

# Updated Report On The Daneros Mine Project, San Juan County, Utah, U.S.A.

National Instrument 43-101  
Technical Report

Prepared for



Author:  
*Douglas C. Peters, Certified Professional Geologist*  
NI 43-101 Qualified Person  
Peters Geosciences  
Golden, Colorado

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## 1.0 SUMMARY

### 1.1 Introduction and Property Description

Energy Fuels Inc. (Energy Fuels) owns the Daneros Mine uranium project (Daneros or the Property), located on the Colorado Plateau in San Juan County, Utah. The Property is in the Red Canyon portion of the White Canyon Mining District. Energy Fuels holds a 100% interest in various groups of mining claims, which cover the Daneros mine and adjoining historical mine sites. These historical sites could be developed in conjunction with Daneros. Daneros was developed and placed into active production in 2009 by Utah Energy Corporation (UEC), the U.S. operating entity for White Canyon Uranium Limited (WCU). Denison Mines purchased WCU and all its assets in June 2011. Daneros was acquired by Energy Fuels in June 2012 as part of the acquisition of Denison Mines' USA operations. Daneros was placed on standby in October 2012 due to falling uranium prices.

Major uranium deposits in the White Canyon District occur at or near the base of the Upper Triassic Chinle Formation, in fluvial channel deposits of the Shinarump Member, the basal member of the Chinle Formation. Uranium mineralization appears to be related to low-energy depositional environments in that uranium is localized in fluvial sandstones that lie beneath organic-rich lacustrine-marsh mudstone and carbonaceous delta-front sediments. The reducing environment preserved in these facies played an important role in the localization of uranium. Single mineralized pods range from a few feet to a few hundred feet in length and from less than one to more than ten feet in thickness. Deposits range in size from a few tons to more than 600,000 tons. In general, grades of vanadium mineralization associated with uranium deposits in the Shinarump Member are relatively low when compared to other Colorado Plateau deposits. Typically, Shinarump deposits are not processed for vanadium. Historical production from the White Canyon District exceeds 11 million pounds  $U_3O_8$ .

Daneros is located 40 miles due west of Blanding, Utah. The driving distance from Blanding to the project is 65 miles by U.S. and State Highways, and county road (see Figure 4-1). Energy Fuels owns and operates the White Mesa uranium-vanadium mill 6 miles south of Blanding, to which the Daneros mineralized material will be shipped for processing. The project comprises 141 unpatented mining claims located on federal land administered by the U.S. Bureau of Land Management (BLM) in San Juan County, Utah, totaling 3,072 acres. The property lies in Section 1, T37S, R15E, SLM, Sections 5, 6, 7, 8, and 18, T37S, R16E, and Section 31, T36S, R16E. Energy Fuels also has a mining lease through the State of Utah on all of section 32, T36S, R16E.

### 1.2 Operations

The Daneros mine operated from 2009 until October 2012 when the mine was placed on standby. The initial mine plan at Daneros involved driving twin declines (with the second decline for emergency escape and ventilation) into the center of the Daneros deposit and developing away from the entry point. Random room and pillar mining was employed, as was typical for the deposits in the local region. Mining utilized rubber tired loaders and small trucks to transport mineralized material to the surface, where it was loaded into over-the-road trucks, covered by a secure tarpaulin and transported to the White Mesa Mill.

The total White Mesa Mill production from Daneros is shown in Table 1-1 below:

**Table 1-1. Material Processed from Daneros 2010 - 2013**

Year	Dry Tons	Avg. Grade (%U <sub>3</sub> O <sub>8</sub> )	Est. Lbs. (U <sub>3</sub> O <sub>8</sub> )
2010	39,300	0.28	217,200
2011	32,000	0.25	162,200
2012	37,900	0.26	194,800
2013	11,500	0.24	54,600
<b>TOTAL</b>	<b>120,700</b>	<b>0.26</b>	<b>628,900</b>

### 1.3 Permitting

The primary permits required for mining operations at the Daneros Mine are in place, including a mine permit issued by Utah Division of Oil, Gas, and Mining (UDOGM) and the Daneros Plan of Operation Modification approved by the Bureau of Land Management (BLM). The permits obtained by UEC were for the initial stage of operations and contemplated eventual expansion of the mining operations, with the inclusion of additional surface area for support facilities and development rock stockpiles. In 2013, Energy Fuels submitted a modification of the permits to both UDOGM and the BLM to allow for expansion of the mining operations. The BLM issued its Environmental Assessment, Decision Record, Finding of No Significant Impact (FONSI) and approval of the modified Plan of Operations (MPOM) in February 2018. Energy Fuels expects UDOGM to issue a Large Mine Permit for an expanded mining operation within three to six months. The Daneros Mine does not discharge any water, so no discharge permit is required. Daneros Mine operations comply with all currently applicable permit requirements.

### 1.4 Mineral Resource Estimate

Energy Fuels has prepared a resource estimate for Daneros, located in the Red Canyon portion of the White Canyon District in southeastern Utah. This resource estimate was prepared using data acquired between 1975 and 2012. Table 1-2 presents Energy Fuels' Mineral Resource estimate for this property. The effective date of the Mineral Resource estimate is March 2, 2018. No Mineral Reserves have been estimated for the property.

**Table 1-2. Daneros Mineral Resources - March 2018**

Classification	COG (%eU <sub>3</sub> O <sub>8</sub> )	Tonnage (Tons)	Grade (% eU <sub>3</sub> O <sub>8</sub> )	Contained Metal (U <sub>3</sub> O <sub>8</sub> lb.)
Indicated	0.23	20,000	0.36	142,000
Inferred	0.23	7,000	0.37	52,000

Notes:

- 1) CIM definitions were followed for Mineral Resources.
- 2) Mineral Resources are estimated at a cut-off grade of 0.23% eU<sub>3</sub>O<sub>8</sub>
- 3) Mineral Resources are estimated using a long-term uranium price of \$55 per pound U<sub>3</sub>O<sub>8</sub>
- 4) A minimum thickness of 1 foot was used
- 5) Bulk density is 0.07143 ton/ft<sup>3</sup> (14 ft<sup>3</sup>/ton)
- 6) Mineral Resources are exclusive of Mineral Reserves and do not have demonstrated economic viability
- 7) Numbers may not add due to rounding

## 1.5 Conclusions

Peters Geosciences has reviewed the Energy Fuels resource estimate and supporting documentation and is of the opinion that classification of the mineralized material as Indicated and Inferred Mineral Resources meets the definition stated by NI 43-101, and also meets the definitions and guidelines of the CIM Standards on Mineral Resources and Reserves (adopted by the CIM Council on May 10, 2014).

There is potential to expand the estimated resource with additional surface drilling and underground development and long hole drilling.

## 1.6 Recommendations

The Author recommends that Energy Fuels proceed with the following efforts at Daneros as it plans for future production.

### Exploration

Perform surface drilling to confirm resources and connectivity of resources in the Shinarump paleochannel system, of which the Daneros Mine is a part, where mineralization is known, but distribution still is uncertain. (Estimated \$400,000)

After mine restart, perform underground long hole drilling to determine in advance of mining where likely resources exist and where accordingly to drive mine headings to best access these resources. (Estimated \$100,000)

### Mine Development

After mine restart, continue advancing mine headings toward the Lark Mine and previously defined mineralization to the north and northwest of the Daneros Mine in order to access known and potential resources in these areas. This includes short downward drilling in the area of Lark Mine Pod L-03 from the existing Daneros mine workings where it was believed that the already developed heading was too high stratigraphically to have intersected the expected pod of mineralization. If the pod can be located with such drilling, then workings should be developed to mine this pod. (Estimated \$850,000)

## **2.0 INTRODUCTION AND TERMS OF REFERENCE**

Peters Geosciences was retained by Energy Fuels Resources (USA) Inc. (Energy Fuels) to prepare an updated, independent Technical Report, compliant with Canadian National Instrument 43-101 (NI 43-101) on the Daneros mine (the Property or Daneros) This Technical Report replaces the July 18, 2012 Technical report titled *The Daneros Mine Project, San Juan County, Utah, U.S.A.* (“2012 Technical Report”) prepared by Douglas C. Peters, Certified Professional Geologist, of Peters Geosciences, Golden, Colorado. This updated Technical Report was issued to utilize additional drilling information not included in the 2012 Technical Report. This updated resource estimate accounts for all historical mining at Daneros, including mining that took place following issuance of the 2012 Technical Report. This report has been prepared to meet the requirements of NI 43-101 and Form 43-101F1.

### **2.1 Sources of Information**

Douglas C. Peters, Certified Professional Geologist (AIPG #8274) and Registered Member (SME #2516800), and principal in Peters Geosciences, visited the Daneros property on July 12, 2012 during a tour of the property led by Mr. Finn Whiting, formerly of Energy Fuels. In addition to viewing the underground conditions in parts of Daneros, accessible drill-hole locations were visited as well. Mr. Peters traversed parts of the property and surrounding areas on accessible roadways to observe surface conditions and drill sites. Depositional characteristics of the uranium were directly seen, although no in-place samples were collected for separate assaying due to constraints within the time frame of the field visit.

For the original report, dated July 18, 2012, relevant reports, maps, and data were reviewed and discussed with Energy Fuels staff at that time, principally Mr. Richard White, who served as VP of Exploration for the company’s Colorado and Utah operations, and with Mr. Whiting, former mine geologist at the Daneros Mine for Energy Fuels. Both Mr. White and Mr. Whiting no longer are employees with Energy Fuels. This updated report has been prepared involving review of relevant documents and data with Mr. Daniel Kapostasy, Senior Geologist, and Mr. Trey White, Vice-President for Technical Services, of Energy Fuels. The References section of this report lists the reviewed documents of importance as cited in this report.

### **2.2 List of Abbreviations**

A	Annum (year)
%	Percent
°	Degrees
°C	Degrees Celsius
cm	Centimeters
D	Day
EM	Electromagnetic
G	Grams
g/cm <sup>3</sup>	grams per cubic centimeter
g/m <sup>3</sup>	grams per cubic meter
g/l	grams per Liter
H	Hour(s)
Ha	Hectares (10,000 square meters)
HP	Horsepower
Hwy	Highway
IRR	Internal rate of return
k	Thousand



**UPDATED REPORT ON THE DANEROS MINE PROJECT, SAN JUAN COUNTY, UTAH, U.S.A**  
**NI 43-101 TECHNICAL REPORT, MARCH 2018**

kg	Kilograms
km	Kilometers
km/h	Kilometers per hour
km <sup>2</sup>	Square kilometers
kV	Kilovolts
kW	Kilowatts
l	Liter
Lbs	Pounds
M	Million
Mt	Million tonnes
M	Meters
m <sup>3</sup> /t/d	Square meters per tonne per day (thickening)
m <sup>3</sup>	Cubic meters
m <sup>3</sup> /h	Cubic meters per hour
m%U	meters times per cent uranium
m%U <sub>3</sub> O <sub>8</sub>	meters times per cent uranium oxide
m ASL	Meters above sea level (elevation)
mm	Millimeters
MPa	Megapascal
Mt/a	Million dry tonnes per year
MW	Megawatts
N	Newton
NPV	Net present value
Pa	Pascal (Newtons per square meter)
ppm	Parts per million
P <sub>80</sub>	80% passing (particle size nomenclature)
st	Short tons
SX	Solvent extraction
t	Tonnes (metric)
t/h	Tonnes per hour
t/d	Tonnes per day
t/a	Tonnes per year
U	Uranium
%U	Percent uranium (%U x 1.179 = %U <sub>3</sub> O <sub>8</sub> )
U <sub>3</sub> O <sub>8</sub>	Uranium oxide (yellowcake)
%U <sub>3</sub> O <sub>8</sub>	Percent uranium oxide (%U <sub>3</sub> O <sub>8</sub> x 0.848 = %U)
e%U <sub>3</sub> O <sub>8</sub>	Equivalent Percent uranium oxide (%U <sub>3</sub> O <sub>8</sub> x 0.848 = %U)
Cdn\$	Canadian Dollars
US\$	US dollars
\$/t	Canadian dollars per tonne
US\$/lb	US dollars per pound
US\$/t	US dollars per tonne v/v
%	Percent solids by volume
wt%	Percent solids by weight
>	Greater than
<	Less than

### 3.0 RELIANCE ON OTHER EXPERTS

This report for Energy Fuels has been reviewed by Douglas C. Peters of Peters Geosciences for completeness and technical correctness for sections prepared by Energy Fuels staff. Text also has been added and modified by Peters Geosciences as part of the report preparation process for Energy Fuels. The information, conclusions, opinions, and estimates contained herein are based upon information available to Peters Geosciences at the time of report preparation. This includes certain data, maps, and other documents in the possession of Energy Fuels that were reviewed with Mr. Richard White, CPG and Mr. Finn Whiting of Energy Fuels at the Daneros property and in the Energy Fuels office in Lakewood, Colorado. The 2012 Technical Report was also reviewed with Mr. Daniel Kapostasy of Energy Fuels, who performed the updated Daneros mineral resource modeling for this report, and with Mr. Trey White of Energy Fuels.

Mr. Whiting accompanied Mr. Peters for a field review on July 12, 2012 of the mine and overlying property covered by this report. Mr. Whiting was instrumental in assisting with the review, discussion, and understanding of both the general and site-specific geology of the Daneros property and nearby abandoned mines and mining districts. Mr. Kapostasy also reviewed changes in understanding of the Property and surroundings that have occurred through further work done on the Property since the original report was prepared.

Mr. Peters did not investigate the legal title of claims and leases covering the Daneros and related properties. Likewise, Mr. Peters did not review the updated permitting and reclamation status of the Daneros property beyond basic discussions with Mr. Trey White and Mr. Kapostasy.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

The Daneros Mine Project is located 40 miles due west of Blanding, Utah. Total driving distance from Blanding to Daneros is 65 miles. Access to Daneros from Blanding is by paved U.S. Highway 191 and paved State Highway 95 to Fry Canyon, and then by dirt road, County Road 258 (Radium King Road), to the site (see Figure 4-1). The Daneros Property includes the Daneros mine that was in operation between 2009 and 2012 as well as three historical mines, the Lark, Bullseye, and Spook. Information pertaining to the Lark, Bullseye, and Spook mines can be found in Section 6 of this report.

### 4.1 Land Tenure

There have been a few changes to the land coverage of the Daneros project since the 2012 Technical Report. The project now comprises 141 unpatented mining claims located on federal land in San Juan County, Utah administered by the Bureau of Land Management (BLM) and one Utah State Section Lease (ML-52918). The claims are located in Section 1, T37S, R15E, SLM, Sections, 5, 6, 7, 8 and 18, T37S, R16E, and Section 31, T36S, R16E. The total acreage of the project area is 3,072 acres. The mining claims are maintained by making annual payments of US\$155 per claim to BLM due September 1<sup>st</sup> each year and a nominal filing fee at the county level, within 30 days of the BLM filing, of about \$10 per claim. Claim payments are current through September 1, 2018. Energy Fuels also has a mining lease through the State of Utah on all of section 32, T36S, R16E. A payment of \$640 is due every August to maintain the lease.

Holders of unpatented mining claims generally are granted surface access to conduct mineral exploration and mining activities. However, additional permits such as those held by Energy Fuels are generally required prior to conducting exploration or mining activities on such claims. The property included in the Daneros Project area is shown on Figure 4-2. The mine portal is located at about 5,750 feet above sea level and at approximate coordinates of 110° 12' West longitude and 37° 36' North latitude.

