Zone. In the X and Y directions the model extends equally for 160 blocks (800 ft, or 244 m). In the Z direction (elevation), the model extends 340 blocks (1,700 ft, or 518 m).

Plan views through the EZ1 pipe block model are shown in Figures 14-4 to 14-6 (inclusive).

**EZ1 VOLUME COMPARISONS**

The solids supplied by Energy Fuels were cross-checked against the volumes of the block models (at zero grade) estimated by RPA. For EZ1, the total wireframe volume for all solids (five in total) is 1.3% higher than the accumulated block volumes. This difference in volumes is considered acceptable and it suggests that the volume accumulation routine in Gemcom is acceptable.

**EZ1 GRADE COMPARISONS**

The raw eU₃O₈ averages (uncapped) were checked against the averages for both the composites used during interpolation and the eU₃O₈ values populating the block models. For EZ1, the respective values are 0.40%, 0.39% and 0.41%. The slight increase in
block model averages suggests that the search strategy and interpolation method may need to be modified. For example, restrictive kriging may be useful.

**EZ1 CLASSIFICATION OF MINERAL RESOURCE**

The resource estimate at EZ1 is classified as Inferred. The following reasons are given:

- Inability to check the digital dataset with original drill logs and assay/gamma-log information.
- Absence of significant core drilling to corroborate the gamma-log results.
- Uncertainties about grade continuity due, principally, to drill hole spacing.
- Uncertainties about the QA/QC procedures at the time of data collection.
- Potential uncertainty in the spatial location of drill holes particularly below the 500 ft distance mark.
- Lack of documentation about mineral zonation and/or potential uranium remobilization.
- Uncertainties about the correlation between the gamma-log values and the chemical assays. In a previous study, RPA noted that the ‘equivalency’ between the assayed uranium content of the rock and the values obtained from gamma-logging do not always directly correlate.
- Uncertainty between the drill-indicated resource estimates and the actual mineable resource (again, this point was also made in a previous RPA study).
- Sample support is extremely low in some portions of the two pipes. Underground drilling is suggested to further define these satellite zones.
Grade Scale
\[ eU_3O_8 \]
- 0.00001 - 0.01000
- 0.01000 - 0.04000
- 0.04000 - 0.08000
- 0.08000 - 0.12000
- 0.12000 - 0.20000
- 0.20000 - 99.99000

Figure 14-4

Energy Fuels Inc.

**EZ1 and EZ2 Breccia Pipes**
*Arizona Strip District, U.S.A.*

Plan of the EZ1 Block Model at 4015 Elevation

Figure 14-5

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.

Plan of the EZ1 Block Model at 3810 Elevation

Energy Fuels Inc.

Grade Scale
$eU_3O_8$

- 0.00001 - 0.01000
- 0.01000 - 0.04000
- 0.04000 - 0.08000
- 0.08000 - 0.12000
- 0.12000 - 0.20000
- 0.20000 - 99.99000


June 2012
**EZ1 and EZ2 Breccia Pipes**

**Arizona Strip District, U.S.A.**

**Plan of the EZ1 Block Model at 3731 Elevation**

*Source: Denison Mines (U.S.A.) Corp., 2008.*
EZ2 DEPOSIT RESOURCE ESTIMATE

RESOURCE DATABASE AND VALIDATION

The EZ2 breccia pipe has been assessed and modelled in an identical manner to the EZ1 deposit. To avoid repetition, the following comments will focus on aspects that are unique to EZ2.

The EZ2 database was compiled and assessed in the same manner as the EZ1 dataset (Table 14-9). There are 47 drill holes in the database with a cumulative length of 76,018 ft (23,169 m). Two holes have no useful data (EZ2-010 and EZ2-034) and were not included in the resource estimate: these holes were abandoned during drilling at depths of 980 ft (299 m) and 288.5 ft (87.9 m), respectively. The average drill hole length of all holes used in the construction of the resource estimate is 1,617.7 ft (493.1 m).

