Technical Report on the Pinyon Plain Project, Coconino County, Arizona, USA

Energy Fuels Inc.

SLR Project No: 138.02544.00002

February 22, 2022

Technical Report on the Pinyon Plain Project, Coconino County, Arizona, USA

SLR Project No: 138.02544.00002

Prepared by
SLR International Corporation
1658 Cole Blvd, Suite 100
Lakewood, CO 80401
USA

for

Energy Fuels Inc.
225 Union Blvd., Suite 600
Lakewood, CO 80228
USA

Effective Date - December 31, 2021
Signature Date - February 22, 2022

Qualified Person
Mark B. Mathisen, C.P.G.

FINAL

Distribution: 1 copy - Energy Fuels Inc.
1 copy - SLR International Corporation

CONTENTS

TABLES

FIGURES

1.0 SUMMARY

1.1 Executive Summary

This Independent Technical Report (Technical Report) was prepared by Mark B. Mathisen, C.P.G., of SLR International Corporation (SLR), for Energy Fuels Inc. (Energy Fuels), the parent company of Energy Fuels Resources (USA) Inc. (EFR), with respect to the Pinyon Plain Project (Pinyon Plain or the Project), located in Coconino County, Arizona, USA. The purpose of this report is to disclose the current Mineral Resource estimate.

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

This Technical Report satisfies the requirements of Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601 (b)(96) Technical Report Summary. Mark B. Mathisen is a Qualified Person (QP) within the meaning of both S-K 1300 and NI 43-101 (SLR QP). The SLR QP visited the Project on November 16, 2021.

The Project is a uranium and copper breccia pipe deposit in northern Arizona. The Project was originally included as part of the Arizona Strip Uranium Project. The Arizona Strip Uranium Project was located in the Arizona Strip District, a mining district located in northwestern Arizona, and contained three deposits: the Pinenut Mine, the Arizona 1 Mine, and the Project (formerly known as the Pinyon Plain pipe). The Pinenut and Arizona 1 breccia pipes are located between the town of Fredonia, Arizona, and the Grand Canyon National Park. The Pinenut Mine was mined-out in 2015 and is currently being reclaimed. The Arizona 1 Mine is currently on standby. The Project is located south of the Grand Canyon National Park, and is the only deposit documented in this Technical Report. It has been considered separate from the Arizona Strip Uranium Project since 2017.

EFR acquired the Project in 2012, through its acquisition of Denison Mines Corporation's (Denison) US assets. At that time the Project was permitted and contained a headframe, hoist, and compressor, and a shaft to a depth of 50 ft. EFR refurbished the surface facilities and extended the shaft an additional 228 ft to a depth of 278 ft. In late 2013, the Project was placed on standby due to low uranium prices. In October 2015, EFR re-started the Project and committed to completing the shaft and underground delineation drilling program. From October 2015 to March 2017, the shaft was sunk to a depth of 1,452 ft, and three development levels were started at the 1,003 ft, 1,220 ft, and 1,400 ft depths, all of which have functioned as drill stations. The final depth for the shaft is 1,470 ft.

The Project is currently on standby while continuing environmental compliance activities with all infrastructure in place needed to restart operations. EFR envisages this an underground operation in which the mineralized material will be processed at EFR's White Mesa Mill (the Mill), 320 miles away in Blanding, Utah. The Mill is on a reduced operating schedule while processing materials as they become available.

The Project was previously referred to as the Canyon Mine, however, in November of 2020 EFR changed the project name to Pinyon Plain because the former name was not descriptive of the location of the Project and had resulted in misleading information and confusion among members of the public, with many people mistakenly assuming the Project is in the Grand Canyon or within the National Park itself.

A Mineral Resource estimate for the Project, based on 130 diamond drillholes totalling 79,775 ft, was completed by EFR, and audited by the SLR QP. Table 1-1 summarizes Mineral Resources based on a $65/lb uranium price at an equivalent uranium cut-off grade of 0.40% U_3O_8 for zones containing copper (the Main Zones) and 0.30% U_3O_8 for the Juniper and Upper zones. The effective date of the Mineral Resource estimate is December 31, 2021.

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

Table 1-1: Summary of Attributable Mineral Resources - Effective Date December 31, 2021
Energy Fuels Inc. - Pinyon Plain Project

Classification	Zone	COG (% U_3O_8 Eqv)	Tonnage (tons)	Grade (% eU_3O_8)	Contained Metal (lbs U_3O_8)	Recovery U_3O_8 (%)	Grade (% Cu)	Contained Metal (lbs Cu)	Recovery Cu (%)
				Main Zone					
Measured	Main	0.40	6,000	0.46	55,000	96	9.60	1,155,000	90
Indicated	Main	0.40	90,000	0.92	1,644,000	96	5.89	10,553,000	90
Total Measured + Indicated			**96,000**	**0.88**	**1,699,000**	**96**	**6.10**	**11,708,000**	**90**
Inferred	Main	0.40	-	-	-	-	-	-	-
	Main-Lower	0.40	4,000	0.22	16,000	96	6.50	470,000	90
Total Inferred			**4,000**	**0.20**	**16,000**	**96**	**5.88**	**470,000**	**90**
				Juniper					
Indicated	**Juniper I**	**0.30**	**37,000**	**0.95**	**703,000**	**96**	**-**	**-**	**-**
Inferred	Juniper I	0.30	2,000	0.58	24,000	96	-	-	-
	Juniper II	0.30	1,000	0.36	8,000	96	-	-	-
Total Inferred			**3,000**	**0.53**	**32,000**	**96**	**-**	**-**	**-**
				Upper Zones					
Inferred	Cap	0.30	300	0.33	2,000	96	-	-	-
	Upper	0.30	9,000	0.44	76,000	96	-	-	-
Total Inferred			**9,300**	**0.42**	**78,000**	**96**	**-**	**-**	**-**

Notes:

1. SEC S-K 1300 definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.
2. Mineral Resources are estimated at an equivalent uranium cut-off grade of 0.40% U_3O_8 for copper bearing zone and 0.30% U_3O_8 for non-copper bearing zones, with estimated recoveries of 96% for uranium and 90% for copper.
3. Mineral Resources are estimated using a long-term uranium price of US$65 per pound, and copper price of US$4.00 per pound.

4. A copper to U_3O_8 conversion factor of 18.19 was used for converting copper grades to equivalent U_3O_8 grades (% U_3O_8 Eqv) for cut-off grade evaluation and reporting.
5. No minimum mining width was used in determining Mineral Resources.
6. Bulk density is 0.082 ton/ft^3 (12.2 ft^3/ton or 2.63 t/m^3).
7. Mineral Resources are exclusive of Mineral Reserves and do not have demonstrated economic viability.
8. Numbers may not add due to rounding.
9. Tonnages of uranium and copper cannot be added as they overlap in the Main and Main Lower Zone.
10. Mineral Resources are 100% attributable to EFR and are in situ.

1.1.1 Conclusions

The SLR QP offers the following conclusions on the Project.

1.1.1.1 Geology and Mineral Resources

- The effective date of the Mineral Resource estimate is December 31, 2021. Estimated block model uranium grades are based on chemical assay and radiometric probe grades
- Mineral Resources are based on a $65/lb uranium price at a uranium cut-off grade of 0.31% based on a combination of long-hole stoping, shrinkage stoping, and drift and fill underground mining methods with trucking mineralized material from the Project 320 miles to Energy Fuels' White Mesa Mill located near Blanding, Utah.
- Measured Resources total 6,000 ton at an average grade of 0.46% eU_3O_8 for a total of 55,000 lb U_3O_8. Indicated Resources total 127,000 ton at an average grade of 0.92% eU_3O_8 for a total of 2,347,000 lb U_3O_8. Inferred Resources total 16,300 ton at an average grade of 0.39% eU_3O_8 for a total of 126,000 lb U_3O_8.
- Sampling and assaying procedures have been adequately completed and carried out using industry standard quality assurance/quality control (QA/QC) practices. These practices include, but are not limited to, sampling, assaying, chain of custody of the samples, sample storage, use of third-party laboratories, standards, blanks, and duplicates.
- The SLR QP considers the estimation procedures employed at Pinyon Plain, including compositing, top-cutting, variography, block model construction, and interpolation to be reasonable and in line with industry standard practice.
- The SLR QP finds the classification criteria to be reasonable.
- In the SLR QP's opinion, the assumptions, parameters, and methodology used for the Pinyon Plain Mineral Resource estimate is appropriate for the style of mineralization and mining methods.

1.1.2 Recommendations

The SLR QP makes the following recommendations regarding the Project based on EFR's construction and development plans to start operations at the Pinyon Plain mine (focused on the Main Zone only). The two-phase programs are independent of each other and advancing to Phase 2 is not contingent on positive results of the Phase 1 program.

1.1.2.1 Phase 1: Determine Work Plans and Completed Engineering Designs

1. Review the condition of existing surface and underground infrastructure and develop engineering drawings, as needed
2. Develop mine plans

3. Determine underground labor and equipment requirements and develop contracts
4. Construct surface ore pad

The SLR QP estimates the cost of the Phase 1 work will range from $4.2 million to $4.8 million dollars.

1.1.2.2 Phase 2: Underground Mine Development

1. Construct underground infrastructure to include loading pockets, cages, and loading buckets
2. Develop mine access from shaft stations, including spiral ramp, mine levels, ore passes and sumps
3. Develop ventilation/secondary egress borehole
4. Install mine ventilation and pumping plans

The SLR QP estimates the cost of the Phase 2 work will range from $8.8 million to $9.2 million dollars.

In addition to the two-phase program for resuming mining operations, the SLR QP makes the following recommendations regarding the QA/QC data supporting the drillhole database at the Project. The following recommendations are independent of the engineering and mine development work and are provided for any future exploration or delineation drilling programs:

1. Submit field duplicates using two split core samples at a rate of one in 50.
2. Continue to monitor for low-grade bias of copper and slight low-grade bias of U_3O_8 at White Mesa Mill.
3. Continue to monitor for temporal trends (change in average grade of Certified Reference Material (CRM) data over time) observed at White Mesa Mill to ensure assay accuracy.
4. Procure CRM made from the Project resource material (matrix matched), to obtain an improved understanding of laboratory performance as applied to Project samples.
5. Source three matrix-matched or matrix-similar CRMs for U_3O_8 that represent low, medium, and high grade ore at the Project. Incorporate the CRMs in the sample stream sent to White Mesa Mill at a rate of one in 25. Ensure the certified values of these CRMs are blind to the laboratory. In addition, submit these CRMs to independent laboratories with check assays at a rate of one in 10 to obtain a meaningful sample size for analysis.
6. Implement a duplicate assay protocol for field, coarse and pulp samples that is blind to the laboratory, and that the rates of insertion for duplicate samples be approximately one in 50 for field duplicates, and one in 25 for coarse and pulp duplicate samples.
7. Continue to work to smooth the connection of the uranium wireframes between sections in future updates.
8. Explore the use of dynamic anisotropy for the interpolation of uranium mineralization within the Main Zone in future updates, where copper mineralization follows the contact of the breccia pipe with the country rock.
9. The SLR QP recommends that future updates to the copper mineralization include some marginal material where appropriate to increase the continuity and volume of the wireframes, particularly the high grade copper wireframe.

1.2 Technical Summary

1.2.1 Property Description and Location

The Project is a fully permitted underground uranium and copper deposit in northern Arizona, located on a 17-acre site within the Kaibab National Forest. It is situated 153 mi north of Phoenix, 86 mi northwest of Flagstaff, and seven miles southeast of Tusayan, in Sections 19 and 20, Township 29 North, Range 03 East, Gila and Salt River Meridian (GSRM), Coconino County, Arizona.

Access to the Project site is via State Highway 64 and Federal Highway 180 to within five miles of the project site, then over unsurfaced public U.S. Forest Service (USFS) roads. The Atchison, Topeka and Santa Fe railway line passes east-west 50 mi south of the site at Williams, and a spur of the railway, which passes 10 mi west of the Project site, services the Grand Canyon National Park. Airports at Flagstaff, Phoenix, and Tusayan provide air access to the area.

Material mined at Pinyon Plain will be transported 320 mi on paved roads to EFR's White Mesa Mill in Blanding, Utah, for processing.

The climate in northern Arizona is semi-arid, with cold winters and hot summers. January temperatures range from approximately 7°F to 57°F and July temperatures range from 52°F to 97°F. Annual precipitation, mostly in the form of rain but with some snow, is about 12 in.

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 Project is located on the Coconino Plateau within the Colorado Plateau, at an elevation of approximately 6,500 feet above sea level (ft ASL).

Although the Coconino Plateau is sparsely populated, tourist traffic to Grand Canyon National Park results in large numbers of people passing through the region daily. Personnel for future mining operations are expected to be sourced from the nearby towns of Williams and Flagstaff, Arizona (50 miles and 70 miles, respectively), as well as other underground mining districts in the western United States.

1.2.2 Land Tenure

EFR's property position at the Project consists of nine unpatented mining claims (Canyon 64-66, 74-76, and 84-86), located on USFS land, encompassing approximately 186 acres. EFR acquired the Project in June 2012 and has a 100% interest in the claims. The Project is located at latitude 35°52'58.65" N and longitude 112° 5'47.05" W. All claims are in good standing until September 30, 2022.

1.2.3 Existing Infrastructure

Existing infrastructure includes a shaft, headframe, hoist, compressor, surface maintenance shops, employee offices, a water well, evaporation pond, water treatment plant, rock stockpile pads, water tanks and a fuel tank. An existing power line terminates at the site.

1.2.4 History

Uranium exploration and mining of breccia pipe deposits started in the region in 1951. In the late-1970s, Energy Fuels Nuclear, Inc. (EFNI) formed a uranium exploration venture with several Swiss utilities and acquired significant uranium reserves in southeast Utah. EFNI permitted and built the 2,000 stpd White Mesa Mill near Blanding, Utah, to process Colorado Plateau ore, which was expected to average 0.13% U_3O_8.

As part of their exploration program, EFNI identified and investigated more than 4,000 circular features, which potentially indicate mineralized breccia pipes, in northern Arizona.

The Project is located on mining claims that EFNI acquired from Gulf Mineral Resources (Gulf) in 1982 who originally staked the claims in April 1978. EFNI was acquired by the Concord group in the early-1990s. The Concord group declared bankruptcy in 1995, and most of the EFNI assets, including the Project, were acquired by International Uranium Corporation (IUC) in 1997. IUC merged with Denison Mines Inc. on December 1, 2006, and the new company changed its name to Denison Mines Corporation. In June 2012, Energy Fuels acquired all of Denison's mining assets and operations in the United States. Currently the Project claims are held by EFR, a wholly owned subsidiary of EFR Arizona Strip LLC. Between 1978 and 1994, Gulf and EFNI drilled 45 surface holes, including a deep water well, totalling 62,289 ft.

A mine shaft and conveyances were developed for underground exploration and are operational, however, no past production has occurred at the Project.

1.2.5 Geology and Mineralization

Parts of two distant physiographic provinces are found in Arizona: the Basin and Range Province located in the southern portion of the state; and the Colorado Plateau Province located across the northern and central portions of the state. Pinyon Plain lies within the Colorado Plateau Province.

The region has experienced volcanic activity since the Pliocene epoch. A number of lava-capped buttes rise above the general landscape, and lava flows cover large areas in the southern part of the district. Faulting has exerted significant control on the geologic development and geomorphic history of the region. Major structural features include the Grand Wash, Hurricane, and Toroweap fault systems, all trending generally north-south with an eastern up-thrown side. These faults are topographically prominent and show impressive scarps though other less prominent fault systems exist.

The surface expression of the Pinyon Plain breccia pipe is a broad shallow depression in the Permian Kaibab Formation. The pipe is essentially vertical with an average diameter of less than 200 ft but is considerably narrower through the Coconino and Hermit horizons (80 ft in diameter). The cross-sectional area is in the order of 20,000 ft^2 to 25,000 ft^2. The pipe extends for at least 2,300 ft vertically from the Toroweap limestone to the upper Redwall horizons. The ultimate depth of the pipe is unknown. Uranium mineralization is concentrated in an annular ring within the breccia pipe.

Mineralization extends vertically both inside and outside the pipe over approximately 1,700 vertical ft, but potentially economic grade mineralization has been found mainly in the collapsed portions of the Coconino, Hermit, and Esplanade horizons and at the margins of the pipe in fracture zones. Sulfide zones are found scattered throughout the pipe but are especially concentrated in a sulfide cap near the Toroweap-Coconino contact, where the cap averages 20 ft in thickness and consists of pyrite and bravoite, an iron-nickel sulfide. The mineralization assemblage consists of uranium-pyrite-hematite with massive copper sulfide mineralization common in and near the uranium zone. The strongest mineralization appears to occur in the lower Hermit-upper Esplanade horizons in an annular fracture zone.

In the mineralized zone, the uranium mineralization occurs largely as blebs, streaks, small veins, and fine disseminations of uraninite/pitchblende (UO_2). Mineralization is mainly confined to matrix material, but may extend into clasts and larger breccia fragments, particularly where these fragments are Coconino sandstone. In addition to uranium, copper mineralization is also found within the breccia pipe. Typically replacing the matrix material, copper occurs as chalcocite, bornite, tennantite, and covellite. Arsenic is present where tennantite mineralization occurs. Additionally, lower quantities of silver, zinc, lead, molybdenum, copper, nickel, and vanadium are present and scattered throughout the pipe.

1.2.6 Exploration Status

Gulf drilled eight exploration holes at the site from 1978 through May 1982 but found only low-grade uranium in this pipe. Additional drilling completed by EFNI in 1983 identified a major deposit. No drilling activity was completed on the Project between EFNI's final drill program in 1994 and EFR's underground drilling program in 2016 to 2017.

1.2.7 Mineral Resources

Mineral Resources have been classified in accordance with the definitions for Mineral Resources in S-K 1300, which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM, 2014) definitions which are incorporated by reference in NI43-101.

A geologic and resource model of the breccia pipe host was constructed based on drill logs. Mineralization wireframes for U_3O_8 were based on assays at a nominal cut-off grade of 0.15% based on underground mining methods and trucking mineralized material 320 miles from the Project to be milled at Energy Fuels' White Mesa Mill located near Blanding, Utah. The Project resource database, dated June 17, 2017, includes drilling results from 1978 to 2017 and includes surveyed drillhole collar locations (including dip and azimuth), assay, radiometric probe, and lithology data from 130 diamond drillholes totalling 79,775 ft of drilling.

The SLR QP has reviewed and accepted the Mineral Resource estimate prepared by EFR based on block models constrained with 3D wireframes on the principal mineralized domains. Mineralized values for U_3O_8 and copper were interpolated into blocks using inverse distance squared (ID^2) or ordinary kriging (OK).

2.0 INTRODUCTION

This Independent Technical Report (Technical Report) was prepared by Mark B. Mathisen, C.P.G., of SLR International Corporation (SLR), for Energy Fuels Inc. (Energy Fuels), the parent company of Energy Fuels Resources (USA) Inc. (EFR), with respect to the Pinyon Plain Project (Pinyon Plain or the Project), located in Coconino County, Arizona, USA. The purpose of this report is to disclose the current Mineral Resource estimate.

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

This Technical Report satisfies the requirements of Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601 (b)(96) Technical Report Summary. Mark B. Mathisen is a QP within the meaning of both S-K 1300 and NI 43-101 (SLR QP).

The Project is a uranium and copper breccia pipe deposit in northern Arizona. The Project was originally included as part of the Arizona Strip Uranium Project. The Arizona Strip Uranium Project was located in the Arizona Strip District, a mining district located in northwestern Arizona, and contained three deposits: the Pinenut Mine, the Arizona 1 Mine, and the Project (formerly known as the Pinyon Plain pipe). The Pinenut and Arizona 1 breccia pipes are located between the town of Fredonia, Arizona, and the Grand Canyon National Park. The Pinenut Mine was mined-out in 2015 and is currently being reclaimed. The Arizona 1 Mine is currently on standby. The Project is located south of the Grand Canyon National Park, and is the only deposit documented in this Technical Report. It has been considered separate from the Arizona Strip Uranium Project since 2017.

EFR acquired the Project in 2012, through its acquisition of Denison Mines Corporation's (Denison) US assets. At that time the Project was permitted and contained a headframe, hoist, and compressor, and a shaft to a depth of 50 ft. EFR refurbished the surface facilities and extended the shaft an additional 228 ft to a depth of 278 ft. In late 2013, the Project was placed on standby due to low uranium prices. In October 2015, EFR re-started the Project and committed to completing the shaft and underground delineation drilling program. From October 2015 to March 2017, the shaft was sunk to a depth of 1,452 ft, and three development levels were started at the 1,003 ft, 1,220 ft, and 1,400 ft depths, all of which have functioned as drill stations. The final depth for the shaft is 1,470 ft.

The Project is currently on standby while continuing environmental compliance activities with all infrastructure in place needed to restart operations. EFR envisages this an underground operation in which the mineralized material will be processed at EFR's White Mesa Mill (the Mill), 320 miles away in Blanding, Utah. The Mill is on a reduced operating schedule while processing materials as they become available.

The Project was previously referred to as the Canyon Mine, however, in November of 2020 EFR changed the project name to Pinyon Plain because the former name was not descriptive of the location of the Project and had resulted in misleading information and confusion among members of the public, with many people mistakenly assuming the Project is in the Grand Canyon or within the National Park itself.

2.1 Sources of Information

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

This Technical Report was prepared by Mark B. Mathisen, C.P.G., Principal Geologist, SLR, who is an independent qualified person. The SLR QP visited the Project under care and maintenance on November 16, 2021. The SLR QP toured the operational areas, project offices, and water treatment facility (WTF) and conducted discussions with EFR Project geologists on current and future plans of operations. The SLR QP is responsible for all sections and the overall preparation of the Technical Report.

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

- Gordon Sobering, Senior Mine Engineer, Energy Fuels Resources (USA) Inc.
- Daniel Kapostasy, P.G., Chief Geologist Conventional Mining, Energy Fuels Resources (USA) Inc.
- Matthew Germansen, Mine Geologist, Energy Fuels Resources (USA) Inc.

This Technical Report supersedes the previous NI 43-101 Technical Report completed by the SLR QP, as the former Roscoe Postle Associates Inc (RPA), dated October 6, 2017.

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

2.2 List of Abbreviations

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

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

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

3.0 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by the SLR QP for EFR's parent company, Energy Fuels. The information, conclusions, opinions, and estimates contained herein are based on:

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

3.1 Reliance on Information Provided by the Registrant

For the purpose of this Technical Report, the SLR QP has relied on ownership information provided by Energy Fuels in a legal opinion by Parsons Behle & Latimer dated January 19, 2022, entitled Mining Claim Status Report - Pinyon Mine, Coconino County, Arizona. The opinion was relied on in Section 4 Property Description and Location and the Summary of this Technical Report. The SLR QP has not researched property title or mineral rights for the Project as we consider it reasonable to rely on Energy Fuels' legal counsel who is responsible for maintaining this information.

The SLR QP has taken all appropriate steps, in their professional opinion, to ensure that the above information from Energy Fuels is sound.

Except as provided by applicable laws, any use of this Technical Report by any third party is at that party's sole risk.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Project is a fully permitted underground uranium and copper deposit in northern Arizona. The mineral rights are held by EFR, a wholly-owned subsidiary of EFR Arizona Strip LLC.

4.1 Location

The Project is a fully permitted underground uranium and copper deposit in northern Arizona, located on a 17-acre site within the Kaibab National Forest. It is situated 153 mi north of Phoenix, 86 mi northwest of Flagstaff, 47 mi north of Williams, and seven miles southeast of Tusayan, in Sections 19 and 20, Township 29 North, Range 03 East, Gila and Salt River Meridian (GSRM), Coconino County, Arizona (Figure 4-1).

The geographic coordinates for the approximate center of the Project are located at latitude 35°52'58.65" N and longitude 112°5'47.05" W. All surface data coordinates are State Plane 1983 Arizona Central FIPS 0202 (US feet) system.

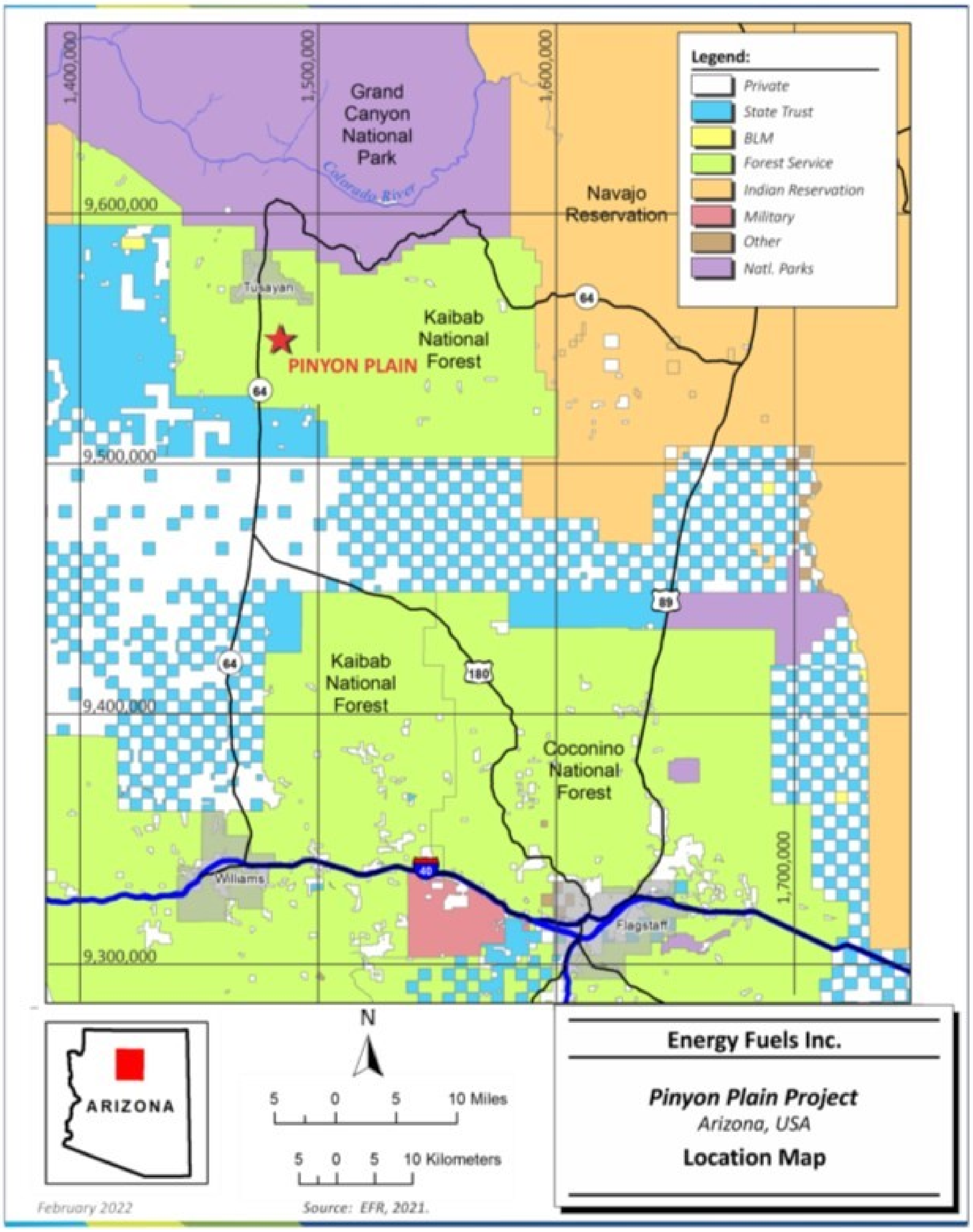


Figure 4-1: Location Map

4.2 Land Tenure

EFR's property position at the Project consists of nine unpatented mining claims (Canyon 64-66, 74-76, and 84-86), located on U.S. Forest Service (USFS) land, encompassing approximately 186 acres (Figure 4-2). Gulf Mineral Resources (Gulf) originally staked the claims in 1978 and various companies have maintained the claims since the original staking. EFR acquired the Project in June 2012 and has a 100% interest in the claims.