**Table 4-1. Land Ownership and Mining Rights at Daneros**

Claim Group/Lease	Claim/Lease Nos.	No. of		Royalty
		Claims	Ownership	
Christy	1, 9-28, 33, 34, 37-39 & 42-46	31	Energy Fuels	0.0%
Daneros	1-5	5	Energy Fuels	15.0%
Daneros	6-25	20	Energy Fuels	0.0%
Lark	3-23	21	Energy Fuels	2.5%
Red Bull	1-12 & 14	13	Energy Fuels	0.0%
Royal	1-12	12	Energy Fuels	2.5%
Spook	1-8	8	Energy Fuels	0.0%
Tessy	6, 9 & 11	3	Energy Fuels	15.0%
Tessy	4	1	Energy Fuels	0.0%
Yellow Parrot	1-27	27	Energy Fuels	0.0%
Utah State Lease	ML-52918	N/A	Energy Fuels	8%
<b>TOTAL</b>		<b>141</b>		

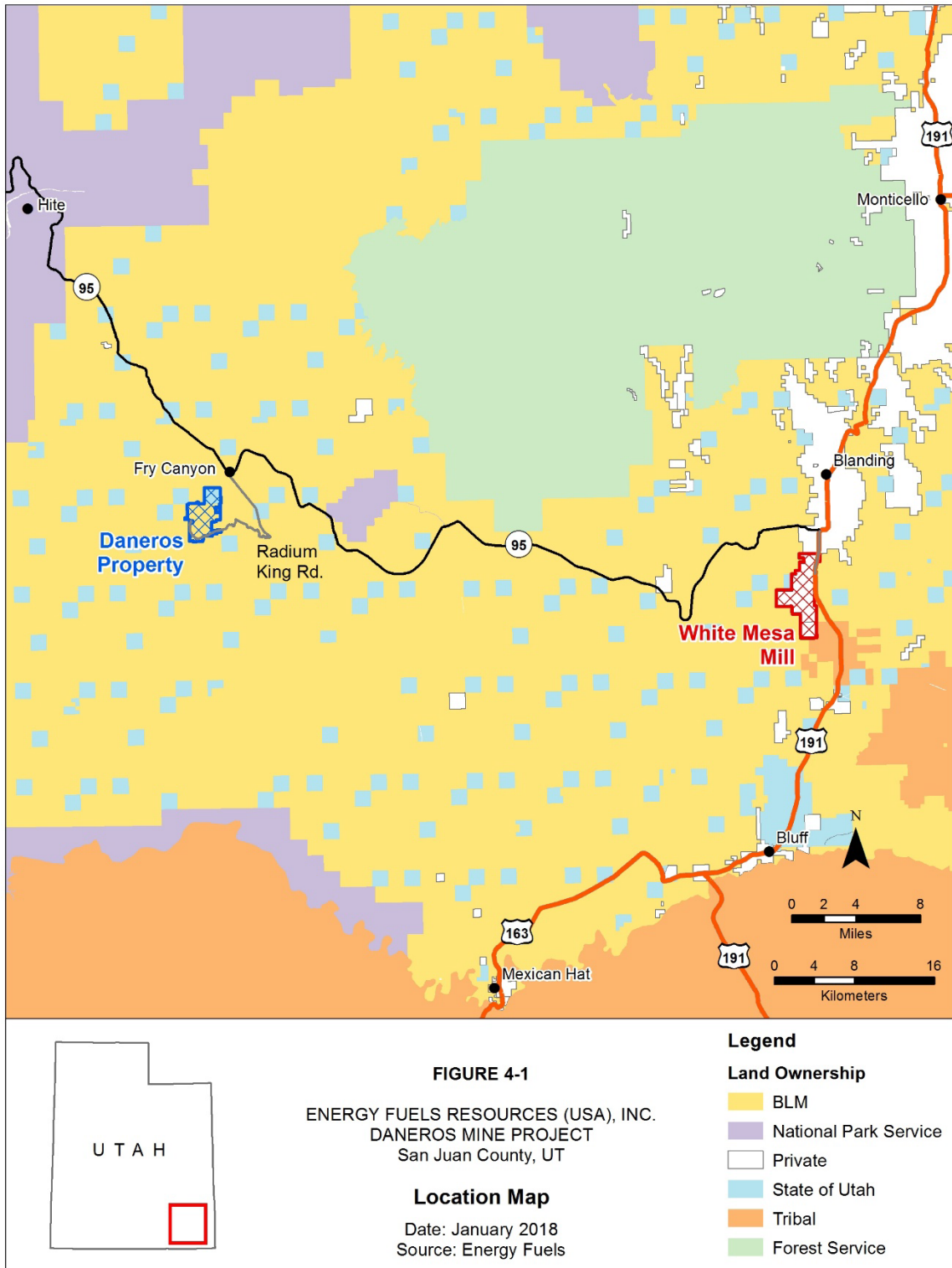
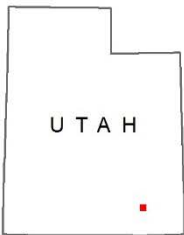
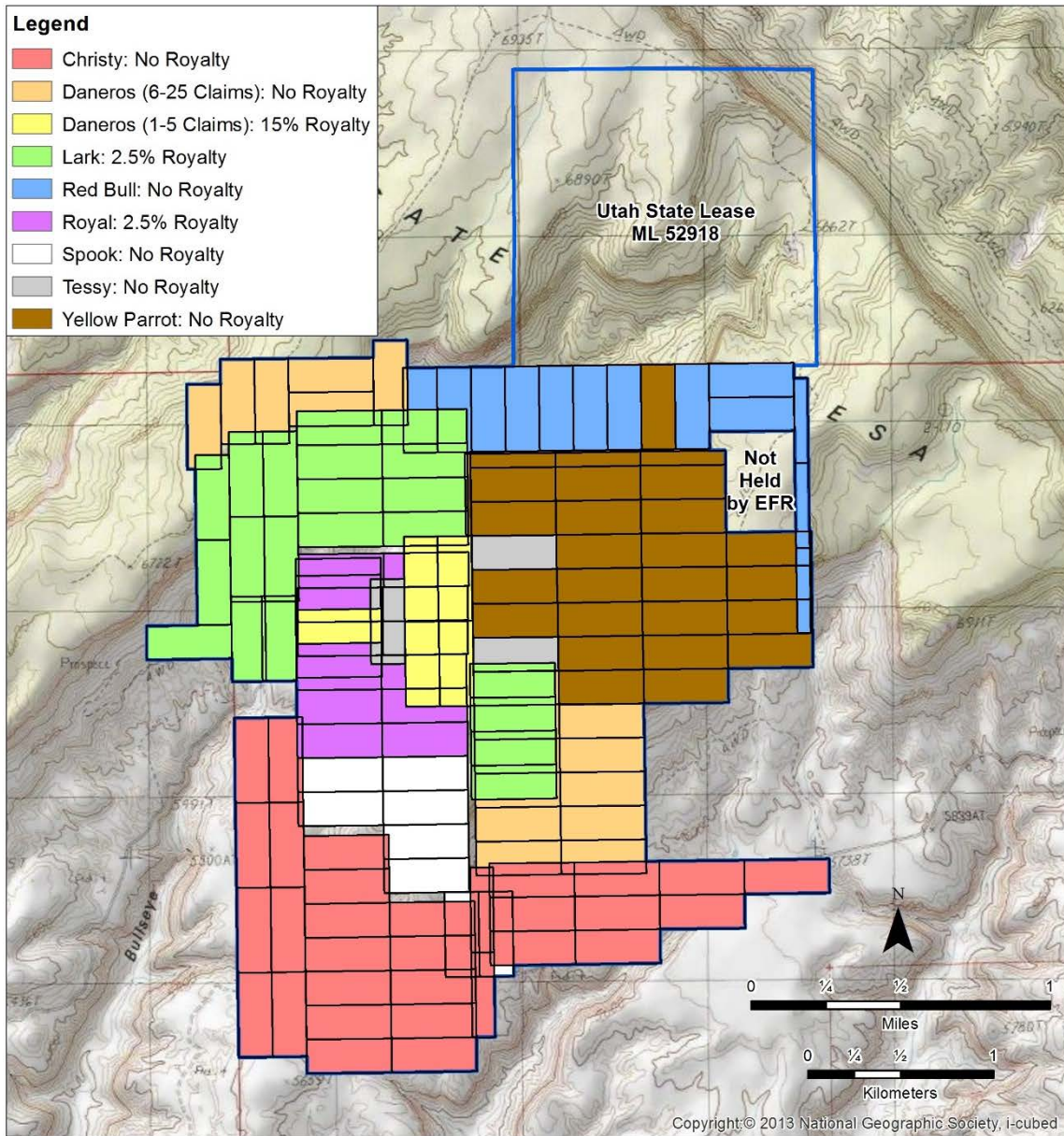


Figure 4-1. Location of the Daneros Project



**FIGURE 4-2**  
 ENERGY FUELS RESOURCES (USA), INC.  
 DANEROS MINE PROJECT  
 San Juan County, UT

**Property Map**

Date: January 2018  
 Source: Energy Fuels

**Figure 4-2. Daneros Property Map**

The claims were staked by various individuals, spanning a long time frame. Energy Fuels acquired the property through the acquisition of Denison Mines Holding Corp. (DMHC) in June 2012. Denison became owner of the property with the purchase of White Canyon Uranium Limited (WCU) in June 2011. WCU had consolidated a portfolio of properties and prospects in June 2007, including much of the current Energy Fuels holdings in the area. As a result, a number of the claims bear production royalties.

## **4.2 Royalties**

The 2.5% royalty on the Lark and Royal claims is interpreted to be a 2.5% yellowcake ( $U_3O_8$  product) royalty without any deductions. The royalty also applies to vanadium at the same rate (2.5%), although the Daneros property is not expected to produce any vanadium. In the \$50 to \$60/Lb price range, the 2.5% royalty on the Lark and Royal claims ranges from \$1.25/Lb to \$1.50/Lb of produced yellowcake (\$5 to \$9/ton of mineralized material).

The 15% royalty on the Daneros (1-5) claims is dependent on whether Energy Fuels controls both the Daneros Mine and the White Mesa Mill (WMM). As this is currently the case, that royalty is calculated by the following method.

- The royalty is 15% of the market value
  - Market value is defined as the higher of:
    - \$9 per pound of contained  $U_3O_8$  less transportation costs from the mine to WMM
    - The highest price paid to 3rd party miners (buying schedule) less transportation costs from the mine to WMM
  - Because a WMM buying schedule is not currently in place, assumptions were made to develop a reasonable buying schedule for the future, based on how this has been structured in the past. This was done solely for the purpose of estimating future royalty costs so that they could be incorporated into the resource cut-off grade calculation.
- In the \$50 to \$60/Lb price range, the 15% royalty on the Daneros (1-5) claims ranges from about \$3/Lb to \$5/Lb of produced yellowcake (\$12 to \$30/ton of mineralized material).

Note that the Daneros (1-5) claims and Tessy claims overlap some of the Lark and Royal claims. The Daneros (1-5) claims and the Tessy claims predate the the Lark and Royal claims and therefore the royalty or lack of royalty associated with those claims are senior to the 2.5% royalty on the Lark and Royal claims.

The royalty for the Utah State Lease is an 8% gross value royalty on uranium and 4% on all other minerals. The gross value of leased material for this lease means the actual compensation received by the Lessee. No deductions are allowed under this royalty. There are no NI 43-101 compliant Mineral Resources on this State Lease.

## **4.3 Permits**

Regulatory approvals for mining at Daneros have been issued by the Utah Division of Oil, Gas and Minerals (UDOGM), the BLM, and the Utah Division of Air Quality, and the Utah Division of Water Rights. Some permits issued to WCU that allowed for initial development and mining needed to be revised to allow for future expansion. The primary reason for permitting the expansion is that the development rock stockpiles have nearly reached permitted capacity.

Energy Fuels began the permit revision process in 2012 with the submittal of a construction application to the Utah Division of Air Quality (UDAQ) and EPA for radon emissions. This application was approved in May 2012. An air permit application was submitted to UDAQ for other regulated air emissions (e.g., fugitive dust, volatile organic compounds) and approved in late 2012. In early 2013, a modified Plan of Operations (MPOM) and a Large Mine Notice of Intent (NOI) proposing expansion of the existing mine were submitted to the BLM and

UDOGM, respectively. An Environmental Assessment (EA) was issued by the BLM for public comment in July 2016 and approved in February 2018.

The EA package (i.e., Final EA, Decision Record and Finding of No Significant Impact (FONSI)), approved in February 2018, authorizes expansion of the permit area from 4.5 to 46 acres, construction of a new portal, storage of an additional 270,000 cubic yards of development rock, construction of eight new vent shafts and production of approximately 25,000 tons of material per year. Energy Fuels anticipates approval of the Large Mine permit from UDOGM in three to six months. Operations can begin under the current Small Mine Permit while the UDOGM review of the Large Mine application proceeds.

Energy Fuels also currently holds an exploration permit through UDOGM to drill 38 exploration holes on the Daneros Property. White Canyon Uranium drilled 25 of the original 63 permitted holes in 2010.

A reclamation cost estimate for Daneros was completed in 2016 by Energy Fuels and accepted by the State of Utah. The reclamation cost estimate of \$145,000 includes escalation to 2021 and a reclamation bond is posted in this amount. This cost estimate is to reclaim the property from its current condition.

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

The Daneros Mine property is located in southeastern Utah in the White Canyon uranium mining district (White Canyon District) of the Colorado Plateau physiographic province. The White Canyon District generally encompasses the local geographic areas of Red, White, and Fry Canyons at the west end and Elk Ridge in the eastern end. The Daneros property is in the Red Canyon portion of the District. Utah State Highway 95 runs generally east-west between Hite and Blanding, Utah. From Blanding, the project can be reached in about 1.5 hours by driving approximately 50 miles (80 km) west of U.S. Highway 191 at Blanding on State Highway 95 to the very small community of Fry Canyon, Utah. This is 30 miles east of the Hite turn-off on Highway 95. These towns and roads are shown in Figure 4-1.

The Daneros Mine portal is located 3 miles southwest of Fry Canyon, Utah. It is accessed via Radium King Road, which initially follows the canyon floor southeasterly from Fry Canyon for 5 miles, then climbs steeply to the west onto a bench mid-way up the canyon wall. The road continues westerly on the bench on the north side of Red Canyon for about 7.5 miles to the intersection with the Daneros access road. The Daneros Mine is located about 0.5 miles to the north of Radium King Road, a total distance of approximately 13 miles from Fry Canyon, Utah. The haulage distance from the Daneros Mine to the Energy Fuels' White Mesa Mill is 66 miles. The mill entrance is three miles south of the State Highway 95-US Highway 191 intersection south of Blanding.

The project area is located along a north-south trending canyon known as Bullseye Canyon, which is a tributary to Red Canyon. Red Canyon drainage flows westerly for approximately 25 miles to the Colorado River where it joins Lake Powell at the head of Good Hope Bay. The mine portal area comprises steeply sloping, rocky ground and scree along the eastern slope of this canyon. Very steep to vertical, and at times overhanging, cliffs 400 feet high rise from the slope about 250 feet above the portal. The mesas are capped by the Kayenta sandstone and slope gently to the southwest reflecting the gentle regional stratigraphic dip. A series of bulldozed tracks and drill roads provide access throughout the project area, but access to the mesa tops is very limited. A number of historical workings are evident within the immediate surroundings of the Energy Fuels project area, the most significant being the former Bullseye, Lark, and Royal mine workings near the Daneros Mine portal.

The semi-arid climate of the White Canyon area is characterized by large daily and yearly temperature ranges and a total annual precipitation of approximately 10 to 16 inches, mostly as sporadic, intense summer thunderstorms typical of the Colorado Plateau region. Winter snowfall is moderate and rarely stays on the ground very long. Weather conditions pose no impediment to year round work on the property.

Vegetation in the project area consists of sagebrush, juniper, and piñon in the hills and slopes, whereas desert grasses, forbs, and shrubs are evident within the valley floors and on the mesa tops. Elevations in the region range from about 5,300 feet at the Fry Canyon townsite to over 7,000 feet on the surrounding mesa tops. The mine portal is at about 5,750 feet above sea level.

Apart from previous mining activities, the only commercial land use purposes are cattle grazing and tourism activities such as hiking and mountain biking. Due to the shortage of water and thin soils, much of the White Canyon area is unsuitable for agricultural purposes.

The project area is remotely located relative to water and power infrastructure. Housing for mine workers is mostly in camp trailers in Fry Canyon or they commute from Blanding, 65 miles to the east, or farther. Blanding is a large enough town with various regional industrial activities to have stores and supply houses of sufficient size and inventory for much of the needs of an operation the size of the Daneros Mine.



## 6.0 HISTORY

The White Canyon mining district has a long history of exploration and mining. From 1949–1987 production from the district was 2,259,822 tons at an average grade of 0.24%  $U_3O_8$  for a total of 11,069,032 lbs. placing it second, behind Lisbon Valley, for uranium production from the Chinle Formation on the Colorado Plateau (Chenoweth, 1993).

Prospecting for copper in the White Canyon area is thought to have begun possibly as early as 1880 by early gold prospectors. During 1906 and 1907, there was intense activity for copper exploration in the area when there was an unusually high price for copper, but no production resulted. The properties in the area remained idle again until 1946 when miners shipped two truckloads of copper ore from the Happy Jack Mine to a smelter in Garfield, Utah but they were rejected due to uranium content. In 1948, a truckload of ore was sent to the U.S. Atomic Energy Commission (“AEC”) Mill in Monticello, Utah and it was rejected due to its copper content. In August 1949, Vanadium Corporation of America (“VCA”) began operating a small mill in White Canyon that could recover copper and uranium and that opened up uranium mining in the White Canyon area. From 1948 until 1951, White Canyon and the nearby Red Canyon and Deer Flat areas were subject to intense exploration. Production slowly increased until 1953 when it nearly tripled over previous years.

The VCA White Canyon Mill was closed in December 1953 and producers started shipping to an ore buying station built by the AEC in 1954 on a site near the Happy Jack Mine. The number of active mines during 1954 in the White Canyon District increased from 19 to 36. On July 31, 1957, the AEC closed its White Canyon Buying Station after purchasing 179,635 tons of ore averaging 0.25%  $U_3O_8$  and containing 915,696 pounds  $U_3O_8$ . The stockpiled ore was later sold to Texas-Zinc Minerals Corporation (“Texas-Zinc”).