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Number of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collar</td>
<td>47</td>
</tr>
<tr>
<td>Survey</td>
<td>39,481</td>
</tr>
<tr>
<td>Assays</td>
<td>91,650</td>
</tr>
<tr>
<td>Lithologies</td>
<td>193</td>
</tr>
</tbody>
</table>

As with the EZ1 database, there were unsampled intervals (25,268 in total for a cumulative footage of 12,634 ft) because the grade was below the gamma-logging tool’s cut-off level (no readings in the database). In addition, 67 values were flagged as -0.1 in the raw dataset indicating that they were unsampled; these were deleted from the database. Other database integrity checks were performed by RPA prior to running the resource estimate and one minor modification was made (the hole length for EZ2-034 was extended by 0.5 ft to match the downhole survey length).

Descriptive statistics for the EZ2 assay dataset are shown in Tables 14-10 (Energy Fuels) and 14-11 (RPA). RPA does not include zero grade values in the statistical treatment (this explains the variance between the two statistical summaries).
TABLE 14-10  RAW eU₃O₈ STATISTICS FOR EZ2 (ENERGY FUELS)
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Energy Fuels</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.013</td>
</tr>
<tr>
<td>Median</td>
<td>0.001</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.124</td>
</tr>
<tr>
<td>Variance</td>
<td>0.015</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000</td>
</tr>
<tr>
<td>Maximum</td>
<td>7.933</td>
</tr>
<tr>
<td>Count</td>
<td>91,650</td>
</tr>
</tbody>
</table>

TABLE 14-11  RAW eU₃O₈ STATISTICS FOR EZ2 (RPA)
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>RPA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.015</td>
</tr>
<tr>
<td>Median</td>
<td>0.002</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.133</td>
</tr>
<tr>
<td>Variance</td>
<td>0.018</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.001</td>
</tr>
<tr>
<td>Maximum</td>
<td>7.933</td>
</tr>
<tr>
<td>Count</td>
<td>91,583</td>
</tr>
</tbody>
</table>

It is RPA’s opinion that the database is suitable for a resource estimate of the EZ2 pipe.

CUT-OFF GRADE
EZ2 uses the same cut-off grade as EZ1 (0.2% eU₃O₈).

GEOLOGICAL INTERPRETATION AND 3D MODELLING
The procedures and practices used to create the EZ1 wireframes were also used to create the EZ2 geological solids. In total, 18 discrete wireframes were created by Energy Fuels (Figure 14-7). RPA estimated the individual tonnages of the EZ2 solids which range in size from four tons to 75,021 tons (for a total of 119,346 tons).

The Energy Fuels EZ2 wireframes were used without modification by RPA to constrain their check resource estimates. It is noted that RPA did not have access to the historic geological sections used to support Energy Fuels' wireframe interpretation.
EZ2 STATISTICS FOR SOLIDS

Each of the 18 solids in the EZ2 breccia pipe has been assigned a unique rock code. Table 14-12 displays the descriptive statistics for eU$_3$O$_8$ (uncapped) values within each solid. Rock code 210 is used for nine satellite solids.