All claims, which are renewed annually in September of each year, are in good standing until September 30, 2022 (at which time they will be renewed for the following year as a matter of course). All unpatented mining claims are subject to an annual federal mining claim maintenance fee of $165 per claim plus approximately $10 per claim for county filing fees to the BLM. Table 4-1 lists the mineral claims covering the Project.

Table 4-1: Claims Held by EFR for the Pinyon Plain Project
Energy Fuels Inc. - Pinyon Plain Project

Sec.	¼ Section	Type	Claim Name/No.	Claimant	Loc. Date	Expiration Date
19 & 20	NE(19),NW(20)	Lode	Canyon #64	EFR Arizona Strip LLC.	4/5/1978	Sept. 2022
19 & 20	NE,SE(19),NW,SW(20)	Lode	Canyon #65	EFR Arizona Strip LLC.	4/5/1978	Sept. 2022
19 & 20	SE(19),SW(20)	Lode	Canyon #66	EFR Arizona Strip LLC.	4/5/1978	Sept. 2022
20	NW	Lode	Canyon #74	EFR Arizona Strip LLC.	4/5/1978	Sept. 2022
20	NW,SW	Lode	Canyon #75	EFR Arizona Strip LLC.	4/5/1978	Sept. 2022
20	SW	Lode	Canyon #76	EFR Arizona Strip LLC.	4/5/1978	Sept. 2022
20	NE,NW	Lode	Canyon #84	EFR Arizona Strip LLC.	4/4/1978	Sept. 2022
20	NE,NW,SE,SW	Lode	Canyon #85	EFR Arizona Strip LLC.	4/4/1978	Sept. 2022
20	SE,SW	Lode	Canyon #86	EFR Arizona Strip LLC.	4/4/1978	Sept. 2022

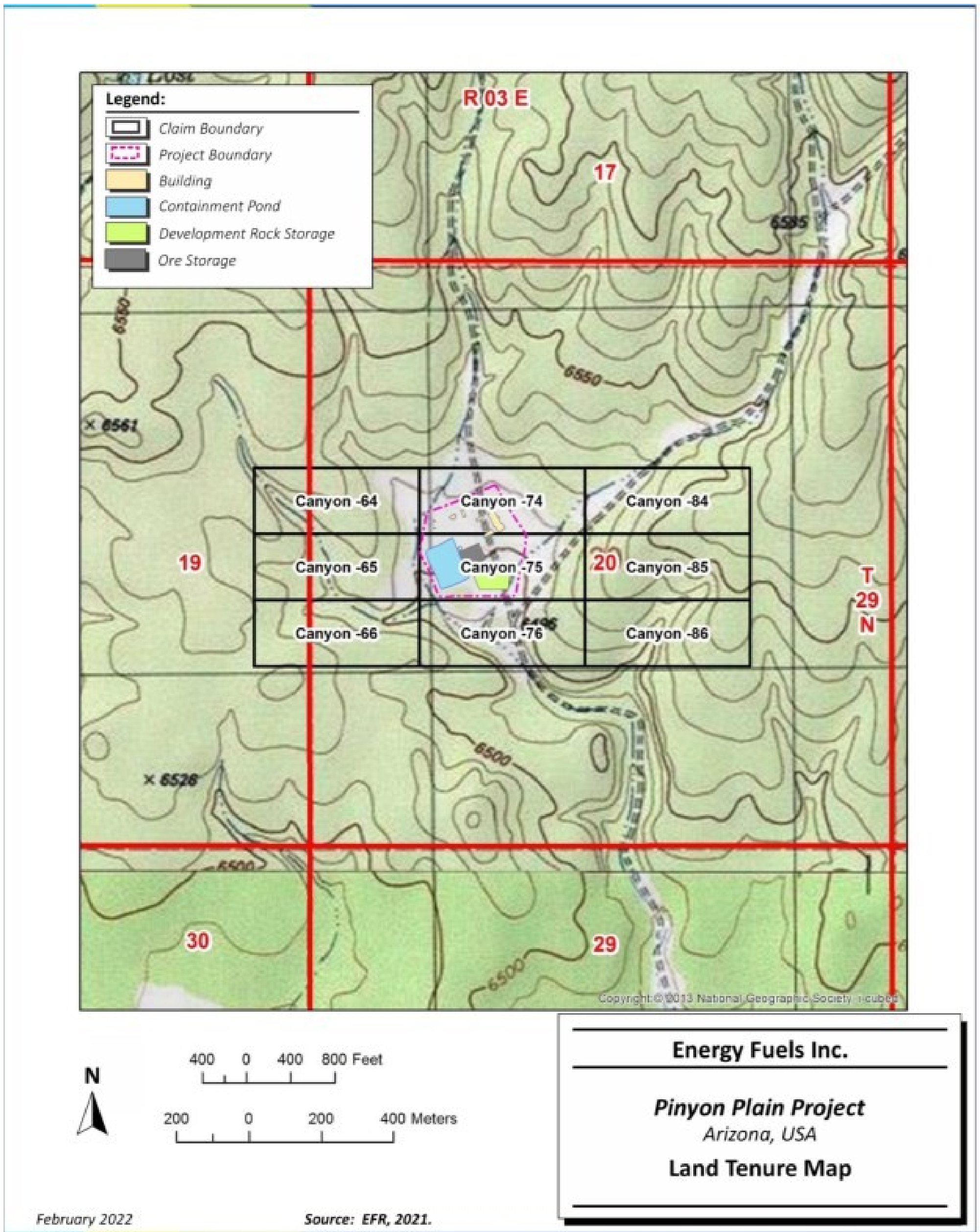


Figure 4-2: Land Tenure Map

4.3 Royalties

A uranium royalty on the Project was retained at one time by the successors to Gulf Oil Company; however, the current status of the royalty is under investigation by EFR. If valid, the royalty rate is a 3.5% weighted average price tied to the Atomic Energy Commission Circular 5.

- At a $65/lb U_3O_8 price the royalty would be:
  - $20.96/ton of mill feed at a 0.88% U_3O_8 grade
  - $8.57/ton of mill feed at a 0.39% U_3O_8 grade
  - $6.64/ton of mill feed at a 0.31% U_3O_8 grade

4.4 Other Significant Risks

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

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

Access to the Project site is via State Highway 64 and Federal Highway 180 to within five miles of the site, then over unsurfaced public USFS roads (Figure 4-1). The Atchison, Topeka and Santa Fe railway line passes east-west 50 mi south of the site at Williams, and a spur of the railway, which passes 10 mi west of the Project site, services the Grand Canyon National Park. Airports at Flagstaff, Phoenix, and Tusayan provide air access to the area.

Although the Coconino Plateau is sparsely populated, tourist traffic to Grand Canyon National Park results in large numbers of people passing through the region daily.

The White Mesa Mill, owned by Energy Fuels Inc., is located 320 road mi from the Project.

5.2 Vegetation

Vegetation on the plateaus is primarily ponderosa pine forest with some open pinyon-juniper woodland and shrubs. The local climate allows for a year-round mining operation.

5.3 Climate

The climate in northern Arizona is semi-arid, with cold winters and hot summers. January temperatures range from approximately 7°F to 57°F and July temperatures range from 52°F to 97°F. Annual precipitation, mostly in the form of rain but with some snow, is about 12 in.

5.4 Local Resources

Personnel and supplies for future mining operations are expected to be sourced from the nearby towns of Williams and Flagstaff, Arizona (50 miles and 70 miles, respectively), as well as other underground mining districts in the western United States.

5.5 Infrastructure

In addition to the mine shaft, existing surface mine infrastructure includes surface maintenance shops, employee offices and change rooms, a water well, an evaporation pond, water treatment plant, explosive magazines, water tanks, fuel tank, and rock stockpile pads (ore and development rock). Electrical power is available through an existing power line that terminates at the site. The Project is currently on standby while continuing environmental compliance activities.

In 1982, Energy Fuels Nuclear, Inc. (EFNI), which is not part of Energy Fuels Inc., acquired the Project. From 1982 to 1987, EFNI conducted exploration drilling, permitted the mine, constructed certain surface facilities including a headframe, hoist, and compressor, and sunk the shaft to a depth of 50 ft. From 1987 to 2013, the Project was put on standby due to low uranium prices. In 2012, EFR acquired the Project through its acquisition of Denison Mines Corporation's US assets (Denison). Beginning in 2013, EFR refurbished the surface facilities and extended the shaft an additional 228 ft to a depth of 278 ft. In late 2013, the project was again placed on standby due to low uranium prices. In October 2015, EFR re-started the Project and committed to completing the shaft and underground delineation drilling program. From October 2015 to March 2018, the shaft was sunk to a depth of 1,470 ft, and three development levels were started at the 1,000 ft (5,506 ft ASL), 1,220 ft (5,286 ft ASL); and 1,400 ft (5,106 ft ASL) depths, all of which have functioned as drill stations.

During 2019, a 1,000,000-gallon water tank was installed, in addition to the existing 400,000-gallon tank installed in 2017. These above-ground storage tanks are used for operational flexibility and extra water storage capacity during winter months. Three floating, downcasting, enhanced evaporators were installed in the Non-Stormwater Impoundment to aid in evaporation. The tanks and evaporators are part of Energy Fuels' water balance management practices at the site.

During 2020, a fourth floating, down-casting, enhanced evaporator was installed at the site to increase the operational flexibility of the water balance management practices. Additionally, a water capture and pumping system was installed in the shaft to segregate unimpacted water and store it for beneficial use. During 2021, a water treatment plant was installed to process water for offsite transport. The water treatment plant was commissioned in April 2021. Water use agreements have been entered into with local farmers and ranchers through which they may utilize excess water from the Pinyon Plain Project for their own beneficial uses within the Coconino Plateau groundwater basin.

5.6 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 Project is located on the Coconino Plateau within the Colorado Plateau, at an elevation of approximately 6,500 feet above sea level (ft ASL).

Overall, the land is flat lying across several square miles surrounding the Project. Elevation at the site is 6,500 ft ASL with a southern downward slope averaging 100 ft per mile. Two major regional topographical features include the Red Butte, a lava capped mesa 4.5 mi south at an elevation of 7,234 ft ASL, and the Colorado River, 15 mi to the north at an elevation of 2,500 ft ASL.

Major landforms in the general area of the Project include nearly level drainage bottoms of recent alluvium, gently sloping plateau ridgetops, and moderately sloping canyon sideslopes. Soils have developed from residual or colluvial parent materials, and outcrops of bedrock are typically exposed along shoulder slopes and ridgetops. The Coconino Rim, a north-facing escarpment east and north of the deposit, is the major landform obstructing access between Pinyon Plain and highways to the east.

6.0 HISTORY

Uranium exploration and mining of breccia pipe deposits started in the region in 1951 when a geologist with the U.S. Geological Survey noted uranium ore on the dump of an old copper prospect on the South Rim of the Grand Canyon in Northern Arizona. The prospect was inside Grand Canyon National Park, but on fee land that predated the Park. The Golden Crown Mining Company, which later merged with Western Gold and Uranium Inc., mined a significant high grade uranium deposit, the Orphan Mine, from 1956 to 1969. By the time mining ended, 4.26 million pounds (Mlb) of uranium, along with some minor amounts of copper, vanadium, and silver had been produced (Bennett, n.d.).

After the discovery of this first uranium deposit in the 1950s, an extensive search for other uranium deposits was made by the government and mining industry, but only a few low-grade prospects were found. Exploration started again in the early-1970s.

In the mid-1970s, Western Nuclear leased the Hack Canyon prospect located approximately 25 mi north of the Grand Canyon and found high grade uranium mineralization offsetting an old shallow copper-uranium site. In the next few years, a second deposit was found a mile away along a fault.

In the late-1970s, EFNI formed a uranium exploration venture with several Swiss utilities and acquired significant uranium reserves in southeast Utah. EFNI permitted and built the 2,000 stpd White Mesa Mill near Blanding, Utah, to process Colorado Plateau ore, which was expected to average 0.13% U_3O_8. When the uranium market fell in 1980, the higher-grade Hack Canyon property was leased by EFNI from Western Nuclear in December 1980 as a likely low-cost source of U_3O_8 mill feed. Development started promptly, and the Hack Canyon deposits were in production by the end of 1981. They proved to be much better than the initial estimates suggested in terms of both grade and tonnage.

As part of their exploration program, EFNI identified and investigated more than 4,000 circular features, which potentially indicate mineralized breccia pipes, in northern Arizona. Approximately 110 of the most prospective features were further explored by deep drilling, and nearly 50% of those drilled were shown to contain uranium mineralization. Ultimately, nine pipes were developed. Total mine production from the EFNI breccia pipes from 1980 through 1991 was approximately 19.1 Mlb of U_3O_8 at an average grade of just over 0.60% U_3O_8.

6.1 Prior Ownership

The Project is located on mining claims that EFNI acquired from Gulf in 1982. Gulf originally staked the claims in April 1978. EFNI was acquired by the Concord group in the early-1990s. The Concord group declared bankruptcy in 1995, and most of the EFNI assets, including the Project, were acquired by International Uranium Corporation (IUC) in 1997. IUC merged with Denison Mines Inc. on December 1, 2006, and the new company changed its name to Denison Mines Corporation. In June 2012, Energy Fuels Inc. acquired all of Denison's mining assets and operations in the United States. Currently the Project claims are held by EFR, a wholly-owned subsidiary of EFR Arizona Strip LLC.

6.2 Exploration and Development History

Since 1994, exploration activities undertaken on the Project have only included drilling. Prior to that, exploration activities carried out by EFR's predecessors from 1983 to 1987 include:

- Ground control source audio magneto tellurium (CSAMT) surveys
- Ground magnetics
- Ground very low frequency (VLF) surveys
- Time domain electro-magnetic surveys (TDEM)
- Surface gravity surveys
- Airborne electromagnetic (EM) surveys

6.2.1 Drilling

The basic tool for exploring breccia pipes in northern Arizona is deep rotary drilling, supplemented by core drilling, up to a depth of 2,000 ft or more from surface. All drillholes are surveyed for deviation and logged using gamma logging equipment, as described in Section 11.1.1. Previous operators drilled 45 surface holes, including a deep water well, totalling 62,289 ft (Table 6-1). Gulf drilled eight exploration holes at the Project site from 1978 to May 1982 but found only low-grade uranium mineralization. Additional drilling by EFNI in 1983 identified economic uranium mineralization at the Pinyon Plain breccia pipe.

After EFNI identified mineralization, shallow drilling was conducted to locate the center of the collapse feature (holes S01-S13), as a guide to the throat of the underlying breccia pipe. EFNI followed this up with additional deep drilling to better define the mineralization.

Table 6-1: Drilling at Pinyon Plain Project by Previous Operators
Energy Fuels Inc. - Pinyon Plain Project

Year	Company	Location	# Holes	Total Depth (ft)	Hole ID	Type
1978-1982	Gulf	Surface	8	13,041	COG Series	Rotary
1983	EFNI	Surface	5	10,504	CYN Series 01-05	Rotary
1984	EFNI	Surface	13	1,350	CYN Series S01-S13	Rotary
1984	EFNI	Surface	10	18,462	CYN Series 06-14C & 16C	Core/Rotary
1985	EFNI	Surface	2	3,534	CYN 15C & CYN 15W1	Core
1986	EFNI	Surface	1	3,086	55-515772	Water Well
1994	EFNI	Surface	6	12,312	CYN Series 17-22	Rotary
Total			**45**	**62,289**		

6.3 Past Production

A mine shaft and conveyances were developed for underground exploration and are operational, however, no past production has occurred at the Project.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Project is located on the Colorado Plateau, south of the Grand Canyon, within the Kaibab National Forest. The Project's mineralization is controlled by a collapse structure known as a breccia pipe. This breccia pipe is one of thousands of collapse structures found on the north and south rims of the Grand Canyon. The Pinyon Plain pipe extends from the surface (Moenkopi Formation) through various geologic strata into the Redwall Limestone.

Parts of two distant physiographic provinces are found in Arizona: the Basin and Range Province located in the southern portion of the state; and the Colorado Plateau Province located across the northern and central portions of the state. Pinyon Plain lies within the Colorado Plateau Province.

Surface exposures near the Project reveal sedimentary and volcanic rocks ranging in age from upper Paleozoic to Quaternary. The area is largely underlain by Mississippian through Triassic Period sedimentary rocks, however, exposed within the Grand Canyon are older rocks reaching Precambrian in age.

The region has experienced volcanic activity since the Pliocene epoch. A number of lava-capped buttes rise above the general landscape, and lava flows cover large areas in 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 generally trending north-south with an eastern up thrown side. These faults are topographically prominent and show impressive scarps though other less prominent fault systems exist.

The deep incision of the Grand Canyon and associated side canyons, such as Kanab Creek, have dewatered the sedimentary section. Regionally ground water is encountered in the Redwall limestone, which coincides with the deeper formations exposed in the Grand Canyon. Perched ground water, usually in very limited quantities, is often encountered at the base of the Coconino sandstone in contact with the low permeability Hermit shale sequence. Figure 7-1 is a map showing the regional geology of the Project. Figure 7-2 presents a regional stratigraphic column.

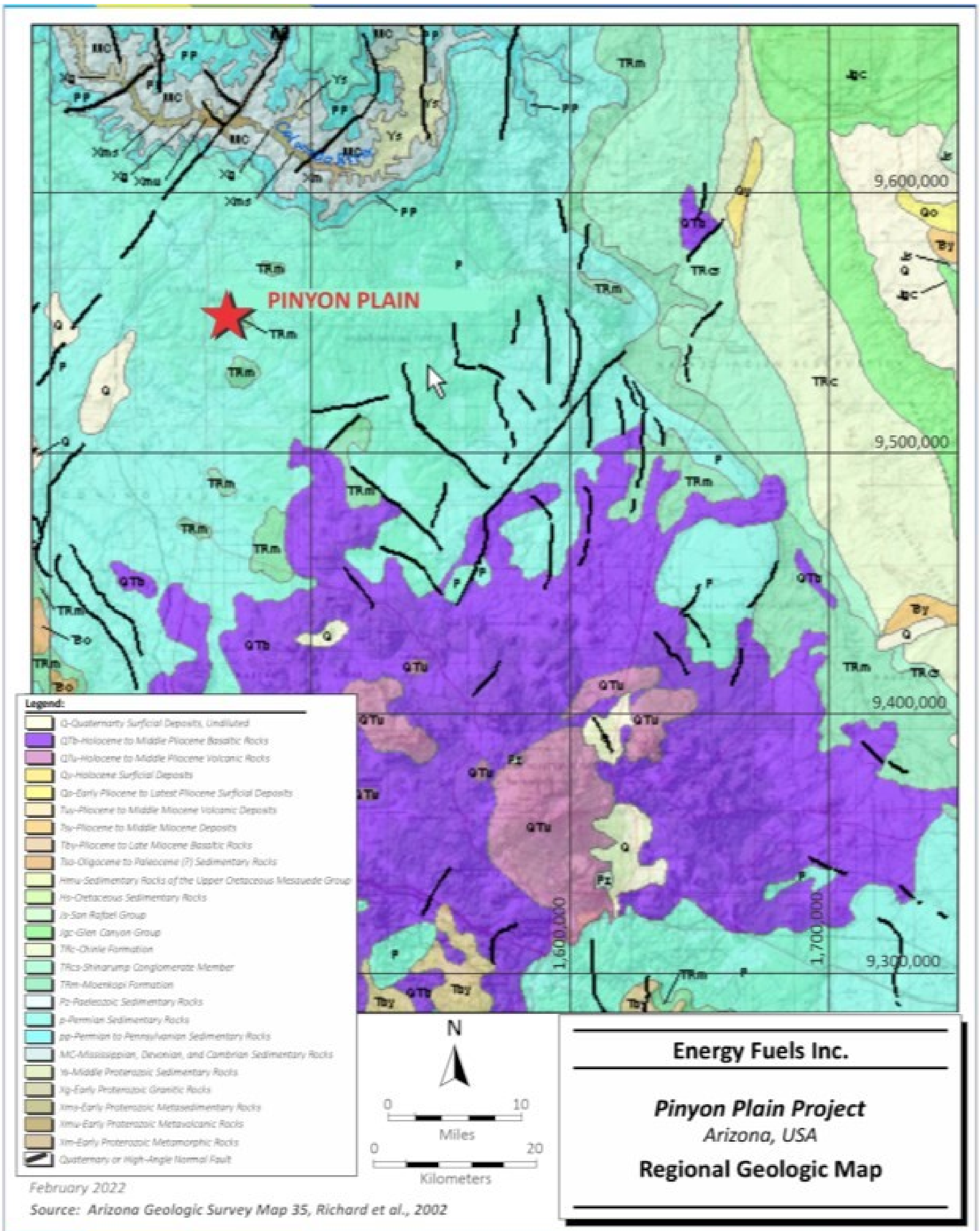


Figure 7-1: Regional Geologic Map

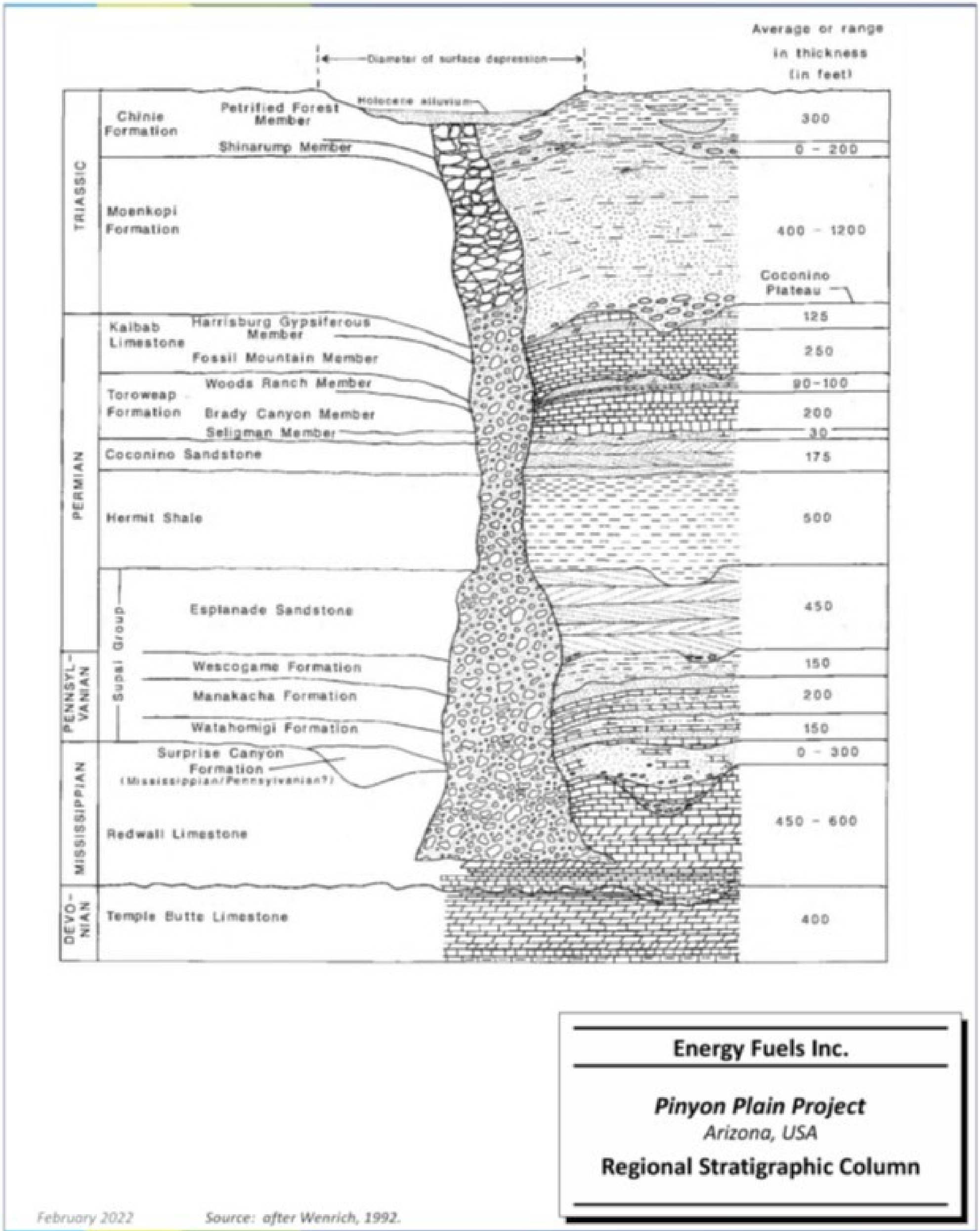


Figure 7-2: Regional Stratigraphic Column

7.2 Local Geology

The surface expression of the Project is a broad shallow depression in the Permian Kaibab Formation. The pipe is essentially vertical with an average diameter of less than 200 ft, but it is considerably narrower through the Coconino and Hermit horizons (80 ft in diameter). The cross-sectional area is approximately 20,000 ft^2 to 25,000 ft^2. The pipe extends for at least 2,300 ft vertically from the Toroweap limestone to the upper Redwall horizons (Figure 7-3). The ultimate depth of the pipe is unknown. Uranium mineralization is concentrated in an annular ring within the breccia pipe.

7.2.1 Structural Geology

Regional joint systems rooted below the Redwall trend northwest-southeast and northeast-southwest. The regional joints and fractures lead to upward caving of the karstic voids in the Redwall Limestone vertically through the overlying Paleozoic sediments. As surface water and groundwater interact with the pipe, a circular brecciated column forms inside of the fracture controlled boundary.

Fractures related to the pipe can surround the brecciated zone and extend thin "ring fractures" up to 300 ft beyond the breccia pipe. Vertical joints and associated breccia pipes increase permeability and porosity, leading to the mineralization observed in the region. Figure 7-4 presents a horizontal section looking down at the breccia pipe and shows the distribution of mineralization with reference to the pipe structure.

7.2.2 Alteration

The Pinyon Plain breccia pipe is surrounded by bleached zones, particularly notable in the Hermit Formation where unaltered red sediments contrast sharply with gray-green bleached material. Bleaching is common within 100 ft of the pipe boundary. Sulfide mineralization, commonly in the form of pyrite, is found as streaks or blebs within the bleached zones.