In the summer of 1956, Texas-Zinc began operating their mill at Mexican Hat, Utah. The mill initially processed 775 tons of ore per day and was expanded to 1,000 tons per day in 1958. Due to the AEC reducing its procurement program, production in the district started to decline in 1959. In June 1959, five uranium companies were merged to form Atlas Minerals, a subsidiary of Atlas Corporation. Atlas Minerals acquired Texas-Zinc Minerals in July 1963 and continued to operate the mill in Mexican Hat through its subsidiary, A-Z Minerals Corporation. Due to reduced buying by the AEC, A-Z Minerals closed the Mexican Hat Mill in February 1965. The closing of the Mexican Hat Mill and previous closing of the AEC ore-buying station and closing of the AEC facility at Monticello, Utah, left the independent operators in the district with the only market for their low-vanadium ores at the Atlas Minerals mill at Moab, Utah, a 110-mile longer haulage, which caused production to continue its decline.

The AEC ore procurement program ended on December 31, 1970 and during the early 1970s minimum production was recorded from the district. Production from the district started picking up again by 1974 when the demand for uranium picked up due to nuclear power generation. Atlas Minerals started buying ore from independent producers. Exploration and production once again increased in the White Canyon District. In 1974, Utah Power and Light Company (“UP&L”) began to acquire properties in the White Canyon District, which included 100% interest in the Spook-Bullseye property and 60% interest in the Lark-Royal property, both located near the Daneros property in Red Canyon. UP&L conducted exploration drilling from 1975 through 1983, drilling a total of 2,417 holes, which resulted in the discovery of several new uranium deposits. UP&L never started mining operations in the White Canyon District due to the collapse of the uranium price by 1982. By 1987, the last mines in the White Canyon district closed due to declining economics, socio-political factors, and competition from lower cost producers.

Following 1987, the properties were idle and little or no exploration activity took place in the White Canyon District. In 1993, UP&L dropped their mining claims in the White Canyon District. In October 1993, Eugene and Merwin Shumway staked the Daneros and Geitus claims that covered two of the deposits UP&L had discovered. Eugene and Merwin Shumway quitclaimed their claims to predecessors of White Canyon Uranium (WCU), Wilene and

Mike Shumway, Terry Leach, and James Lammert in March 1994. No exploration or development took place between 1994 and 2005. From 2005 to 2007, these predecessors of WCU began acquiring properties with known historic mineral deposits in the White Canyon District. In 2007, Utah Commodities Pty, Ltd. who later changed their name to White Canyon Uranium Limited, which operates in the United States through its wholly owned subsidiary Utah Energy Corporation (UEC), acquired 100% interest in the Daneros and Geitus claims. In December 2008, WCU purchased 33 claims, known as the Lark-Royal Project, an extension of the Daneros Project, from Uranium One.

WCU gathered the necessary environmental data and submitted applications for approvals to open an underground mine at Daneros. A Plan of Operations (POO) was submitted to the BLM and approved in May, 2009, following which UEC commenced active mine development, including driving a decline into the main deposit at Daneros. The first loads of mineralized material from Daneros were delivered to WMM in December 2009, then operated by Denison Mines.

In January 2010, Denison entered into a toll milling agreement with UEC. UEC actively produced from the mine for the next 17 months. In June 2011, Denison completed the acquisition of WCU and continued production using the same mining contractor WCU was employing. Energy Fuels acquired Denison in June 2012 and kept the mine in operation, again using the same contractors. Energy Fuels continued mining Daneros until October 2012, when it placed the mine on standby due to low uranium prices.

The Daneros mine was accessed via a 450-foot long, 15% decline utilizing rubber tired equipment. It was mined using a random room and pillar configuration, employing split-shooting to selectively mine the thin uranium mineralization. Mineralized material was trucked to the surface and dumped onto pads where it was then loaded into trucks and shipped to WMM in Blanding, UT.

## **6.1 Daneros Exploration History**

In the early 1950s, the AEC conducted exploratory drilling in the White Canyon area resulting in a number of promising uranium discoveries. The area in and around Bullseye Canyon, where Daneros is located, has been a target of this exploration drilling since that time.

Also during the AEC exploration programs, companies were encouraged to develop exploration drifts along promising geologic trends or channels. As part of this exploration drifting, a company would drill “exploration long holes” underground, to better define a chosen mineralized zone. Several of these prospects around the Energy Fuels property were drilled in this manner. The Spook Prospect, the Bullseye Prospect, and the Cove (Lark) Prospect were all mined and drilled in this manner along the Cairns Channel (Texas Zinc and Minerals Map of 1961).

Between 1975 and 1985, UP&L explored within and around Bullseye Canyon. UP&L drilled 565 diamond drill holes with an average depth of 510 feet and, following industry standard procedures, logged all holes using down-hole geophysical (gamma) probes to identify radioactive horizons. Anomalous horizons were sampled and analysed for uranium.

WCU began drilling programs in Bullseye Canyon during 2007. The first program drilled 8 air rotary holes within the Daneros 1-5 claims. A second program, in 2008 drilled 16 diamond drill holes and 1 rotary drill hole. Finally, a third program, also in 2008, drilled 11 diamond drill holes and 9 rotary drill holes. Additionally, WCU drilled 25 rotary holes in 2010.

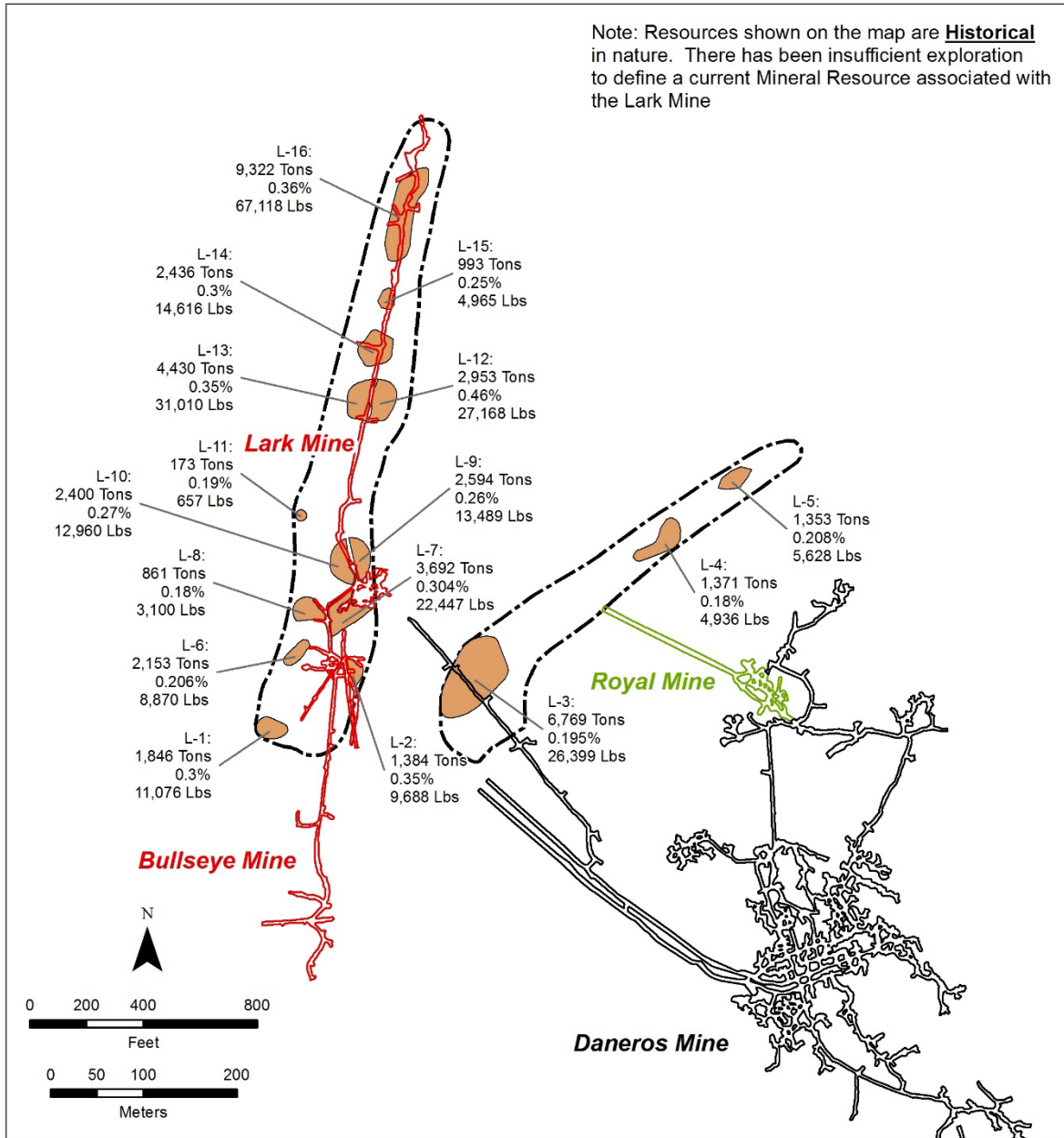
## 6.2 Historical Resource Estimates

The Daneros property contains three historical mines, which produced in the early days of mining in the White Canyon District. These mines are the Lark/Bullseye, the Royal and the Spook. A historical resource estimate for the Lark mine was completed by UP&L in 1974. UP&L estimated that the Lark mine contained approximately 45,000 tons at a grade of 0.30% U<sub>3</sub>O<sub>8</sub> for 265,000 pounds of uranium. This historical resource estimate is based on both surface and underground long-hole drilling. Areas of influence were defined by connecting surface holes that are less than 100 ft. apart and to the mineralized extent of a long hole. A density of 14 cu ft./ton was used. This historical resource is detailed in Table 6-1 below.

**Table 6-1. UP&L Historical Resource Estimate for the Lark Mine**

Lark Zone ID	Tons	% U3O8	Lbs
L-01	1,846	0.30	11,076
L-02	1,384	0.35	9,688
L-03	6,769	0.20	26,399
L-04	1,371	0.18	4,936
L-05	1,353	0.21	5,628
L-06	2,153	0.21	8,870
L-07	3,962	0.30	24,089
L-08	861	0.18	3,100
L-09	2,584	0.26	13,437
L-10	2,400	0.27	12,960
L-11	173	0.18	623
L-12	2,953	0.46	27,168
L-13	4,430	0.35	31,010
L-14	2,436	0.30	14,616
L-15	883	0.25	4,415
L-16	9,322	0.36	67,118
<b>TOTAL</b>	<b>44,880</b>	<b>0.30</b>	<b>265,133</b>

Peters Geosciences and Energy Fuels do not consider this historical resource estimate to be current Mineral Resources or Reserves as defined under NI 43-101. Peters Geosciences and Energy Fuels have not done sufficient work to classify the historical estimate as current mineral resources. Peters Geosciences and Energy Fuels have not reviewed any drill logs, data, or other information, other than what is shown on the map in Figure 6-1 to verify this historical estimate. This historical estimate is included only as an indication of mineralization and should not be relied upon.



**FIGURE 6-1**  
 ENERGY FUELS RESOURCES (USA), INC.  
 DANEROS MINE PROJECT  
 San Juan County, UT

**Lark Mine**  
 Date: January 2018  
 Source: Energy Fuels

**Legend**  
 Lark Historical Ore Pod  
 Lark Mineralization Halo

Figure 6-1. Historical Resource and Location of Lark Mine

### 6.3 Historical Production

The AEC tracked production on ore it purchased from mines between 1947 and 1970. All three historical mines at Daneros, the Lark (Cove), Bullseye and Spook mine produced and sold ore to the AEC during that period (AEC, undated report). Table 6-2 details production from those mines during that period.

**Table 6-2. Historical Production from Mines at Daneros, 1947 - 1970**

<b>Mine</b>	<b>Tonnage (Tons)</b>	<b>Grade (%U<sub>3</sub>O<sub>8</sub>)</b>	<b>Contained Metal (U<sub>3</sub>O<sub>8</sub> lb.)</b>
Cove (aka Lark Mine)	3,900	0.23	18,200
Bullseye	26,200	0.19	101,300
Spook	42,900	0.23	195,000

Milled mineralized material from the Daneros Mine between 2009 and 2012 totaled approximately 121,000 tons at an average grade of 0.26% U<sub>3</sub>O<sub>8</sub>. Table 6-3 details material from Daneros that was milled at the WMM between 2010 and 2013. Note that this mineralized material was mined from Daneros between 2009 and 2012.

**Table 6-3. Material Processed from Daneros 2010 - 2013**

<b>Year</b>	<b>Dry Tons</b>	<b>Avg. Grade (%U<sub>3</sub>O<sub>8</sub>)</b>	<b>Est. Lbs. (U<sub>3</sub>O<sub>8</sub>)</b>
2010	39,300	0.28	217,200
2011	32,000	0.25	162,200
2012	37,900	0.26	194,800
2013	11,500	0.24	54,600
<b>TOTAL</b>	<b>120,700</b>	<b>0.26</b>	<b>628,900</b>

The process utilized at WMM (2010 to 2013) for treating Daneros mineralized material is described below:

Run-of-mine material is reduced to minus 28-mesh in a six-foot by 18-ft. diameter semi-autogenous grinding (SAG) mill. Leaching of the mineralized material is accomplished in two stages: a pre-leach and a hot acid leach. The first or pre-leach circuit, consisting of two mechanically agitated tanks, utilizes pregnant (high-grade) strong acid solution from the countercurrent decantation (CCD) circuit, which serves both to initiate the leaching process and to neutralize excess acid. The pre-leach circuit discharges to a 100 ft. diameter thickener where the underflow solids are pumped to the second stage leach and the overflow solution is pumped to clarification, filtration, and solvent extraction circuits. A hot strong acid leach is used in the second stage leach unit, which consists of seven mechanically agitated tanks having a retention time of approximately 24 hours. Free acid is controlled at 70 grams per liter and the temperature is maintained at 75° C. Leached pulp is washed and thickened in the CCD circuit, which consists of eight high-capacity thickeners. Underflow from the final thickener at 50% solids is discharged to the tailings area. Overflow from the first thickener (pregnant solution) is returned to the pre-leach tanks.

The solvent extraction (SX) circuit consists of four extraction stages in which uranium in pregnant solution is transferred to the organic phase, a mixture consisting of 2.5% amine, 2.5% isodecanol, and 95% kerosene. Loaded organic is pumped to one acid wash stage followed by four stages of stripping by a 1.5 molar sodium chloride solution, and thence to a continuous ammonia precipitation circuit. Precipitated uranium is settled, thickened, centrifuged, and dried at 1,400° F. The final product at about 97% U<sub>3</sub>O<sub>8</sub> is packed into 55-gallon drums for shipment.

#### 6.4 Historical Mining Method (2009 – 2012)

The Daneros mine operated from 2009 until October 2012 when the mine was placed on standby. The Daneros deposit is accessed from the surface through a 450-foot long decline at a gradient of -15%. During this time period random room and pillar mining was employed, as was typical for the deposits in the local region. Mining utilized rubber tired loaders and small trucks to transport mineralized material to the surface, where it was loaded into over-the-road trucks, covered by a secure tarpaulin and transported to the WMM.

The Shinarump deposits are usually thinner than the mining height needed for personnel and equipment access; therefore, the mineralized material was mined by a split-shooting method. The split-shooting mining method involves assessing each face as the stopes advance by the mine geologist, engineer, mine foreman, or experienced lead-miner. Because the grades and thickness of the typical Shinarump uranium deposits are highly variable, they are usually unpredictable from one round to the next. (A round is a complete mining cycle of drill-blast-muck-ground support, if needed to be ready to drill again; a normal round advances a face about 6 feet.) Typically, the thickness of the mineralized material was less than the height needed to advance the stope. As the stope face was being drilled, the blast holes were probed with a Geiger Counter probe in order to estimate the  $U_3O_8$  grade. The uranium mineralization is usually dark gray to black. The mineralization sometimes rolls, pinches or swells, or follows cross-beds within the sandstone. Therefore, the miners also used drill cutting color as a criterion to help guide blast hole direction and spacing. This irregular habit of the deposit can result in holes collared in mineralized material ending in waste, or, conversely, holes collared in waste will penetrate mineralized material much of their length. Based on the results of the assessment of the blast holes drilled in the face, the round will be loaded and shot in two or more stages. Depending on the location and thickness of the mineralized material in the face (there may be multiple mineralized layers); the miner will attempt to blast either only mineralized material or only waste rock. They will muck it out as clean as possible, then shoot the remaining rock and muck it cleanly. The amount of waste rock shot before or after the mineralized material typically resulted in stope heights of eight-to-nine feet.

During this time period the mine also employed an underground long hole exploration drilling program, reaching out as much as 400 feet ahead of and adjacent to the workings, as guided by the mine geologist.

## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

Major uranium deposits in the east-central Colorado Plateau occur principally in two fluvial sandstone sequences. The older is located at or near the base of the Upper Triassic Chinle Formation and the other occurs in the Late Jurassic Salt Wash Member of the Morrison Formation. Nearly all of the deposits in the White Canyon District occur in fluvial channel deposits of the basal member of the Chinle Formation, the Shinarump Member. The Morrison, having been eroded, does not occur anywhere on the Daneros property.