**TABLE 14-12  DESCRIPTIVE STATISTICS (UNCAPPED VALUES) FOR EACH EZ2 SOLID**

<table>
<thead>
<tr>
<th>Rock Code</th>
<th>Lens Name</th>
<th>Average</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>Number of values</th>
</tr>
</thead>
<tbody>
<tr>
<td>210</td>
<td>2_SAT</td>
<td>0.393</td>
<td>0.000</td>
<td>2.946</td>
<td>0.499</td>
<td>0.250</td>
<td>128</td>
</tr>
<tr>
<td>215</td>
<td>2_COCO</td>
<td>0.202</td>
<td>0.096</td>
<td>0.564</td>
<td>0.114</td>
<td>0.013</td>
<td>24</td>
</tr>
<tr>
<td>220</td>
<td>2_RING_2</td>
<td>0.201</td>
<td>0.106</td>
<td>0.519</td>
<td>0.095</td>
<td>0.009</td>
<td>22</td>
</tr>
<tr>
<td>230</td>
<td>2_RING_1</td>
<td>0.253</td>
<td>0.021</td>
<td>1.754</td>
<td>0.334</td>
<td>0.112</td>
<td>57</td>
</tr>
<tr>
<td>240</td>
<td>2_L_MAIN</td>
<td>0.667</td>
<td>0.000</td>
<td>7.933</td>
<td>1.218</td>
<td>1.483</td>
<td>401</td>
</tr>
<tr>
<td>250</td>
<td>2_L_SUB</td>
<td>0.187</td>
<td>0.018</td>
<td>0.399</td>
<td>0.113</td>
<td>0.013</td>
<td>19</td>
</tr>
<tr>
<td>260</td>
<td>2_M_MAIN</td>
<td>0.392</td>
<td>0.000</td>
<td>3.821</td>
<td>0.624</td>
<td>0.389</td>
<td>268</td>
</tr>
<tr>
<td>270</td>
<td>2_M_SUB</td>
<td>0.161</td>
<td>0.000</td>
<td>1.542</td>
<td>0.215</td>
<td>0.046</td>
<td>176</td>
</tr>
<tr>
<td>280</td>
<td>2_U_MAIN</td>
<td>0.326</td>
<td>0.000</td>
<td>4.551</td>
<td>0.487</td>
<td>0.237</td>
<td>1003</td>
</tr>
<tr>
<td>290</td>
<td>2_U_SAT</td>
<td>0.243</td>
<td>0.127</td>
<td>0.534</td>
<td>0.083</td>
<td>0.007</td>
<td>31</td>
</tr>
</tbody>
</table>

The two largest solids have the highest number of values and the highest maximum values. RPA notes that the average for rock code 280 (with 1,003 values) is lower than the average for some of the other lenses which may suggest that a few high values are contributing to the average grade of the smaller lenses.
All ringed ones are Satellite 1 to 9

Energy Fuels Inc.
EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.
Interpreted EZ2
Gradeshell Wireframes


June 2012
EZ2 CAPPING

Figure 14-8 is a cumulative frequency plot of the raw $\text{eU}_3\text{O}_8$ values in the EZ2 dataset (values greater than 0.1%). A few high value outliers create a positively skewed distribution, although the effects of these outliers can be mitigated by capping them at a specific grade level. Capping levels of 7% $\text{eU}_3\text{O}_8$ were used by RPA (see the population break in Figure 14-8), although Energy Fuels used a 5% $\text{eU}_3\text{O}_8$ capping level. Energy Fuels’ capping level set back nine values to 5% $\text{eU}_3\text{O}_8$, while the RPA’s capping set back five values. Table 14-13 shows the descriptive statistics for the capped datasets used by Energy Fuels and RPA.

RPA recommends further investigation of the capping levels when additional data are available.

TABLE 14-13  DESCRIPTIVE STATISTICS OF CAPPED $\text{eU}_3\text{O}_8$ VALUES FOR EZ2

<table>
<thead>
<tr>
<th>Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Fuels</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Median</td>
</tr>
<tr>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Variance</td>
</tr>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>Count</td>
</tr>
</tbody>
</table>

| RPA                                           |
| Mean                                          | 0.018 |
| Median                                        | 0.002 |
| Standard Deviation                            | 0.144 |
| Variance                                      | 0.021 |
| Minimum                                       | 0.001 |
| Maximum                                       | 7.00  |
| Count                                         | 66,315 |
EZ2 eU3O8 GT 0.1

Energy Fuels Inc.

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.

Ez2 Cummulative Distribution Plot of Raw Grades Above 0.1% eU3O8

Figure 14-8

COMPOSITING
All of the eU₃O₈ gamma-log data were recorded in 0.5 ft sample lengths. The data were composited to 2 ft run-length intervals prior to running in the estimate. Table 14-14 shows the descriptive statistics for the composites created for the EZ2 wireframes. The statistics are the same for both Energy Fuels and RPA.

TABLE 14-14  DESCRIPTIVE STATISTICS OF COMPOSITE eU₃O₈ VALUES FOR EZ2
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Energy Fuels/RPA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.373</td>
</tr>
<tr>
<td>Median</td>
<td>0.193</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.635</td>
</tr>
<tr>
<td>Coefficient of Variation</td>
<td>1.703</td>
</tr>
<tr>
<td>Variance</td>
<td>0.403</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.002</td>
</tr>
<tr>
<td>Maximum</td>
<td>7.067</td>
</tr>
<tr>
<td>Count</td>
<td>551</td>
</tr>
</tbody>
</table>

DENSITY
EZ2 uses the same density as EZ1.