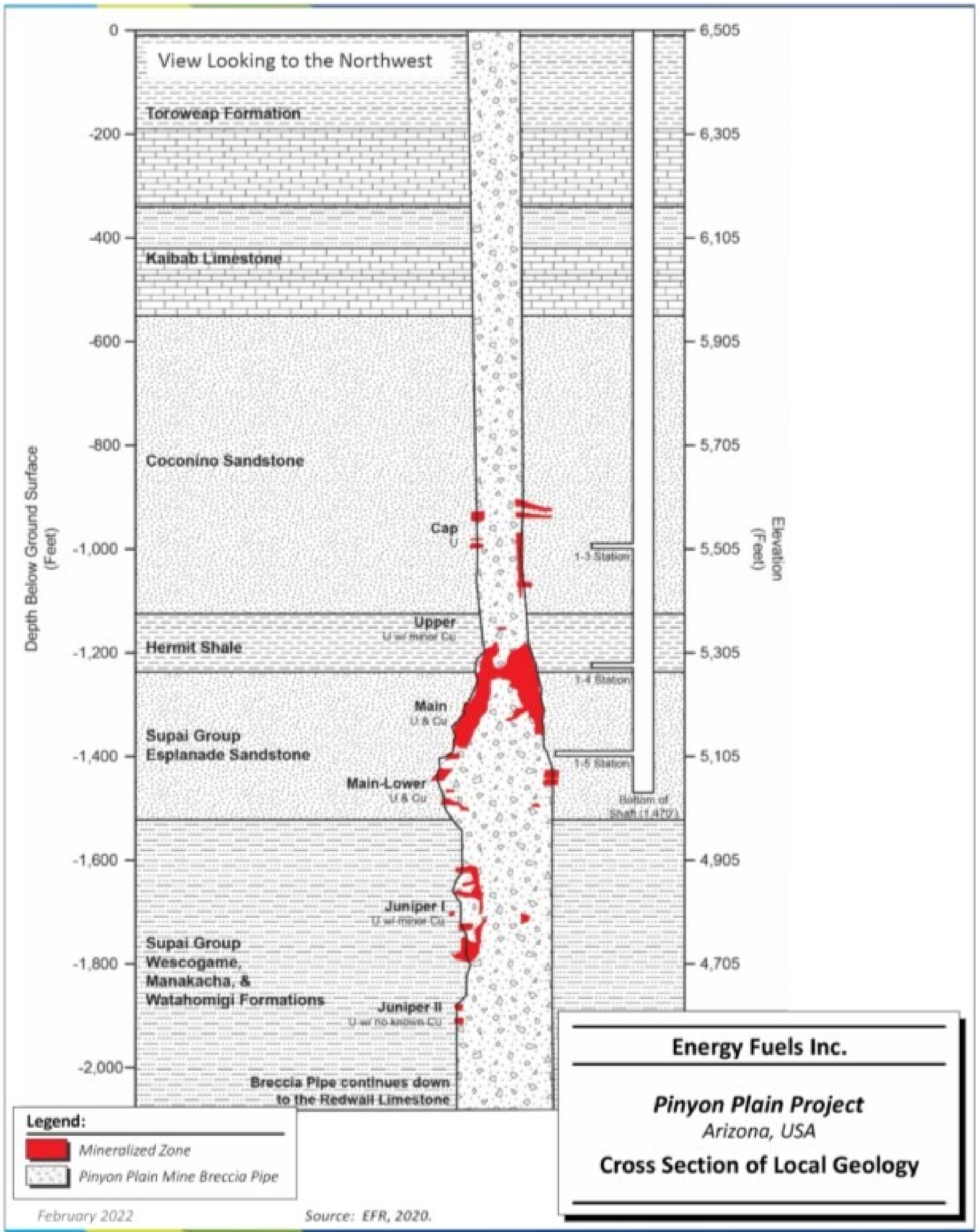


Figure 7-3: Cross Section of Local Geology

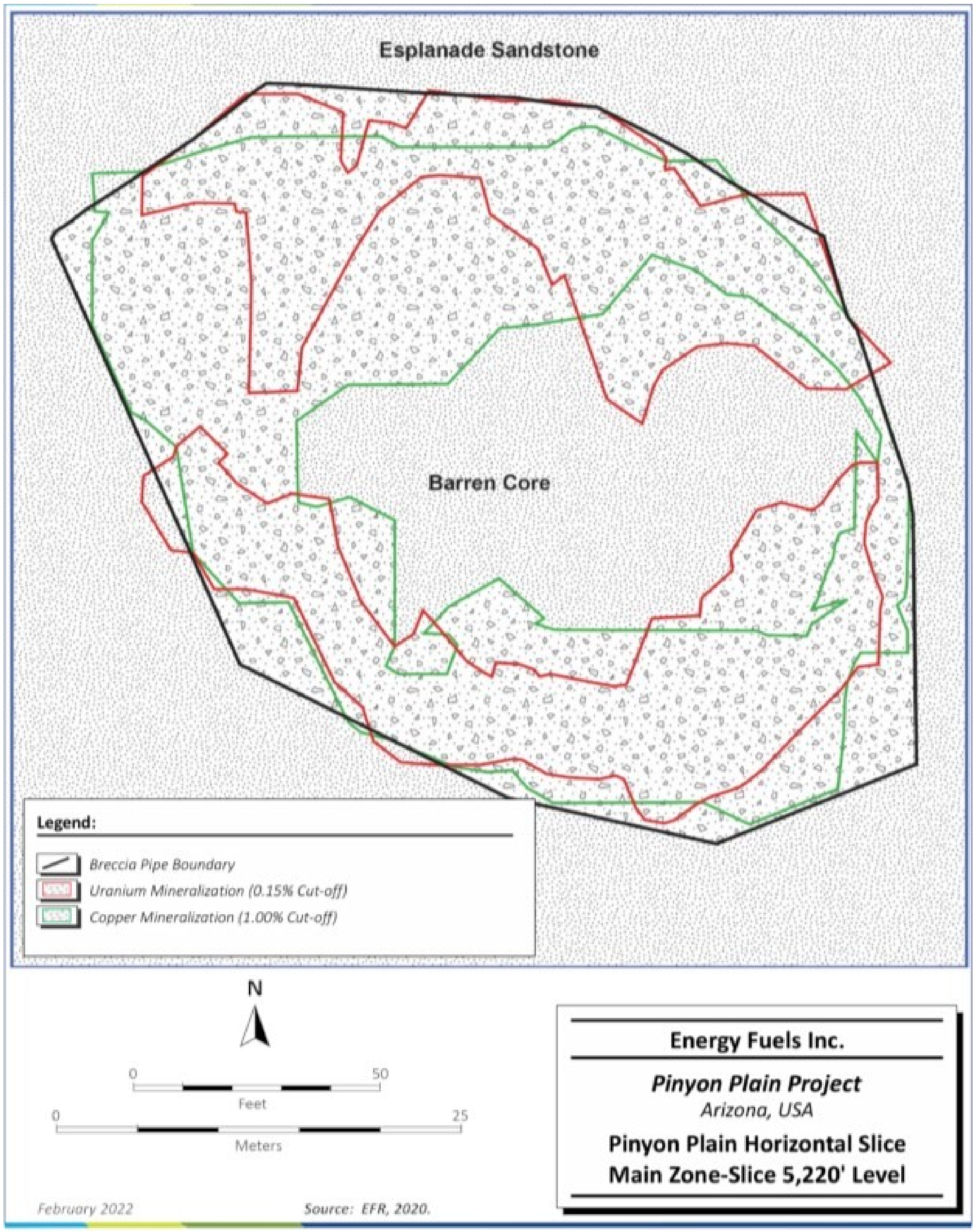


Figure 7-4: Pinyon Plain Horizontal Slice Main Zone - Slice 5,200' Level

7.3 Mineralization

Mineralization at the Project extends vertically approximately 1,700 ft, both inside and outside the pipe, but high-grade uranium and copper mineralization is found primarily in the collapsed portions of the Coconino, Hermit, and Esplanade horizons and at the margins of the pipe in fracture zones. Sulfide zones are found scattered throughout the pipe but are especially concentrated (within a sulfide cap) near the Toroweap-Coconino contact, where the cap averages 20 ft thick and consists of pyrite and bravoite, an iron-nickel sulfide. The ore assemblage consists of uranium-pyrite-hematite with massive copper sulfide mineralization common in and near the high-grade zone. The strongest mineralization appears to occur in the lower Hermit-upper Esplanade horizons in an annular fracture zone.

The metal of interest at the Project is uranium, though significant copper mineralization co-exists in the breccia pipe. As the rocks making up the breccia within the pipe are all sedimentary rocks, mineralization typically occurs within the matrix material (primarily sand) surrounding the larger breccia clasts.

7.3.1 Uranium Mineralization

Uranium mineralization at the Project is concentrated in three stratigraphic levels or zones (Upper/Cap, Main, and Juniper) within a collapse structure ranging from 80 ft to 230 ft wide with a vertical extension from a depth of 650 ft to over 2,100 ft, resulting in approximately 1,450 ft of mineralization. Mineralized intercepts range widely up to several tens of feet with grades in excess of 1.00% U_3O_8. In previous reports and EFR news releases, the mineralization was subdivided into six distinct zones; those six have been combined into the three listed above for simplicity. The Upper/Cap Zone combines the previously reported Upper and Cap Zones. The Main Zone combines the previously reported Main and Main-Lower Zones and the Juniper combines the previously reported Juniper I and Juniper II Zones.

Age dating of mineralization (U-Pb) indicates a range from 101 million to 260 million years, which suggests that the earliest uranium mineralization had occurred in the Permian Period before the pipes completely formed in the Triassic Period.

Consistent with other breccia pipe deposits, in the mineralized zone, the uranium mineralization occurs largely as blebs, streaks, small veins, and fine disseminations of uraninite/pitchblende (UO_2). Mineralization is mainly confined to matrix material, but may extend into clasts and larger breccia fragments, particularly where these fragments are of Coconino sandstone. Uranium mineralization occurs primarily as uraninite and various uranium phase minerals (unidentifiable minerals) with lesser amounts of brannerite and uranospinite.

7.3.2 Copper Mineralization

Currently, there is no reasonable prospect for the economic extraction of copper at the Project.

Significant copper mineralization occurs at the Project within the Main Zone, both with uranium mineralization and outside of uranium mineralization.

Copper mineralization can be disseminated throughout the matrix material (commonly replacing calcite cement) with higher-grade mineralization typically occurring as vug fills, blebs, or streaks within the matrix and sometimes zoning the breccia clasts. The highest-grade copper mineralization completely replaces the matrix cement or replaces the matrix material all together.

Copper mineralization occurs primarily as tennantite, chalcocite, and bornite with lesser amounts of covellite. Pyrite and sphalerite are also found throughout the pipe. Silver is commonly associated with the copper mineralization in the Main Zone. Assay values of silver greater than one ounce per short ton are common where copper grades are high. Arsenic is present where tennantite mineralization occurs. Additionally, lower quantities of silver, zinc, lead, molybdenum, copper, nickel, and vanadium are present and scattered throughout the pipe.

8.0 DEPOSIT TYPES

Paleozoic Era sedimentary rocks of northern Arizona are host to thousands of breccia pipes. The pipes extend from the Mississippian Redwall Limestone up to the Triassic Chinle Formation, a total of approximately 4,000 ft of section. Due to erosion and other factors, however, no single pipe has been observed cutting through the entire section. No pipe occurs above the Chinle Formation or below the Redwall Limestone. Breccia pipes mineralized with uranium are called Solution-Collapse Breccia Pipe Uranium deposits, which are defined as U.S. Geological Survey Model 32e (Finch, 1992).

Breccia pipes within the Arizona Strip District are vertical or near vertical, circular to elliptical bodies of broken rock comprised of slabs, rotated angular blocks and fragments of surrounding and stratigraphically higher formations. The inclusion of breccia made of stratigraphically higher formations suggests that the pipes formed by solution collapse of underlying calcareous rocks, such as the Redwall Limestone. Surrounding the blocks and slabs making up the breccia is a matrix of fine material comprised of surrounding and overlying rock from various formations. For the most part, the matrix consists of siliceous or calcareous cement.

Breccia pipes are comprised of three interrelated features: a basinal or structurally shallow depression at surface (designated by some as a collapse cone); a breccia pipe, which underlies the structural depression; and annular fracture rings, which occur outside, but at the margin of the pipes. Annular fracture rings are commonly, but not always, mineralized. The structural depression may range in diameter up to 0.5 miles or more, whereas breccia pipe diameters can range up to approximately 600 ft, but normally range from 200 ft to 300 ft in diameter.

Mineralization in the breccia pipes takes place by water flowing along fractures and through porous materials that provide conduits for fluid flow and typically takes place in stages. Wenrich and Sutphin (1989) identified at least four separate mineralizing events that occur within the Arizona Strip District pipes, with uranium and copper mineralization occurring as part of the last two mineralizing events.

To date, mineralized breccia pipes appear to occur in clusters or trends. Spacing between pipes ranges from 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 the Mississippian and Permian Periods is considered to have initiated formation of the numerous and widespread pipes in the region.

9.0 EXPLORATION

EFR has completed no exploration work on the Project other than underground development drilling discussed in Section 10, since acquiring the properties in 2012.

9.1 Geotechnical

In 1987, the geotechnical consulting firm of Dames and Moore (1987) completed an evaluation of mine stability and subsidence potential at the Project.

The scope of work was based on a review of geologic and geotechnical data from similar breccia pipe uranium mines on the Arizona Strip (the Orphan Mine, the Hack 2 Mine, Kanab North, and the Pigeon Mine), including the stability of existing underground stopes.

Numerical modeling of stopes was analyzed at depths of 800 ft, 1,200 ft, and 1,600 ft below surface with a surrounding rock strength of 3,000 psi. Stope dimensions at these mines varied from 60 ft high by 30 ft wide (Orphan Mine) to 350 ft high by 200 ft wide (Hack 2 Mine). Ground support was limited to rock bolts in the stope backs and no backfill.

The report concluded that stopes up to 350 ft high at a depth of 1,200 ft would not develop significant stability problems as long as prudent ground supports were employed. In addition, the report predicted mined out stopes would fill with rubblized rock as a result of subsidence reaching surface in several hundred years; the surface expression would be less than two feet over a broad area and would be difficult to observe in the field.

Since the geotechnical report was produced, EFR has decided to fill stopes with waste rock, which will significantly reduce any post-mining surface expression from ground subsidence.

9.2 Hydrogeology

Experience from past mining in breccia pipes on the Colorado Plateau indicates water inflows to be low to absent. A hydrologic model has not been done on the Project, however, since the completion of the mineshaft and drill stations in 2017, the mine inflow has averaged 20 gpm during care and maintenance.

Strata overlying and hosting the mineralization consist of individual beds of sandstones, shales, and limestones with varying degrees of fracturing, faulting, and lithification. Some rock members may contain groundwater in confined perched zones, others may have solution cavities of varying sizes, while other rock types retard the downward percolation of groundwater.

As part of the Draft Environmental Impact Statement (EIS) for the USFS, a report on groundwater conditions was completed by Errol L. Montgomery & Associates (Montgomery, 1985).

The report concluded the following based on the analysis of hydrogeologic and hydrochemical data obtained during the environmental impact investigations:

- The proposed mine will have little or no impact on groundwater circulation and storage in perched aquifers. Similarly, there will be negligible impact on the yield from nearby springs or wells to the groundwater.
- The proposed mine will have little or no impact on the chemical quality of the groundwater in the perched aquifers.

- The proposed mine will have negligible impact on groundwater circulation and storage in the Redwall-Muav aquifer.

With the implementation of planned mitigation actions, there is a low possibility of deterioration of the groundwater chemistry.

10.0 DRILLING

EFR acquired the Project from Denison in 2012. Since that time, exploration work carried out by EFR at the Project has included the drilling of 80 core holes and 25 percussion holes from three subsurface levels accessed from the production shaft to delineate mineralization extents, results of which were used to update the geologic model and Mineral Resource estimates discussed in the following sections of this report.

Three mineralized zones have been identified on the Project; from top downward, they are the Upper/Cap Zone, the Main Zone, and the Juniper Zone. Mineral Resources (Section 14) are reported on the Main and Juniper Zones; the Upper/Cap Zone is currently an exploration target.

10.1 Drilling

As of the effective date of this report, EFR and its predecessors have completed 150 holes (45 surface and 105 underground), totalling 92,724 ft, from 1978 to 2017 using core, rotary, and percussion methods. No drilling was conducted on the Project from 1994 to 2016.

Drillhole collar locations are recorded on the original drill logs and radiometric logs created at the time of drilling, including easting and northing coordinates in local grid or modified NAD 1983 Arizona Central FIBPS 0202 (US feet) and elevation of collar in feet above sea level. Drillhole orientation were surveyed with a Reflex EZ Shot or similar deviation tool in the drill string every time a length of drill pipe was added.

From 2016 to 2017, EFR completed 105 underground drillholes totalling 30,314 ft from drill stations developed from the Pinyon Plain mineshaft. No drilling has taken place on the Project since 2017. A summary of drilling completed by EFR is presented in Table 10-1, and Figure 10-1 shows the locations of all the drill collars from EFR and the previous operators.

Table 10-1: Underground Drillhole Database Summary
Energy Fuels Inc. - Pinyon Plain Project

Year	Company	Location	# Holes	Total Depth (ft)	Hole ID	Type
2016	EFR	1-3 Level	15	12,435	CMCH Series 001 - 015	Core
2016	EFR	1-4 Level	25	4,179	CMLH Series 001 - 025	Percussion
2016-2017	EFR	1-4 Level	42	8,420	CMCH Series 016 - 058	Core
2017	EFR	1-5 Level	23	5,401	CMCH Series 059 - 081	Core
Total			**105**	**30,314**		

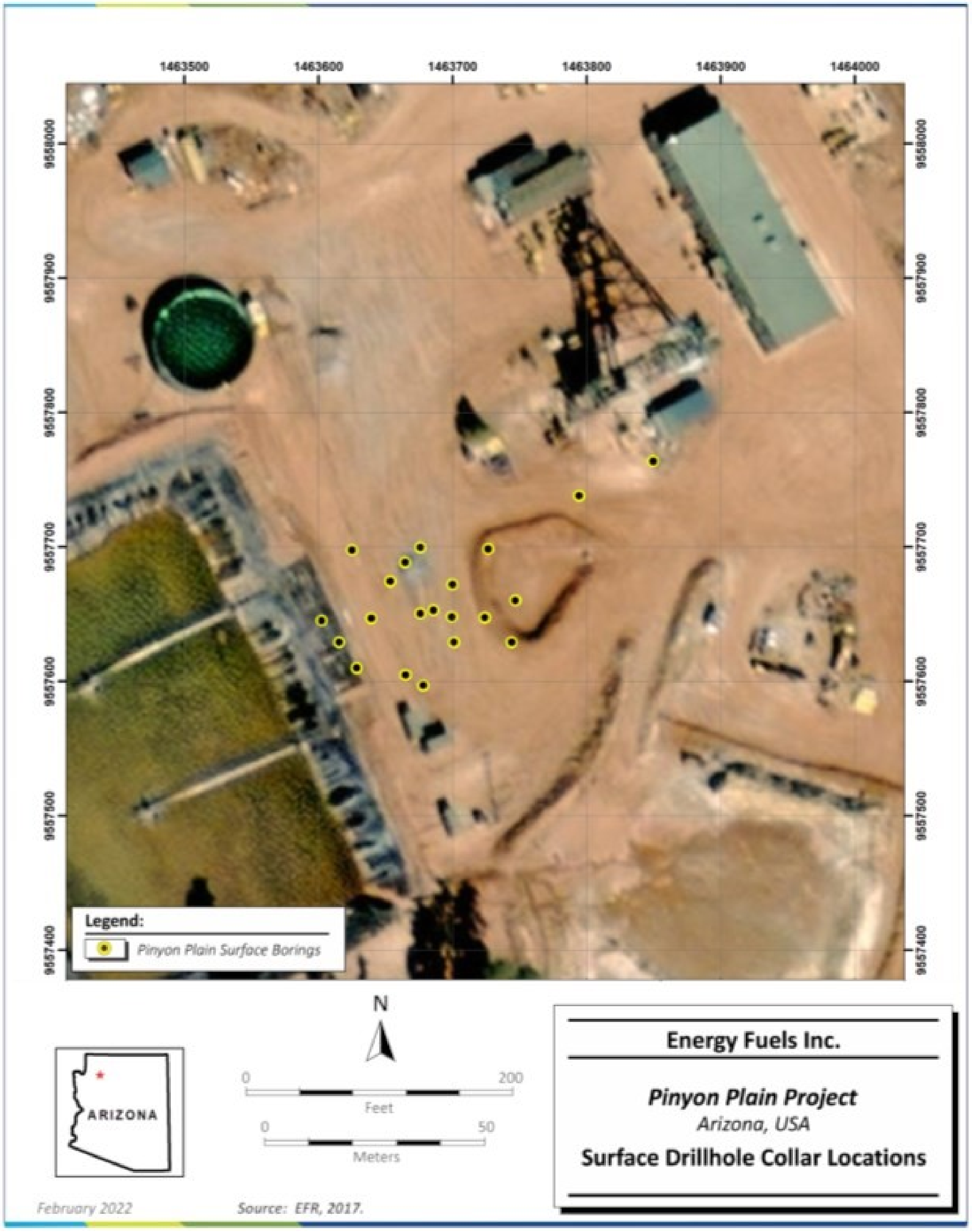


Figure 10-1: Surface Drillhole Collar Locations

All core was removed by the drillers from the wireline core barrel and placed in core boxes, orienting the core to fit together where possible and limiting a core box to a single run. The driller labeled the core box with the drillhole ID, box number, and start/finish depths on both the bottom of the core box and the core box lid. The driller also placed blocks or core markers in the core box to indicate the "from" and "to" depths of the core run as well as the core run number. If core was not recovered during a core run, a wooden block was placed in the core box by the driller with the "from" and "to" depths of no recovery (if known). Core was transported from the drill station by the driller or the geologist to surface for logging.

Upon arrival at the core logging facility on surface, core was photographed and screened radiometrically using a Radiation Solutions RS-125 Super-SPEC device and elementally using a handheld x-ray fluorescent (XRF) analyzer. Drill core recovery percentage was noted. Core was then logged by the field geologist, noting the depth of each stratigraphic unit, and a description of lithology and structures. Details noted on the lithology log include colour, texture, grain size, cementation, and mineralogy of each lithologically distinct unit, as well as the type of fracture and any voids or vugs.

All drillholes on the Property were logged with a radiometric probe to measure the natural gamma radiation, from which an indirect estimate of uranium content was made and is discussed in Section 11.1.1.

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

10.1.1 Copper Mineralization

During exploration drilling at the Project in 2016, copper mineralization was discovered within the breccia pipe. The core from the underground drilling program was analyzed for copper mineralization with an Olympus Vanta handheld XRF device. Sections of core that showed grades of approximately 0.5% Cu or above where uranium was not present were sampled for chemical assay. Sections of core that contained uranium (identified with a scintillometer) were also sampled for chemical assay to determine both the uranium and copper content. Table 10-2 lists a number of selected composited intercepts of copper mineralization. Figure 10-2 and Table 10-3 provide some detail of the statistics associated with the copper mineralization.

Table 10-2: Selected Copper and Uranium Assay Intercepts
Energy Fuels Inc. - Pinyon Plain Project

Hole ID	Target Zone	From (ft)	To (ft)	Intercept Length (ft)	U_3O_8	Cu	Azimuth (°)	Dip (°)	Depth (ft below surface)
2	Main	213	318	105.0	0.17%	9.55%	225	-63	1,190
3	Main	205	265	60.0	0.02%	7.66%	213	-63	1,182
4	Main	294	335	41.0	1.09%	2.75%	211	-75	1,285
4	Main	335	342	7.0	0.01%	9.95%	213	-75	1,320
5	Main	265	319	54.0	0.72%	9.19%	224	-70	1,250
6	Main	298	342	44.0	0.74%	10.22%	228	-75	1,284
6	Juniper	784	822	38.0	0.28%	0.53%	228	-75	1,793

Hole ID	Target Zone	From (ft)	To (ft)	Intercept Length (ft)	U_3O_8	Cu	Azimuth (°)	Dip (°)	Depth (ft below surface)
7	Main	302	348	46.0	1.37%	13.52%	240	-74	1,287
7	Juniper	644	656	12.0	1.26%	0.81%	240	-74	1,626
8	Main	316	374	58.0	0.75%	13.91%	244	-74	1,305
1	Main	372	390	18.0	1.23%	7.74%	240	-78	1,360
11	Main	636	642	6.0	16.99%	1.20%	240	-78	1,618
12	Main	302	314	12.0	1.78%	3.81%	224	-76	1,294
12	Main	332	340	8.0	0.84%	26.20%	224	-76	1,318
13	Main	348	360	12.0	0.95%	6.83%	195	-76	1,334
14	Main	296	300	4.0	8.35%	1.64%	200	-75	1,281
14	Main	334	354	20.0	0.93%	9.30%	200	-75	1,319
15	Main	436	444	8.0	0.02%	12.87%	250	-79	1,420
16	Main	12	70	58.0	0.51%	5.57%	200	-60	1,221
16	Main	120	132	12.0	1.41%	3.28%	200	-60	1,329
17	Main	12	48	36.0	0.65%	5.12%	195	-51	1,242
18	Main	3	53	50.0	0.22%	5.49%	195	-40	1,238
19	Main	107	143	36.0	1.14%	12.68%	195	-32	1,283
23	Main	14	62	48.0	0.48%	14.25%	175	-60	1,254
25	Main	14	42	28.0	0.61%	10.08%	180	-40	1,221
26	Main	18	42	24.0	0.56%	18.17%	180	-30	1,221
26	Main	86	134	48.0	2.88%	2.31%	180	-32	1,323
27	Main	12	44	32.0	0.29%	11.54%	180	-20	1,216
32	Main	120	192	72.0	0.99%	10.08%	220	-41	1,348
33	Main	4	76	72.0	0.11%	5.25%	222	-31	1,240
33	Main	100	128	28.0	1.66%	14.85%	222	-31	1,328
37	Main	166	196	30.5	1.54%	10.35%	240	-50	1,346
38	Main	8	154	146.0	0.47%	6.22%	241	-40	1,292
40	Main	12	112	100.0	0.90%	9.44%	240	-21	1,288
43	Main	16	136	120.0	0.81%	11.95%	260	-41	1,287
48	Main	54	62	8.0	3.57%	0.29%	280	-41	1,258
64	Main	64	142	78.0	1.11%	9.47%	300	+47	1,325
67	Main	142	190	48.0	1.78%	11.22%	285	+19	1,346
69	Main	144	208	64.0	1.08%	14.51%	285	+40	1,287
80	Juniper	290	298	8.0	5.03%	0.61%	290	-62	1,538
81	Juniper	275	286	11.0	3.26%	0.64%	263	-51	1,577

Table 10-3: Declustered Cu Assay Statistics
Energy Fuels Inc. - Pinyon Plain Project

Item	Value
No. Samples	3,500
Mean	2.37%
Standard Deviation	5.14
Variance	26.36
Coef. Of Variation	2.17
Maximum	55.66%
Upper Quartile	1.81%
Median	0.17%
Lower Quartile	0.04%
Minimum	0.00%

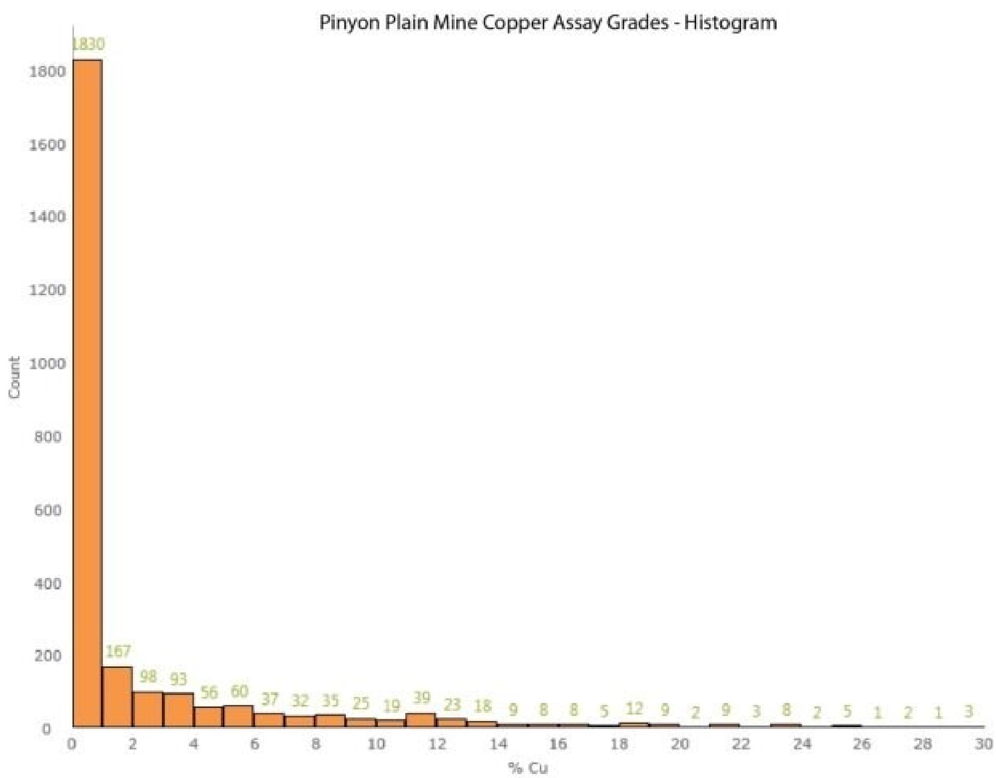


Figure 10-2: Histogram of Declustered Cu Assays

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sample Preparation and Analysis

This section references the Standard Operating Procedure (SOP) Handbook for core handling, sampling, and quality assurance/quality control (QA/QC) protocols for core drilling at the Project, prepared by EFR in December 2016 (Energy Fuels, 2016).