The Shinarump Member consists of predominantly trough cross-bedded, coarse-grained sandstone and minor gray, carbonaceous mudstone and is interpreted as a valley-fill sequence overlain by deposits of a braided stream system. Uranium mineralization appears to be related to low-energy depositional environments in which uranium is localized in fluvial sandstones that lie beneath organic-rich lacustrine-marsh mudstones and carbonaceous delta-front sediments. The reducing environment preserved in these facies played an important role in the localization of uranium.

Uranium deposits consist of closely spaced, lenticular mineralized pods, which are generally concordant with bedding in paleochannel sediments. Single mineralized pods range from a few feet to a few hundred feet in length and from less than one to more than ten feet in thickness. Deposits range in size from a few tons to more than 600,000 tons. Deposits in the Shinarump Member generally have low vanadium content, and therefore are not processed for vanadium recovery. Historical production from the White Canyon District exceeds 11 million pounds  $U_3O_8$ .

### 7.1 Regional Geology

The uranium-rich Colorado Plateau province covers nearly 130,000 square miles in the Four Corners region of the Southwestern United States. The Daneros Mine Project lies in the Canyon Lands Section in the central and east-central part of the Colorado Plateau in Utah and Colorado. This region of the Colorado Plateau is also within the Paradox Basin.

The Plateau's basement rocks, which are not exposed in the area of Daneros, are mostly Proterozoic metamorphic units and igneous intrusions. Sedimentary rocks exposed in the canyons and mesas around the White Canyon District range from Permian through Triassic. On the southwest side of Red Canyon a few miles to the southwest, the Jurassic Navajo Sandstone caps the mesas. The rest of the Mesozoic and younger rocks have been eroded from the region.

The earlier Paleozoic systems are deeply buried. They represent shallow-marine sedimentation on a relatively stable platform with fluctuations in sea level. During the later Paleozoic periods, the region became more structurally active. The Paradox Basin subsided deeply accompanied by uplift of the adjacent Uncompahgre Uplift, 100 miles northeast of the Daneros property, exposing its Precambrian core. Thousands of feet of sediment accumulated in the center of the basin, in a restricted circulation marine environment. This resulted in extensive deposition of evaporites (gypsum, salt, and potash) along with limestones, shales, and some sandstones (Hermosa Formation). As the Uncompahgre highland eroded, great thickness of arkosic sediments accumulated coevally in the northeastern Paradox Basin. The distal part of the basin bounded by the Monument Uplift in the White Canyon area received finer grained sediments and carbonates due to lateral and vertical facies changes. The Paradox Basin was filled by middle Permian time; however, the Uncompahgre continued to be a highland shedding abundant coarse clastic, arkosic debris (Cutler Formation) as the basin slowly subsided. The Cutler is finer grained in the White Canyon district; the Cedar Mesa and White Rim sandstone members of the Cutler are prominent bench-forming units in the region.

The region was again relatively stable throughout much of the Mesozoic Era with minor uplifts and gently subsiding basins continuing to receive fluvial and lacustrine sediments (Moenkopi and Chinle Formations) during the early Mesozoic Era with minor erosional periods locally. The region dried considerably in late Triassic and early Jurassic and large dune fields, very shallow seas, and extensive aggrading floodplains existed throughout the region resulting in deposition of predominantly sandstone of eolian and fluvial origin (Wingate, Kayenta, Navajo, and Entrada formations). In the northern Paradox Basin, the buried Pennsylvanian evaporites were influenced by basement faulting and sediment loading and flowed into a series of northwest-trending diapiric anticlines. Flowage of the salt was erratically active from Permian through late Jurassic, thereby affecting deposition of the Triassic and early Jurassic sediments. The source of the sediments changed during this time from the earlier eastern source to a western dominated source. Volcanic ash from a couple of volcanic episodes to the west settled over the area as well (upper part of the Chinle and the Brushy Basin Member of the Morrison Formation). In the Cretaceous, the Sevier orogeny to the west resulted in sediment accumulation in the region evolving from deposition of conglomerates to a coastal plain with swamps (Burro Canyon and Dakota formations) to an epicontinental interior seaway where thick marine black shales were deposited (Mancos Shale). Near the end of the Cretaceous, alternating regressions and transgressions of the sea led to thick littoral sandstones interbedded with marine shales (Mesa Verde Group), later covered by fluvial and lacustrine sediments in the early Tertiary.

This thick stratigraphic sequence is interrupted locally by basement fault-related monoclines (e.g., Comb Ridge) as well as the salt-cored anticlines in the northern Paradox Basin area. The salt anticlines are controlled by basement faults, being elongated in a northwest-southeast direction, as is the Uncompahgre Uplift. The White Canyon district is located along the northwestern flank of the Monument Uplift, which forms the southwestern edge of the Paradox Basin. The Monument Uplift is a broad, north-south trending, asymmetrical anticline approximately 50 miles wide by 100 miles long, upon which a few minor folds are developed. Very little faulting occurs in the White Canyon district.

During the Tertiary, several clusters of laccoliths intruded the Colorado Plateau about 20-30 million years ago into several different horizons of Paleozoic and Mesozoic sedimentary rocks. Diorite porphyry is the dominant rock type, with minor monzonite porphyry and syenite intruded later. The emplacement of the individual intrusive bodies was largely controlled by basement faults. The closest intrusive centers to the White Canyon district are the Little Rockies portion of the Henry Mountains complex 24 miles to the northwest and the Abajo Mountains 36 miles to the northeast. Following epeirogenic uplift of the region, deep canyon cutting occurred, continuing through the Pleistocene.

## **7.2 Local Geologic Detail**

Much of this section is summarized from Thaden et al. (1964). Figure 7-1 shows the surficial geology near Daneros. The stratigraphic units exposed on or near the Daneros property include the Permian Cutler, Triassic Moenkopi and Chinle and the Jurassic Wingate and Kayenta formations. The host rock of the uranium deposits is the Shinarump Member of the Chinle. These units are described below. Strata throughout much of the White Canyon area are generally unfaulted and dip gently west-southwestward at 2° to 3°. A zone of north-northeast trending normal faults are mapped beginning about a mile southwest of the Daneros Mine. These faults define a very narrow graben structure that extends six miles to the southwest. The north end of the fault zone is concealed by landslide material. A strong joint set with the same strike of the fault zone, about N35°E, is prevalent throughout the district. These joints have influenced erosion as several tributary canyons to Red Canyon on its north side, including Bullseye Canyon where the Daneros is located, have the same strike.



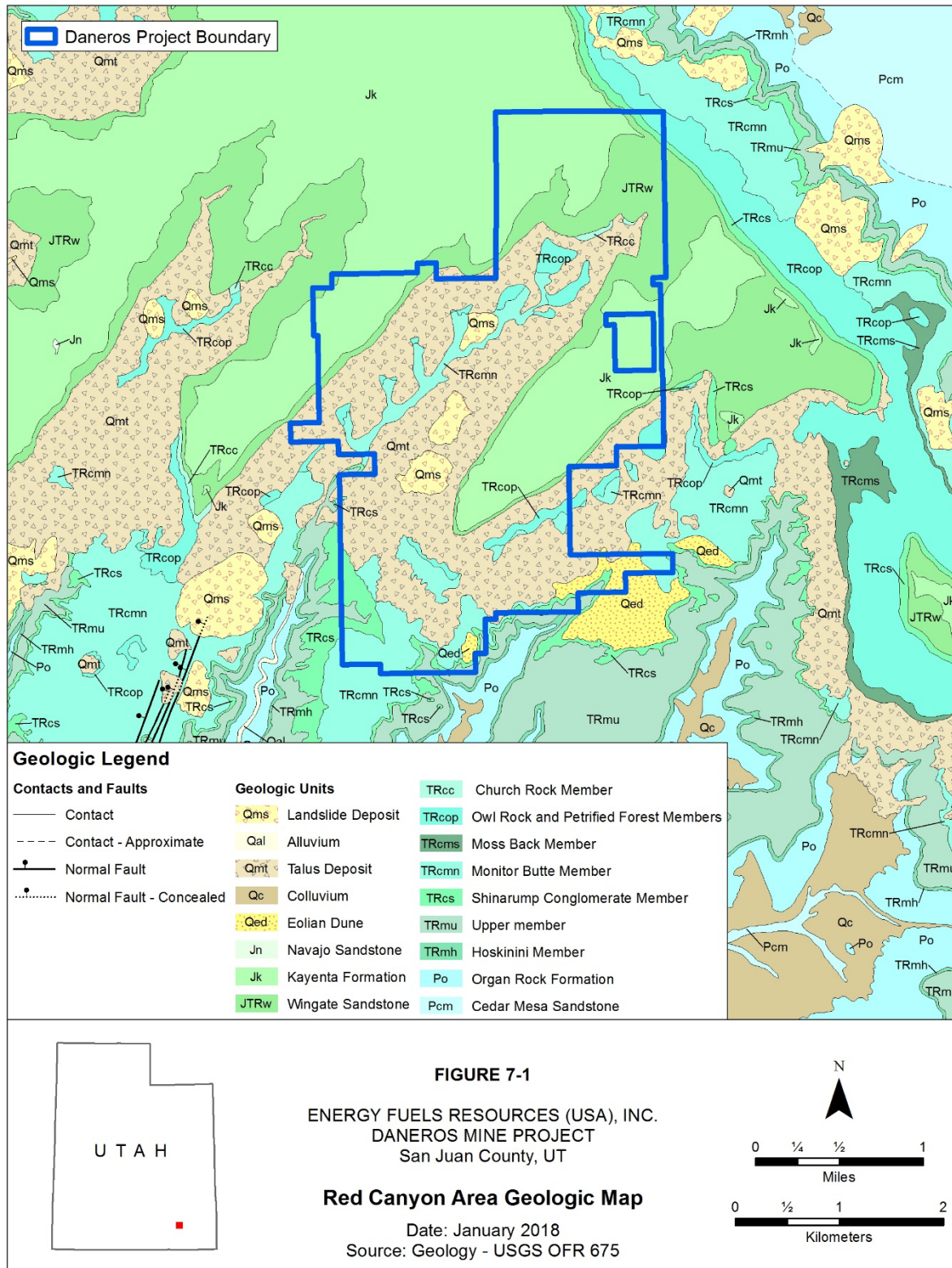
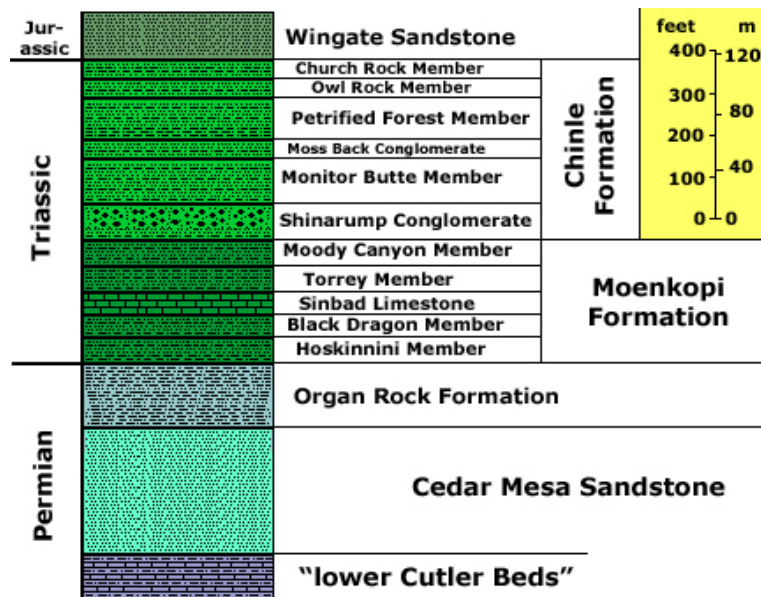


Figure 7-1. Geologic Map of the Daneros Area (USGS OFR 675)

The upper part of the Cutler Formation is exposed in the lower walls and floor of Fry Canyon north and east of the property and the deeper parts of the Red Canyon tributaries to the south. The Cedar Mesa sandstone member is a light-grayish-orange, cross-stratified, fine-grained sandstone interbedded with lenses of red, gray, green, and brown sandy siltstone near the top. It is about 980 feet thick. It is resistant to erosion, forming large benches with steep cliffs where it is incised by canyons. The Cedar Mesa sandstone is predominately eolian in origin; the source of the sediment was to the northwest (Dubiel et al., 1996). The 220-350 feet of steep slopes with multiple ledges above the Cedar Mesa sandstone is the Organ Rock tongue of the Cutler. It consists of flat-bedded reddish brown siltstone alternating with medium-grained sandstone beds. The Organ Rock Member was deposited on a floodplain by streams flowing east-to-northeast across the area. Above the Organ Rock is the White Rim sandstone member. This is a very fine-grained, silty, cross-bedded sandstone about 20 feet thick. It is light yellowish-orange, which weathers to white cliffs, hence the name. The area dried again during White Rim deposition. It is of similar origin and deposition to the Cedar Mesa.

Unconformably overlying the Cutler is the Triassic Hoskinnini Member of the Moenkopi Formation. It is a very fine grained to coarse-grained, reddish-brown sandstone interbedded with grayish-orange sandstone. The unit is up to 110 feet thick. The upper Moenkopi is from 175-265 feet thick, forming slopes with multiple ledges and cliffs. Flat-bedded reddish-brown siltstones and sandstones predominate with a lenticular orange sandstone in the middle part of the sequence. A few thin limestone beds occur.

The Chinle Formation of Triassic-age overlies the Moenkopi. In ascending order, the members of the Chinle are Shinarump, Monitor Butte, Moss Back, Petrified Forest, Owl Rock and Church Rock Members (Figure 7-2). The main uranium-bearing unit at the Daneros Mine and throughout the White Canyon district is the fluvial Shinarump Member, a basal, sandstone-conglomerate sequence deposited in a complex stream system, which unconformably overlies and locally scours into oxidized sedimentary units of the Moenkopi Formation.



**Figure 7-2. Local Stratigraphy at Daneros (Scale as Shown).**

The Shinarump Member is composed of two distinct quartzose sandstone units: a lower conglomeratic sandstone, which is overlain by a regionally extensive medium to coarse-grained sandstone. The pebbles in the conglomerate units are quartz, quartzite, and chert from distant sources. Some conglomerates contain abundant siltstone fragments derived locally from erosion of underlying rocks. The Shinarump Member also contains variable

amounts of interbedded siltstone and mudstone beds, as well as locally abundant fossil trees and other plant-derived material. The Shinarump Member is interpreted to represent the basal portion of an incised valley-fill sequence ranging in thickness from more than 80 feet near the deepest parts of the palaeovalley to less than three feet where it pinches out against the palaeovalley wall. Dozens of channels have been mapped in the White Canyon District. Although much meandering is present, the general flow of the streams was toward the northwest.

Overlying the Shinarump is a variegated mudstone unit (Monitor Butte Member). It is interbedded with numerous cross-stratified lenticular sandstone and conglomeritic sandstones that are red, gray, or yellow. This unit weathers to steep slopes with multiple small cliffs. It is from 120 to 250 feet thick in the area. The portal of the Daneros Mine is located in this unit in the east wall of Bullseye Canyon. The mine access declines down to the southeast to the deposit in the Shinarump.

Above the mudstone unit is the Moss Back Member of the Chinle. It consists of gray cross-stratified lenticular sandstone that is fine to medium grained. Thin lenses and beds of siltstone and conglomerate also occur. The Moss Back is up to 190 feet thick east of the project area, but pinches out to the west. At the Daneros Mine site, the Moss Back is missing. The Moss Back is the main host rock of large past uranium production and known resources in the Lisbon Valley-Big Indian Valley district some 65 miles northeast of the Daneros property.

Above the Moss Back is a thick silty and limy sequence of the Chinle with some sandstone and conglomerate beds. Parts of this sequence have been correlated by various workers to other named members of the Chinle. In the tributary canyons on the north side of Red Canyon, including Bullseye Canyon above the Daneros Mine site, the upper Chinle slopes are often covered by talus and landslide debris. The lower mudstone unit in the lower slopes of the tributary canyons is also mostly covered by this weakly cemented veneer of sand to boulder-sized rock fragments.

Tall, steep to vertical cliffs of the Triassic-aged Wingate sandstone rise above the upper Chinle slopes. It is a reddish-brown, cross-stratified, fine-grained sandstone about 300 feet thick. The cliffs continue upward, with only small breaks locally, for another 180 to 300 feet. These upper cliffs are formed by the Jurassic Kayenta Formation. It contains more lenticular beds of fine-to medium-grained sandstone along with thin beds of conglomerate and claystone. The Kayenta is reddish-purple and weathers in a more blocky fashion than the underlying massive cliffs of the Wingate. The resistance of the Kayenta results in it being the cap of all the higher mesas in the White Canyon district.