INVERSE DISTANCE PARAMETERS
EZ2 used the same parameters as EZ1.

BLOCK MODELLING
RPA created a block model for EZ2 with the same dimensions as the one created by Energy Fuels. Each block is 5 ft by 5 ft by 5 ft with 2.5 ft by 2.5 ft by 2.5 ft sub-blocks. The model origin is at coordinates 940500 ft E., 2049500 ft N. and 4,300 ft elevation in the NAD 83 Arizona State Plane Coordinate System, West Zone. In the X and Y directions, the model extends equally for 160 blocks (800 ft, or 244 m). In the Z direction (elevation), the model extends 220 blocks (1,700 ft, or 518 m).

Plan views through the EZ2 pipe block model are shown in Figures 14-9 to 14-11 (inclusive).
EZ2 VOLUME COMPARISONS
The solids supplied by Energy Fuels were cross-checked against the volumes of the block models (at zero grade) estimated by RPA. For EZ2, the total wireframe volume for all solids (18 in total) is 0.02% higher than the accumulated block volumes. This difference in volumes is considered acceptable and it suggests that the volume accumulation routine in Gemcom is acceptable.

EZ2 GRADE COMPARISONS
The raw eU₃O₈ averages (uncapped) were checked against the averages for both the composites used during interpolation and the eU₃O₈ values populating the block models. For EZ2, the respective values are 0.384%, 0.387% and 0.418%. The slight increase in block model averages suggests grade smearing during the interpolation and RPA suggests that the search strategy and interpolation method may need to be modified. For example, restrictive kriging may be useful (but this will require variography).

EZ2 CLASSIFICATION OF MINERAL RESOURCE
EZ2 is also classified as an Inferred Resource. The reasons given for EZ1 also apply to EZ2.

EZ1 AND EZ2 MINERAL RESOURCE VALIDATION
RPA validated both block models using the following techniques: visual inspection, volume comparisons (already discussed), and cross-checks with the Nearest Neighbour method.

A visual comparison was made between the 2 ft composite values and the interpolated block values (Figure 14-12). No issues were found.

For the ID²/NN check, the total number of pounds of eU₃O₈ is compared (Tables 14-15 and 14-16). In both deposits, the number of contained pounds of eU₃O₈ is higher using the ID² interpolation. In particular, EZ1 is 6.5% higher while EZ2 is 14% higher.
TABLE 14-15  INFERRED MINERAL RESOURCES: ID$^2$
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Deposit</th>
<th>Tons</th>
<th>Grade $\text{eU}_3\text{O}_8$ (%)</th>
<th>Contained $\text{U}_3\text{O}_8$ (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ1</td>
<td>110,500</td>
<td>0.51</td>
<td>1,127,000</td>
</tr>
<tr>
<td>EZ2</td>
<td>113,700</td>
<td>0.43</td>
<td>978,000</td>
</tr>
</tbody>
</table>

Notes:
1. Mineral resources were classified in accordance with CIM Definition Standards.
2. Cut-off grade is 0.2% $\text{eU}_3\text{O}_8$.
3. Mineral resources have not been demonstrated to be economically viable.
4. Grades were converted from gamma-log data and are therefore equivalent $\text{U}_3\text{O}_8$ ($\text{eU}_3\text{O}_8$).
5. Grade shell wireframes at 0.2% $\text{eU}_3\text{O}_8$ were used to constrain the grade interpolation.
6. All material within the wireframes was included in the estimate.
7. Wireframes were constructed with a minimum drill hole sample length of 6 ft.
8. High grades for EZ1 were cut to 10% (Energy Fuels).
9. High grades for EZ2 were cut to 5% (Energy Fuels).