Samples respect geological contacts and vary from 2 ft to 10 ft in length, depending on core recovery, length of the lithological unit, and mineralization. Most core samples were four feet long, except where broken along lithological or mineralization contacts. Core outside the breccia pipe was considered barren and was not sampled. Sample interval and number were marked on the core log, the core-sampling log, and the sample bags.

Sample core was cut in half, lengthwise, by technicians with a diamond saw, returning half of the split core to the core box and submitting the other half for sample preparation and analysis. The sample number, which references the drillhole name, depth, and sample length, was written on two aluminum tags. One sample tag was stapled to the sample bag and an additional sample tag was placed within the bag. The sample tag that was affixed to the outside of the sample bag also contained the sample date and the sampler's initials.

Once sampled, the remaining half core splits were returned to the core box and archived onsite.

11.1.1 Gamma Logging

All drillholes completed by EFR at the Project were logged with a Mount Sopris gamma logging unit employing a natural gamma probe. The probe measures natural gamma radiation using one 0.5-inch by 1.5-inch sodium iodide (NaI) crystal assembly. Normally, accurate concentrations can be measured in uranium grades ranging from less than 0.1% to as high as 5% U_3O_8. Data are logged at a speed of 15 ft to 20 ft per minute down hole and 15 ft to 20 ft per minute up hole, typically in open holes. Occasionally, unstable holes are logged through the drill pipe and the grades are adjusted for the material type and wall thickness of the pipe used.

The radiometric or gamma probe measures gamma radiation which is emitted during the natural Radioactive decay of uranium (U) and variations in the natural radioactivity originating from changes in concentrations of the trace element thorium (Th) as well as changes in concentration of the major rock forming element potassium (K).

Potassium decays into two stable isotopes (argon and calcium) which are no longer radioactive and emits gamma rays with energies of 1.46 mega electron-volts (MeV). Uranium and thorium, however, decay into daughter products which are unstable (i.e., radioactive). The decay of uranium forms a series of about a dozen radioactive elements in nature that finally decay to a stable isotope of lead. The decay of thorium forms a similar series of radioelements. As each radioelement in the series decays, it is accompanied by emissions of alpha or beta particles, or gamma rays. The gamma rays have specific energies associated with the decaying radionuclide. The most prominent of the gamma rays in the uranium series originate from decay of ^{214}Bi (bismuth 214), and in the thorium series from decay of ^{208}Tl (thallium 208).

The natural gamma measurement is made when a detector emits a pulse of light when struck by a gamma ray. This pulse of light is amplified by a photomultiplier tube, which outputs a current pulse that is accumulated and reported as counts per second (cps). The gamma probe is lowered to the bottom of a drillhole, and data are recorded as the tool travels to the bottom and then is pulled back up to the surface. The current pulse is carried up a conductive cable and processed by a logging system computer that stores the raw gamma cps data.

The basis of the indirect uranium grade calculation (referred to as "eU_3O_8" for "equivalent U_3O_8") is the sensitivity of the detector used in the probe, which is the ratio of cps to known uranium grade and is referred to as the probe calibration factor. Each detector's sensitivity is measured when it is first manufactured and is also periodically checked throughout the operating life of each probe against a known set of standard "test pits," with various known grades of uranium mineralization, or through empirical calculations. Application of the calibration factor, along with other probe correction factors, allows for immediate grade estimation in the field as each drillhole is logged.

Downhole total gamma data are subjected to a complex set of mathematical equations, considering the specific parameters of the probe used, speed of logging, size of bore hole, drilling fluids, and presence or absence of any type of drillhole casing. The result is an indirect measurement of uranium content within the sphere of measurement of the gamma detector.

An EFR in-house computer program known as GAMLOG converts the measured cps of the gamma rays into 0.5 ft increments of equivalent percent U_3O_8 (%eU_3O_8). GAMLOG is based on the Scott's Algorithm developed by James Scott of the Atomic Energy Commission (AEC) in 1962 (Scott, 1962) and is widely used in the industry.

The conversion coefficients for conversion of probe cps to percent equivalent uranium grades are based on the calibration results obtained at the United States Department of Energy Uranium Calibration Pits in Grand Junction, Colorado, USA.

In those holes associated with copper mineralization or where EFR personnel reported that the probe underestimated U_3O_8 grades above 2% due to saturation of the probe's sodium iodide crystal, (a normal occurrence associated with gamma logging for uranium), EFR used chemical assay for both copper and uranium. Where there was lower grade uranium and areas of low-grade copper mineralization, radiometric data was used in lieu of chemical assays.

11.1.1.1 Calibration

For the gamma probes to report accurate %eU_3O_8 values the gamma probes must be calibrated regularly. The probes are calibrated by running the probes in test pits maintained historically by the AEC and currently by the DOE. There are test pits in Grand Junction, Colorado, Grants, New Mexico, and Casper, Wyoming. The test pits have known %U_3O_8 values, which are measured by the probes. A dead time (DT) and K-factor can be calculated based on running the probes in the test pits. These values are necessary to convert CPS to %eU_3O_8. The dead time accounts for the size of the hole and the decay that occurs in the space between the probe and the wall rock. DT is measured in microseconds (µsec). The K-factor is simply a calibration coefficient used to convert the DT-corrected CPS to %eU_3O_8.

Quarterly or semi-annual calibration is usually sufficient. Calibration should be done more frequently if variations in data are observed or the probe is damaged.

11.1.1.2 Method

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

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

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

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

$$\%eU3O8 = 2KN$$

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

11.1.2 Core Sampling

11.1.2.1 Sample Preparation

Samples were delivered by a staff geologist to Energy Fuel's White Mesa Mill in Blanding, Utah, for uranium and copper assaying. The White Mesa Mill Laboratory holds no certifications and no accreditations.

Upon delivery of the samples to White Mesa Mill, samples were weighed, dried for 16 to 24 hrs, and weighed again to determine the moisture content. The samples were crushed using a Bico Jaw Crusher and Metso Minerals cone crusher and split using a riffle splitter before pulverization using a ring and puck pulverizer. The crushers, splitters, and pulverisers are cleaned between uses with abrasive sand.

11.1.2.2 Assaying and Analytical Procedure

A split of the pulverized sample was digested in the laboratory in a combination of nitric, perchloric, and hydrofluoric acid, diluted, and analyzed. Determination of uranium content in the sample was performed by a spectrophotometric analysis using the Thermo Scientific Biomate 3 Spectrophotometer. Other analyses were performed either on the Perkin Elmer Optima 5300V ICP-OES or the Perkin Elmer ELAN DRC II ICP-MS. Calibrations were performed daily on these instruments, and every four in 100 analyses were spiked with a standard solution after analysis to ensure consistency of results.

11.1.3 Radiometric Equilibrium

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

A comparison of chemical data vs probe data showed that no disequilibrium factor is needed for the Project.

11.2 Sample Security

Bagged samples were placed in barrels, which were secured in the back of a truck for transport and delivered by EFR personnel to the laboratory at White Mesa Mill for analytical testing. White Mesa Mill personnel were responsible for shipping check samples to various third-party laboratories. A chain of custody form was maintained at all times.

Following analysis, dried, crushed samples were stored in sealed, plastic bottles for long-term storage. Pulverized samples were also stored in sealed, plastic bottles. All samples are stored out of the elements to ensure stored sample quality.

The laboratory at White Mesa Mill uses a combination of digital exports from the instrument's computer and hand entry from logbooks to maintain a master spreadsheet, which calculates grade based on the various inputs. Certificates of analysis were provided to EFR personnel in secured Adobe Acrobat and Microsoft Excel format.

EFR believes the sample preparation, security, and analytical procedures are acceptable for the purposes of a Mineral Resource estimate and meet industry standards.

11.3 Quality Assurance and Quality Control

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

QA/QC samples, including duplicates, blanks, certified reference materials (CRMs or standards), and checks, were submitted by the onsite team at the Project, the Lakewood, Colorado, office of EFR, and EFR's White Mesa Mill laboratory. The submission rate and responsible party of each sample type is listed in Table 11-1.

Table 11-1: QA/QC Samples for the Pinyon Plain Project Drilling
Energy Fuels Inc. - Pinyon Plain Project

Sample Type		Responsible Party	Collection Method	Rate of Insertion
Duplicates	Field	Field Geologist	¼ core	1 in 100
	Coarse	WMM[2] Lab personnel	Second split of crushed sample	2 in 100
	Pulp	WMM Lab personnel	Second split of pulverized sample	2 in 100
CRM[1]		Lakewood Office	Shipped directly to lab	4 in 100
Blank	Coarse	Lakewood Office	Shipped directly to lab	2 in 100
	Pulp	Lakewood Office	Shipped directly to lab	2 in 100
Check Assay		WMM Lab personnel	Split of reject sample	4 in 100
CRM[1] with Check Assay		WMM Lab personnel		10 in 100
Bulk Density		WMM Lab personnel	Core samples	As Available

Notes:

1. CRM = Certified Reference Material
2. WMM = White Mesa Mill

CRMs and fine blanks were shuffled (random sequence applied), numbered, and catalogued in the Lakewood, Colorado, office by EFR technical personnel prior to shipment to the White Mesa Mill laboratory manager. These samples (blind to the White Mesa Mill manager, laboratory manager, and laboratory personnel) were inserted into the sample stream by the laboratory manager. The coarse blanks were not blind to the White Mesa Mill laboratory manager.

Check assays were performed by three independent laboratories (Section 11.3.4) and were submitted by White Mesa Mill personnel. Drilling and assaying were performed in 2016 and 2017; however, all assay results were received by Project personnel in 2017. Table 11-2 outlines the number of submitted QA/QC samples and the portion of the total database they comprise.

Results of the QA/QC program were compiled in a series of Microsoft Excel tables and charts on a regular basis as the program progressed and were distributed to the project and laboratory personnel. QA/QC trends were discussed as the program progressed and action was taken to correct issues.

Table 11-2: Summary of QA/QC Submittals
Energy Fuels Inc. - Pinyon Plain Project

Sample Type	Count	Percentage of Assay Samples
Drillholes	130	-
Assay Samples	3,413	-
Probe Samples	97,994	-
Probe / Assay Duplicates	563	16%
Coarse Blanks	63	2%
Fine Blanks	63	2%
Copper CRMs	125	4%
Field Duplicates	36	1%
Coarse Duplicates	62	2%
Pulp Duplicates	69	2%
Check Assays	114	3%
Total QA/QC Samples	**532**	**16%**

11.3.1 Blanks

The regular submission of blank material is used to assess contamination during sample preparation and to identify sample numbering errors. EFR submitted blank samples at an insertion rate of one in 50 at both the coarse and fine preparation stages. The coarse blank sample is a granite matrix sourced from ASL and certified as barren for both copper and uranium, and the fine blank material was purchased from Ore Research and Exploration (reference material OREAS 24b). OREAS 24b has certified values of 0.0038% Cu and 0.000174% U. The SLR QP reviewed the results of the blank samples submitted alongside drill core and tabulated the number of failures for both coarse and fine blanks. A blank sample was considered to have failed if the assay returned a copper or uranium value more than ten times the detection limit for the assay method. No failures were reported for the coarse or fine blank samples, as presented in Figure 11-1.

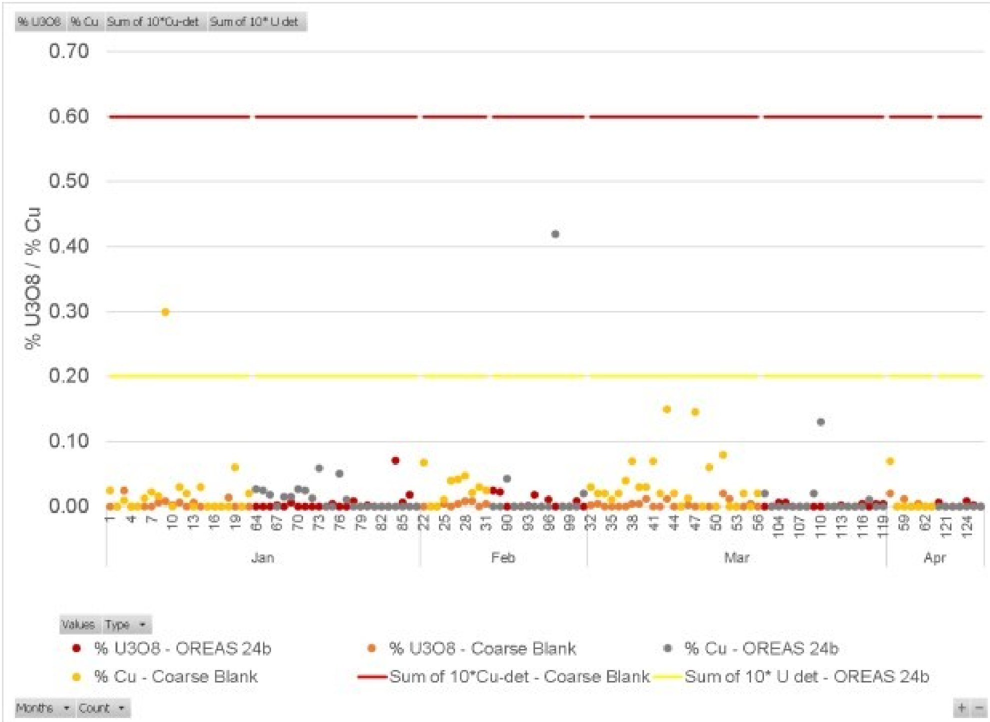


Figure 11-1: Results of Blank Samples

11.3.2 Certified Reference Material

Results of the regular submission of CRMS (standards) are used to identify problems with specific sample batches and biases associated with the primary assay laboratory. Three different copper CRMs were submitted into the sample stream at White Mesa Mill, representing low, medium, and high grade copper material for an insertion rate of one in 25. The matrix of the material, expected value, and tolerance limits are listed in Table 11-3. The CRMs were assayed using a 4-acid digest or aqua regia technique with inductively coupled plasma (ICP) or atomic absorption (AA) finish.

Table 11-3: Expected Values and Ranges of Copper CRM
Energy Fuels Inc. - Pinyon Plain Project

CRM	Cert. Date	Matrix	Expected Value (%)	Tolerance 2 S.D. (%)
CDN-CM-41	2016	Minto Mine: Hypogene Cu Sulfide hosted in Granodiorite	1.71	0.05
CDN-ME-1410	2014	High Sulfide VMS	3.80	0.17
OREAS 1131	2009	Tritton Cu Project: Chalcopyrite Breccia Ore	13.5	0.8

Notes:

1. Certified tolerance is a 95% confidence interval from 13.3% to 13.8% Cu.

No U_3O_8 specific CRMs were sent to White Mesa Mill. As part of the mill's daily protocol for running samples, the equipment was calibrated daily using U_3O_8 CRM 129-A, sourced from the New Brunswick Laboratory at the U.S. Department of Energy. The SLR QP recommends sourcing three matrix-matched or matrix-similar CRMs for U_3O_8, representing low, medium, and high grades at the Project, and incorporating them into the sample stream sent to White Mesa Mill at a rate of one in 25.

The SLR QP calculated failure rates of each copper CRM, prepared contact plots, and looked at temporal trends of the CRMs. Failure rates, defined as a copper value reporting more than three standard deviations (SD) from the expected value, or two consecutive copper values reporting more than two SD from the expected values were tabulated, and are presented in Table 11-4. All CRMs assayed at White Mesa Mill displayed a low bias relative to the expected copper value, as well as a positive temporal trend, and a high failure rate. Control plots of each CRM are presented in Figure 11-2 and a graph of the average copper value by date for each CRM is shown in Figure 11-3. Two of the CRMs, CDN-CM-41 and CDN-ME-1410, are made of a material unlike the material at the Project.

The SLR QP recommends that EFR continue to monitor for low-grade bias of copper and slight low-grade bias of U_3O_8 at the White Mesa Mill laboratory and continue to monitor for temporal trends (change in average grade of CRM data over time) observed at White Mesa Mill laboratory. The SLR QP also recommends EFR procure CRM made from the Project resource material (matrix matched), to obtain an improved understanding of laboratory performance as applied to Project samples; source three matrix-matched or matrix-similar CRMs for U_3O_8 that represent low, medium, and high grade ore at the Project; incorporate the CRMs in the sample stream sent to White Mesa Mill at a rate of one in 25 and ensure the certified values of these CRMs are blind to the laboratory. In addition, submit these CRMs to independent laboratories with check assays at a rate of one in 10 to obtain a meaningful sample size for analysis.

Table 11-4: Summary of CRM Performance
Energy Fuels Inc. - Pinyon Plain Project

CRM	Expected Value (%Cu)	Submittals	Failures	Percentage of Failures
CDN-CM-41	1.71	39	31	79%
CDN-ME-1410	3.80	49	25	51%
OREAS 113	13.5	37	20	54%
Total		**125**	**76**	**61%**

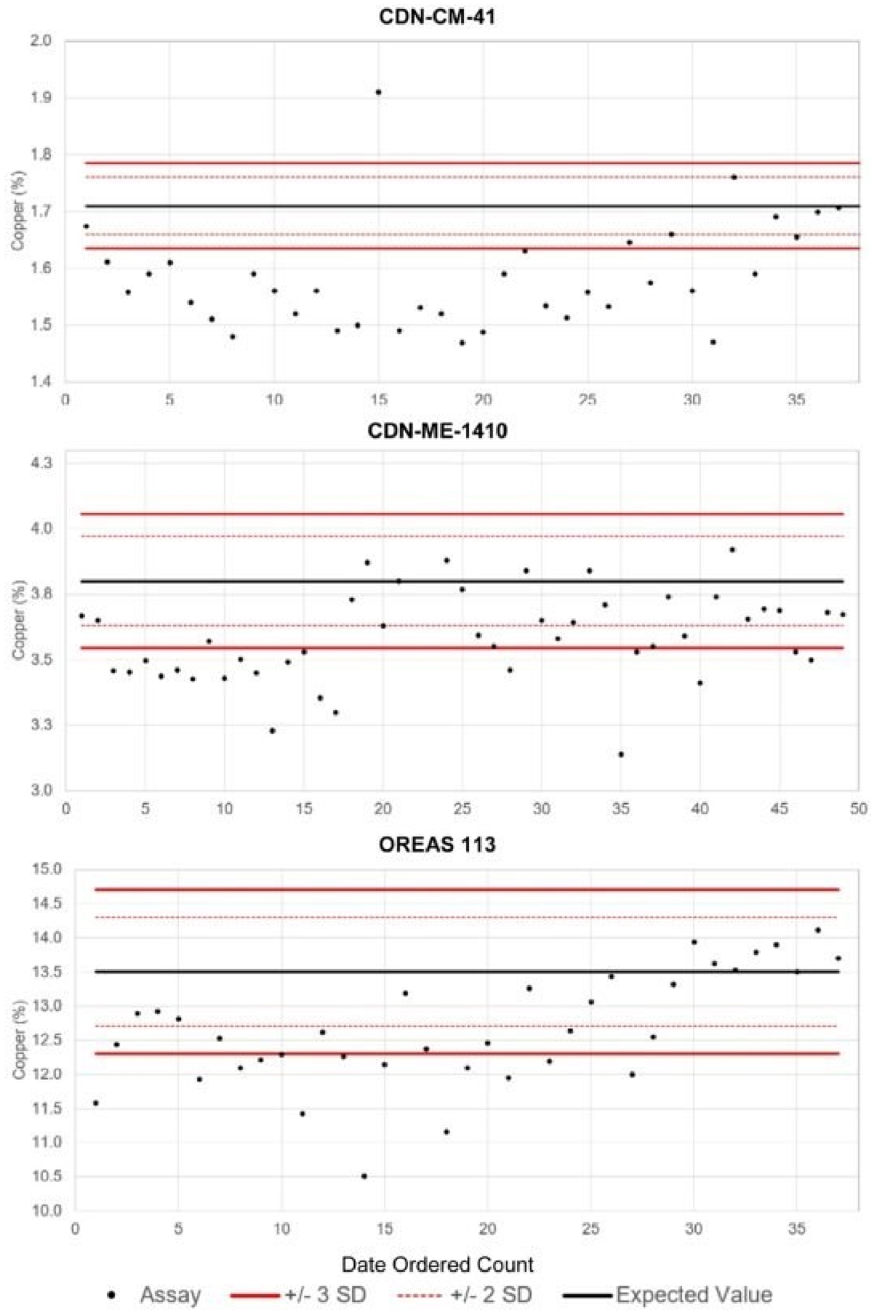


Figure 11-2: Control Charts of Copper CRM

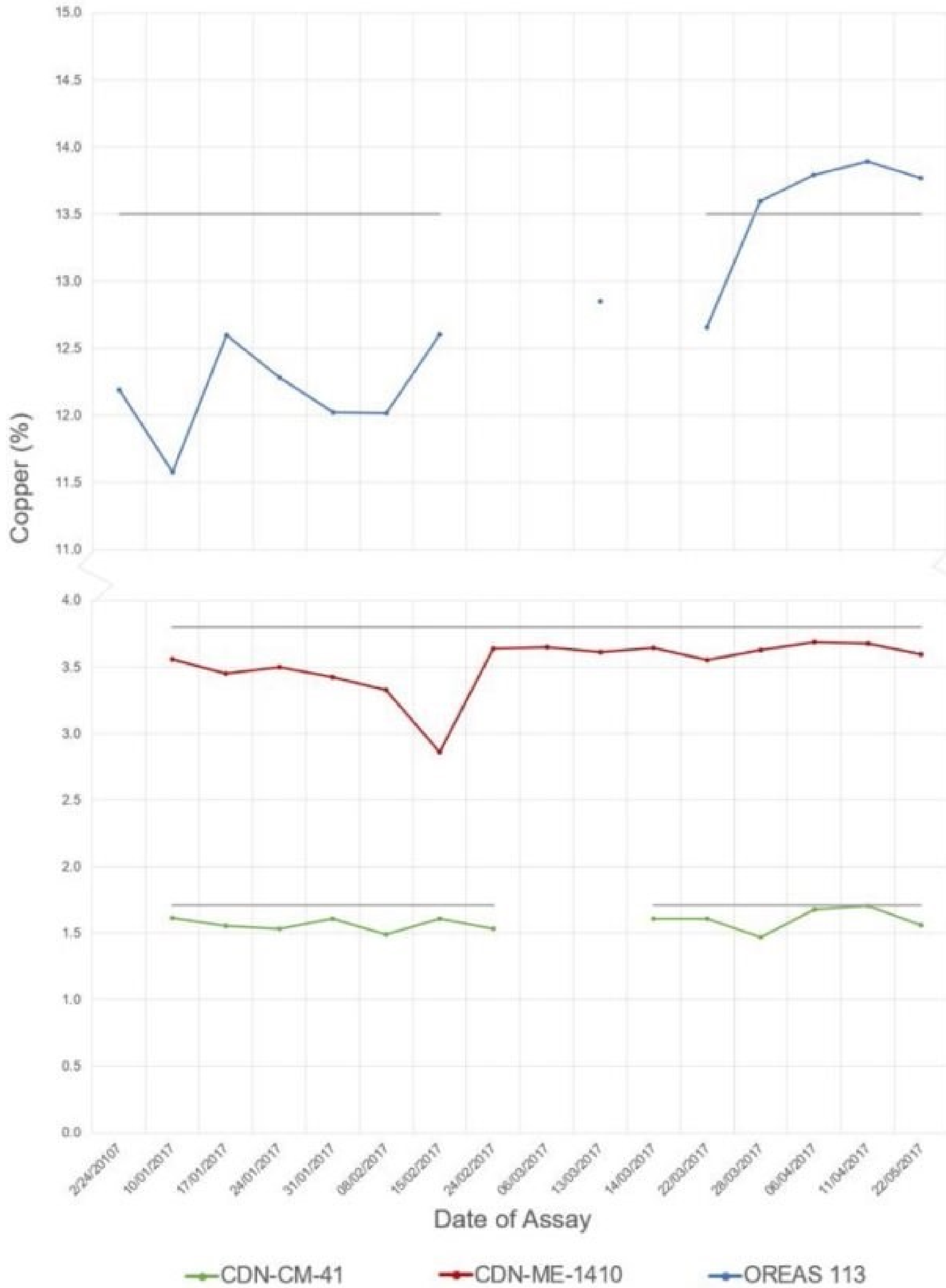


Figure 11-3: Average Copper Grade of CRM Over Time

11.3.3 Duplicates

Duplicate samples help to monitor preparation and assay precision and grade variability as a function of sample homogeneity and laboratory error. The field duplicate includes the natural variability of the original core sample, as well as levels of error at various stages, including core splitting, sample size reduction in the preparatory laboratory, sub-sampling of the pulverized sample, and the analytical error. Coarse reject and pulp duplicates provide a measure of the sample homogeneity at different stages of the preparation process (crushing and pulverizing).

Field duplicate samples were collected by the onsite geologist and submitted to the laboratory as separate samples, adjacent in the sample stream and clearly marked as such. A total of 1% of the drillhole samples have been duplicated by splitting the half core sample into two quarter core samples. The duplicate protocol and procedure for collecting, submitting, and analyzing coarse and pulp duplicate assays is carried out by the White Mesa Mill. A total of 2% of the drillhole samples were resubmitted at the coarse and pulp assay preparation stages for comparison.

Results for both coarse and pulp sample pairs show excellent correlation (Table 11-5) with very good repeatability for both copper and uranium. Of the field, coarse, and pulp duplicate sample sets, however, less than 20% of each of the submitted sample types report grades above the COG of 0.29% U_3O_8 and less than 10% are above the expected average grade of 1% U_3O_8.

Over half of the field duplicates reported U_3O_8 values with a relative difference greater than 20%, which may be related to the uranium occurring as blebs or vug fill. Only one of the four field sample pairs within the grade range of interest, however, had a relative difference greater than 20%. Over half of the field duplicates reported copper values with a relative difference greater than 20%. Only five of the 16 sample pairs with a grade higher than 1% Cu, however, had a relative difference greater than 20%. The SLR QP recommends collecting additional field samples, in the form of ½ core, in the grade range of interest, in order to draw deeper conclusions about the nature of the material at Pinyon Plain.

The SLR QP also recommends implementing a duplicate assay protocol for field, coarse, and pulp samples that is blind to the laboratory, and recommends that the rates of insertion for duplicate samples be approximately one in 50 for field duplicates and one in 25 for coarse and pulp duplicate samples.