### **7.3 Uranium Mineralization**

The uranium deposit at the Daneros Mine, like nearly all others in the White Canyon district, is in the lower part of the Shinarump, especially where it has scoured into the Moenkopi. The lithology, facies, sedimentary structures, and locations within the channel deposits all were important in controlling the migration of fluids and localization of the deposits. Coarser-grained rock is more favorable than fine-grained sand or silt units. Most of the uranium mineralization is overlying impermeable siltstones of the Moenkopi or local siltstone lenses internal of the Shinarump. The lateral edges of channels where they are bounded by mudstones are also favorable locations for mineralization. Sandstones and conglomerates bounded on the top by siltstones or clay layers are also favorable. Intersections of channels and meanders have been found to be favored locations. The most favorable sites are in the coarser sandstone/conglomerates adjacent to finer sediments that contain vegetal matter. The uranium was transported into the area in oxidized groundwaters. The permeability differences related to the grain size of the various facies confined, concentrated, and slowed the flow of the oxidized waters. The accumulations of carbonaceous material created local reducing environments. These reducing conditions caused the dissolved uranium minerals to precipitate.

Uraninite (pitchblende) is by far the dominant primary uranium mineral in the Shinarump deposits. It occurs as distinct grains, fine-grained coatings on and pore-fillings between detrital quartz grains, partial replacement of

feldspar grains, and as replacement in carbonized wood and other remains of organic matter. Metallic sulfide minerals are often abundant including copper sulfides. Where secondary oxidation has occurred, minor amounts of uranyl carbonates, sulfates, and phosphates are found. The source of the uranium is not well established. Overlying shaley units of the Chinle contain clays derived from volcanic ash that is uraniferous. The source area of the arkosic sediments was also a uranium-rich province.

## 8.0 DEPOSIT TYPES

The Daneros uranium deposit can be classified as Phanerozoic Sandstone; Tabular/Peneconcordant; Basal-channel Type in the classification scheme of Dahlkamp (1993). The Shinarump Member of the Chinle is the only host rock horizon with this type of deposit on the property. The property is not known to hold potential for any other type of economic deposits.

## 9.0 EXPLORATION

Uranium exploration in the White Canyon mining district has been ongoing since the late 1940s. Prospectors used Geiger counters to investigate outcrops of the Shinarump. Several macroscopic guides to exploration were channel “scouring”, conglomerate pebble type, and carbon content, all characteristic of the Shinarump. Where the bench and slopes above the Shinarump were accessible, percussion, core, and rotary drilling were used to explore for and define channels that were not exposed in the outcrop. Access routes were constructed to the top of some mesas where deeper rotary drilling was used to access the Shinarump at depth. The history of exploration is closely tied to the AEC buying program, opening and closing of the several processing facilities in the region, and the fluctuation of the price of uranium. See Section 6 of this report for more detail. Mapping isopach thicknesses of the Shinarump based on drilling data highlights areas that are more promising for additional mineralization. Typically, higher-grade mineralization occurs in paleochannels that are more than 20 ft. thick. Identifying and targeting these areas could lead to the discovery of more mineralization at Daneros.

## 10.0 DRILLING

### 10.1 Introduction

Drilling at Daneros has occurred in phases as different owners have held the property. An unknown quantity of surface and underground drill holes were completed in and around the Lark/Bullseye, Royal and Spook mines prior to UP&L's acquisition of Daneros in 1974. Since the location and data associated with these holes could not be verified, none of the pre-UP&L holes were used in this resource estimate. A summary of the drill holes used in this resource calculation is given in Table 10-1, and Figure 10-1 shows the locations of all 1,217 holes.

**Table 10-1. Summary of Drilling Completed at Daneros**

<b>Company</b>	<b>Years</b>	<b>No. Holes</b>	<b>Type</b>	<b>Total Footage</b>
Utah Power & Light	1975-1983	565	Surface (Rotary & Core)	284,008
White Canyon Uranium	2007-2010	69	Surface (Rotary & Core)	25,058
Denison/Energy Fuels	2010-2012	583	Underground Long-hole	79,703
<b>TOTAL</b>	<b>1975-2012</b>	<b>1,217</b>		<b>388,769</b>

### 10.2 Surface Drilling

All known surface drilling at Daneros was conducted by UP&L between 1975 and 1983 and WCU between 2007 and 2010.

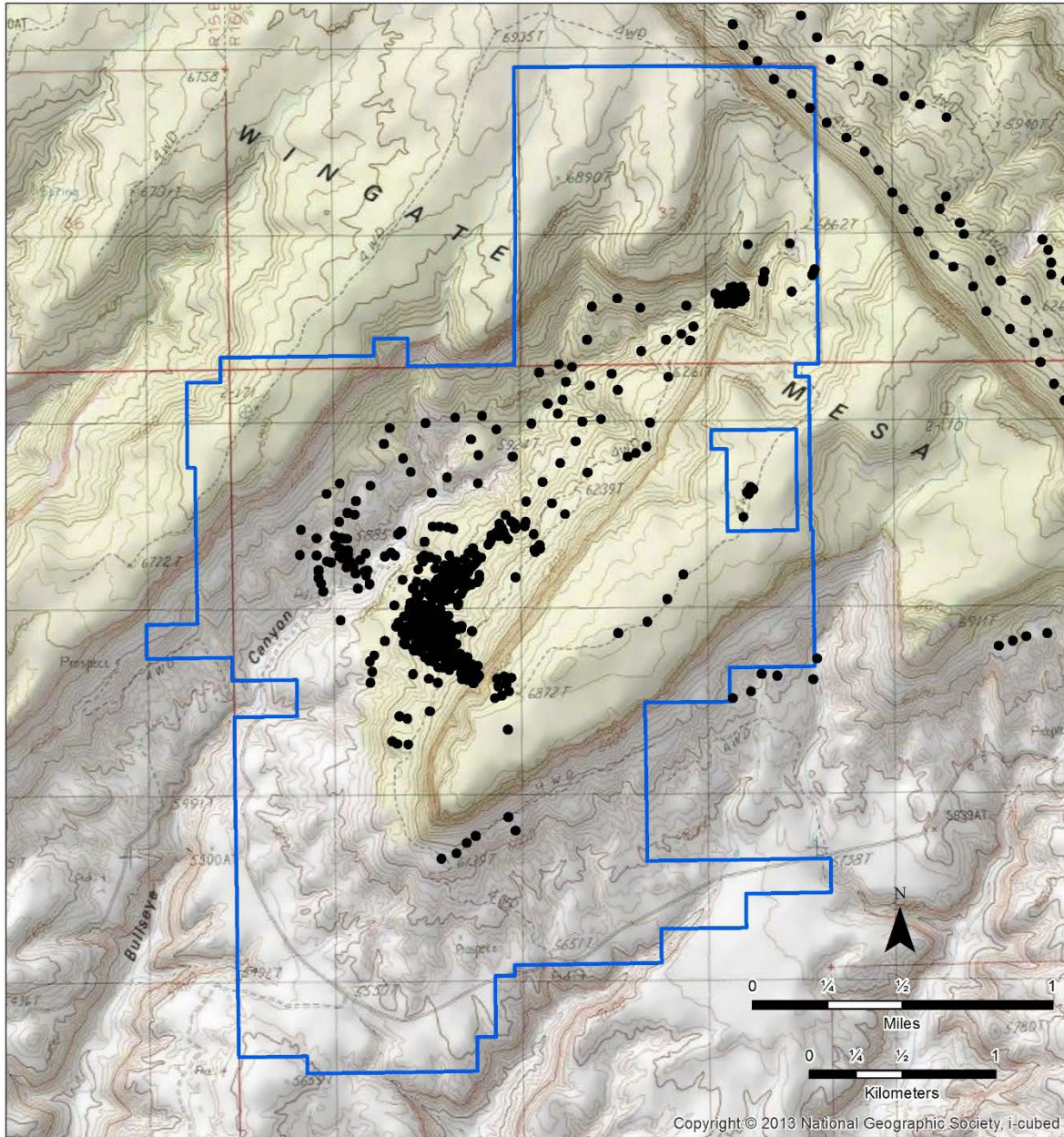
#### 10.2.1 Utah Power and Light

The majority of the exploration drilling on the Daneros property did not begin until 1975 when UP&L drilled 548 rotary holes and 17 core holes between 1975 and 1983. UP&L would drill exploration holes on a wide spaced pattern until mineralization was encountered. They would then drill a series of offset holes, and if a trend was discovered, continue drilling along that trend. Mineralized bodies were typically named after the number of the drill hole that encountered mineralization. For example, Hole LR-125 encountered 6.0 ft. of 0.805% U<sub>3</sub>O<sub>8</sub>, all additional holes in that area were named 125-01, 125-02, etc., and that mineralized body was named the 125 mineralized body. UP&L would also offset rotary holes with core holes. Seventeen core holes were drilled by UP&L at Daneros.

Once holes were completed, they were logged for gamma, and mineralized intervals were defined from the drilling data. Some of the later holes were also logged for resistivity, spontaneous potential, and deviation. Table 10-2 summarizes UP&L's drilling program at Daneros.

**Table 10-2. Utah Power and Light Drilling Statistics**

<b>Program</b>	<b>Year</b>	<b>No. of Drill Holes</b>	<b>Type</b>	<b>Total Footage</b>
LR	1975 - 1983	548	Air Rotary	276,690
LR	1975 - 1983	17	Core	7,318
<b>TOTAL</b>		<b>565</b>		<b>284,008</b>



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**FIGURE 10-1**  
 ENERGY FUELS RESOURCES (USA), INC.  
 DANEROS MINE PROJECT  
 San Juan County, UT

**Drill Hole Location Map**  
 Date: January 2018  
 Source: Energy Fuels

**Legend**  
 ● Drill Hole Collar  
 □ Daneros Property

Figure 10-1. Drill Hole Location Map



### 10.2.2 White Canyon Uranium

After acquiring the property in 2007, WCU drilled 44 surface holes on the Daneros 1-5 claims in 2007 and 2008. Eight air rotary holes were drilled in 2007, cased with PVC and logged for gamma by Jet West Geophysical. One of the holes, DAN007, collapsed prior to probing. In 2008, an additional 36 diamond holes were drilled and selectively cored within the mineralized interval. Holes were also probed for gamma, resistivity, spontaneous potential, and deviation by Century Wireline Service. Holes DAN012 and DAN045 collapsed prior to probing. WCU drilled an additional 25 air rotary exploration holes in September 2010. Upon completion, holes were logged for gamma, spontaneous potential, resistivity, and deviation. Table 10-3 summarizes the drilling completed by WCU at Daneros.

**Table 10-3. White Canyon Uranium Drilling Statistics**

<b>Program</b>	<b>Year</b>	<b>No. of Drill Holes</b>	<b>Type</b>	<b>Total Footage</b>
DAN	2007	8	Air Rotary	3,360
DAN	2008	36	Diamond	16,138
WCU	2010	25	Air Rotary	5,560
<b>TOTAL</b>		<b>69</b>		<b>25,058</b>

### 10.3 Underground Drilling

An underground long-hole drilling program was implemented by Denison following their acquisition of Daneros in 2011. A series of short definition and long exploration holes were used to better define the deposit during mining, as well as search for new mineralized zones. Energy Fuels continued the long-hole drilling program until the mine was shut down in October 2012. Table 10-4 details the underground drilling that took place at Daneros.

**Table 10-4. Underground Drilling Statistics**

<b>Series</b>	<b>No. of Drill Holes</b>	<b>Total Footage</b>
DN	459	47,028
DNR	124	32,675
<b>TOTAL</b>	<b>583</b>	<b>79,703</b>

### 10.4 Historical Drilling Information

#### 10.4.1 Utah Power and Light

Data associated with the UP&L surface exploration program was maintained in a drill hole tabulation notebook. An internal summary report by UP&L on their uranium properties from March 1985 contains these tabulation spreadsheets and is the primary data source for the UP&L drilling program.

The tabulation sheets for the Lark-Royal Project (Daneros) contain the drill hole number, total depth drilled, depth of the probe logs, collar coordinates (northing, easting, and elevation), elevation and depth of geologic contacts, depth, thickness, and grade of mineralized intercepts, completion date, and remarks. Typically UP&L did not run deviation surveys on drill holes. Occasionally, on deeper holes, deviation surveys were conducted. In these cases, the direction, depth and deviation distance are noted on the tabulation sheets. This form of exploration notation is typical of companies drilling in the 1970s and was an easy way to note a large amount of data in a printable format. An example of the UP&L tabulation sheet is shown in Figure 10-2.

UPDATED REPORT ON THE DANEROS MINE PROJECT, SAN JUAN COUNTY, UTAH, U.S.A  
 NI 43-101 TECHNICAL REPORT, MARCH 2018

UTAH POWER & LIGHT COMPANY DEPARTMENT OF MINING & EXPLORATION															
PROJECT NAME : <u>Lark-Royal</u>				DRILL HOLE TABULATION SHEET											
PROJECT NUMBER (ER) : _____				URANIUM EXPLORATION PROGRAM											
HOLE NUMBER	TOTAL DEPTH	E-LOGS		LOCATION		COLLAR ELEVATION	GEOLOGIC CONTACTS		CORED INTERVALS	RADIOMETRICS				COMPLETION DATE	REMARKS
		NG	R	NORTHERN COORDINATE	EASTERN COORDINATE		FM TOP	DEPTH		DEPTH	THICKNESS	GRADE	GR T		
LR-101	90	88	87	341180.92	2379097.39	5620.4	A	TRCmb	49					4-15-76	17.0'
								TRCS							
								TRM	66						
102	85	83	83					TRCmb	47		2.0	.050	.100	4-15-76	22.0
								TRCS							
								TRM	69						
103	155.0	146	122	341448.57	2379057.97	5671.2	A	TRCmb	60	70.0	2.0	.031	.062	4-26-76	28.0
								TRCS							
								TRM	88						
104	170	164		341685.20	2379135.85	5708.7	A	TRCmb	138	135	1.0	.024	.024	4-27-76	14.0'
								TRCS							
								TRM	152						
105	170	167		341801.28	2379236.91	5675.2	A	TRCmb	120	117	1.0	.038	.038	4-27-76	22.0
								TRCS							
								TRM	142						
106	230	226		340622.81	2378798.75	5773.62	A	TRCmb	210					4-27-76	4.0
								TRCS							
								TRM	214						
107	320	317	314	340882.30	2379740.12	5865.7	A	TRCmb	279	297	0.5	.022	.011	4-26-76	20.0
								TRCS							
								TRM	299						
108	320	317	315	341118.51	2371835.94	5874.0	A	TRCmb	298	298	1.5	.034	.050	4-22-76	4.0
								TRCS							
								TRM	302						
110	125	123	123					TRCmb	81					4-28-76	26.0
								TRCS							
								TRM	102						
111	125	122		342185.10	2379856.97	5684.9	A	TRCmb	95	105.0	1.0	.021	.021	4-29-76	12.0
								TRCS							
								TRM	107						
112	320	316	316	341351.95	2380500.47	5882.6	A	TRCmb	280	291.0	2.0	.053	.106	4-17-76	14.0
								TRCS							
								TRM	294						
113	355	352	352	341215.27	2380434.46	5924.2	A	TRCmb	324	335	5.5	.134	.737	4-19-76	18.0
								TRCS							
								TRM	340						
114	395	393	393	341102.00	2380516.41	5970.0	A	TRCmb	374	376.5	4.0	.039	.150	4-22-76	8.0
								TRCS							
								TRM	382						
115	305	301		341192.11	2380059.67	5857.2	A	TRCmb	274	275	1.0	.068	.068	4-22-76	12.0
								TRCS							
								TRM	286	281	3.5	.120	.420		
116	300	298	298	341515.14	2380164.62	5856.8	A	TRCmb	260	271	2.0	.031	.062	4-17-76	14.0
								TRCS							
								TRM	274						

\* A = SURVEYED ELEVATION , B = ALTIMETER ELEVATION , C = ESTIMATED ELEVATION

Figure 10-2. Example Utah Power & Light Tabulation Sheet

UP&L drill logs were not available for review to verify the data in the tabulation sheets. Mineralized intercepts given on tabulation sheets were reported using the standard AEC method for determining grade based on gamma logs. This method leads to the reporting of mineralized intervals with a simple thickness and a grade. Half-foot gamma data is not available for these holes.

These data were manually input into Excel spreadsheets for import into Vulcan for resource estimation. Collar coordinates were converted from the values given on the tabulation spreadsheets to NAD83 Utah State Plane South coordinates following the steps below. Holes without downhole deviation survey data were assumed to be vertical. It should be noted that having reviewed the actual downhole survey data for other Daneros holes, deviation at Daneros is minimal.

Converting UP&L coordinates to NAD83 Utah State Plane South coordinates:

1. Convert coordinates given by UP&L to NAD83 Utah State Plane South coordinates using Corpcon software or similar.
2. Subtract 112 ft. from the northing coordinate.
3. Subtract 790 ft. from the easting coordinate.