TABLE 14-16  NEAREST NEIGHBOUR CHECK ESTIMATE
Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Deposit</th>
<th>Tons</th>
<th>Grade $\text{eU}_3\text{O}_8$ (%)</th>
<th>Contained $\text{U}_3\text{O}_8$ (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ1</td>
<td>55,800</td>
<td>0.95</td>
<td>1,060,200</td>
</tr>
<tr>
<td>EZ2</td>
<td>59,300</td>
<td>0.71</td>
<td>842,000</td>
</tr>
</tbody>
</table>

The differences between the ID$^2$ and NN results are a minor issue for an Inferred Resource estimate. However, RPA suggests that the interpolation method be re-examined when more data are available.
Figure 14-9

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.
Plan of the EZ2 Block Model at 4150 Elevation

Energy Fuels Inc.

Grade Scale
\( eU_3O_8 \)

- 0.00001 - 0.01000
- 0.01000 - 0.04000
- 0.04000 - 0.08000
- 0.08000 - 0.12000
- 0.12000 - 0.20000
- 0.20000 - 99.99000

June 2012

Figure 14-10

Energy Fuels Inc.

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.
Plan of the EZ2 Block Model at 4130 Elevation

June 2012

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.

Plan of the EZ2 Block Model at 4065 Elevation

Grade Scale
$eU_3O_8$

- 0.00001 - 0.01000
- 0.01000 - 0.04000
- 0.04000 - 0.08000
- 0.08000 - 0.12000
- 0.12000 - 0.20000
- 0.20000 - 99.99000

June 2012
Comparison of Composites Against Block Model Values

Figure 14-12

Energy Fuels Inc.

EZ1 and EZ2 Breccia Pipes
Arizona Strip District, U.S.A.


June 2012
15 MINERAL RESERVE ESTIMATE

There are currently no Mineral Reserve estimates for the EZ1 or EZ2 Breccia Pipes.
16 MINING METHODS

The conceptual mine plan for the EZ1 and EZ2 Complex is based on accessing the two pipes from a single shaft located between them. The pipes will be reached by horizontal tunnels at or below the lower reaches of the mineralized sections. The common surface facility will be the main shaft, working space for waste piles, stockpiles, water impoundments, and all buildings and related infrastructure.

The use of a single shaft will provide more rapid access to a large volume of potentially economic mineralization and will also reduce the overall capital development expenditures when compared with the development of two shafts. Utilizing a single shaft and three ventilation shafts will minimize the surface impacts. This will be more favourable for permitting considerations.

By developing both breccia pipes simultaneously, multiple working areas will be available which will allow increased operational flexibility and sustainable production. All potentially economic mineralization will be hoisted up the main shaft where it will be loaded into haulage trucks and transported to the White Mesa mill in secured, over-the-road trucks. The haulage distance from the EZ1 and EZ2 pipes to the White Mesa mill is approximately 310 miles.

Mining will employ the same methods currently in use at Energy Fuels’ active and planned breccia pipes. It is anticipated that the bulk of the mineralization will be extracted using blasthole slot mining.
17 RECOVERY METHODS

Processing of any mineralized material from either breccia pipe is expected to take place at Energy Fuels’ White Mesa mill near Blanding, Utah. The basic mill process is a sulphuric acid leach with solvent extraction recovery of uranium and vanadium. In general, the mill operates on a campaign basis in order to stockpile sufficient material for processing.

Historical operating costs for the White Mesa mill are listed in Pool and Ross (2007) and they are shown here only to indicate the general ranges of costs for mining, haulage and milling (Table 17-1). Note that these numbers are well below the values used for the current resource estimate cut-off grade (see section 14).

<table>
<thead>
<tr>
<th>Operation name</th>
<th>Mining ($/ton)</th>
<th>Haulage ($/ton)</th>
<th>Milling ($/ton)</th>
<th>Total ($/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canyon (1984)</td>
<td>38.85</td>
<td>22.00</td>
<td>43.00</td>
<td>103.85</td>
</tr>
<tr>
<td>Arizona 1 (1993)</td>
<td>34.28</td>
<td>25.17</td>
<td>53.24</td>
<td>112.69</td>
</tr>
<tr>
<td>Pinenut (1996)</td>
<td>39.72</td>
<td>34.87</td>
<td>41.36</td>
<td>115.95</td>
</tr>
</tbody>
</table>
18 PROJECT INFRASTRUCTURE