Table 11-5: Basic Comparative Statistics of 2017 Duplicate Assays
Energy Fuels Inc. - Pinyon Plain Project

	Field		Coarse		Pulp	
	Original	**Duplicate**	**Original**	**Duplicate**	**Original**	**Duplicate**
			U_3O_8			
Count	36	36	62	62	69	69
Mean (%)	0.14	0.13	0.30	0.31	1.13	1.12
Max. Value (%)	1.45	1.00	9.71	9.80	25.90	25.36
Min. Value (%)	0.00	0.00	0.00	0.00	0.00	0.00
Median (%)	0.02	0.01	0.02	0.02	0.02	0.03
Variance	0.10	0.06	1.67	1.73	19.74	19.03
Std. Dev.	0.32	0.25	1.29	1.31	4.44	4.36
Corr. Coefficient	0.961		1.000		1.000	
% Diff. Btw Means	8.5		-2.0		1.3	
			Copper			
Count	35	35	61	61	69	69
Mean (%)	4.12	4.33	2.22	2.21	3.51	3.42
Max. Value (%)	24.22	22.60	22.38	22.84	30.50	26.14
Min. Value (%)	0.00	0.00	0.00	0.00	0.00	0.00
Median (%)	0.34	0.44	0.14	0.12	0.20	0.20
Variance	48.18	49.38	19.86	20.06	52.68	49.60
Std. Dev.	6.94	7.03	4.46	4.48	7.26	7.04
Corr. Coefficient	0.983		0.997		0.997	
% Diff. Btw Means	-5.0		0.6		2.5	

11.3.4 Check Assays

A total of 114 assays were sent for re-assay at one of three independent laboratories to ascertain if any bias is present within the primary laboratory, Energy Fuel Inc.'s White Mesa Mill laboratory:

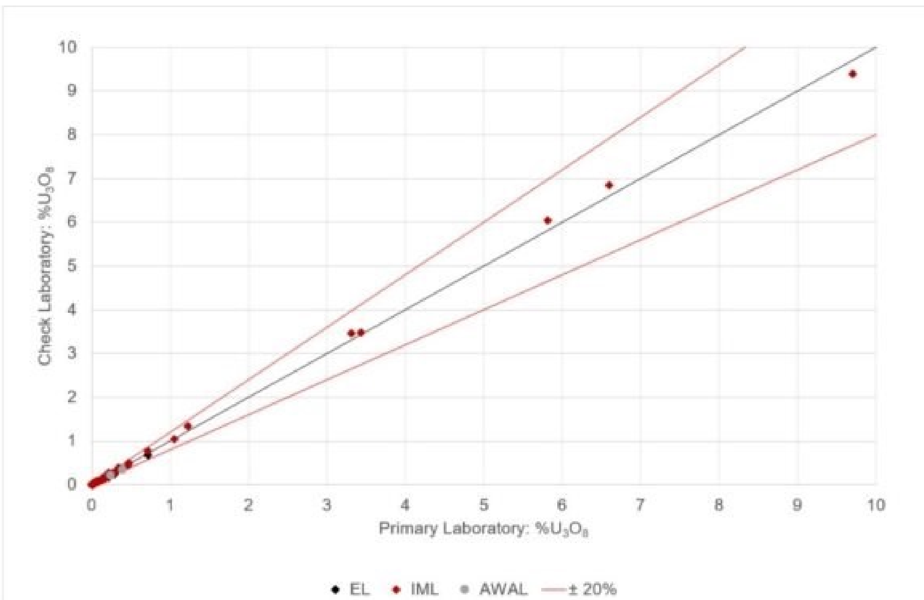
- American West Analytical Laboratories, located in Salt Lake City, Utah - Accredited by the National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and state accredited in Colorado, Idaho, New Mexico, Wyoming, and Missouri
- Energy Laboratories, located in Casper, Wyoming - NELAP accredited Certifications USEPA: WY00002; FL-DOH NELAC: E87641; Oregon: WY200001; Utah: WY00002; Washington: C1012
- Inter-Mountain Laboratory (now Pace Analytical), located in Sheridan, Wyoming - EPA, DOE, and several other accreditations (http://intermountainlabs.com/certifications.html)

The number of check assay samples sent to each laboratory is presented in Table 11-6. Because Inter-Mountain Labs (IML) is the only laboratory with a significant number of samples, and the only laboratory to include CRMs, it was chosen for comparison with the primary laboratory at White Mesa Mill. Scatter plots of the primary and independent laboratory results for U_3O_8 and copper are shown in Figure 11-4 and Figure 11-5, respectively.

Table 11-6: Check Assays List
Energy Fuels Inc. - Pinyon Plain Project

Laboratory	No. Check Assay Samples Sent	No. Cu CRMs Sent
American West Analytical Labs	10	-
Energy Laboratories	5	-
Inter-Mountain Labs	99	11
Total	**114**	**11**

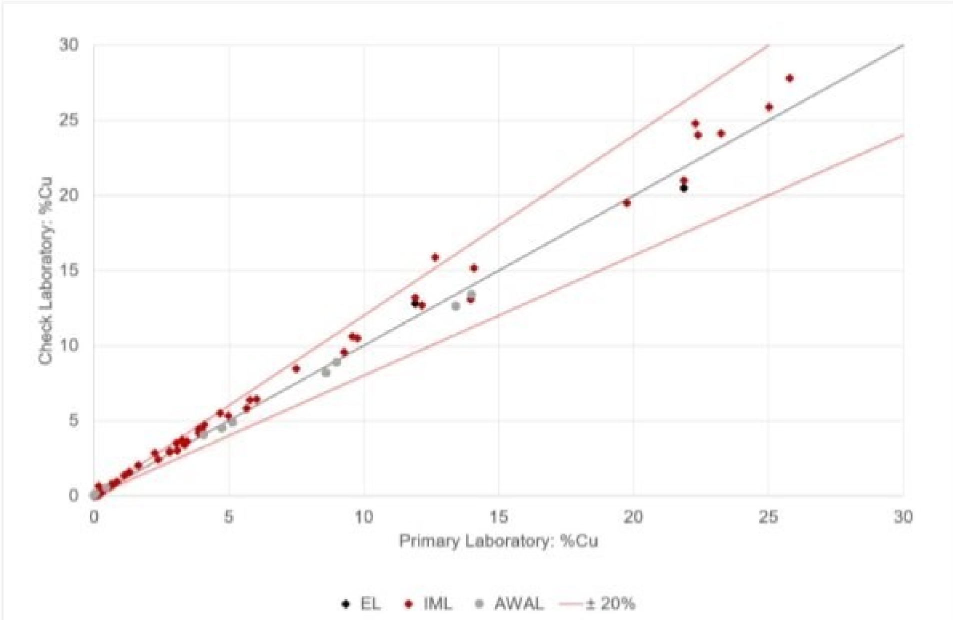
The results indicate a slight low bias of both copper and U_3O_8 results at White Mesa Mill. This finding is supported by the low bias observed in the copper CRM results from White Mesa Mill. Copper CRM results from IML are not conclusive due to the small number of samples submitted, however, the CRM results from IML were mostly slightly above the expected value, with no failures.



Notes:

1. EL = Energy Laboratories
2. IML = Inter-Mountain Labs
3. AWAL = American West Analytical Labs

Figure 11-4: Scatter Plot of Independent vs Primary Laboratory Check Assay Results for U_3O_8



Notes:

1. EL = Energy Laboratories
2. IML = Inter-Mountain Labs
3. AWAL = American West Analytical Labs

Figure 11-5: Scatter Plot of Independent vs. Primary Laboratory Check Assay Results for Copper

11.3.5 Comparison of Probe vs. Assay Results

A total of 97,944 U_3O_8 0.5 ft probe samples were included in the Mineral Resource database where chemical assay data were not available. To check for disequilibrium and ensure that no bias was present between assay and probe results, EFR assayed several drillholes for which probe data were available. Drillhole intervals in the Main Zone were flagged and weighted averages were calculated for the results of each method over the interval of interest. These weighted averages were then compared using basic statistics, including scatter and quantile-quantile plots. A total of 14 sample pairs were removed that returned results above 2% U_3O_8, to account for probe saturation. A scatter plot of the 77 sample pair results is shown in Figure 11-6.

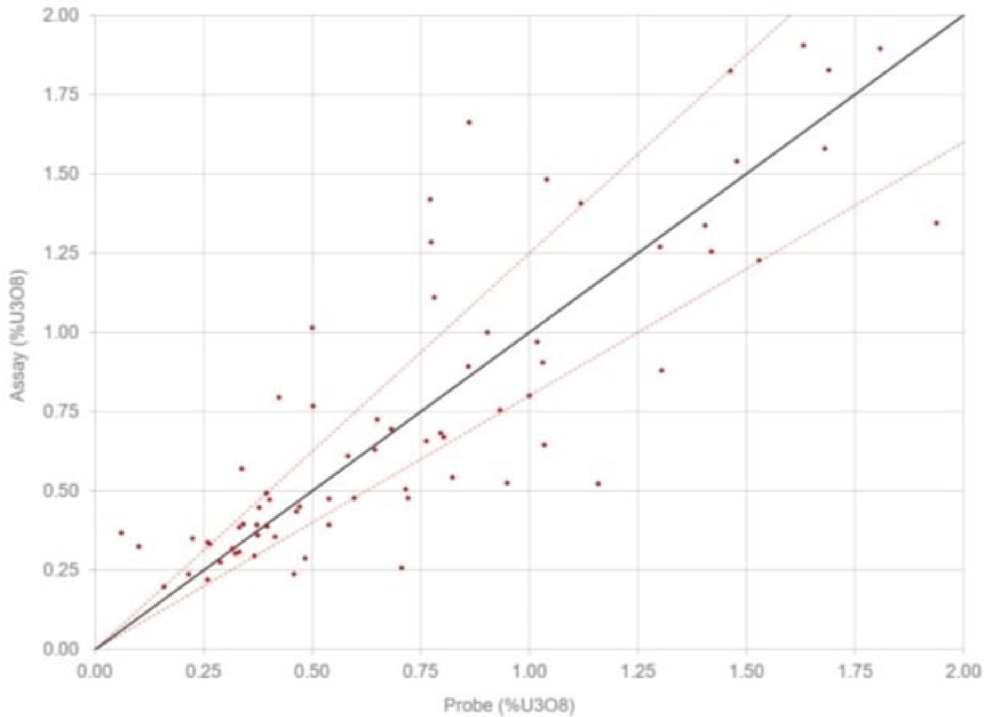


Figure 11-6: Scatter Pot of the Weighted Average of Probe and Assay U_3O_8 Results Over Drillhole Intercepts within the Main Zone

The results indicate good correlation between the assay and probe data, with negligible bias.

11.4 Density Analyses

Bulk densities were determined at White Mesa Mill for a majority of the samples submitted (2,630 of 3,347). A single piece of split core sample, at least four inches in length, was measured in all dimensions using calipers to calculate volume, and then weighed dry. Density was calculated using the measured volume and the mass. An additional 37, full core, six-inch samples, were submitted to White Mesa Mill to verify the caliper method. These 37 full core samples were measured with calipers to calculate volume and then weighed dry. Additionally, these samples were immersed in water to determine volume via water displacement. The densities calculated by both methods were compared. The densities calculated using the caliper method were approximately 1% greater than those calculated using water displacement on the same core samples, which is a negligible difference.

11.5 Conclusions

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

12.0 DATA VERIFICATION

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

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

12.1 SLR Data Verification (2021)

The SLR QP visited the Project on November 16, 2021. Discussions were held with the EFR technical team and found them to have a strong understanding of the mineralization types and their processing characteristics, and how the analytical results are tied to the results. The SLR QP received the project data from EFR for independent review as a series of MS Excel spreadsheets and Vulcan digital files. The SLR QP used the information provided to validate the Mineral Resource interpolation, tons, grade, and classification.

12.2 Audit of Drillhole Database

The SLR QP conducted a series of verification tests on the drillhole database provided by EFR. These tests included a search for missing information and tables, unique location of drillhole collars, and overlapping sample or lithology intervals. Empty tables were limited to lithology, alteration, and geotechnical results. No database issues were identified.

12.3 Verification of Assay Table

The SLR QP compared 100% of the assay sample database for both copper and uranium to assay results in Excel format from White Mesa Mill. Several values in the database were recorded at 0% Cu or 0% U_3O_8. The industry standard is to record assays which return a value below detection limit at a value equal to half the detection limit. This is not expected to materially impact the Mineral Resources. No other discrepancies were found.

12.4 Limitations

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

12.4.1 Conclusion

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

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Metallurgical Testing

Preliminary metallurgical bench tests have been completed on samples from the Project to determine both uranium and copper metallurgical performance. Copper mineralization presents an upside to the Project, however, and warrants additional metallurgical test work to attempt to improve recoveries and lower processing costs.

Test work was completed at the White Mesa Mill's metallurgical laboratory while confirmatory testing was conducted at the Australian Nuclear Science and Technology Organization (ANSTO), an independent metallurgical laboratory in New South Wales, Australia, that operates a Quality Management System which complies with the requirements ISO 9001:2015 for conduct of strategic and applied nuclear research across three themes, Nuclear Fuel Cycle, Environment, and Human Health Testing included conventional acid leaching, flotation of conventionally leached residue, and roasting pre-treatment followed by conventional acid leaching. The primary goal of the work was to determine if the existing White Mesa Mill process flow sheet would be suitable for processing the Project's mineralized material types, and if not, what process flow sheet would be appropriate while minimizing capital modifications to the White Mesa Mill circuit.

Several metallurgical testing programs have been completed on the Project's mineralized material types. The goal of these tests is to maximize uranium and copper recoveries, and to minimize changes to the White Mesa Mill circuit and any associated capital requirements, while also minimizing process operating costs and uranium deportment to the final copper product.

Two metallurgical composites were used for testing during 2016 and 2017.

The first metallurgical composite was created in October 2016 and was made from 37 core samples. White Mesa Mill laboratory testing showed the average grades for this composite were 0.81% U_3O_8 and 9.78% Cu. This composite was the most representative of the Main Zone of the deposit from the samples available at the time. Testing was done on this composite from October 2016 to January 2017. The preliminary conventional acid leaching test work was conducted to determine uranium and copper recoveries. Leaching conditions, including temperature, solids density, and free acid and chlorate dosages, were varied between a total of 17 tests.

Uranium recoveries were high for this test series ranging from 96.3% to 99.8%. Copper recoveries were significantly lower ranging from 18.7% to 55.5%. Sulfuric acid consumption was higher than normal for ores treated at White Mesa Mill ranging between 221 pounds per short ton (lb/ton) to 670 lb/ton. Sodium chlorate consumptions were 0 lb/ton to 164 lb/ton of feed, which is significantly higher than the normal ore range of 0 lb/ton to 30 lb/ton.

Owing to the poor copper metallurgical performance during conventional acid leaching, flotation testing of conventional leaching residue was examined. Due to the possibility of uranium deportment to the copper concentrate, it was decided to run flotation concentration tests on leached residue in order to potentially minimize uranium concentrations. Flotation of copper worked very well with rougher copper recovery at 72% with a copper concentrate grade of 33.3%. Unfortunately, uranium deportment to the concentrate exceeded normal treatment charge/refining charge (TC/RC) limits at 0.105% U_3O_8, making flotation an unlikely processing option.

A second (and larger) composite was made in January of 2017 and was used for testing from that point on. This composite was the most representative of the Main Zone of the deposit from the samples available at the time. The metallurgical testing composite was generated from 60 core samples representing 240 ft of half drill core (approximately 360 lb) from the Pinyon Plain deposit. A split of this composite was also sent to ANSTO in Australia for independent testing. White Mesa Mill laboratory testing showed the average grades for this composite were 0.76% U_3O_8 and 9.93% Cu. The primary goal of this program was to determine the metallurgical response using the conventional acid leach process currently in use at White Mesa Mill. Summary results are presented in Table 13-1 below.

As expected, uranium recoveries averaged 93.4%, ranging from a low of 68.3% to 99.8%. Copper recoveries were considerably lower, averaging 26.9% and ranging from 4% to 53.7%. Reagent consumptions using the conventional leaching averaged 900 lb/ton for sulfuric acid and 20 lb/ton for chlorate.

Table 13-1: Conventional Acid Leach Test Results
Energy Fuels Inc. - Pinyon Plain Project

Test #	Recovery		Targets				Actual		Consumption (lb/ton)	
	U_3O_8	Cu	Free Acid	Temp (ºF)	EMF	% Solids	Free Acid	EMF	Acid	Chlorate
1	98.2	37.6	85	85	none	50	80.9	385	224.0	80.0
2	98.0	48.6	80	80	500	50	76.4	443	434.0	128.0
3	96.8	50.0	50	80	500	50	48.5	457	361.0	128.0
4	94.0	53.7	20	80	500	50	18.1	439	265.0	144.0
5	98.0	46.9	80	80	450	50	76.9	438	420.0	120.0
6	99.2	53.3	80	80	500	33	85.3	415	316.0	80.0
7	96.7	35.9	50	50	500	50	39.7	658	280.0	100.0
8	96.6	17.0	50	ambient	500	50	51.5	846	258.0	80.0
9	97.0	33.1	50	50	400	50	52.4	396	309.0	80.0
10	95.5	6.8	50	50	none	50	49.5	409	228.0	0.0
11	96.7	17.2	50	50	none	50	47.0	416	246.0	20.0
12	80.9	9.2	50	ambient	none	50	47.5	401	228.0	20.0
13	80.1	7.8	80	ambient	none	50	73.0	398	291.0	20.0
14	99.8	11.9	50	60	none	50	43.1	366	220.0	20.0
15	97.5	18.4	50	60	none	33	54.9	366	362.0	20.0
16	97.2	30.6	50	60	none	50	48.5	386	276.0	40.0
17	96.6	20.7	20	50	none	50	19.1	357	154.6	20.0
18	97.8	19.0	20	80	none	50	15.2	325	147.2	20.0
19	82.4	16.6	50	60	none	50	48.0	318	209.8	10.0

Test #	Recovery		Targets			Actual			Consumption (lb/ton)	
	U_3O_8	Cu	Free Acid	Temp (ºF)	EMF	% Solids	Free Acid	EMF	Acid	Chlorate
20	68.3	4.0	50	60	none	50	45.6	278	180.3	0.0
Avg.	**93.4**	**26.9**							**270.5**	**56.5**
Max.	**99.8**	**53.7**							**434.0**	**144.0**
Min.	**68.3**	**4.0**							**147.2**	**0.0**

Due to low copper recoveries, a series of tests were run to determine the effect of a roasting pre-treatment. Roasting temperatures were varied between 450°C and 650°C. As shown in Table 13-2, roasting improved recoveries for both uranium and copper, averaging 86% and 87.6% respectively. Using the optimum roasting temperature of 650°C, recoveries averaged 91.6% for uranium and 94.9% for copper. Reagent consumptions on the roasted material averaged 250 lb/ton for sulfuric acid and 15 lb/ton chlorate using temperatures of 650°C for the roasting phase and 50°C for the leaching phase.

Table 13-2: Roasted Acid Test Results
Energy Fuels Inc. - Pinyon Plain Project

Test #	Roasting		Recovery		Targets			Actual			Consumption (lb/ton)	
	Temp (ºF)	Time	U_3O_8	Cu	Free Acid	Temp (ºF)	EMF	% Solids	Free Acid	EMF	Acid	Chlorate
2	450	45	78.8	85.2	80	60	none	4	76.9	379.0	5500	0
3	550	45	98.7	98.4	80	60	none	4	78.4	550.0	5500	0
4	650	45	99.2	92.2	80	60	none	4	78.4	603.0	5500	0
5	550	45	60.9	63.3	80	60	none	4	67.1	337.0	4600	0
7	550	45	95.4	87.3	80	60	none	4	59.8	536.0	4600	20
8	550	90	93.3	86.0	80	60	none	4	60.3	534.0	4600	20
9	550	45	85.3	81.8	80	80	none	4	72.0	349.0	4875	20
10	550	120	63.6	73.9	80	80	none	15	81.8	336.0	4325	0
11	650	120	94.7	96.0	80	80	none	15	75.5	432.0	4325	0
12	650	20	81.3	76.0	80	80	none	15	78.0	341.0	1195	0
13	650	40	89.3	87.4	80	80	none	15	80.9	382.0	1195	0
14	650	60	94.9	91.9	80	80	none	15	77.9	417.0	1195	0
15	650	60	76.4	88.4	20	20	none	15	24.0	322.0	460	0
16	650	60	82.8	92.0	50	50	none	15	49.9	400.0	775	0
17	650	60	82.6	92.6	20	80	none	15	20.6	405.0	506	0
18	650	60	84.0	90.3	80	20	none	15	76.0	354.0	1150	0

Test #	Roasting		Recovery		Targets			Actual			Consumption (lb/ton)	
	Temp (ºF)	Time	U_3O_8	Cu	Free Acid	Temp (ºF)	EMF	% Solids	Free Acid	EMF	Acid	Chlorate
19	650	60	95.9	97.3	80	80	none	15	85.0	433.0	1380	0
20	650	60	99.1	92.2	20	50	none	15	17.6	555.0	450	10
21	650	60	30.6	90.9	30	50	none	40	30.9	412.0	318	10
22	650	60	79.7	93.3	80	80	none	40	83.3	396.0	580	0
23	650	60	97.8	95.4	none	80	none	33	41.7	458.0	479	10
24	650	60	95.8	93.4	none	80	none	33	26.0	426.0	350	10
25	650	60	96.5	93.7	none	50	none	33	51.0	445.0	450	10
26	650	60	80.9	92.0	none	50	none	20	26.5	400.0	450	10
27	650	60	86.6	94.5	none	50	none	20	22.4	405.0	450	10
28	650	60	97.1	96.3	none	50	none	20	31.9	642.0	450	20
29	650	60	97.2	96.7	none	50	none	20	28.9	654.0	450	20
30	440	60	68.4	26.2	none	80	none	33	45.6	325.0	350	10
31	606	60	93.4	84.6	none	80	none	33	25.5	395.0	350	10
32	770	60	89.7	88.2	none	80	none	33	15.2	631.0	350	10
Avg.			**86.0**	**87.6**							**1992.2**	**6.5**
Max.			**99.2**	**98.4**							**5500.0**	**20**
Min.			**30.6**	**26.2**							**317.5**	**0**

Two different metallurgical testing programs have been completed at ANSTO's facilities in Australia. These series of tests were conducted on the second bulk composite generated at White Mesa Mill and coincide with the White Mesa Mill's program from January 2017. Pertinent test work focused on conventional acid leaching (one test) and roasting pre-treatment followed by acid leaching (six tests). Comparisons between the White Mesa Mill and ANSTO test work results are presented in Figure 13-1 and Figure 13-2 for conventional leaching and roasting pre-treatment respectively. Results from the White Mesa Mill laboratory are in red and results from the ANSTO laboratory are blue. It should be noted that the results presented incorporate the entire data set and no outliers were culled.

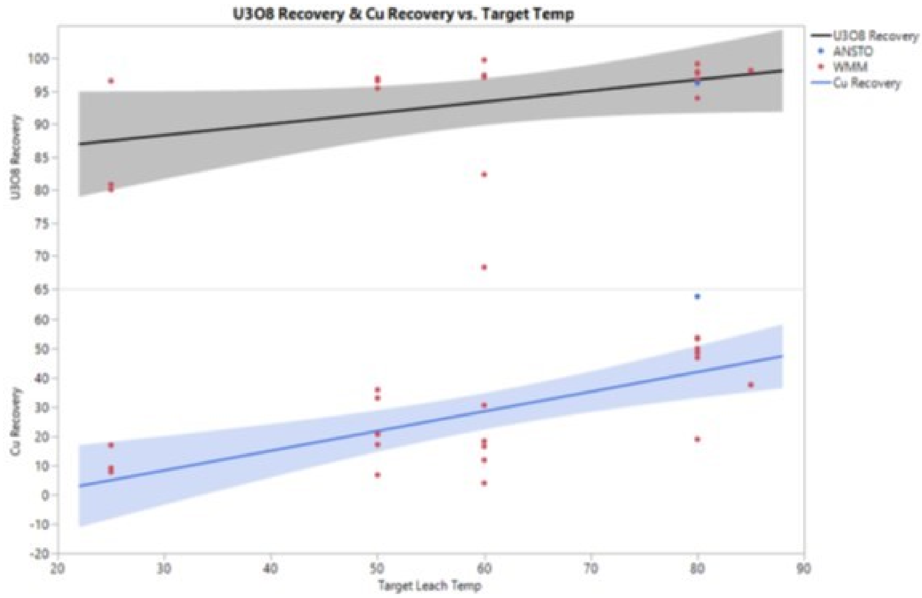


Figure 13-1: Laboratory Comparison - Conventional Leaching

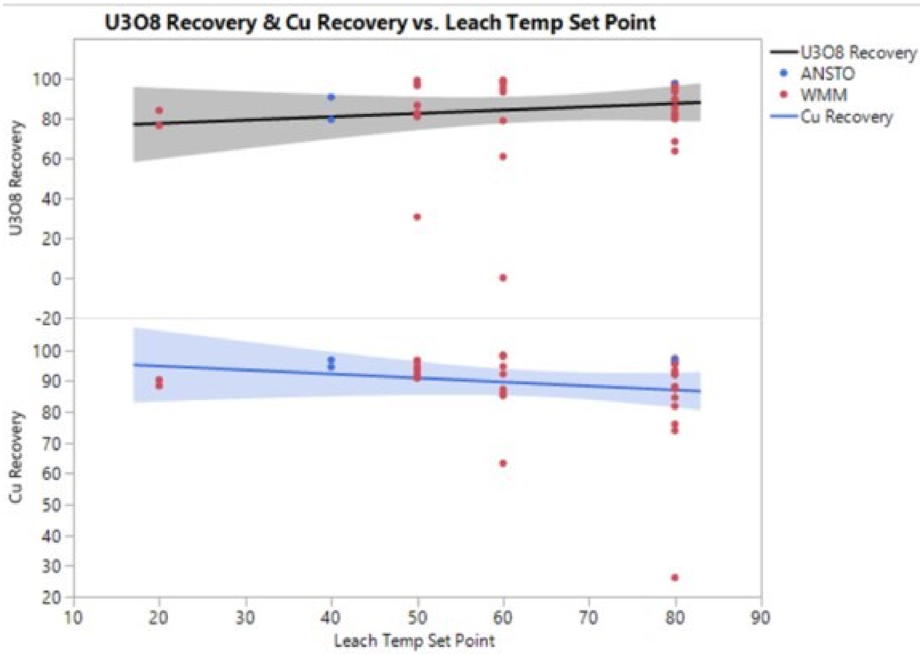


Figure 13-2: Laboratory Comparison - Roasting Pre-Treatment and Leaching

In 2018 Hazen Research Inc. (Hazen) in Golden, Colorado conducted bench- and pilot-scale programs to demonstrate copper extraction from ore at the Project. Hazen Research holds certifications from various state regulatory agencies and from the US Environmental Protection Agency (EPA). And ELI is NELAP accredited with certifications USEPA: WY00002; FL-DOH NELAC: E87641; Oregon: WY200001; Utah: WY00002; Washington: C1012.

Bench-scale experiments were conducted to determine the preferred operating conditions for the pilot-scale roasting and leaching programs. Four roasting experiments were performed to evaluate two variables: temperature and excess air. Four batch, bench-scale sulfuric acid (H_2SO_4) leach tests of the batch calcines were conducted, using the leach conditions set by EFR, to measure roasting success. Four additional bench-scale leach tests of pilot kiln calcine and pre-roasted calcine also were conducted. The results of this work showed that uranium and copper recoveries exceeding 95% and 90%, respectively, could be expected from the Project ore evaluated in this program. Results suggested that leaching efficiency was controlled, in large part, by the degree of sulfide oxidation and that oxygen availability was a key variable in roasting.

A continuous roasting program was performed to demonstrate oxidative roasting of the Project ore and to generate calcine for subsequent pilot acid leaching. Target parameters for the pilot roast were discussed and accepted by EFR. The target parameters included a 4% to 5% oxygen concentration in the off-gas, 1-hour residence time, and 650°C burden temperature. Approximately 360 kg of ore were processed in the pilot kiln system. Roasted product (calcine) was collected continuously and sampled on an hourly basis. The product samples were assayed for acid insoluble sulfur to determine the extent of sulfide oxidation. The average sulfide oxidation from the product samples was 95%. During operations, a runaway temperature excursion occurred causing material to stick to the kiln wall. As a result, the residence time through the kiln may have been affected, as suggested by incomplete sulfide oxidation. A single batch pilot acid leach using 60 kg of pilot calcine was performed to confirm the leaching results and generate pregnant leach solution (PLS) for subsequent uranium and copper solvent extraction (SX). The conditions prescribed by EFR for the leach evaluation were 350 lb/ton H_2SO_4, 10 lb/ton sodium chlorate ($NaClO_3$), 33% solids, and 80°C. The leaching time was 24 hours in a 70 gal agitated tank; kinetic samples were obtained at two hours, four hours, and eight hours. The final slurry was filtered in a filtering centrifuge and washed thoroughly. The PLS and wash were collected; washed solids were dried and analyzed. Uranium extraction from calcine was 95% and copper extraction was 90% at 24 hours. Kinetic data suggested that leaching was essentially complete for both metals at eight hours.