#### 10.4.2 White Canyon Uranium

WCU drilled 69 surface holes between 2007 and 2010. The 2007-2008 drilling (44 holes) is summarized in an internal report titled *Report on Drilling Operations 2007 & 2008* (Coll et al., 2008). This report details all aspects

of the drilling program from surveying the collar coordinates, logging the holes, collecting samples for assay, and providing assay results. Additionally, WCU drilled an additional 25 holes in 2010. The results of that drilling program are summarized in a memo dated October 5, 2010 and issued by Integrated Production Resources. The memo briefly describes the drilling results, survey techniques, and logging procedures performed on those 25 holes.

Holes drilled between 2007 and 2008 were marked with a wooden stake immediately after drilling, which was replaced during reclamation by metal rebar set in a concrete plug. A metal plate attached to the rebar was inscribed with the hole number. Drill hole collars were surveyed by E. Schaaf & Associates under the supervision of a licensed surveyor. WGS 84 UTM coordinates are provided as Appendix 1 of the drill report. Holes drilled in 2010 were surveyed in house and WGS 84 UTM coordinates are provided in the memo.

Holes drilled in 2007 were logged by Jet West Geophysical for gamma, deviation, resistivity, and spontaneous potential. Holes from 2008 were logged by Century Wireline Services for gamma, deviation, resistivity and spontaneous potential. Holes from 2010 were logged in house using equipment provided by Hawkins CBM Logging. The holes from 2010 were logged for gamma, deviation, resistivity, and spontaneous potential. Energy Fuels has the electronic raw and processed data files from all three drilling programs. That data was compiled into Excel spreadsheets and imported into Vulcan for use in resource modeling.

In addition to the logging data, WCU cored a number of holes in 2008 and sampled and assayed that material. The assay data and sampling methodology is detailed in the drill report (Coll et al., 2008). Assay data reported replaced gamma data and were used in resource estimation. Core was also tested for specific gravity. Details regarding that testing are provided in Section 14 of this Technical Report.

#### **10.4.3 Underground Drilling (Denison/Energy Fuels)**

Underground long holes were drilled by Denison and Energy Fuels as part of the underground mining program. Short holes, typically about 60 feet long, drilled using rotary or percussion drills, were drilled to define mineralization near the working face. Long holes, up to 400 feet long were drilled with an underground rotary drill, and used to explore for additional mineralization. In total, 583 underground holes were drilled at Daneros between 2010 and 2012.

Hole collar locations were surveyed in as part of the underground survey program.

All holes were logged in house by Denison, Energy Fuels, or contract mining personnel using calibrated Mt. Sopris equipment. Gamma data were collected using a sodium iodide crystal probe, and directional/orientation data on the longer holes was collected using a gyro tool. Typically, holes less than 100 feet deep were not probed. Issues were reported with the gyro tool throughout the long-hole program. Due to issues with the gyro and not probing shorter holes, the majority of long-holes (476 of 583) do not have deviation data associated with them.

Two series of long holes were drilled: the DN series, which was drilled and probed by Denison or Energy Fuels personnel, and the DNR series of holes which were drilled and probed by a contractor, Reliance. Data for both series of holes were maintained in a series of Excel spreadsheets.

#### **10.5 Drill Hole Database**

Of the 1,217 drill holes described above, only 1,186 have usable data. Thirty-one surface drill holes (30 UP&L holes and 1 WCU hole) are either missing collar or assay data and have been removed from the dataset. The data for the 1,186 holes is currently being stored in a Vulcan ISIS database. The database contains four tabs, each of which is described in detail below.

1. Collar: The collar tab contains location information about the drill hole including drill hole ID (primary key in the database), the X, Y, and Z coordinates of the collar location, the total depth and any notes about the hole
2. Survey: The survey tab contains the downhole deviation information about the drill hole including deviation direction (azimuth), depth of deviation measurement(s), and distance of deviation. Holes without deviation surveys were assumed to be vertical
3. Assay: The assay tab contains the grade information about the hole including the top and bottom of the mineralized intercept, the %U<sub>3</sub>O<sub>8</sub> of the mineralized intercept, the thickness of the intercept, the grade-thickness of the intercept (%U<sub>3</sub>O<sub>8</sub> x thickness), and whether the grade is from probe data or chemical assay
4. Strat: The strat tab contains information about the downhole geology including the top and bottom of the geologic unit, the thickness of the geologic unit, and the name (abbreviation) of the geologic unit.

## 11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

Industry standards for uranium exploration in the Western United States are based almost completely on drilling, followed by logging the open hole with a gamma probe and converting that data to an equivalent  $U_3O_8$  percent ( $eU_3O_8\%$ ). That process utilizes a number of checks including:

1. The frequent calibration of logging tools
2. The drilling and the collection of core for assay as a check on gamma log values and the potential for disequilibrium
3. Closed-can analyses as an adjunct to chemical assays
4. Gamma logging by different tools (e.g., Prompt Fission Neutron) or other companies

In addition to logging, core collected for chemical assay can be used to replace log data where it is available. Assay data at Daneros is made up of both  $eU_3O_8$  log data and chemical assay data.

### 11.1 Gamma Logging

Exploration for uranium deposits in the southwest United States typically involves identification and testing of permeable sandstones within reduced sedimentary sequences. The primary method of collecting information is through extensive drilling and the use of downhole geophysical probes. The downhole geophysical probes measure natural gamma radiation, from which an indirect estimate of uranium content can be made.

The radiometric (gamma) probe measures gamma radiation, which is emitted during the natural radioactive decay of uranium. The gamma radiation is detected by a sodium iodide crystal, which when struck by a gamma ray emits a pulse of light. This pulse of light is amplified by a photomultiplier tube, which outputs a current pulse. The gamma probe is lowered to the bottom of a drill hole and data is recorded as the tool is withdrawn up the hole. The current pulse is carried up a conductive cable and processed by a logging system computer, which stores the raw gamma counts per second ("CPS") data.

If the gamma radiation emitted by the daughter products of uranium is in balance with the actual uranium content of the measured interval, then uranium grade can be calculated solely from the gamma intensity measurement. Downhole CPS data are subjected to a complex set of mathematical equations, taking into account the specific parameters of the probe used, speed of logging, size of bore hole, drilling fluids and presence or absence of and type of drill hole casing. The result is an indirect measurement of uranium content within the sphere of measurement of the gamma detector.

The basis of the indirect uranium grade calculation (referred to as " $eU_3O_8$ " or "equivalent  $U_3O_8$ ") is the sensitivity of the sodium iodide crystal used in each individual probe. Each probe's sensitivity is measured against a known set of standard "test pits," with various known grades of uranium mineralization, located at the U.S. Department of Energy's (DOE) Grand Junction, Colorado office. The ratio of CPS to known uranium grade is referred to as the probe "K-Factor", and this value is determined for every gamma probe when it is first manufactured and is also periodically checked throughout the operating life of each probe. Application of the K-Factor, along with other probe correction factors, allows for immediate grade estimation in the field as each drill hole is logged.

There are two primary methods for converting gamma CPS to  $eU_3O_8$ . The first method was developed by the AEC and is commonly referred to as the "half amplitude method". For this method, a gamma ray curve on a drill log is plotted for the length of the hole. Anomalies, which represent mineralized zones, are identified, and an upper and lower boundary is determined by picking a point approximately one-half the height from the background value to the peak of the anomaly. The CPS for each half-foot interval is determined, summed, and divided by the number of intervals to get an average CPS for the anomaly. The CPS for that anomaly is converted to an  $eU_3O_8$

value by using the K-Factor and other calibration factors specific to the probe used for that hole. The UP&L assay data were calculated using this method.

The second method, which is the one commonly used today, is probing the hole and collecting CPS data on half foot intervals. That interval data then are processed through a program called GAMLOG, which converts the CPS data to half-foot  $eU_3O_8$  data. GAMLOG uses an iterative process that calculates a grade for a half-foot zone by looking at the half-foot it is calculating as well as a half-foot above and below the interval in question. This is done to compensate for the probe actually collecting data from a one and a half foot sphere, not a discrete half-foot interval. Century Wireline Services, used for logging some holes drilled by WCU, uses a program called Compulog, which is a proprietary version of GAMLOG, but is comparable. Holes drilled by WCU, Denison, and Energy Fuels use this method to calculate  $eU_3O_8$ .

### 11.1.1 Disequilibrium

Disequilibrium defines the disparity between uranium and its naturally occurring radioactive daughter products. This disparity occurs by either mobilization of the readily soluble uranium from its original site of deposition, leaving the less soluble daughter products behind, or from a lack of significant time (approximately 1 million years) for the daughter products to reach equilibrium from the decay of uranium.

Disequilibrium is an important concept when using only gamma probe data for resource estimation. During gamma logging, uranium is measured indirectly by measuring the amount of Bismuth-214, a gamma-emitting daughter isotope. If some of the uranium has been removed leaving behind its daughter isotopes, an overestimation of uranium content will be calculated. Conversely, if new uranium has been transported into the area and not had time to equilibrate, then the uranium concentration will be underestimated.

Whereas no specific disequilibrium study has been conducted at Daneros, the age of the host sandstone being Triassic in age and the lack of groundwater in the area to be adding or removing uranium to the deposit make it unlikely that any significant disequilibrium exists. No disequilibrium factor was applied to the Mineral Resource contained in this report.

## 11.2 Core Sampling

Whereas core was collected during UP&L's exploration program, no core data from the program has been found. Denison and Energy Fuels only completed underground drilling, and collected no core. WCU cored and sampled 23 holes (194 total samples) for chemical assay. The samples were shipped to American Assay Laboratories for elemental ICP-MS and XRF analysis. These 194 assay samples were used in the drill hole database in place of downhole gamma data. Details of the core sampling procedure are detailed in the internal report entitled *Report on Drilling Operations 2007 & 2008*. The following description of core sampling is taken directly from that report.

*All core was placed in PVC diamond core trays at the rig. Core trays were numbered with the hole number, tray number and depth interval in feet. Beginning and end of core runs were marked with inscribed core blocks. Core trays were covered with lids, which were secured with PVC tape. Core trays were removed from site to the Company's office and warehouse facility at 1300 S Highway 191, Moab, Utah, where they were photographed prior to logging (Appendix 5).*

*Following logging, core was marked out into numbered sampling lengths. The selected core was transported in the original core trays by Company personnel or by couriers Old Dominion Freight Line to American Assay Laboratories Inc. 1500 Glendale Ave, Sparks, NV ("AAL").*

*Marked core was cut in half with a diamond saw by AAL personnel. One half was submitted for sample preparation and analysis, while the remaining half was retained in the original core trays.*

*The core trays, calico-bagged coarse sample residues and sample pulps were strapped and shrink wrapped onto pallets and transported by courier from AAL's Sparks lab to the Company's warehouse at 1300 S Highway 191, Moab, Utah. The warehouse is a locked steel building within a yard enclosed by a 6 foot steel mesh fence topped by three strands of barbed wire. When the adjacent office building is not attended the yard is secured by a padlocked steel framed barbed wire-topped gate.*

For the 194 assay samples used in the drill hole database, the XRF reported elemental uranium value (reported in ppm) was converted to  $U_3O_8\%$  by dividing the reported value by 10,000 to convert to percent uranium and then multiplying that value by 1.7924 to convert from elemental uranium to uranium oxide.

The American Assay Laboratories sample preparation technique was:

Core was cut in half by diamond saw, entire half core was jaw-crushed to 10 mesh (2,000 microns); split in Jones riffle splitter; 300 grams of sample pulverized until 85% passes 150 mesh (100 microns)

The analytical technique was:

For ICP: A half gram of sample was digested in nitric hydrochloric mixed acid; solvent extracted, then analyzed by Varient ICP.

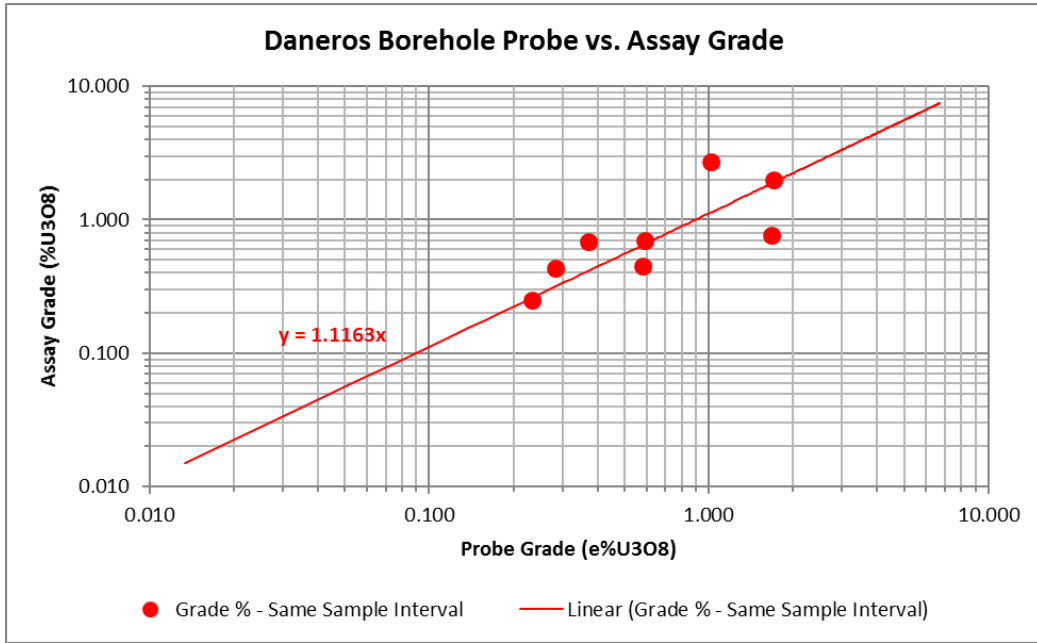
For XRF: Pressed powders were prepared from a 7-gram sample and analyzed by Pananalytical XRF.

Energy Fuels has not sampled or re-assayed any of the core drilled by WCU. The Daneros core is currently located at Energy Fuels' La Sal Mine, approximately 30 miles south of Moab, UT

#### **11.2.1 Quality Assurance/Quality Control**

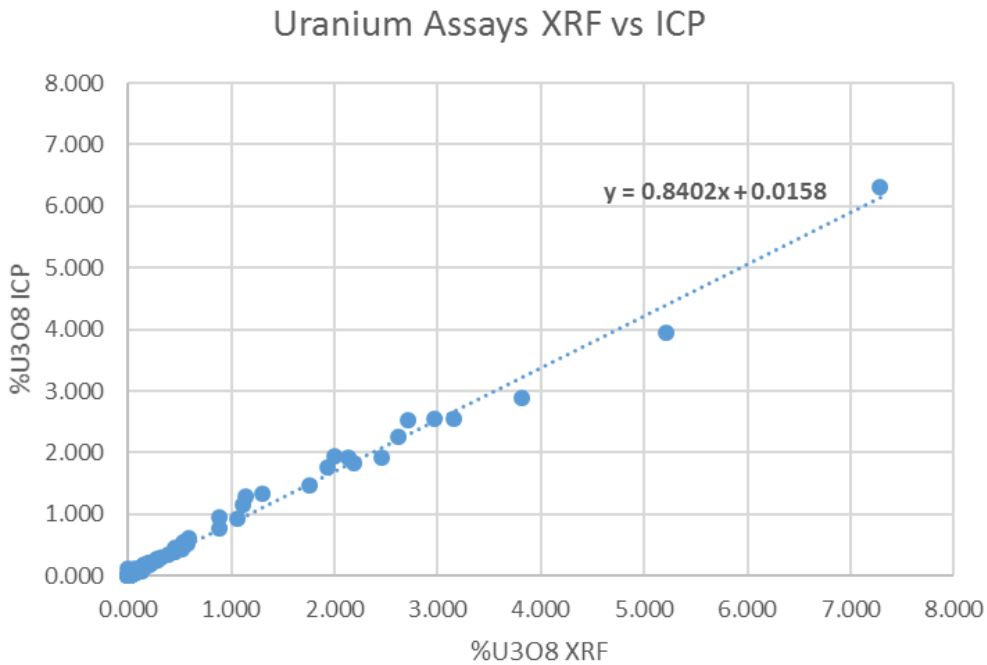
No description of QA/QC protocols were described in the 2007 and 2008 drilling report. If future core sampling is done at Daneros, it is recommended that a strict QA/QC program be implemented including the submission of standards and blanks to the reporting laboratory, the collection of duplicate samples, and submission of samples to other laboratories.

WCU did compare assayed intervals to equivalent probe composite intervals and good correlation was seen. The assay values show a slight positive bias (Figure 11-1)



**Figure 11-1. Comparison of Assay Grades and Probe Grades over the same Interval**

For all 194 assay samples, the XRF and ICP assay values were compared. Figure 11-2 below shows a plot of XRF values vs. ICP values. In general, ICP values were slightly higher than XRF values for the same sample. Where assay values were used in the resource estimate, the XRF value was used.



**Figure 11-2. Uranium Assay Comparison (XRF vs ICP Methods)**



**11.2.2 Density Analyses**

Density analyses are available on core drilled by WCU on the DAN series of holes. In total, specific gravity measurements were made on 61 core samples. The length-weighted average on 59 of the 61 pieces of core (two samples did not have a reported length) is 2.27 g/cc or 14.1 ft<sup>3</sup>/ton. Table 11-1 summarizes the available density data for Daneros. The Mineral Resource for Daneros was calculated using a density of 14.0 ft<sup>3</sup>/ton.