This section is not applicable.
19 MARKET STUDIES AND CONTRACTS

MARKETS

Uranium market prices have rebounded from lows of $10.00 per pound in the mid-1990s to recent values around $50 per pound (July 2012). Some of the factors influencing the uranium price are:

- A weak US dollar compared to the currencies of the producer nations
- Disruptions in the uranium supply chain
- Reduced commercial uranium inventories
- Russia’s withdrawal from the uranium concentrates market
- Increased demand for uranium
- Market speculation

Fundamentally, the outlook for uranium has improved since 2000 due to factors such as:

- Global warming concerns from fossil fuel use
- Improved safety records
- Increasing efficiencies
- Competitive costs
- Continuing new reactor installations

Although negatively impacted by the Japanese earthquake and tsunami in March 2011, the uranium market has held the $50/lb level since the disaster. The restart of two Japanese reactors with more expected to start over the summer, along with the end of the Russian HEU agreement in 2012 all contribute to strong market fundamentals.

It is now apparent that the market for uranium has moved from one driven by excess secondary supplies to one driven by primary production. The latest global uranium requirements estimate by the World Nuclear Association (September 2011) show Reference Case projections of 177 million pounds U₃O₈ in 2012 to approximately 226 million pounds U₃O₈ in 2020.
20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

Mine development of uranium-bearing breccia pipes of the Arizona Strip requires a minimum of surface disturbance, typically less than 20 acres (8.1 ha), and has little if any impact on groundwater since most of the mines are relatively dry. The overall environmental impact is small. Nevertheless, the Grand Canyon area is environmentally sensitive in many ways and the permitting, development, and operation of uranium mines will be a contentious issue.

The proposed EZ surface disturbance is slightly larger than 20 acres (8.1 ha) (but less than 40 acres (16.2 ha) as proposed). This is based on the fact that two breccia pipes may be accessed from the same surface facility. A series of permits and approvals will need to be obtained from the Department of the Interior Bureau of Land Management (BLM), the Arizona Department of Environmental Quality (ADEQ), Mohave County, and other agencies.

The extraction of uranium from BLM unpatented mining claims is in accordance and compliance with applicable BLM regulations (Federal Mining Law at 43 CFR subpart 3809, Surface Management Program) and ADEQ rules and regulations. Energy Fuels is proposing this project to allow for the development and production of uranium in accordance with the BLM multiple-use mandate and the goals and objectives of the President’s Natural Energy Plan. An Aquifer Protection Permit and Air Quality Permit are required from ADEQ. All permit applications were being prepared by Denison, and Energy Fuels will continue this process.
21 CAPITAL AND OPERATING COSTS

This section is not applicable.
This section is not applicable.
23 ADJACENT PROPERTIES

EFNI developed and mined several breccia pipe deposits in the Arizona Strip between 1980 and 1991. These pipes (Hack 1, Hack 2, Hack 3, Pigeon and Hermit) were subsequently reclaimed. Production from these pipes is summarized in Table 23-1.

**TABLE 23-1 ENERGY FUELS PRODUCTION SUMMARY – OTHER BRECCIA PIPES**

Energy Fuels Inc. – EZ1 and EZ2 Breccia Pipes

<table>
<thead>
<tr>
<th>Pipe</th>
<th>Tons of Ore</th>
<th>Average Grade (% U₃O₈)</th>
<th>Pounds U₃O₈</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hack 1</td>
<td>133,822</td>
<td>0.53</td>
<td>1,419,623</td>
</tr>
<tr>
<td>Hack 2</td>
<td>497,099</td>
<td>0.70</td>
<td>7,000,273</td>
</tr>
<tr>
<td>Hack 3</td>
<td>111,263</td>
<td>0.50</td>
<td>1,121,748</td>
</tr>
<tr>
<td>Pigeon</td>
<td>439,359</td>
<td>0.65</td>
<td>5,702,570</td>
</tr>
<tr>
<td>Hermit</td>
<td>36,339</td>
<td>0.76</td>
<td>552,449</td>
</tr>
</tbody>
</table>

The information on historical production provided above is not necessarily indicative of mineralization EZ1 and EZ2 pipes discussed in this report.
24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.
25 INTERPRETATION AND CONCLUSIONS