Before uranium SX, deionized (DI) water was added to the PLS to simulate the dilution that would occur in countercurrent washing of leach solids. An eight-stage continuous SX circuit was assembled using glass mixers and settlers. Solvent (tertiary amine extractant [Alamine 336], isodecanol, aliphatic diluent) was mixed with the PLS and separated in four countercurrent stages, followed by solvent scrubbing, two sodium carbonate (Na_2CO_3) strip stages for uranium recovery and concentration, and a wash stage to prepare the solvent for recycling. The circuit was operated for 30 hours and demonstrated greater than 99% uranium extraction with only about 2.5 mg/L U_3O_8 reporting to the raffinate (tailings stream). The uranium SX was operated as a precursor to copper SX and was not in itself a research and development effort.

The combined uranium SX raffinate solution became feed to copper SX. Components of the uranium SX circuit, after cleaning and tubing replacement, were used to assemble the copper SX, and the stage configuration was identical. The copper SX solvent was 20% LIX 984N (aldoxime-ketoxime blend) in aliphatic diluent. The stripping agent was 180 g/L H_2SO_4; no copper was introduced into the strip feed to ensure that the copper cathode produced in the electrowinning (EW) step would be 100% ore-sourced. The copper SX circuit was operated for 35 hours over 4 days and produced 15.8 L of pregnant strip solution at a concentration of 38.2 g/L Cu. Copper extraction during steady-state operation exceeded 96%, with raffinate copper levels of less than 0.3 g/L.

The copper SX strip product became feed to a small-scale, continuous copper EW operation. A single glass cell was assembled using a calcium-lead alloy anode and a stainless steel cathode. A small Hewlett Packard rectifier provided the power to apply a current density of 300 ampere per square foot (A/ft^2) to the cathode. The operation design targeted a 3 g/L to 4 g/L reduction in copper concentration, from 38 g/L Cu to 34 g/L Cu. This reduction was achieved over 64 hours of continuous operation, and an approximately 50 g copper plate was produced. An impurity scan of the copper product by glow discharge mass spectroscopy (GDMS) conducted by Northern Analytical Laboratory, Inc. (NAL), in Londonderry, New Hampshire, showed generally low levels or an absence of the 78 impurities analyzed. Lead was present at 300 ppm, which was attributed to loss from the lead anode caused by a nonoptimized EW setup and operation; commercial EW operation should minimize or eliminate lead as a cathode impurity.

During the bench- and pilot-scale programs, Hazen was able to demonstrate that extraction of copper from the Project ore using EFR's process is technically feasible. The data collected from the bench-scale experiments were repeatable in the pilot-scale demonstration in terms of uranium and copper extractions. The results and observations from both programs elucidated potential issues for commercial scaleup, including material stickiness during roasting and the formation of uranium precipitate (metazeunerite, $Cu(UO_2)2(AsO_4)2 \cdot 8H_2O$) in diluted acid leach liquor.

Residual sulfide after roasting affects copper extraction as confirmed in the bench- and pilot-scale leaches. The average residual sulfide removed from the roasted products during the pilot-scale program was 95%, which resulted in a copper extraction of 90%.

During the pilot-scale roasting program, temperature excursions were experienced, likely due to the exothermic oxidation of sulfides. The temperature excursions caused the ore to become sticky, which may have affected the residence time through the kiln. There was still a considerable amount of residual sulfide on the roasted product, which suggests that material stuck on the kiln walls may have caused a decrease in the effective cross-sectional area of the kiln. At the end of the pilot roast program, the kiln was inspected and cleaned out. A total of 8 kg of material was found stuck on the kiln walls and required physical separation. Because of the short duration of the continuous roasting program, evaluating this phenomenon was not considered.

Acid leaching of calcine at the conditions established by EFR showed good uranium and copper dissolution, exceeding 90% for both metals in some experiments. Uranium appeared to leach more rapidly than copper. In one roast-leach experiment, copper extraction exceeded 90% in two hours of leaching; the batch roast conditions for this calcine sample were 650°C and double the standard airflow (six litres per minute, L/min). These and other data collected in the program confirm the relationship between sulfide oxidation and both leaching potential and leaching kinetics.

Uranium SX of the dilute acid leach PLS proceeded very well and showed excellent results; the use of tertiary amine for SX of uranium in a sulfate system is a proven and robust unit operation. The SX circuit operated well within the conditions evaluated. Hazen recommended that the formation of metazeunerite in the dilute PLS be further evaluated to determine the conditions of its precipitation, which deprives leach liquor of both uranium and copper.

Copper was successfully recovered from uranium SX raffinate by SX using LIX 984N. After circuit shakedown and adjustment of the overall extraction, the copper tenor in the raffinate was consistently less than 0.3 g/L Cu. Stripping using copper-free strong H_2SO_4 generated pregnant strip solution with more than 40 g/L Cu. Analysis of stripped, washed organic showed approximately 3 g/L Cu, suggesting that an additional strip stage may have been beneficial. Arsenic was notably absent at a significant concentration in the strip product; therefore, it was unavailable as a potential impurity in copper EW.

Copper EW from pregnant SX strip solution was carried out in a small glass cell using a single lead-calcium anode and single stainless steel cathode. Preoperational design resulted in achievement of the operating targets: 300 A/ft^2 current density, and a nominal 3 g/L Cu bite in a single pass. A 50 g copper plate was produced, which contained minimal impurities (as shown by GDMS analysis) other than lead, a typical contaminant when using a lead anode. Because of the short duration of the copper EW operation, optimization of the system was not evaluated. Therefore, further evaluation of the copper EW process is recommended to determine how improvements to impurity levels can be made. The lead content, especially, can be significantly reduced or eliminated through EW operational changes to reduce cell turbulence.

The roast-acid leach, uranium SX, copper SX, and copper EW process designed by EFR for the Pinyon Plaindeposit and modeled at bench and pilot scale by Hazen comprises a series of proven, robust unit operations. Each of these operations performed well in the test work. Minor idiosyncrasies in some experimental work discussed in individual report sections herein may point to potential process optimization paths, however, the overall process showed strong competency to recover and concentrate the uranium and copper values. A summary of uranium and copper recoveries from each unit operation is provided in Table 13-3.

Table 13-3: Summary of Uranium and Copper Recoveries (Hazen)
Energy Fuels Inc. - Pinyon Plain Project

Unit of Operation	Recovery %	
	U	Cu
Pilot Leach	95	90
Uranium SX	100	N/A
Copper SX	N/A	95
Copper EW	N/A	100
Overall Calculated Recoveries	95	86

Notes:

1. N/A = not applicable
2. Recoveries are calculated from the inputs and outputs of individual unit operations

To economically produce copper cathode, the copper cathode grade will need to be considered when scaling to a commercial capacity. Based on the GDMS results from NAL, certain impurities may need to be further evaluated for refinement depending on market criteria.

13.2 Opinion of Adequacy

The copper is expected to be processed using roasting, followed by acid leach and solvent extraction. Acid leach followed by solvent extraction is the current process used for uranium recovery. Following solvent extraction, a saleable copper product is expected to be produced by electrowinning. To recover copper from the Pinyon Plain mineralized material, some modifications to White Mesa Mill process circuits are required. The copper modifications are expected to include using the existing vanadium solvent extraction circuit for copper extraction, the addition of a roaster to improve copper recovery, and the addition of an electrowinning circuit. Bench and pilot scale test work done by HAZEN in 2018 indicates that acid leaching after roasting pre-treatment is expected to result in satisfactory copper and uranium recoveries.

The metallurgical test results provided by the White Mesa Mill, ANSTO, and Hazen indicate that metallurgical recoveries using optimum roasting and leach conditions are expected to be approximately 96% for uranium and 86 to 90% for copper.

The metallurgical composites that were used for metallurgical testing are representative of the various types and styles of mineralization for the Main Zone of the deposit, which contain copper. The average U_3O_8 grades for these two test composites were close to the average grade of the U_3O_8 presented as a resource in this Technical Report.

There are no known processing factors or deleterious elements that could have a significant effect on potential economic extraction.

The White Mesa Mill has a significant operating history using the uranium SX circuit, which has included milling relatively high grade copper ores with no detrimental impact to the uranium recovery or product grade. Expected White Mesa Mill modifications to recover copper include utilizing the existing vanadium solvent extraction circuit for copper and the addition of an EW circuit. Carry over of uranium to the copper electrolyte is not expected and will be verified by future laboratory test work.

The SLR QP supports the conclusions of the expected performance of the metallurgical processes based on test work data from the White Mesa Mill, ANSTO, and Hazen, in addition to historical operating data from White Mesa Mill. In the SLR QP's opinion, the metallurgical test work is adequate for the purposes of Mineral Resource estimation.

14.0 MINERAL RESOURCE ESTIMATE

14.1 Summary

Mineral Resources have been classified in accordance with the definitions for Mineral Resources in S-K 1300, which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM, 2014) definitions which are incorporated by reference in NI43-101.

The SLR QP has reviewed and accepted the Mineral Resource estimate prepared by EFR based on block models constrained with 3D wireframes on the principal mineralized domains. Mineralized values for U_3O_8 and copper values were interpolated into blocks using inverse distance squared (ID^2) or ordinary kriging (OK).

A geologic and resource model of the breccia pipe host was constructed based on drill logs. Mineralization wireframes for U_3O_8 were based on assays at a nominal cut-off grade of 0.15%. Low and high grade copper wireframes were based on nominal cut-off grades of 1% and 8%, respectively.

Table 14-1 summarizes Mineral Resources based on a $65/lb uranium price at an equivalent uranium cut-off grade of 0.40% U_3O_8 for zones (the Main Zone and Main-Lower Zones) containing copper and 0.30% U_3O_8 for the Juniper and Upper zones. Uranium and copper estimates pertain to the same deposit and there is an overlap of tonnages in the Main and Main Lower zones, therefore they are listed separately in Table 14-1.

Based on the similarity of the Pinyon Plain deposit to other past producing breccia pipe deposits in northern Arizona, the proposed mining methods at Pinyon Plain will include a combination of long-hole stoping, shrinkage stoping, and drift and fill. Metallurgical test results provided by EFR White Mesa Mill laboratory personnel indicated that metallurgical recoveries using optimum roasting and leach conditions will be approximately 96% for uranium and 90% for copper. The effective date of this Mineral Resource estimate is December 31, 2021, and it is in situ. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

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

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

Table 14-1: Summary of Attributable Mineral Resources - Effective Date December 31, 2021
Energy Fuels Inc. - Pinyon Plain Project

Classification	Zone	COG (% U_3O_8 Eqv)	Tonnage (tons)	Grade (% eU_3O_8)	Contained Metal (lbs U_3O_8)	Recovery U_3O_8 (%)	Grade (% Cu)	Contained Metal (lbs Cu)	Recovery Cu (%)
				Main Zone					
Measured	Main	0.40	6,000	0.46	55,000	96	9.60	1,155,000	90
Indicated	Main	0.40	90,000	0.92	1,644,000	96	5.89	10,553,000	90
Total Measured + Indicated			**96,000**	**0.88**	**1,699,000**	**96**	**6.10**	**11,708,000**	**90**
Inferred	Main	0.40	-	-	-	-	-	-	-
	Main-Lower	0.40	4,000	0.22	16,000	96	6.50	470,000	90
Total Inferred			**4,000**	**0.20**	**16,000**	**96**	**5.88**	**470,000**	**90**
				Juniper					
Indicated	**Juniper I**	**0.30**	**37,000**	**0.95**	**703,000**	**96**	**-**	**-**	**-**
Inferred	Juniper I	0.30	2,000	0.58	24,000	96	-	-	-
	Juniper II	0.30	1,000	0.36	8,000	96	-	-	-
Total Inferred			**3,000**	**0.53**	**32,000**	**96**	**-**	**-**	**-**
				Upper Zones					
Inferred	Cap	0.30	300	0.33	2,000	96	-	-	-
	Upper	0.30	9,000	0.44	76,000	96	-	-	-
Total Inferred			**9,300**	**0.42**	**78,000**	**96**	**-**	**-**	**-**

Notes:

1. SEC S-K-1300 definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.
2. Mineral Resources are estimated at an equivalent uranium cut-off grade of 0.40% U3O8 for copper bearing zone and 0.30% U3O8 for non-copper bearing zones, with estimated recoveries of 96% for uranium and 90% for copper.
3. Mineral Resources are estimated using a long-term uranium price of US$65 per pound, and copper price of US$4.00 per pound.

4. A copper to U3O8 conversion factor of 18.19 was used for converting copper grades to equivalent U3O8 grades (% U3O8 Eqv) for cut-off grade evaluation and reporting.
5. No minimum mining width was used in determining Mineral Resources.
6. Bulk density is 0.082 ton/ft3 (12.2 ft3/ton or 2.63 t/m3).
7. Mineral Resources are exclusive of Mineral Reserves and do not have demonstrated economic viability.
8. Numbers may not add due to rounding.
9. Tonnages of uranium and copper cannot be added as they overlap in the Main and Main Lower Zone.
10. Mineral Resources are 100% attributable to EFR and are in situ.

14.2 Resource Database

As of the effective date of this report, EFR and its predecessors have completed 150 holes (45 surface and 105 underground) totalling 92,724 ft from 1978 to 2017. No drilling was conducted on the Project from 1994 to 2016. In 2016 and 2017, EFR completed 105 underground drillholes totalling 30,314 ft at the Project. For this Resource estimate, all of the underground holes and 25 of the 45 surface holes were used in the modeling of mineralization. Twenty surface holes were excluded because they are located outside the pipe and contain no mineralization.

The Project resource database, dated June 17, 2017, includes drilling results from 1978 to 2017 and includes surveyed drillhole collar locations (including dip and azimuth), assay, radiometric probe, and lithology data from 130 diamond drillholes totalling 79,775 ft of drilling.

The resource dataset for the Main Zone is primarily based on assay data, supported by probe composites where assay data was not available. This practice is unique for Arizona Strip District uranium deposits, where it is normal to use mostly probe assay data due to the large copper component at the deposits. A summary of the Project resource database is presented in Table 14-2.

Table 14-2: Summary of Available Drillhole Data
Energy Fuels Inc. - Pinyon Plain Project

Table	Number of Records
Collar	130
Survey	23,483
Geology	512
Geotech	488
Lab	3,651
Probe	120,942
Assay, including:	
Probe U_3O_8	97,994
Assay U_3O_8	3,409
Assay Cu	3,409

14.3 Geological Interpretation

14.3.1 Uranium

Uranium mineralization at the Project is concentrated in six vertical zones (Cap, Upper, Main, Main Lower, Juniper I, and Juniper II) within a collapse structure ranging from 100 ft to 230 ft wide with a vertical extension from a depth of 650 ft to over 2,100 ft, resulting in approximately 1,450 ft of mineralization vertically. Intercepts range widely up to several tens of feet, with grades in excess of 1.00% U_3O_8. Uranium mineralization is hosted within each zone; copper mineralization has been modeled within the Main and Main Lower Zones only. For reporting purposes, the six zones have been combined into three geologic zones: the Upper/Cap, Main, and Juniper Zones (Figure 14-1). The bulk of mineralization for both commodities is hosted within the Main Zone. At present, no structural features other than the pipe boundary have been incorporated into the geological model.

The model of the breccia pipe host was constructed based on drill logs. Geological interpretations supporting the estimate were generated by EFR personnel and audited for completeness and accuracy by the SLR QP. Topographical surfaces, solids, and mineralized wireframes were modeled using Maptek's Vulcan software.

EFR created a series of north-south and east-west polylines spaced at 10 ft. The polylines were edited and joined together in 3D using tie lines. During this "stitching" process, polylines and/or tie lines were snapped to composite control intervals, which were interpreted using a 0.15% eU_3O_8 cut-off. Occasionally, lower grade intersections were included to facilitate continuity. Extension distance for the mineralized wireframes was half-way to the next hole, or approximately 20 ft vertically and horizontally past the last drill intercept. In total, 38 uranium wireframes, or domains, were contained within the three geologic zones and assigned identifier numbers for Upper/Cap (17 domains), Main (12 domains), and Juniper (9 domains). The domains ranged in size from 105 ton to 100,500 ton for a total of 187,700 ton. Domains M_01 (Main) and J_1_01 (Juniper I) account for over 80% of the total tons. A detailed description of these two domains follows.

Within the M_01 domain, the uranium mineralization occurs within the structurally prepared breccia pipe and adjacent to the country rock forming a donut shape roughly 185 ft in diameter and extending from an elevation of 5,325 ft to 5,115 ft. Mineralization consists predominantly of uraninite/pitchblende that occurs as massive to semi-massive accumulations ranging in thickness from less than five feet to 50 ft but is generally in the 30 ft to 40 ft range (horizontally). Within this area, the center or throat of the breccia pipe is essentially barren of uranium mineralization.

EFR proposes that the underlying J_1_01 zone that extends from 4,925 ft elevation to 4,700 ft elevation may be the down-dropped center block of uranium mineralization from the overlying M_01 domain. The shape, depth extension, and horizontal thickness of the mineralization, which ranges from five feet to 50 ft but is generally 25 ft to 30 ft, generally mimics the dimensions of the unmineralized portion of the M_01 zone.

The SLR QP reviewed the uranium mineralization domains and found them to be appropriately extended beyond existing drilling, snapped, and referenced to the principal mineralization controls. The SLR QP recommends EFR continue to work to smooth the connection of the uranium wireframes between sections in future updates.

14.3.2 Copper

Copper mineralization models at Pinyon are restricted to the Main and Main Lower Zones. Copper mineralization present within the Juniper zone has not been modeled at this time due to the much lower sample assay values overall. Final wireframe surfaces, as well as a cross section of mineralization from within the Main Zone, are shown in Figure 14-1.

Within the Main zone, the copper mineralization domain has been modeled at a nominal cut-off grade of 1% Cu, encapsulating mineralization within the breccia pipe. The mineralization tends to concentrate at the contact between the breccia pipe and the country rock, creating a toroid (donut) shape, and elongated at depth. A few flat lying structures carry mineralization into the center of the pipe. Mineralization ranges in thickness from five feet to 80 ft thick (horizontally) but is generally from 20 ft to 40 ft thick. The domain is located from 5,320 ft to 5,120 ft elevation and ranges from 50 ft. deep in the southeast of the breccia pipe and up to 200 ft deep elsewhere.

Additionally, a high grade domain has been modeled in the Main Zone at a cut-off grade of approximately 8% Cu. High grade mineralization also follows the contact with the country rock, but does not extend into the center, or to the southeast, creating a C-shape which is oriented to the southeast and vertically elongated. Mineralization has been modeled to be thickest in the northeast; however, this is also the region with the best access, and therefore the closest drill hole spacing, allowing for a more robust interpretation. The high grade domain is as elongate as the lower grade domain, but patchier, particularly at depth. The high grade domain accounts for approximately 30% of the total copper domain in the Main Zone. The copper domain overlaps approximately 50% of the uranium domain.

Within the Main Lower Zone, mineralization has been captured within three separate wireframes, using a cut-off grade of 1% Cu, delineated using from one to five drill holes. As with the Main Zone, mineralization is modeled towards the edge of the breccia pipe. There is no high grade domain in the Main Lower Zone.

The SLR QP reviewed the copper mineralization domains and found them to be appropriately extended beyond existing drilling, snapped, and referencing the principal mineralization controls. The SLR QP recommends that future updates to the copper mineralization include some marginal material where appropriate to increase the continuity and volume of the wireframes, particularly the high grade copper wireframe.

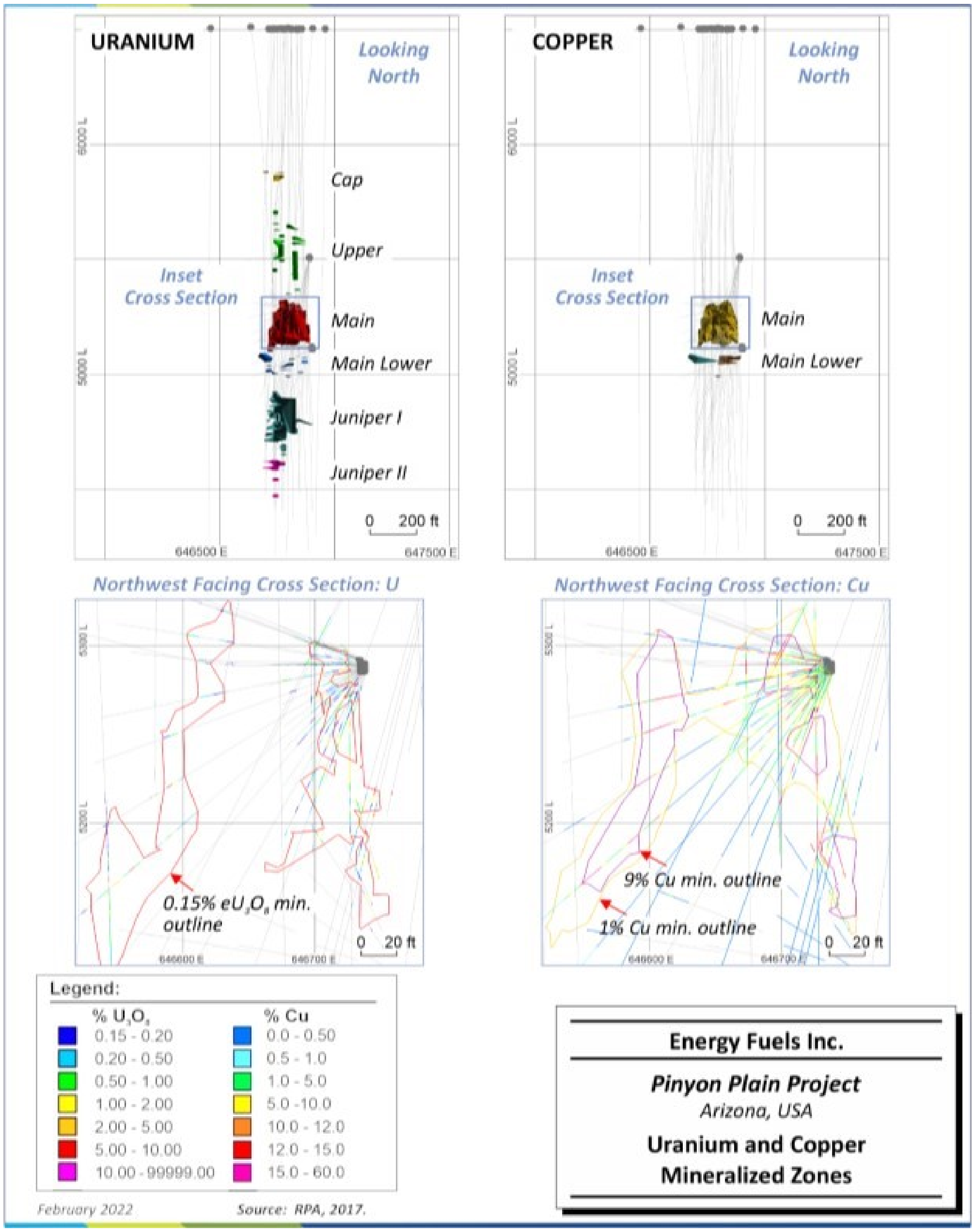


Figure 14-1: Uranium and Copper Mineralized Zones

14.4 Resource Assays

The mineralization wireframe models were used to code the drillhole database and to identify samples within the mineralized wireframes. These samples were extracted from the database on a group-by-group basis, subjected to statistical analyses for their respective domains, and then analyzed by means of histograms and probability plots. A total of 5,203 samples were contained within the mineralized uranium wireframes. The sample statistics are summarized by zone in Table 14-3. The coefficient of variation (CV) is a measure of variability of the data.

Table 14-3: Summary Statistics of Uncapped U_3O_8 Assays
Energy Fuels Inc. - Pinyon Plain Project

Zone	Count	Minimum (% U_3O_8)	Maximum (% U_3O_8)	Mean (% U_3O_8)	Variance	SD (% U_3O_8)	CV
CAP	99	0.009	1.040	0.213	0.020	0.141	0.660
UPPER	733	0.000	4.585	0.337	0.160	0.405	1.200
MAIN	3,128	0.000	45.121	0.886	5.750	2.397	2.710
MAIN-LOWER	108	0.000	1.835	0.267	0.090	0.305	1.140
JUNIPER-1	955	0.000	22.720	0.612	2.580	1.606	2.630
JUNIPER-2	180	0.000	1.489	0.254	0.030	0.159	0.630
ALL ZONES	**5,203**	**0.000**	**45.121**	**0.710**	**4.010**	**2.002**	**2.820**

14.5 Treatment of High Grade Assays

14.5.1 Capping Levels

Where the assay distribution is skewed positively or approaches log-normal, erratic high grade assay values can have a disproportionate effect on the average grade of a deposit. One method of treating these outliers to reduce their influence on the average grade is to cut or cap them at a specific grade level. In the absence of production data to calibrate the capping level, inspection of the assay distribution can be used to estimate a "first pass" cutting level.

The SLR QP is of the opinion that the influence of high grade uranium assays must be reduced or controlled and uses a number of industry best practice methods to achieve this goal, including capping of high grade values. The SLR QP employs a number of statistical analytical methods to determine an appropriate capping value including preparation of frequency histograms, probability plots, decile analyses, and capping curves. Using these methodologies, the SLR QP examined the selected capping values for the mineralized domains for the Project.

Examples of the capping analysis are shown in Figure 14-2 and Figure 14-3 as applied to the data set for the mineralized domains. Very high grade uranium outliers were capped at 15% U_3O_8 within the M_01 and J_1_01 domains, resulting in a total of 16 capped assay values. Capped assay statistics by zones are summarized in Table 14-4 and compared with uncapped assay statistics.

In the SLR QP's opinion, the selected capping values are reasonable and have been correctly applied to the raw assay values for the Pinyon Plain Mineral Resource estimate.