**Table 11-1. Daneros Density Data**

<b>Lab</b>	<b>Method</b>	<b>No. of Samples</b>	<b>Total Length (ft.)</b>	<b>Length Weighted Avg. (g/cc)</b>	<b>Tonnage Factor (ft<sup>3</sup>/ton)</b>
Unknown	Caliper	25	4.65	2.00	16.0
Weatherford	Displacement	19	17.60	2.33	13.7
Unknown	Unknown	17	15.76	2.27	14.1
<b>TOTAL</b>		<b>61</b>	<b>38.01</b>	<b>2.27</b>	<b>14.1</b>

**11.2.3 Additional Data – Rib Scans**

Commonly, 6 ft. holes were drilled into the back and ribs using a jackleg drill and then probed with a hand-held gamma probe to define mineralization. This information was used in short term mine planning. In one of the stopes, being mined prior to Daneros going on standby, four working faces were drilled and probed as described above, and this sample data was used in this Mineral Resource. The data was entered as 1 foot composite data directly into the composite database, following compositing of the drill hole database. In total, twenty-one 1-foot composites were added for the four sample points. The samples were named F\_01 – F\_04. These four samples represent 21 of the 15,611 composites used in the composite database. Table 11-2 details each of the four samples.

**Table 11-2. Rib Scan Samples used in Mineral Resource**

<b>Sample ID</b>	<b>Location</b>		<b>From</b>	<b>To</b>	<b>Length</b>	<b>% eU<sub>3</sub>O<sub>8</sub></b>	<b>No. of Composites</b>
	<b>X</b>	<b>Y</b>					
F_01	2,019,403.3	10,183,627.2	5,590	5,584	6	0.20	6
F_02	2,019,417.0	10,183,681.4	5,588	5,585	3	0.06	3
F_03	2,019,419.7	10,183,722.4	5,594	5,588	6	0.30	6
F_04	2,019,477.9	10,183,732.1	5,589	5,583	6	0.50	6

## 12.0 DATA VERIFICATION

The results of historical sample collection, preparation techniques, and analyses as described in Sections 10 and 11 have been relied upon as being reasonably accurate and normal procedure per industry standards when performed. Where core assays were available from WCU, the assay results of core were comparable to gamma logs of the holes.

No verification of the historical assay data collected between 1973 and 2010 has been conducted. Assay data from cores were available for the 23 WCU holes discussed in Section 11. Historic holes cannot be re-entered for gamma logging. It is believed that the lithology, probe data, core assays, and drill logging information of the previous operators is a reasonable representation of actual in situ conditions because standard industry practices appear to have been followed by all operators.

Likewise, the prior review of Energy Fuels data that Peters Geosciences performed in conjunction with past Energy Fuels personnel for the original Daneros report, and subsequent discussions with current Energy Fuels personnel on data added to the resource database, have resulted in Peters Geosciences concurring with data use and modeling for the uranium resources. Peters Geosciences did not review individual data points within the database and compare those to the drilling and probe data for each hole. However, Peters Geosciences considers that reasonable practices have been followed by Energy Fuels personnel in their data selection and input to the resource modeling.

### 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

From 2010 to 2013, 120,700 tons of mineralized material from Daneros was processed at the WMM with an average grade of 0.26%  $U_3O_8$ . During this time, 100,400 tons of the material was blended with other feed sources and a Daneros-specific metallurgical recovery was not calculated.

However, in November of 2011, 20,300 tons of mineralized material from Daneros was processed at WMM without blending with other sources. This material had an average grade of 0.24%  $U_3O_8$  and contained 97,500 Lbs of  $U_3O_8$ . The average metallurgical recovery for the 20,300 tons of Daneros mineralized material was calculated to be 96%. No additional metallurgical testing is planned for Daneros material. The cut-off grade calculation in this report assumed 95.0% metallurgical recovery.

The historical processing of Daneros mineralized material at the WMM from 2010 to 2013 is described in Section 6.3.

## 14.0 MINERAL RESOURCE ESTIMATES

### 14.1 General Statement

Energy Fuels has prepared a mineral resource estimate for Daneros, located in the Red Canyon portion of the White Canyon District in southeastern Utah. This resource estimate was prepared using data acquired between 1975 and 2012. Herein are presented the raw data and model wireframe creation methods. The suitability of the interpolation technique and search strategies are also presented. Table 14-1 presents Energy Fuels' Mineral Resource estimate for this property. The effective date of the Mineral Resource estimate is March 2, 2018. No Mineral Reserves have been estimated for the property.

**Table 14-1. Daneros Mineral Resources - February 2018**

Classification	COG (%eU3O8)	Tonnage (Tons)	Grade (% eUeO8)	Contained Metal (U3O8 lb.)
Indicated	0.23	20,000	0.36	142,000
Inferred	0.23	7,000	0.37	52,000

Notes:

- 1) CIM definitions were followed for Mineral Resources.
- 2) Mineral Resources are estimated at a cut-off grade of 0.23% eU<sub>3</sub>O<sub>8</sub>
- 3) Mineral Resources are estimated using a long-term uranium price of \$55 per pound U<sub>3</sub>O<sub>8</sub>
- 4) A minimum thickness of 1 foot was used
- 5) Bulk density is 0.07143 ton/ft<sup>3</sup> (14 ft<sup>3</sup>/ton)
- 6) Mineral Resources are exclusive of Mineral Reserves and do not have demonstrated economic viability
- 7) Numbers may not add due to rounding

Energy Fuels created a wireframe model of the mineralized zone based on an outside bound of a 0.05% eU<sub>3</sub>O<sub>8</sub> grade cutoff at a minimum thickness of 1 foot. The wireframe models were snapped to the drilling data. Drill hole data was composited to 1 foot and used in grade interpolation. The resource was classified as Indicated in the highly drilled, highly mined portion of the deposit, which shows high mineral and geologic continuity. The rest of the resource is classified as Inferred.

Energy Fuels believes this resource estimate has been prepared using industry standard best practices and is, therefore, acceptable. Peters Geosciences concurs that the methods used by Energy Fuels are reasonable and normal to the industry and, therefore, are acceptable for NI 43-101 reporting purposes.

## 14.2 Daneros Resource Estimate

### 14.2.1 Resource Database

As of the effective date of this report, Energy Fuels, Denison, WCU, and UP&L have completed 1,217 holes (634 surface holes and 583 underground holes) at Daneros, all drilled between 1975 and 2012. For this resource estimate, all 583 underground holes as well as 603 of the surface holes were used. 31 surface holes (30 from UP&L and 1 from WCU) were removed from the database due to insufficient information (lack of either collar location or assay data). In total, the Energy Fuels' Daneros database contains 1,186 holes, totalling 370,267 feet of drilling. Table 14-2 summarizes the data in the Energy Fuels Daneros drill hole database.

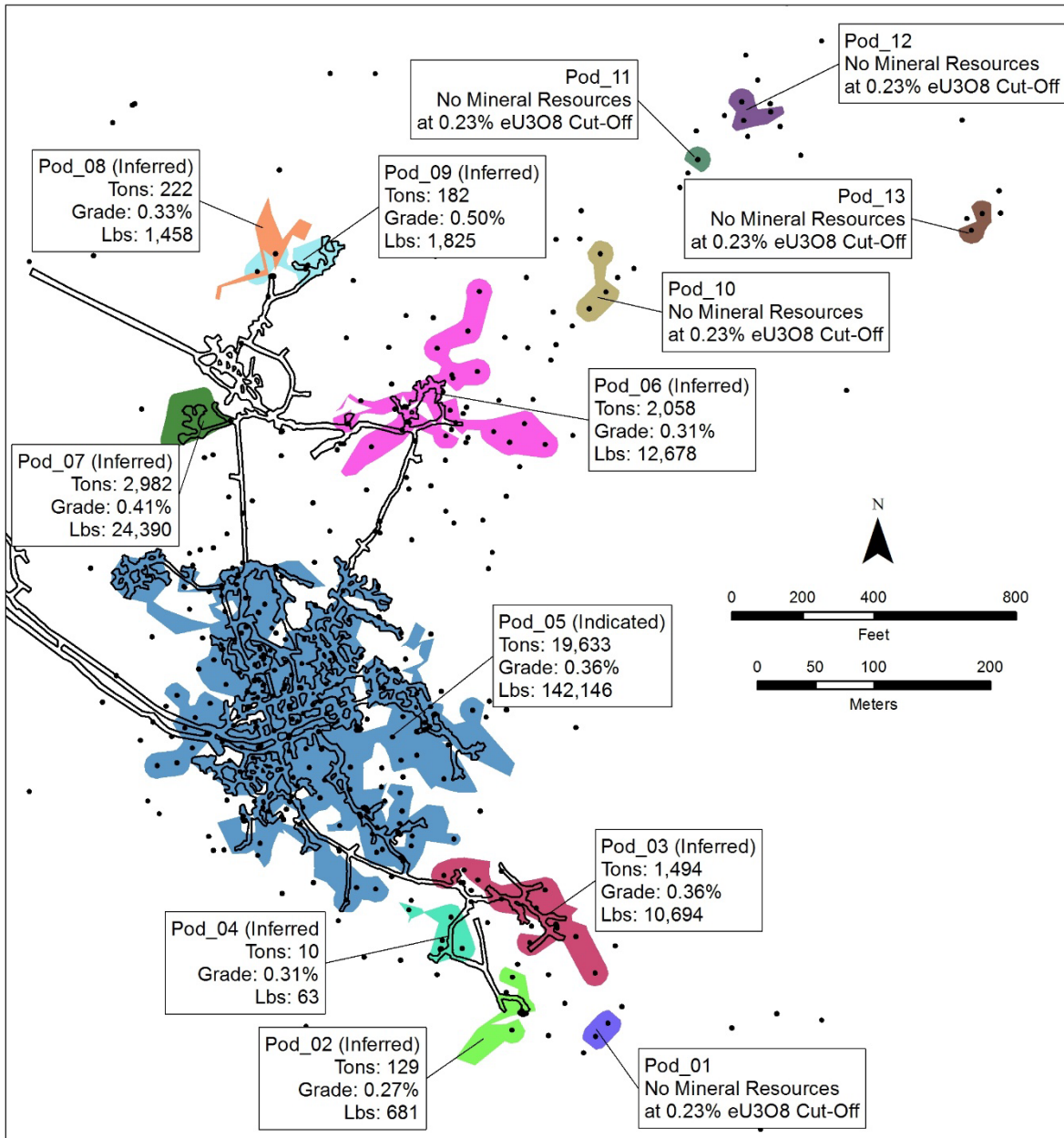
**Table 14-2. Summary of Data in the Energy Fuels Daneros Database**

Table Name	No. of Records
Collar	1,186
Survey	13,870
Assay	123,536
Strat	297
<i>Assay (Probe vs. Assay)</i>	
Probe (eU3O8%)	123,342
Chemical Assay (U3O8%)	194

### 14.2.2 Mineralization Wireframe Models

As a first step in modelling the Daneros deposit, a mineralized cutoff of 1 foot of 0.05% U<sub>3</sub>O<sub>8</sub> was selected to constrain the mineralization. This value was selected because above this value, the deposit shows very good mineralized continuity. A number of solids were constructed using a series of rules. These solids were then used in resource estimation to create composites as well as constrain the block model.

1. **Surface Holes** – Mineralized (0.05% U<sub>3</sub>O<sub>8</sub> and above) and non-mineralized (less than 0.05% U<sub>3</sub>O<sub>8</sub>) surface holes were given an area of influence (AOI) of a circle with a maximum radius of 37.5 ft. (4,418 ft<sup>2</sup>). If two holes were drilled less than 75 ft. apart, the AOI distance was determined to be half the distance between the two holes. Two mineralized holes within 75 ft. of each other were connected with tangent lines to form mineralized pods.
2. **Long Holes** – In plan view, a fan of long holes acted as a surface hole. If the fan was mineralized and within 75 ft. of another mineralized fan or surface hole, it was used to create a pod. If the fan was non-mineralized, it was used to limit the extent of a mineralized pod. In cross-section, mineralized intercepts within a long-hole fan were connected to create a mineralized envelope. If there was a barren hole above or below a mineralized hole the envelope extended half the distance to the barren hole. If the mineralized hole was at the top or bottom of a fan, the envelope was extended to a maximum of 1 ft. above or below the hole. To aid in solids modelling, non-mineralized material was sometimes included between mineralized intercepts, and the block modelling process was used to capture the barren area.
3. **Rib Scans** – In some areas, the ribs of the underground workings were drilled, probed, and the grade and thickness were recorded. For this data, a circle with a radius of 25 ft. was used to define an AOI. If multiple faces were scanned and within 25 ft. of each other, they were linked into a mineralized pod. This rule only pertains to DAN\_POD\_07. Rib scans for this pod were entered as 1 ft. composites into the composite database.
4. **Pod Definition** – Mineralized Pods were created around a single drill hole where no other hole was within 75 ft. or around two or more drill holes when drill holes were within 75 ft. of each other.
5. **Snapping** – All solids were snapped to the raw drill hole intercept.
6. **Underground Stopping Areas** – Because the underground stopping areas provide information as to the location of mineralization, they were used to define the boundary of a pod where drilling data was not available. In areas where underground stopping areas are outside of the AOIs defined above, the pods were extended to the maximum extent of the workings. The thickness of the edge of the pods in these zones represent the thickness of the nearest mineralized intercept.



**FIGURE 14-1**  
 ENERGY FUELS RESOURCES (USA), INC.  
 DANEROS MINE PROJECT  
 San Juan County, UT

**Mineralized Solids and Resources**

Date: January 2018  
 Source: Energy Fuels

**Legend**

- Drill Hole Collar
- Mine Workings

Figure 14-1. Daneros Mineralized Solids and Associated Mineral Resources

**14.2.3 Statistics**

The mineralized solids were used to flag the raw data values that fell within each of the pods. These raw assay values were pulled from the drill hole database and analyzed for basic statistics. In total, 18,323 raw assay values fell within the mineralized pods. Table 14-3 summarizes the raw assay statistics for the mineralized pods.

**Table 14-3. Statistics for Daneros Raw eU<sub>3</sub>O<sub>8</sub> Values**

<u>Raw Grade %eU<sub>3</sub>O<sub>8</sub> Statistics</u>	
No. Samples	18,323
Mean	0.227
Standard Deviation	0.872
Variance	0.760
Max	49.806
Upper Quartile	0.170
Median	0.068
Lower Quartile	0.024
Min.	0.000
Coefficient of Variation	3.847

**14.2.4 Grade Capping**

Sandstone-hosted uranium deposits typically have logarithmic distribution with high-grade outliers, which can disproportionately affect the average grade of a deposit. There are two ways of dealing with high-grade values to reign in their affect. The first is by capping high-grade outliers to a set value to limit their influence. Figure 14-2 is a log probability plot showing the distribution of raw % eU<sub>3</sub>O<sub>8</sub> grades within the mineralized pods at Daneros, and Figure 14-3 is a log probability plot of the upper tail of Figure 14-2 showing a break in grade around 1.15% eU<sub>3</sub>O<sub>8</sub>. For this resource estimate, high-grade values were capped at 1% eU<sub>3</sub>O<sub>8</sub>.

The second method for dealing with high-grade outliers is restricting the influence a high-grade sample has in the estimation process. With many sandstone-hosted deposits, lower grades are much more predominant and continuous with scattered high-grade data. Evaluation of the mineralized pod DAN\_POD\_05 shows that 87% of the samples are below a grade of 0.45% U<sub>3</sub>O<sub>8</sub>. This indicates that mineralization below this value is continuous throughout Daneros, and the high-grade intercepts are more isolated. A half-the-distance search restriction was imposed on data above 0.45% U<sub>3</sub>O<sub>8</sub>.