GENERAL COMMENTS
Energy Fuels’ EZ1 and EZ2 breccia pipes have been drill-tested by 34 and 47 holes, respectively. Uranium values within the holes were recorded using a gamma-logging tool and the interpreted geological solid boundaries are defined using a 0.2% eU₃O₈ cut-off grade. Mineralization is encountered about 1,150 ft (350 m) to 1,500 ft (450 m) below surface. At these depths, the position of the drill holes is uncertain without using improved downhole survey techniques. This affects the position of the samples (values) and the consequent interpretation of the solids. These issues, amongst others, reduce the confidence level of the grade continuity so that all of the resources at EZ1 and EZ2 Complex are classified as Inferred. Additional drilling would upgrade parts of the resource to the Indicated category.

ADEQUACY OF PROCEDURES
RPA has reviewed the methods and procedures to collect and compile geological, geotechnical, and assaying information for the EZ1 and EZ2 pipes and found them reasonable and meeting generally accepted industry standards for an exploration property.

ADEQUACY OF DATA
In RPA’s opinion the various companies involved with data gathering at the EZ1 and EZ2 pipes have conducted exploration sampling and analysis programs using standard practices, providing generally reasonable results. RPA believes that the resulting data can effectively be used in the subsequent estimation of resources.

COMPLIANCE WITH CANADIAN NI 43-101 STANDARDS
In RPA’s opinion the current drill hole database is sufficient for generating a resource model for use in resource estimation.

At a 0.2% eU₃O₈ cut-off grade, the Inferred Resources are 110,500 tons at an eU₃O₈ grade of 0.51% for EZ1 and 113,700 tons at an eU₃O₈ grade of 0.43% for EZ2.

RPA is of the opinion that the resource estimates have been created utilizing acceptable methodologies. RPA is also of the opinion that the classification of Inferred Resources,
stated in Table 25-1, meets the definitions as stated by Canadian NI 43-101 Standards of Disclosure for Mineral Projects.

<table>
<thead>
<tr>
<th>Deposit</th>
<th>Tons</th>
<th>Grade eU₃O₈ (%)</th>
<th>Contained U₃O₈ (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ1</td>
<td>110,500</td>
<td>0.51</td>
<td>1,127,000</td>
</tr>
<tr>
<td>EZ2</td>
<td>113,700</td>
<td>0.43</td>
<td>978,000</td>
</tr>
</tbody>
</table>

Notes:
1. Mineral resources were classified in accordance with CIM Definition Standards.
2. Cut-off grade is 0.2% eU₃O₈.
3. Mineral resources have not been demonstrated to be economically viable.
4. Grades were converted from gamma-log data and are therefore equivalent U₃O₈ (eU₃O₈).
5. Grade shell wireframes at 0.2% eU₃O₈ were used to constrain the grade interpolation.
6. All material within the wireframes was included in the estimate.
7. Wireframes were constructed with a minimum drill hole sample length of 6 ft.
8. High grades for EZ1 were cut to 10%.
9. High grades for EZ2 were cut to 5%.
26 RECOMMENDATIONS

RPA recommends that Energy Fuels:

- Initiate a Preliminary Economic Assessment (PEA) to establish baseline economics and a mine design. No additional drilling or metallurgical testing studies are required for the (PEA). The study should include cost estimates for surface and underground facilities, shaft sinking and drifting, definition drilling, and operating costs.

- Continue the permitting process. The primary permits required to develop EZ1 and EZ2 deposits include: Bureau of Land Management Plan of Operations, Arizona Department of Environmental Quality Aquifer Protection Permit, and Air Approval Order. These major permits define project operations and closure requirements. Minor permits include: Septic System, Stormwater Permit, and Utility Corridor Right of Way.

- Collect hole deviation data on any open holes to verify historic downhole orientation data.

- Test the use of restrictive kriging to minimize grade smearing during the interpolation.