Table 14-4: Summary Statistics of Uncapped vs. Capped Assays
Energy Fuels Inc. - Pinyon Plain Project

Zone	Cap		Upper		Main	
Descriptive Statistics	**Uncap**	**Cap**	**Uncap**	**Cap**	**Uncap**	**Cap**
Number of Samples	99	99	733	733	3,128	3,128
Minimum (%U_3O_8)	0.009	0.009	0.000	0.000	0.000	0.000
Maximum (%U_3O_8)	1.040	1.040	4.585	4.585	45.121	15.000
Mean (%U_3O_8)	0.213	0.213	0.337	0.337	0.886	0.842
Variance	0.020	0.020	0.160	0.160	5.750	3.710
SD (%U_3O_8)	0.141	0.141	0.405	0.405	2.397	1.927
CV	0.660	0.660	1.200	1.200	2.710	2.290
Number of Caps	0	0	0	0	0	13

Zone	Main-Lower		Juniper-1		Juniper-2	
Descriptive Statistics	**Uncap**	**Cap**	**Uncap**	**Cap**	**Uncap**	**Cap**
Number of Samples	108	108	955	955	180	180
Minimum (%U_3O_8)	0.000	0.000	0.000	0.000	0.000	0.000
Maximum (%U_3O_8)	1.835	1.835	22.720	15.000	1.489	1.489
Mean (%U_3O_8)	0.267	0.267	0.612	0.595	0.254	0.254
Variance	0.090	0.090	2.580	2.000	0.030	0.030
SD (%U_3O_8)	0.305	0.305	1.606	1.414	0.159	0.159
CV	1.140	1.140	2.630	2.380	0.630	0.630
Number of Caps	0	0	0	3	0	0

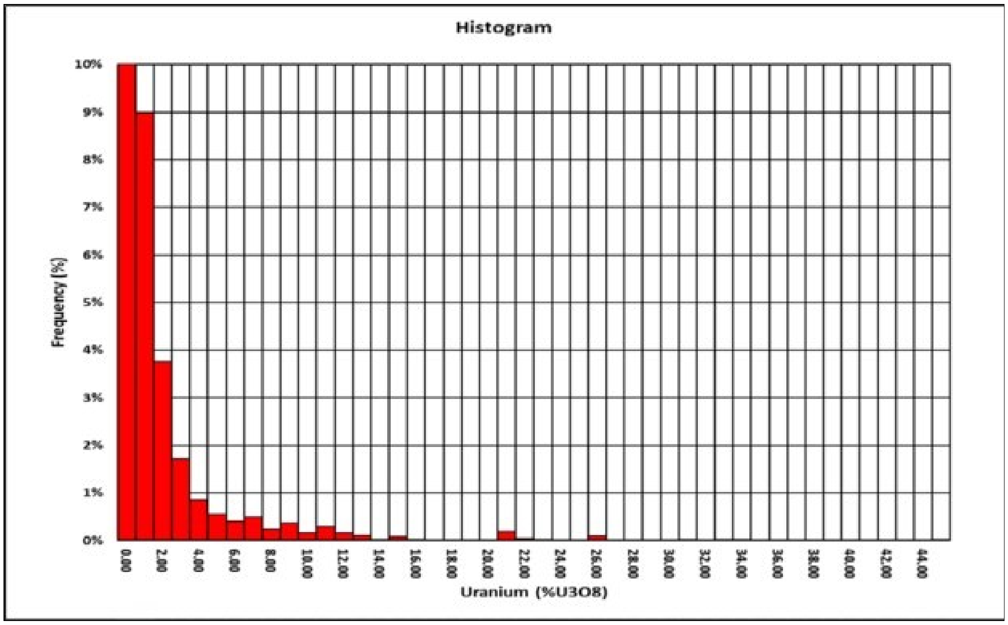


Figure 14-2: Histogram of U_3O_8 Resource Assay in M_01 and J_1_01 Domains

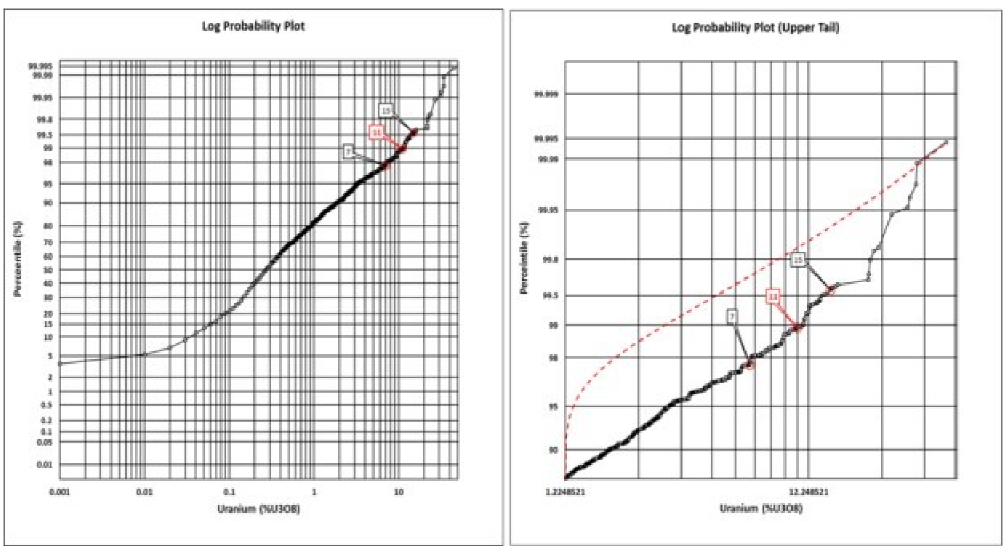


Figure 14-3: Log Normal Probability Plot with Capping Grades

14.5.2 High Grade Restriction

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

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

14.6 Compositing

Composites were created from the capped, raw assay values using the downhole compositing function of Maptek's Vulcan modeling software package. The composite lengths used during interpolation were chosen considering the predominant sampling length, the minimum mining width, style of mineralization, and continuity of grade. The majority of assay intervals within the mineralized domains varied in length from 0.5 ft (probe data) to 10 ft (assay data), as presented in Figure 14-4, with a few samples outside this range. Most assay samples were four feet, and the drillhole samples were composited to four feet, starting at the wireframe pierce point for each domain, continuing to the point at which the hole exited the domain. A small number of unsampled and missing sample intervals were ignored. Residual composites were maintained in the dataset. The composite statistics by zone are summarized in Table 14-5.

Table 14-5: Summary of Uranium Composite Data by Zone
Energy Fuels Inc. - Pinyon Plain Project

Zone	Count	Minimum (% U_3O_8)	Maximum (% U_3O_8)	Mean (% U_3O_8)	Variance	SD (% U_3O_8)	CV
CAP	16	0.076	0.689	0.220	0.022	0.148	0.670
UPPER	101	0.055	1.683	0.335	0.069	0.263	0.786
MAIN	1015	0.000	15.000	0.847	2.589	1.609	1.900
MAIN_LOWER	41	0.000	1.152	0.251	0.064	0.253	1.006
JUNIPER-1	186	0.000	14.130	0.691	2.402	1.550	2.244
JUNIPER-2	25	0.119	0.619	0.252	0.010	0.102	0.405
ALL ZONES	1384	0.000	15.000	0.753	2.262	1.504	1.997

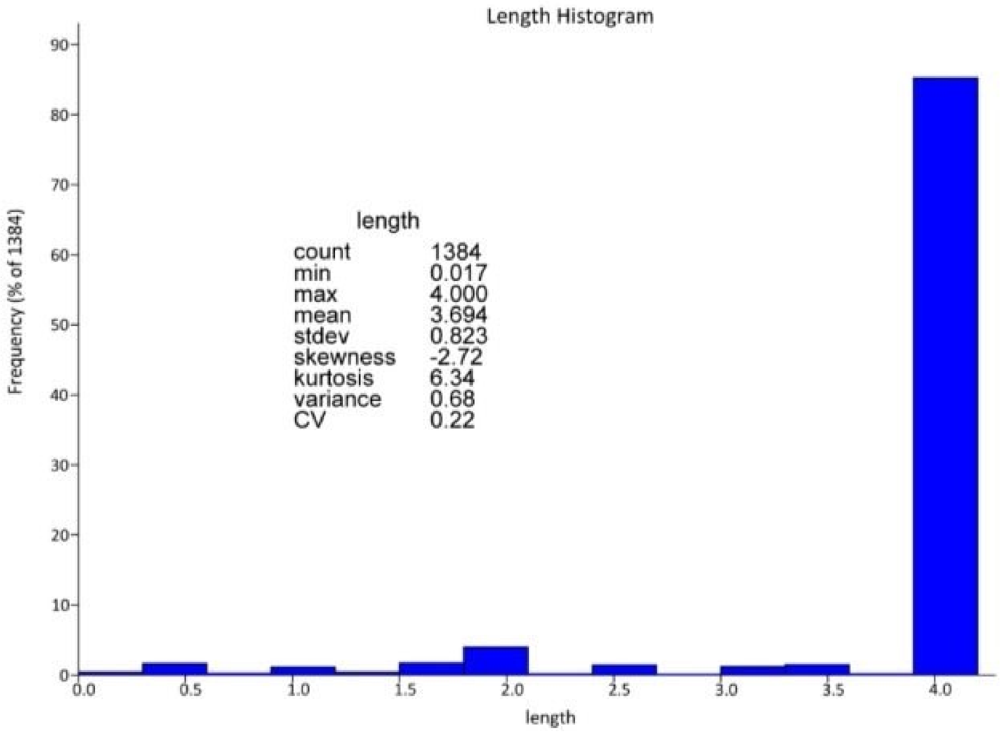


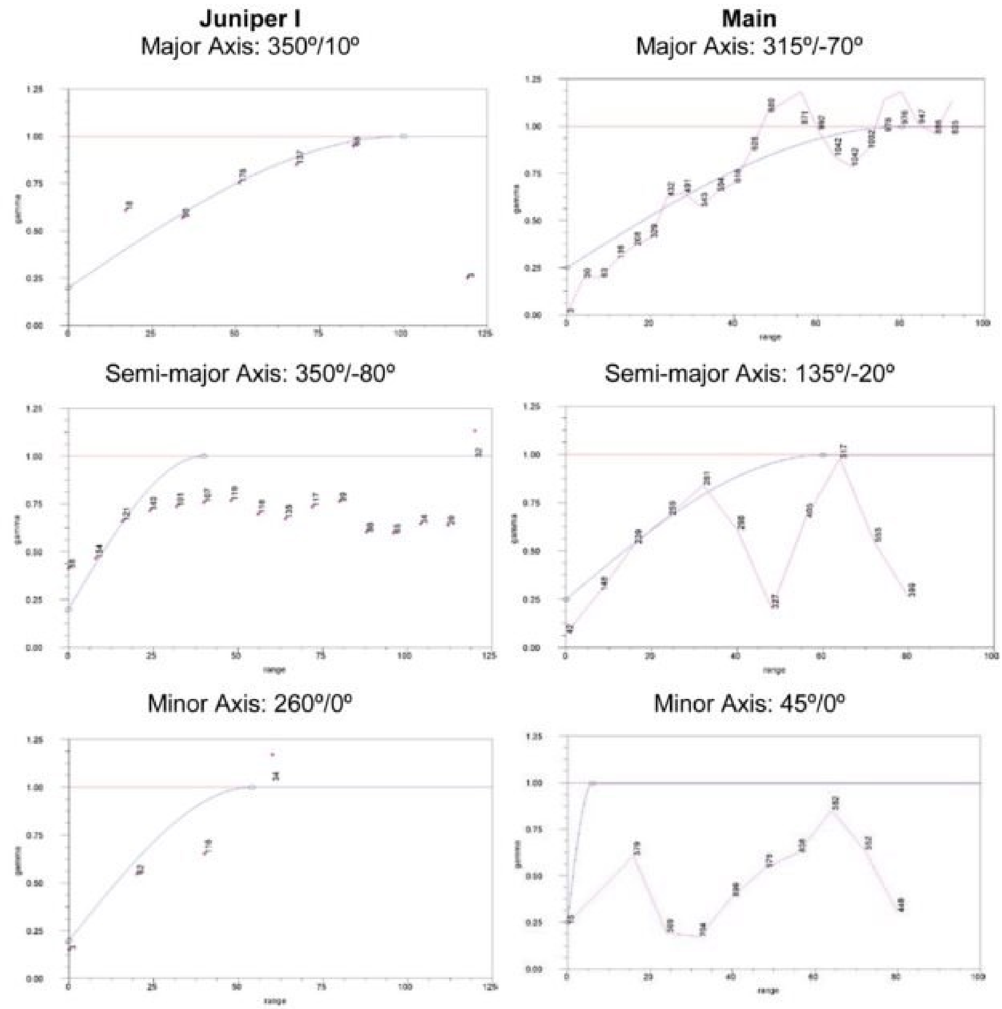
Figure 14-4: Length Histogram

14.7 Trend Analysis

14.7.1 Variography

EFR generated downhole and directional variograms using the four-foot U_3O_8 composite values located within the M_01 and J_1_01 mineralized domains (Figure 14-5) for uranium. The variograms were used to support search ellipsoid anisotropy, linear trends observed in the data, and Mineral Resource classification decisions.

Long range directional variograms were focused in the primary plane of mineralization, which commonly strikes northeast and dips steeply to the southeast. Most ranges were interpreted to be from 40 ft to 60 ft.



Zone	Type	C_0	Major (ft.)	Semi-Major (ft.)	Minor (ft.)
Juniper	Pairwise Relative	0.2	100	54	40
Main	Spherical	0.25	80	60	6

Figure 14-5: U_3O_8 Variogram Models

14.8 Search Strategy and Grade Interpolation Parameters

The steps in calculating the U_3O_8 grade are presented in Table 14-6, including a description of each step and the variable parameters. Section 14.11 describes how the cut-off grade was determined in this report.

Table 14-6: Estimation Steps of Block Model Variables
Energy Fuels Inc. - Pinyon Plain Project

Step	Description	Variable Name
	Steps 1 and 2 estimate U_3O_8 grade within individual wireframes	
1	Build Uranium Estimation File	1st Pass Estimation: canu_est_pass_1_final.bef
		2nd Pass Estimation: canu_est_pass_2_final.bef
		3rd Pass Estimation: canu_est_pass_3_final.bef
2	Run Uranium Estimation File: Calculates U3O8_ok (2 triangulations) and u3o8_idw (38 triangulations) variables	All Uranium: July_2017_43101_Est_Run_File_U_Only.ber
	Steps 3 and 4 calculate u3o8_final (combines U3O8_ok and U3O8_idw estimations)	
3	Block->Manipulation->Calculate	
	Variable Name:	u3o8_final
	Calculation =	u3o8_ok
	OK	
	Select Blocks by bounding triangulation:	ore.tri/u3o8.tri/ok.00t to calc u3o8_final from u3o8_ok
	Select Block centers	
4	Block->Manipulation->Calculate	
	Variable Name:	u3o8_final
	Calculation =	u3o8_idw
	OK	
	Select Blocks by bounding triangulation:	ore.tri/u3o8.tri/idw.00t to calc u3o8_final from u3o8_idw
	Select Block centers	

Estimation of uranium grades was controlled by the grade zones. In the larger domain wireframes, search ellipsoid geometry of the major, semi-major, and minor axis was oriented into the structural plane of the mineralization, as indicated by the variography ranges for each domain. Within the small domain wireframes, the search ellipse was isotropic. The interpolation strategy involved setting up search parameters in three nested estimation runs for each domain. Each subsequent pass was doubled in size. A maximum of three passes was employed to interpolate all blocks.

First, second, and third pass search ellipses maintained normalized anisotropic ratios. Grade interpolation was carried out using OK on mineralized domains M_01 and J_1_01 with ID^2 on all remaining mineralized domains. Depending on the pass and domain wireframe, a minimum of one to eight to a maximum of 1 to 16 composites per block estimate were employed, with a maximum of two to six composites per drillhole. Hard boundaries were used to limit the restrict composites to within the domain wireframe in which they were located. A nearest neighbor (NN) block model was also prepared for comparison purposes. Search parameters are listed in Table 14-7 for the Project.

In order to reduce the influence of very high grade composites, grades greater than a designated threshold level for each domain were restricted to shorter search ellipse dimensions. The threshold grade level of 7% eU_3O_8 was chosen from the basic statistics and from visual inspection of the apparent continuity of very high grades within each domain, which indicated the need to limit their influence to 32 ft by 22 ft by 4 ft or 40 ft by 21.6 ft by 16 ft, domain dependant.

Table 14-7: Uranium Interpolation Plan
Energy Fuels Inc. - Pinyon Plain Project

Domain	Wireframe1	Interp. Type	Bearing/Plunge	First Pass Dimensions (ft)
CAP	c_01	ID^2	335°/-1°	64 x 44 x 8
CAP	c_03	ID^2	345°/1°	64 x 44 x 8
UPPER	u_04	ID^2	84°/-33°	64 x 44 x 8
UPPER	u_08	ID^2	44.5°/-10°	64 x 44 x 8
UPPER	u_09	ID^2	44.5°/-4°	64 x 44 x 8
UPPER	u_10	ID^2	150°/-28°	64 x 44 x 8
UPPER	u_12	ID^2	177°/2°	64 x 44 x 8
MAIN	m_01	OK	315°/-70°	64 x 44 x 8
MAIN LOWER	ml_01	ID^2	345°/0°	64 x 44 x 8
MAIN LOWER	ml_02	ID^2	356.5°/12°	64 x 44 x 8
MAIN LOWER	ml_05	ID^2	245.5°/-5°	64 x 44 x 8
MAIN LOWER	ml_06	ID^2	287.5°/4°	64 x 44 x 8
MAIN LOWER	ml_08	ID^2	62.5°/-33°	64 x 44 x 8
JUNIPER I	j_1_01	OK	350°/10°	80 x 43.2 x 32
JUNIPER I	j_1_02	ID^2	298°/-3°	64 x 44 x 8
JUNIPER II	j_2_01	ID^2	284.5°/0°	64 x 44 x 8

Notes:

1. Wireframes not included in this table were interpolated using an omnidirectional search ellipse, the first pass of which was 20 ft x 20 ft x 20 ft

14.9 Bulk Density

Bulk density was determined by EFR with specific gravity (SG) measurements on drill core by measuring a minimum four inch piece of core in all directions with calipers to determine a volume. The sample is then weighed to get a mass and the density calculated. This method was used to determine the density of 2,857 samples. The density is modeled using inverse distance weighting squared and an average value across the deposit of 0.082 t/ft^3 was calculated.

This method of density determination was validated using the water immersion method according to the Archimedes principle, after the core has been sealed in wax. SG is calculated as weight in air (weight in air - weight in water). Under normal atmospheric conditions, SG (a unitless ratio) is equivalent to density in t/m^3. The validation utilized 37 bulk density measurements that were collected on six-inch drill core samples from the main mineralized zones to represent local major lithologic units, mineralization styles and alteration types. Samples were collected on full core, which had been retained in the core box prior to splitting for sampling. EFR determined the difference between the caliper method and water immersion method is about 1% in favor of the caliper method.

A global density of 0.082 t/ft^3 was assigned to the block model.

14.10 Block Models

All modeling work was carried out using Maptek's Vulcan software version 10.0 software. The Pinyon Plain block model has 4 ft by 4 ft by 4 ft whole blocks and an origin at 646,630 ft East, 1,776,530 ft North, 4,450 ft elevation. The block model is not rotated, and extends 360 ft east-west, 320 ft north-south and 1,460 ft elevation. Before grade estimation, all model blocks were assigned density and mineralized domain codes (copper and uranium), based on majority rules. A summary of the block model variables is provided in Table 14-8.

Table 14-8: Summary of Block Model Variables
Energy Fuels Inc. - Pinyon Plain Project

Variable	Type	Default	Description
u3o8_ok	Double	-99	U_3O_8 estimation using ordinary kriging
u3o8_idw	Double	-99	U_3O_8 estimation using inverse distance
u3o8_nn	Double	-99	U_3O_8 estimation using nearest neighbor
ok_u_est_flag	Integer	0	Ordinary Kriging Estimation Flag
ok_u_samp_flag	Integer	0	No. of samples used in ordinary kriging
ok_u_holes_flag	Integer	0	No. of holes used in ordinary kriging
idw_u_est_flag	Integer	0	Inverse Distance Estimation Flag
idw_u_samp_flag	Integer	0	No. of samples used in inverse distance
idw_u_holes_flag	Integer	0	No. of samples used in inverse distance
nn_u_nearest_samp	Double	0	Distance to nearest neighbor
class	Integer	0	Block Classification
dens	Double	0.082	Density of Block (Default is 12.2 cu ft/ton - 0.082)
bound	Name	out	Mineralized Boundary Zone (C, U, M, ML, J_1, J_2)
u3o8_final	Double	-99	Final U_3O_8 idw or ok block grade
u_tri_flag	Integer	0	block in U shape (in =1, out=0)

14.11 Cut-off Grade

The Pinyon Plain Mineral Resource estimate is summarized in Table 14-1 by block model area. Two cut-off grades were used for the resource estimate. For the uranium and copper bearing zones, a 0.40% uranium equivalent (% eU_3O_8) cut-off grade was used. For the uranium-only zones, a 0.30% eU_3O_8 cut-off grade was used. The two cut-off grades account for separate process campaigns with different unit costs.

Assumptions used in the determination of cut-off grade are presented in Table 14-9.

- Total operating cost (mining, G&A, processing) of US$459 per short ton for the Main Zone and US$375 per short ton for the Juniper Zone
- Royalty cost of $7/ton
- Process recovery of 96% for uranium and 90% for copper
- Uranium price of US$65.00/lb and Copper price of US$4.00/lb. The prices are based on independent, third-party, and market analysts' average forecasts as of 2021, and the supply and demand projections are for the period 2021 to 2035. In the SLR QP's opinion, these long-term price forecasts are a reasonable basis for estimation of Mineral Resources.

Table 14-9: Pinyon Plain Project Cut-off Grade Calculation
Energy Fuels Inc. - Pinyon Plain Project

Item	Unit	Quantity
Price in US$/lb U_3O_8	US$	65
Price in US$/lb Cu	US$	4
Process plant recovery	%	96
Process plant recovery (Cu)	%	90
Cu to U_3O_8 Conversion Factor		18.194
U_3O_8 conversion cost per pound	US$	0.30
Mining cost per ton (Main Zone)	US$	101
Mining cost per ton (Juniper)	US$	116
Surface haulage cost per ton	US$	67
Processing cost per ton	US$	192
G&A cost per ton	US$	Included
Royalty cost per ton	US$	7
Total operating cost per ton (Main)	US$	459
Total operating cost per ton (Juniper)	US$	375
Main Zone: Break-Even Cut off equivalent grade (% U_3O_8 Eqv)	%	0.40
Jupiter Zone: Break-Even Cut-off grade (% eU_3O_8)	%	0.30

The SLR QP reviewed the operating costs and cut-off grade reported by EFR and is of the opinion they are reasonable for disclosing Mineral Resources.

14.12 Classification

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

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

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

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

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

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

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

- Reliability of sampling data:
- Drilling, sampling, sample preparation, and assay procedures follow industry standards.
- Data verification and validation work confirm drill hole sample databases are reliable.

- No significant biases were observed in the QA/QC analysis results.

Confidence in interpretation and modeling of geological and estimation domains:

- Mineralization domains are interpreted manually in cross-sections and refined in longitudinal sections by an experienced resource geologist.
- There is good agreement between the drill holes and mineralization wireframe shapes.
- The mineralization wireframe shapes are well defined by sample data in areas classified as Measured and Indicated.

Confidence in block grade estimates:

- Measured and Indicated block grades correlate well with composite data, statistically and spatially and locally and globally.

Blocks were classified as Measured, Indicated, or Inferred based on drillhole spacing, confidence in the geological interpretation, and apparent continuity of mineralization.

14.12.1 Measured Mineral Resources

Classification of Measured Resources was limited to blocks contained in the Main Zone, directly adjacent to underground drilling station 1-4, where 67 drillholes were collared in a fan pattern on general drillhole spacing of 15 feet. A cross section of block classification in the Main Zone is shown in Figure 14-6.

14.12.2 Indicated Mineral Resources

The remainder of the blocks within the Main Zone, as well as the blocks in primary wireframe within Juniper I, j_1_01, were assigned a classification of Indicated, in which drillhole pierce point spacing is generally less than 25 feet from underground drilling station 1-4.

14.12.3 Inferred Mineral Resources

All remaining blocks in the model were limited to an Inferred classification.

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

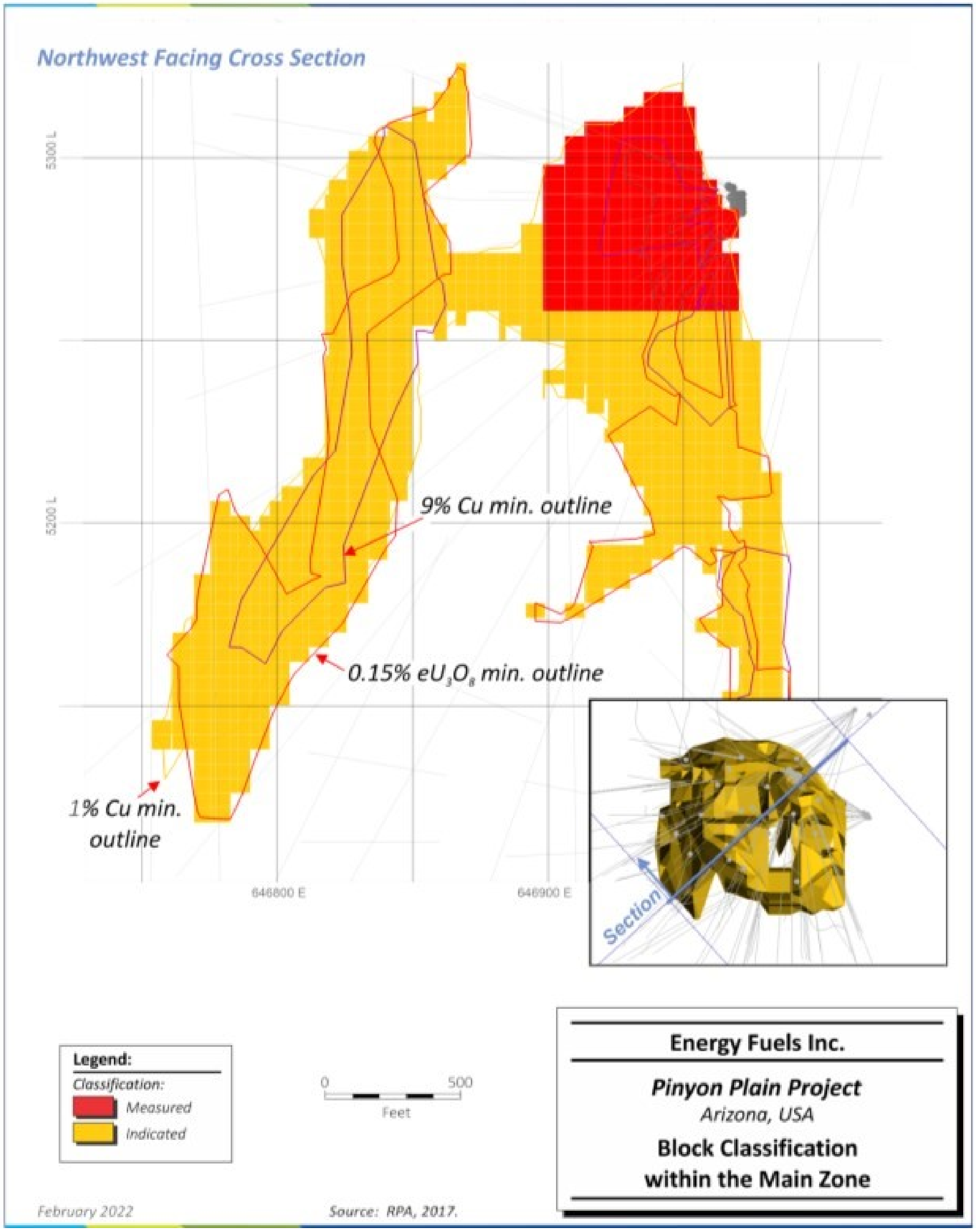


Figure 14-6: Block Classification within the Main Zone

14.13 Block Model Validation

The SLR QP reviewed and validated the block model using various modeling and interpolation aspects of the Pinyon Plain model. Observations and comments from the model validation are provided below.

Mineralization wireframes were checked for conformity to drillhole data, continuity, similarity between sections, overlaps, appropriate terminations between holes and into undrilled areas, and minimum mining thicknesses. The wireframes were snapped to drillhole intervals, are reasonably consistent, continuous, and generally representative of the extents and limits of the mineralization. The SLR QP recommends that EFR continue to work to smooth the connection of the uranium wireframes between sections in future updates.

Capping statistics were reviewed and audited for a series of individual zones and compared to the statistics of capping groups defined by EFR. The SLR QP is satisfied with the chosen caps.

Compositing routines were checked to confirm that composites started and stopped at the intersections with the wireframes and that the composite coding is consistent with the wireframes. The SLR QP is satisfied with the compositing routines and finds the composites appropriate for Mineral Resource estimation.

Contact plots were prepared for selected mineralization domains and confirmed the appropriateness of hard boundaries between the domains during estimation.

Visual inspection and comparison of drillhole composites against mineralized solids were carried out for a number of sections with focus on the Main and Juniper I domains for both copper and uranium. The mineralized solids were found to conform reasonably well to the drillhole composite grades, although some evidence of smoothing was present. A cross section and plan section comparing uranium composite and uranium block grades are presented in Figure 14-7 and Figure 14-8.