BUDGET

RPA recommends the following budget to address the points listed above:

<table>
<thead>
<tr>
<th>Item</th>
<th>US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scoping Studies (PEA, site investigations, etc.)</td>
<td>350,000</td>
</tr>
<tr>
<td>Permitting Costs (air, water, road, right-of-way etc.)</td>
<td>435,000</td>
</tr>
<tr>
<td>Personnel Costs (Mining Engineer, Geologist, CAD Technician)</td>
<td>300,000</td>
</tr>
<tr>
<td>Subtotal</td>
<td>1,085,000</td>
</tr>
<tr>
<td>Contingency</td>
<td>100,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,185,000</strong></td>
</tr>
</tbody>
</table>

Depending on the conclusions and recommendations of the PEA and subsequent studies, Energy Fuels plans underground drilling after shaft sinking and initial access to the mineralization. In addition to the definition drilling for detailed mine planning, RPA recommends that Energy Fuels:
• Improve the calibration factors between the gamma-logging tool values and the chemical assay values. According to Pool and Ross (2007) the gamma-logging tool may either overstate or understate the chemical assay value.

• Collect core samples of mineralization for chemical analyses and metallurgical testing.

• Try to quantify uranium remobilization and mineral zonation.

Assess the significance of the smaller satellite zones and upgrade through drilling or eliminate them from the resource estimates.
27 REFERENCES


This report titled “Technical Report on the EZ1 and EZ2 Breccia Pipes, Arizona Strip District, U.S.A.” and dated June 27, 2012, was prepared and signed by the following authors:

(Signed & Sealed) “Christopher Moreton”

Dated at Toronto, Ontario
June 27, 2012
Christopher Moreton, Ph.D., P.Geo.
Senior Consulting Geologist

(Signed & Sealed) “David A. Ross”

Dated at Toronto, Ontario
June 27, 2012
David Ross, M.Sc., P.Geo.
Principal Geologist
29 CERTIFICATE OF QUALIFIED PERSON

CHRISTOPHER MORETON


1. I am Senior Consulting Geologist with Scott Wilson Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

2. I am a graduate of the University of Southampton in 1981 with a B.Sc. degree in Geology, Memorial University of Newfoundland in 1984 with a M.Sc. degree in Earth Sciences and the University of New Brunswick in 1994 with a Ph.D. degree in Geology.

3. I am registered as a Professional Geologist in the province of Ontario (Reg. #1229) and New Brunswick (Reg. #M5484). I have worked as a geologist for more than 20 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Review and report as a consultant on numerous exploration and mining projects for due diligence and regulatory requirements
   - Extensive experience with exploration-stage base and precious metal mineral projects in Canada and worldwide
   - Gemcom resource modelling expertise

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I have not visited the project.

6. I am responsible for preparation of Sections 1 to 13 and 19, 20, and 23 to 26 and collaborated with my co-author on Section 14 of the Technical Report.


8. I have previously prepared a Technical Report on the EZ1 and EZ2 Breccia Pipes Complex for Denison Mines Corp., dated June 24, 2009, and filed on SEDAR.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 27th day of June, 2012

(Signed & Sealed) “Christopher Moreton”

Christopher Moreton, Ph.D., P.Geo
DAVID A. ROSS


1. I am a Principal Geologist with Scott Wilson Roscoe Postle Associates Inc. of Suite 501, 55 University Ave., Toronto, ON, M5J 2H7.

2. I am a graduate of Carleton University, Ottawa, Canada, in 1993 with a Bachelor of Science degree in Geology and Queen’s University, Kingston, Ontario, Canada, in 1999 with a Master of Science degree in Mineral Exploration.

3. I am registered as a Professional Geologist in the Province of Ontario (Reg.#1192). I have worked as a geologist for a total of 15 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   • Review and report as a consultant on numerous mining and exploration projects around the world for due diligence and regulatory requirements
   • Exploration geologist on a variety of gold and base metal projects in Canada, Indonesia, Chile, and Mongolia.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI43-101.

5. I visited the EZ1 and EZ2 Breccia Pipes property on July 1, 2008.


8. I have previously prepared a Technical Report on the EZ1 and EZ2 Breccia Pipes Complex for Denison Mines Corp., dated June 24, 2009, and filed on SEDAR.


10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 27th day of June, 2012

(Signed & Sealed) “David A. Ross”

David A. Ross, M.Sc., P.Geo