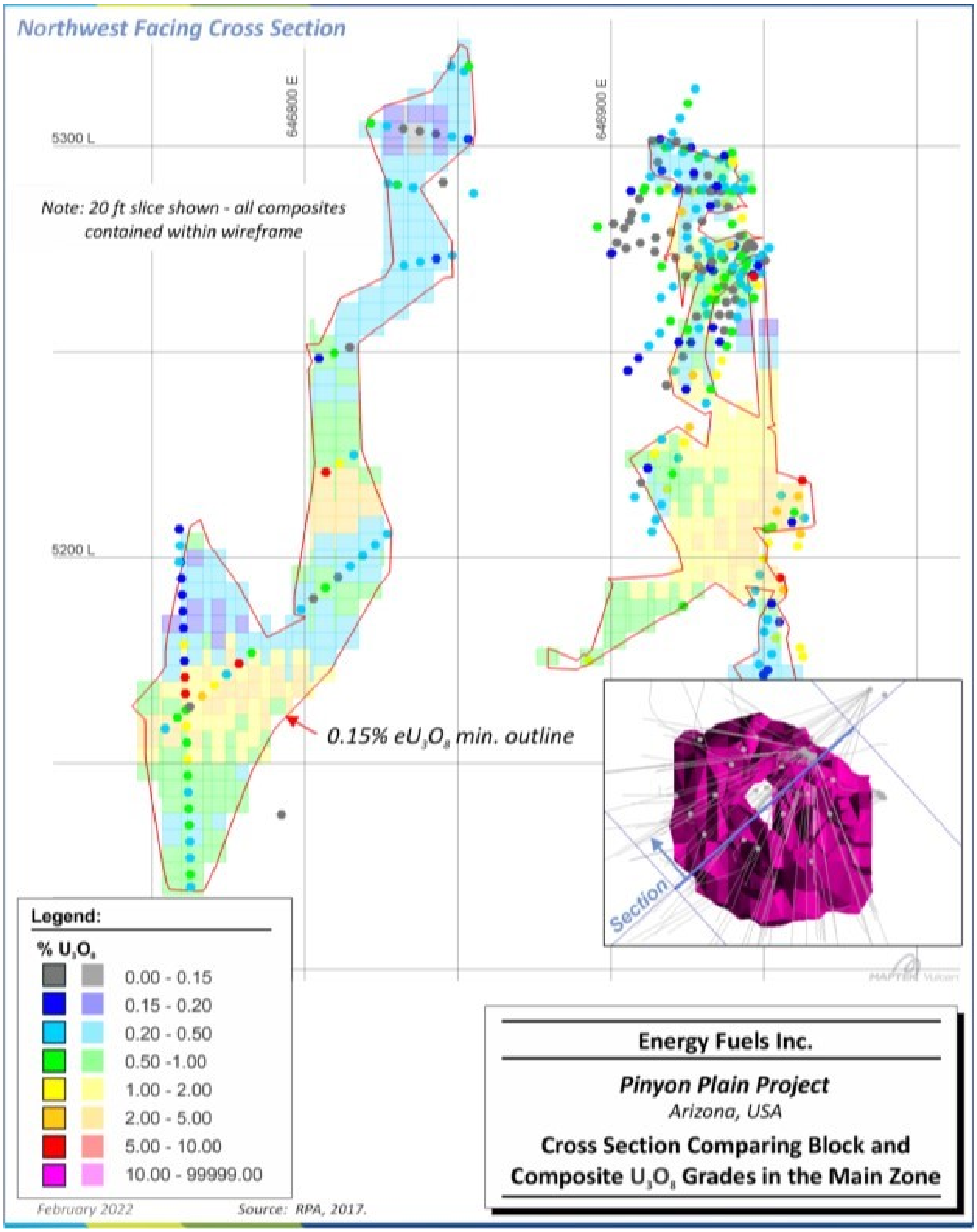


Figure 14-7: Cross Section Comparing Block and Composite U_3O_8 Grades in the Main Zone

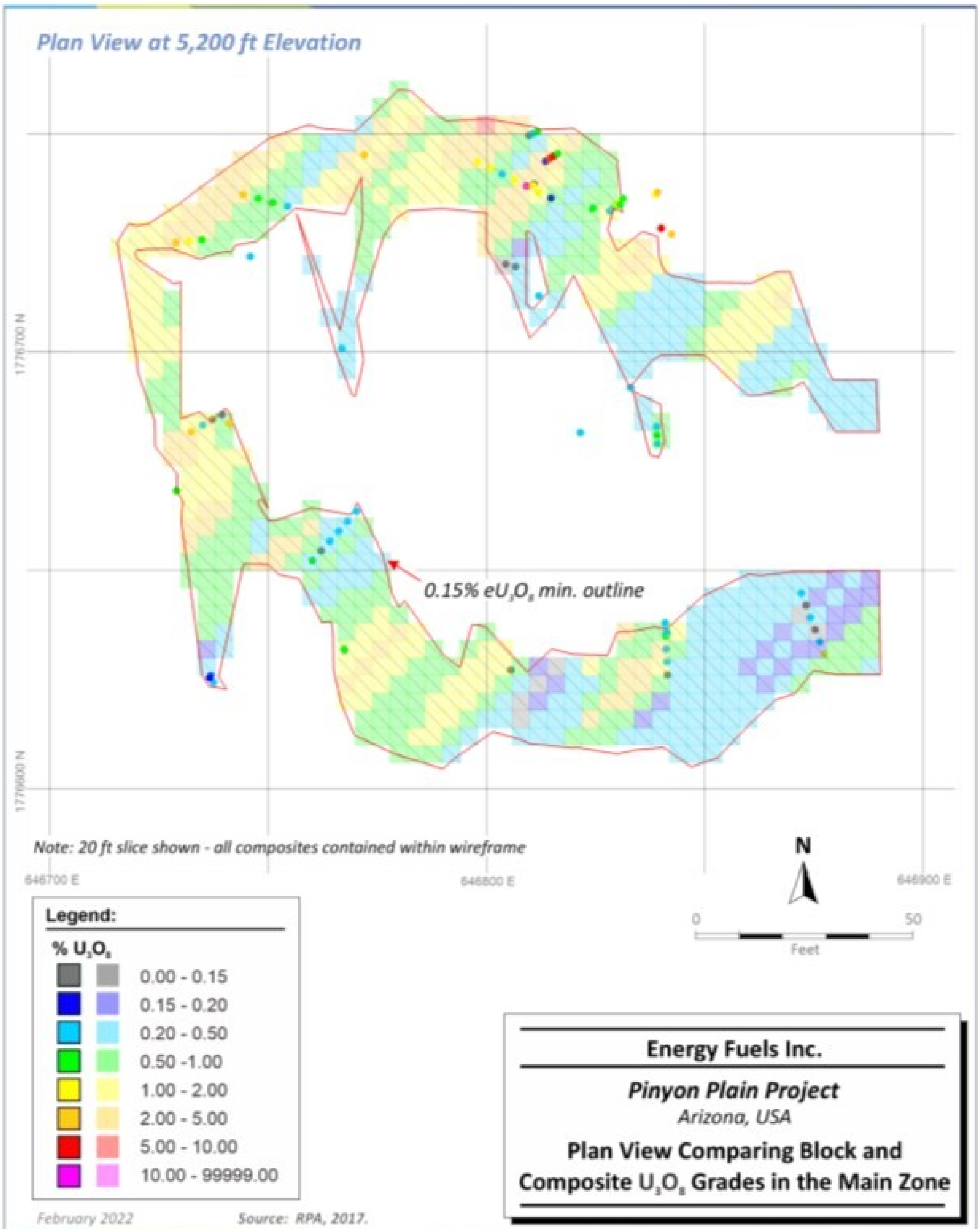


Figure 14-8: Plan View Comparing Block and Composite U_3O_8 Grades in the Main Zone

The SLR QP reviewed the variogram models for selected mineralization groups and prepared variogram models representing selected individual mineralization domains for comparison, then validated the trend of the variogram against observed trends and grade shells created in Leapfrog Geo software. The SLR QP recommends exploring the use of dynamic anisotropy for the interpolation of mineralization within the Main Zone in future updates, where mineralization follows the contact of the breccia pipe with the country rock.

The SLR QP validated the grades estimated in the block models prepared by EFR using basic statistics, visual inspection, volumetric comparison, swath plots, and a re-estimation of a portion of the Main Zone using the ID^2 method. The grades of re-estimated areas were found to be within 10%.

A statistical comparison of the estimated block grades with the four-foot composites is shown in Table 14-10. The block results compare well with the composites, indicating a reasonable overall representation of the uranium grades in the block model.

Table 14-10: Comparison of Block and Composite Uranium Grades
Energy Fuels Inc. - Pinyon Plain Project

Domain	Type	Count	Min	Max	Mean	Variance	SD	CV
CAP	Blocks	685	0.076	0.361	0.196	0.000	0.060	0.300
CAP	Comps	16	0.076	0.689	0.220	0.022	0.148	0.670
UPPER	Blocks	3,017	0.117	1.338	0.336	0.030	0.165	0.490
UPPER	Comps	101	0.055	1.683	0.335	0.069	0.263	0.786
MAIN	Blocks	19,339	0.069	10.887	0.872	0.910	0.953	1.090
MAIN	Comps	1015	0.000	15.000	0.847	2.589	1.609	1.900
MAIN_LOWER	Blocks	1,397	0.016	0.884	0.233	0.030	0.170	0.730
MAIN_LOWER	Comps	41	0.000	1.152	0.251	0.064	0.253	1.006
JUNIPER-1	Blocks	10,516	0.034	11.831	0.724	1.110	1.054	1.460
JUNIPER-1	Comps	186	0.000	14.130	0.691	2.402	1.550	2.244
JUNIPER-2	Blocks	833	0.124	0.614	0.259	0.010	0.086	0.330
JUNIPER-2	Comps	25	0.119	0.619	0.252	0.010	0.102	0.405

14.14 Grade Tonnage Sensitivity

Table 14-11 shows the block model sensitivity to cut-off grade and uranium prices. Figure 14-9 presents the grade tonnage curve for all zones.

Table 14-11: Block Model Sensitivity to Cut-off Grade and Uranium Price in the Main, Main-Lower, and Juniper I Zones
Energy Fuels Inc. - Pinyon Plain Project

Price ($/lb U_3O_8)	Cut-Off Grade (%U_3O_8)[1]	Tonnage (ton)	Grade (% U_3O_8)	Contained Metal (lb U_3O_8)
$80	0.25	177,000	0.73	2,569,000
$75	0.27	169,000	0.76	2,547,000
$70	0.28	165,000	0.77	2,536,000
$65[2]	**0.30**	**157,000**	**0.80**	**2,511,000**
$60	0.33	148,000	0.84	2,475,000
$55	0.36	139,000	0.87	2,439,000
$50	0.40	130,000	0.92	2,387,000
$45	0.44	122,000	0.96	2,329,000
$40	0.50	111,000	1.01	2,246,000
$35	0.57	99,000	1.08	2,144,000
$30	0.67	85,000	1.19	2,017,000
$25	0.80	69,000	1.35	1,859,000

Notes:

1. U_3O_8 Recovery and operating costs held constant
2. Base Case Scenario

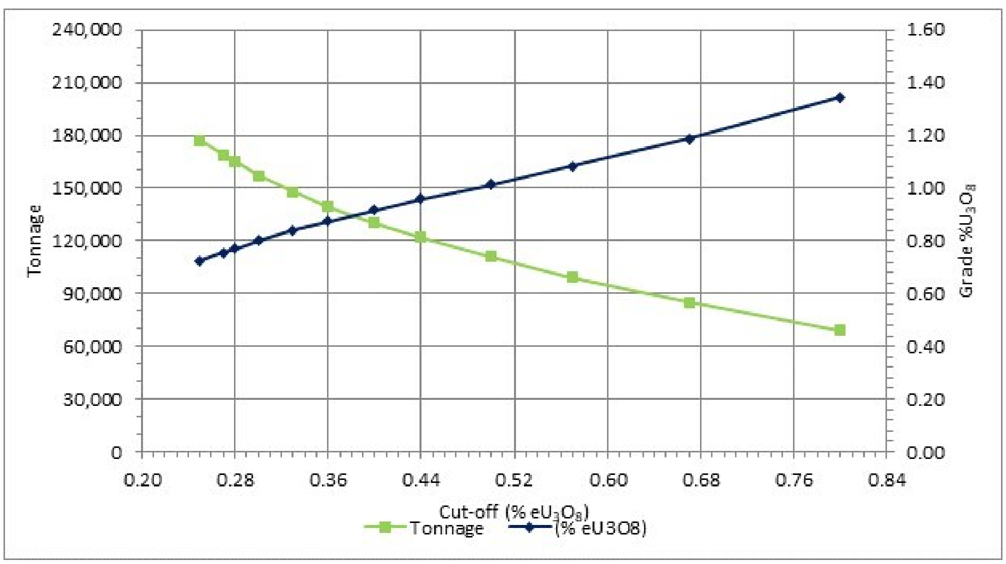


Figure 14-9: Grade Tonnage Curve Main, Main-Lower, and Juniper I Zones

14.15 Mineral Resource Reporting

A summary of the Pinyon Plain Mineral Resources is presented in Table 14-12. Mineral Resources are based on a $65/lb uranium price at an equivalent uranium cut-off grade of 0.40% U_3O_8 for zones (the Main Zone and Main-Lower Zones) containing copper and 0.30% U_3O_8 for the remaining zones. Uranium and copper estimates pertain to the same deposit and there is an overlap of tonnages in the Main and Main Lower zones, therefore they are listed separately. In the SLR QP's opinion, the assumptions, parameters, and methodology used for the Pinyon Plain Mineral Resource estimate is appropriate for the style of mineralization and mining methods. The effective date of the Mineral Resource estimate is December 31, 2021.

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

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

Table 14-12: Summary of Attributable Mineral Resources - Effective Date December 31, 2021
Energy Fuels Inc. - Pinyon Plain Project

Classification	Zone	COG (% U_3O_8 Eqv)	Tonnage (tons)	Grade (% eU_3O_8)	Contained Metal (lbs U_3O_8)	Recovery U_3O_8 (%)	Grade (% Cu)	Contained Metal (lbs Cu)	Recovery Cu (%)
				Main Zone					
Measured	Main	0.40	6,000	0.46	55,000	96	9.60	1,155,000	90
Indicated	Main	0.40	90,000	0.92	1,644,000	96	5.89	10,553,000	90
Total Measured + Indicated			**96,000**	**0.88**	**1,699,000**	**96**	**6.10**	**11,708,000**	**90**
Inferred	Main	0.40	-	-	-	-	-	-	-
	Main-Lower	0.40	4,000	0.22	16,000	96	6.50	470,000	90
Total Inferred			**4,000**	**0.20**	**16,000**	**96**	**5.88**	**470,000**	**90**
				Juniper					
Indicated	**Juniper I**	**0.30**	**37,000**	**0.95**	**703,000**	**96**	**-**	**-**	**-**
Inferred	Juniper I	0.30	2,000	0.58	24,000	96	-	-	-
	Juniper II	0.30	1,000	0.36	8,000	96	-	-	-
Total Inferred			**3,000**	**0.53**	**32,000**	**96**	**-**	**-**	**-**
				Upper Zones					
Inferred	Cap	0.30	300	0.33	2,000	96	-	-	-
	Upper	0.30	9,000	0.44	76,000	96	-	-	-
Total Inferred			**9,300**	**0.42**	**78,000**	**96**	**-**	**-**	**-**

Notes:

1. SEC S-K 1300 definitions were followed for all Mineral Resource categories. These definitions are also consistent with CIM (2014) definitions in NI 43-101.
2. Mineral Resources are estimated at an equivalent uranium cut-off grade of 0.40% U_3O_8 for copper bearing zone and 0.30% U_3O_8 for non-copper bearing zones, with estimated recoveries of 96% for uranium and 90% for copper.
3. Mineral Resources are estimated using a long-term uranium price of US$65 per pound, and copper price of US$4.00 per pound.

4. A copper to U_3O_8 conversion factor of 18.19 was used for converting copper grades to equivalent U_3O_8 grades (% U_3O_8 Eqv) for cut-off grade evaluation and reporting.
5. No minimum mining width was used in determining Mineral Resources.
6. Bulk density is 0.082 ton/ft^3 (12.2 ft^3/ton or 2.63 t/m^3).
7. Mineral Resources are exclusive of Mineral Reserves and do not have demonstrated economic viability.
8. Numbers may not add due to rounding.
9. Tonnages of uranium and copper cannot be added as they overlap in the Main and Main Lower Zone.
10. Mineral Resources are 100% attributable to EFR and are in situ.

15.0 MINERAL RESERVE ESTIMATE

There are no current Mineral Reserves at the Project.

16.0 MINING METHODS

This section is not applicable.

17.0 RECOVERY METHODS

This section is not applicable.

18.0 PROJECT INFRASTRUCTURE

This section is not applicable.

19.0 MARKET STUDIES AND CONTRACTS

This section is not applicable.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

This section is not applicable

21.0 CAPITAL AND OPERATING COSTS

This section is not applicable

22.0 ECONOMIC ANALYSIS

This section is not applicable.

23.0 ADJACENT PROPERTIES

This section is not applicable.

24.0 OTHER RELEVANT DATA AND INFORMATION

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

25.0 INTERPRETATION AND CONCLUSIONS

The SLR QP offers the following interpretations and conclusions regarding Pinyon Plain:

- The effective date of the Mineral Resource estimate is December 31, 2021. Estimated block model uranium grades are based on chemical assay and radiometric probe grades
- Mineral Resources are based on a $65/lb uranium price at a uranium cut-off grade of 0.31% based on a combination of long-hole stoping, shrinkage stoping, and drift and fill underground mining methods with trucking mineralized material from the Project 320 miles to Energy Fuels Inc.'s White Mesa Mill, located near Blanding, Utah.
- Measured Resources total 6,000 ton at an average grade of 0.46% eU_3O_8 for a total of 55,000 lb U_3O_8. Indicated Resources total 127,000 ton at an average grade of 0.92% eU_3O_8 for a total of 2,347,000 lb U_3O_8. Inferred Resources total 16,300 ton at an average grade of 0.39% eU_3O_8 for a total of 126,000 lb U_3O_8.
- Sampling and assaying procedures have been adequately completed and carried out using industry standard quality assurance/quality control (QA/QC) practices. These practices include, but are not limited to, sampling, assaying, chain of custody of the samples, sample storage, use of third-party laboratories, standards, blanks, and duplicates.
- The SLR QP considers the estimation procedures employed at Pinyon Plain, including compositing, top-cutting, variography, block model construction, and interpolation to be reasonable and in line with industry standard practice.
- The SLR QP finds the classification criteria to be reasonable.
- In SLR QP's opinion, the assumptions, parameters, and methodology used for the Pinyon Plain Mineral Resource estimate is appropriate for the style of mineralization and mining methods.

In SLR QP's opinion, there are not any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the Mineral Resource estimate.

26.0 RECOMMENDATIONS

The SLR QP makes the following recommendations regarding the Project based on EFR's construction and development plans to start operations at the Pinyon Plain mine (focused on the Main Zone only). The two-phase programs are independent of each other and advancing to Phase 2 is not contingent on positive results of the Phase 1 program.

26.1 Phase 1: Determine Work Plans and Completed Engineering Designs

1. Review the condition of existing surface and underground infrastructure and develop engineering drawings, as needed
2. Develop mine plans
3. Determine underground labor and equipment requirements and develop contracts
4. Construct surface ore pad

The SLR QP estimates the cost of the Phase 1 work will range from $4.2 million to $4.8 million dollars.

26.2 Phase 2: Underground Mine Development

1. Construct underground infrastructure to include loading pockets, cages and loading buckets
2. Development mine access from shaft stations, including spiral ramp, mine levels, ore passes and sumps
3. Develop ventilation/secondary egress borehole
4. Install mine ventilation and pumping plans"

The SLR QP estimates the cost of the Phase 2 work will range from $8.8 million to $9.2 million dollars.

In addition to the two-phase program for resuming mining operations, the SLR QP makes the following recommendations regarding the QA/QC data supporting the drillhole database at the Project. The following recommendations are independent of the engineering and mine development work and are provided for any future exploration or delineation drilling programs:

1. Submit field duplicates using two ½ core samples at a rate of one in 50.
2. Continue to monitor for low-grade bias of copper and slight low-grade bias of U_3O_8 at White Mesa Mill.
3. Continue to monitor for temporal trends (change in average grade of CRM data over time) observed at White Mesa Mill to ensure assay accuracy.
4. Procure CRM made from the Project resource material (matrix matched), to obtain an improved understanding of laboratory performance as applied to Project samples.
5. Source three matrix-matched or matrix-similar CRMs for U_3O_8 that represent low, medium, and high grade ore at the Project. Incorporate the CRMs in the sample stream sent to White Mesa Mill at a rate of one in 25. Ensure the certified values of these CRMs are blind to the laboratory. In addition, submit these CRMs to independent laboratories alongside check assays at a rate of one in 10 to obtain a meaningful sample size for analysis.
6. Implement a duplicate assay protocol for field, coarse and pulp samples that is blind to the laboratory, and that the rates of insertion for duplicate samples be approximately one in 50 for field duplicates, and one in 25 for coarse and pulp duplicate samples.

7. Continue to work to smooth the connection of the uranium wireframes between sections in future updates.

8. Explore the use of dynamic anisotropy for the interpolation of uranium mineralization within the Main Zone in future updates, where copper mineralization follows the contact of the breccia pipe with the country rock.

9. The SLR QP recommends that future updates to the copper mineralization include some marginal material where appropriate to increase the continuity and volume of the wireframes, particularly the high grade copper wireframe.

27.0 REFERENCES

ANSTO Minerals, 2017 Progress Note 1, Processing of Pinyon Plain Mine Ore, Dated May 16, 2017, ANSTO Minerals, 2017 Progress Note 2-Update on Batch Tests; Processing of Pinyon Plain Mine Ore, Dated June 14, 2017

Bennett, D. (n.d.). Orphan Mine. Retrieved November 2021, from Nature, Culture and History at the Grand Canyon: https://grcahistory.org/history/logging-mining-and-ranching/mining/orphan-mine/

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2014: CIM Definition Standards for Mineral Resources and Mineral Reserves, adopted by CIM Council on May 10, 2014.

Cottrell, J.T., 1994, Internal Memorandum to I.W. Mathisen on Canyon Resource - 1994 Changes; written for Energy Fuels Nuclear, Inc., unpublished, June 27, 1994.

Dames & Moore, 1987: Evaluation of Underground Mine Stability and Subsidence Potential, Proposed Pinyon Plain Mine, Arizona.

Electronic Code of Federal Regulations, Title 17: Commodity and Securities Exchanges, Chapter II, Part 229 Standard Instructions for Filing Forms Under Securities Act of 1933, Securities Exchange Act of 1934 and Energy Policy and Conservation Act of 1975- Regulation S-K. (https://www.ecfr.gov/cgi-bin/text-idx?amp;node=17:3.0.1.1.11&rgn=div5#se17.3.229_11303)

Energy Fuels, 2016, Standard Operating Procedure: Core Handling, Sampling and QA/QC Protocols for Core Drilling at the Pinyon Plain Mine, internal report.

Finch, W.I., 1992, Descriptive Model of Solution-Collapse Breccia Pipe Uranium Deposits, *in,* Bliss, J.D., ed., Developments in Mineral Deposit Modeling, U.S. Geological Survey Bulletin 2004, p. 33-35.

Mathisen, M.B, Wilson, V., Woods, J.L, 2017: Technical Report on the Canyon Mine, Coconino County, Arizona, USA, RPA NI 43-101 report prepared for Energy Fuels Inc. Available at www.sedar.com

Mathisen, I.W., Jr., 1985, Internal Memorandum, written for Energy Fuels Nuclear, Inc., unpublished, January 15, 1985.

Montgomery, E.L., et. al, 1985, Appendix F -Groundwater Conditions Canyon Mine Region, Coconino County, Arizona, Draft Environmental Impact Statement Canyon Uranium Mine, p. 206

Parsons Behle & Latimer, 2022, Mining Claim Status Report - Pinyon Plain Mine, Coconino County, Arizona, letter report to Energy Fuels Resources (USA) Inc., January 19, 2022, 8 pp.

Pool, T.C., and Ross, D.A., 2012: Technical Report on the Arizona Strip Uranium Projects, Arizona, USA, RPA NI 43-101 Report prepared for Energy Fuels Inc. (June 27,2012), Available at www.sedar.com

Scott, J.H., 1962: GAMLOG A Computer Program for Interpreting Gamma-Ray Logs; United States Atomic Energy Commission, Grand Junction Office, Production Evaluation Division, Ore Reserves Branch, TM-179, September 1962.

Shumway, L., 2017: Energy Fuels Nuclear, Inc. Internal Memorandum dated June 9, 2017

US Department of Agriculture, Forest Service, Southwestern Region, Kaibab National Forest, 1985: Draft Environmental Impact Statement, Pinyon Plain Uranium Mine, Appendix F Groundwater Conditions.

US Securities and Exchange Commission, 2018: Regulation S-K, Subpart 229.1300, Item 1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations and Item 601 (b)(96) of Regulation S-K, Technical Report Summary.

Wenrich, K.J., and Sutphin, H.B., 1989, Lithotectonic setting necessary for formation of a uranium rich, solution collapse breccia pipe province, Grand Canyon Region, Arizona, in Metallogenesis of uranium deposits; Technical committee meeting on metallogenesis of uranium deposits, organized by the International Atomic Energy Agency, Vienna, 9-12 March 1987, p. 307-344

Wenrich, K.J., 1992, Breccia Pipes in the Red Butte Area of the Kaibab National Forest, Arizona, U.S. Geological Survey, Open File Report 92-219, p. 14

28.0 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Pinyon Plain Project, Coconino County, Arizona, USA" with an effective date of December 31, 2021, was prepared and signed by the following authors:

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

Dated at Lakewood, CO
February 22, 2022

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

29.0 CERTIFICATE OF QUALIFIED PERSON

29.1 Mark B. Mathisen

I, Mark B. Mathisen, C.P.G., as an author of this report entitled "Technical Report on the Pinyon Plain Project, Coconino County, Arizona, USA" with an effective date of December 31, 2021 (the Technical Report), prepared for Energy Fuels, Inc., do hereby certify that:

1. I am Principal Geologist with SLR International Corporation, of Suite 100, 1658 Cole Boulevard, Lakewood, CO, USA 80401.

2. I am a graduate of Colorado School of Mines in 1984 with a B.Sc. degree in Geophysical Engineering.

3. I am a Registered Professional Geologist in the State of Wyoming (No. PG-2821), a Certified Professional Geologist with the American Institute of Professional Geologists (No. CPG-11648), and a Registered Member of SME (RM #04156896). I have worked as a geologist for a total of 23 years since my graduation. My relevant experience for the purpose of the Technical Report is:

   - Mineral Resource estimation and preparation of NI 43-101 Technical Reports.
   - Director, Project Resources, with Denison Mines Corp., responsible for resource evaluation and reporting for uranium projects in the USA, Canada, Africa, and Mongolia.
   - Project Geologist with Energy Fuels Nuclear, Inc., responsible for planning and direction of field activities and project development for an in situ leach uranium project in the USA. Cost analysis software development.
   - Design and direction of geophysical programs for US and international base metal and gold exploration joint venture programs.

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

5. I visited the Pinyon Plain Project (the Project) on November 16, 2021.

6. I am responsible for all sections and overall preparation of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have been involved previously with the Project from 2006 to 2012 when serving as Director of Project Resources with Denison Mines. Since the Project was acquired by Energy Fuels Resources (USA) in 2012 I have had no involvement with the Project that is the subject of the Technical Report.

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

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

Dated this 22nd day of February 2022

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

Mark B. Mathisen, C.P.G.

www.slrconsulting.com