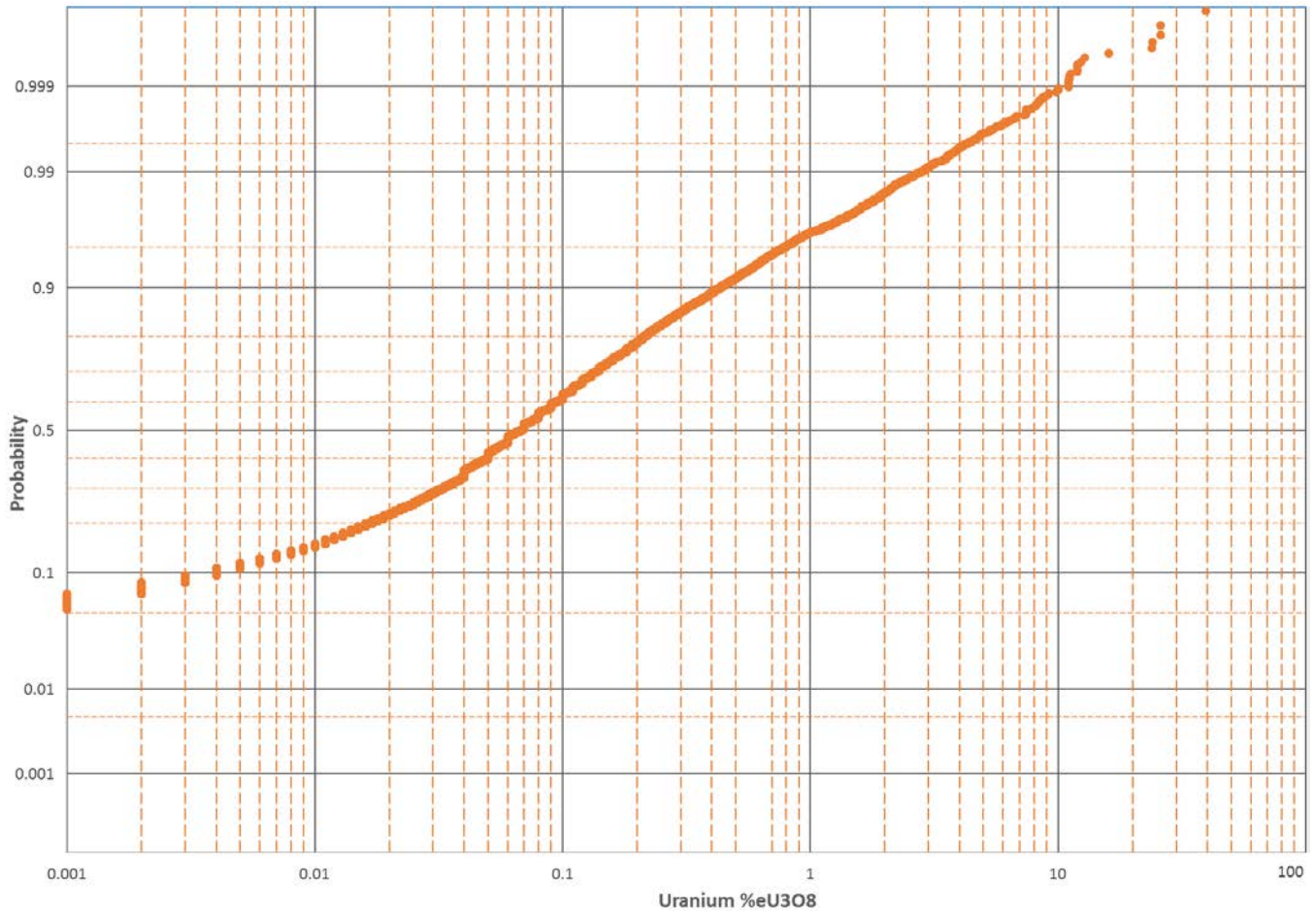


Figure 14-2. Daneros Raw Assay Log Probability Plot



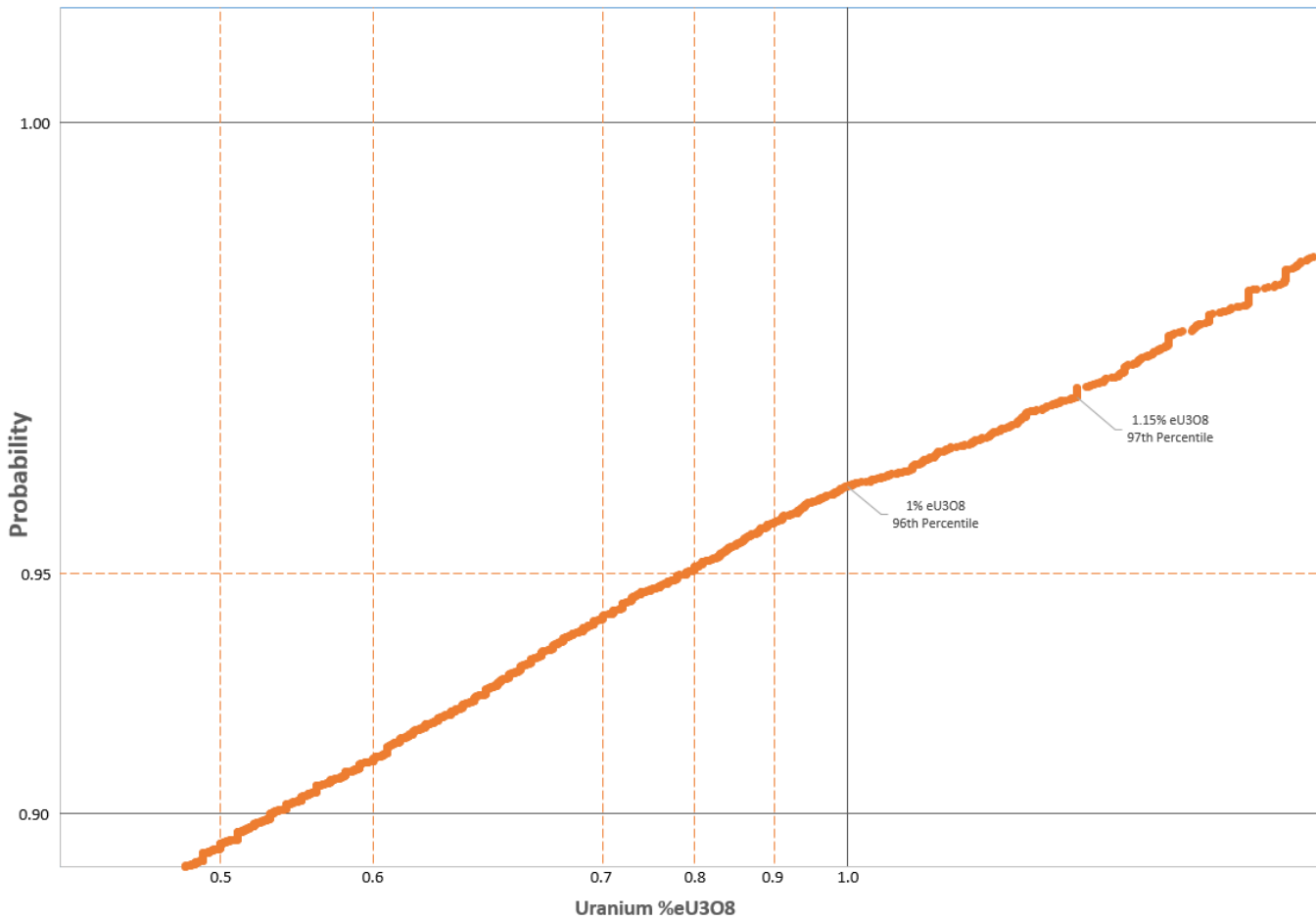


Figure 14-3. Daneros Raw Assay Log Probability Plot (Upper Tails)

### 14.2.5 Compositing

Typically, in uranium mines where split-shooting is employed, the minimum mining thickness that can be efficiently recovered is 2 feet. For that reason, the block model for this resource was made with two-foot thick blocks. In resource estimation, it is normal practice to composite to approximately half the block thickness, or in this case, one-foot. In addition, the average length of raw assay values within the mineralized solids is 0.839 feet. Based on those two factors, a composite size of one-foot was selected for use in grade estimation. Composites were bound and flagged by the mineralized solids and only composites falling within the solids were used in grade estimation. For the UP&L interval data, some of the intervals were longer than one foot. In those cases, the interval was divided into one foot intervals with the grade of that interval.

Composites were generated using the run-length compositing algorithm in Vulcan. A grade cap was set at 1%  $eU_3O_8$ . Statistics for the composited samples are given in Table 14-4. Descriptive Statistics for the Daneros Composited Dataset below. Following compositing, twenty-one 1-foot composites were manually entered into the composite database. These 21 composites represent the rib scan data given in Table 11-2.

**Table 14-4. Descriptive Statistics for the Daneros Compositd Dataset**

<u>Composites (Capping at 1% eU<sub>3</sub>O<sub>8</sub>)</u>	
No. Samples	15,611
Mean	0.143
Standard Deviation	0.209
Variance	0.435
Max	1.000
Upper Quartile	0.165
Median	0.066
Lower Quartile	0.014
Min.	0.000
Coefficient of Variation	1.464

#### 14.2.6 Block Model Parameters

Energy Fuels used Maptek’s Vulcan 3D mine modeling software to generate the resource estimate.

Two block models were used for this resource estimate. The first included all mineralized solids in and near to existing workings. The second was for the 301 mineralized pod, a single mineralized solid, located over a mile from existing workings. Table 14-5 details the block model used.

**Table 14-5. Block Model Construction Details**

		Origin (NAD83 UT State Plane)				Extent			Block Size		
		X	Y	Z	Rotation	X Offset	Y Offset	Z Offset	X Size	Y Size	Z Size
Main	Parent Block	2,019,190	10,181,840	5,550	90	2,550	2,800	100	25	25	2
	Sub-Block	2,019,190	10,181,840	5,550	90	2,550	2,800	100	5	5	1
301	Parent Block	2,024,900	10,188,600	5,650	90	450	300	100	25	25	2
	Sub-Block	2,024,900	10,188,600	5,650	90	450	300	100	5	5	1

#### 14.2.7 Density

Historically, a tonnage factor of 14 ft<sup>3</sup>/ton (0.07143 ton/ft<sup>3</sup>) has been used in evaluating uranium deposits hosted in the Shinarump. For this resource, the historical tonnage factor of 14 ft<sup>3</sup>/ton (0.07143 ton/ft<sup>3</sup>) was used, and was the default value for the variable “dens” in the block model. This historical value also corresponds to the average of all density data collected at Daneros to date.

#### 14.2.8 Grade Interpolation

The resource at Daneros was estimated using both nearest neighbor (NN) and inverse distance weighted squared (IDW) methods. IDW was used as the primary estimator for pods that contained more than four drill holes, and pods containing less than four were estimated using NN. NN was also used as a check to the IDW estimate. For IDW estimates, a first pass search ellipse looked 75 ft. along trend and 50 ft. perpendicular to the main mineralized trend. At Daneros, the main mineralized trend is controlled by the existence of paleochannels in the Shinarump. A minimum of 8 samples from at least 4 different drill holes was required to estimate the grade of a block. Up to three passes were used on each of the mineralized zones to estimate the blocks. The second pass used a search

ellipse twice as large as the first pass (150 ft. x 100 ft. x 8 ft.) and the third pass was four times as big as the first pass (300 ft. x 200 ft. x 16 ft.). Specifics for estimating each of the pods is shown in Table 14-6 below.

**Table 14-6. Estimation Parameters by Zone**

<b>Zone</b>	<b>Estimator</b>	<b>Trend</b>	<b>Plunge</b>	<b>Dip</b>	<b>Est. Passes</b>
<i>DAN_POD_01</i>	NN	0	0	0	1
<i>DAN_POD_02</i>	IDW	40	0	0	3
<i>DAN_POD_03</i>	IDW	40	0	0	3
<i>DAN_POD_04</i>	IDW	40	0	0	3
<i>DAN_POD_05</i>	IDW	40	0	0	3
<i>DAN_POD_06</i>	IDW	40	0	0	3
<i>DAN_POD_07</i>	NN	0	0	0	1
<i>DAN_POD_08</i>	IDW	40	0	0	2
<i>DAN_POD_09</i>	IDW	40	0	0	2
<i>DAN_POD_10</i>	NN	0	0	0	1
<i>DAN_POD_11</i>	NN	0	0	0	1
<i>DAN_POD_12</i>	NN	0	0	0	1
<i>DAN_POD_13</i>	NN	0	0	0	1
<i>SITLA_301</i>	IDW	40	0	0	3

**14.2.9 Removal of Mined Material**

During and following the cessation of mining at Daneros, all underground workings were surveyed and imported into AutoCAD software. Those files were later imported into Vulcan. The survey files consisted of points that were surveyed along the rib of the underground workings. The rib scan points were converted to polygons, and those polygons were offset up and down to the elevation of the sill and back. Using the sill and back, a solid was created of the underground workings. The mine block function in Vulcan was then used to proportionally tag a block that fell within the workings solid. For example, if a block intersected the workings, it was given a value between 0 and 1 to identify how much of the block had been mined. If half of the block fell within the workings, it was assigned a value of 0.5. These proportional values were used when calculating the resource and only the portion of the block falling outside the workings was used to determine the remaining resource.

**14.2.10 Block Model Validation**

The Daneros block model was validated using visual comparison, statistics, volumetric comparison and an estimation of the largest pod, Pod 05, using nearest neighbor methods. A brief discussion of each of these methods is given below.

A visual check between block and composite grades was done in cross-section to identify areas where significant over or underestimation was apparent. Figure 14-4 below shows a cross-section cutting northeast (looking northwest) through Pod 05. The color scheme for the blocks and composites is the same. Overall, the block model shows good correlation with the composites.

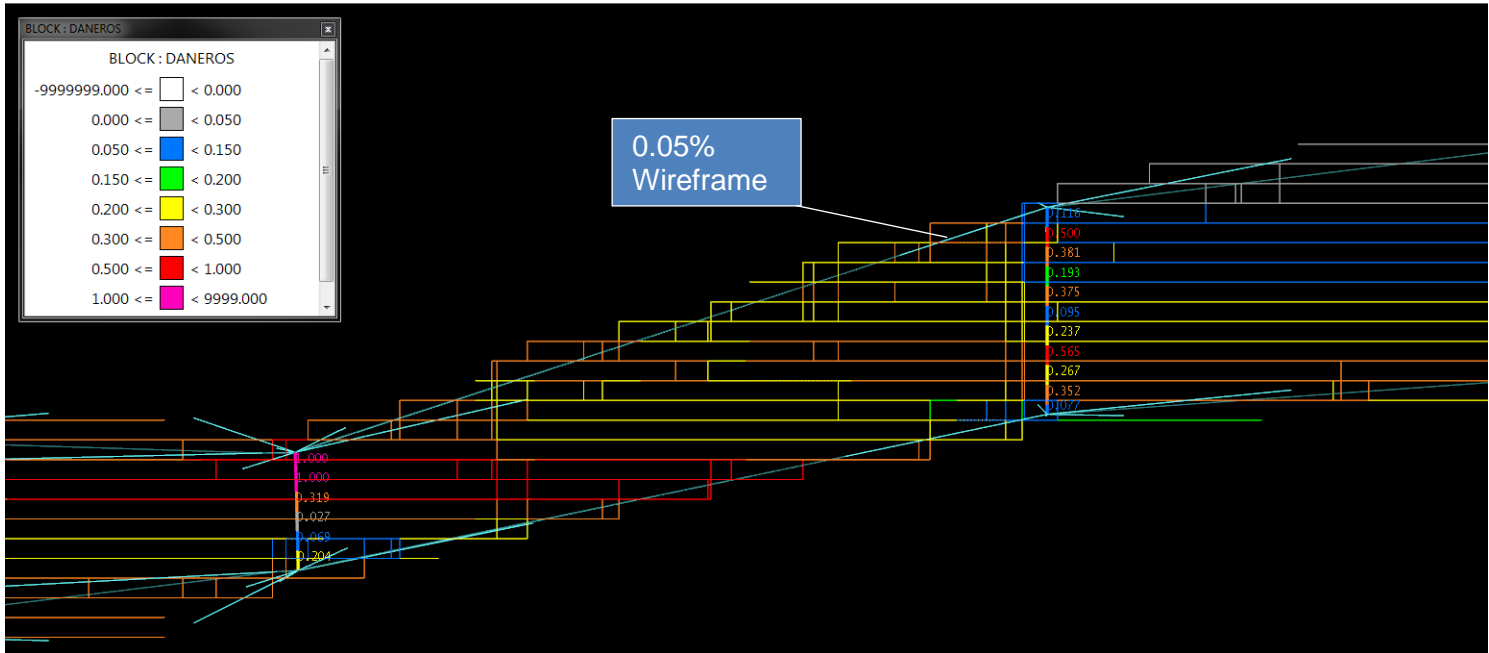


Figure 14-4. Cross-Section of Wireframe, Composites, and Block Model (Pod 05 – Looking Northwest). No Scale

A statistical check was run to look at basic statistics of the composites used to estimate the resource and the blocks that were estimated. Table 14-7 and Table 14-8 give the block and composite statistics for the eight pods (Pod 02 – Pod 09) that were used in the Mineral Resource. Overall, the block results are similar to the composite results indicating that the estimation parameters used were reasonable.

Table 14-7. Block vs Composite Descriptive Statistics (Pod 02 - Pod 05)

	Pod 02 (IDW)		Pod 03 (IDW)		Pod 04 (IDW)		Pod 05 (IDW)	
	Block	Comp.	Block	Comp.	Block	Comp.	Block	Comp.
<i>Count</i>	1,040	332	1,723	840	517	175	15,564	11,093
<i>Min.</i>	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000
<i>Max.</i>	0.361	0.734	0.588	1.000	0.375	0.630	0.982	1.000
<i>Mean</i>	0.115	0.091	0.143	0.146	0.070	0.043	0.159	0.146
<i>Std. Deviation</i>	0.059	0.104	0.099	0.196	0.049	0.095	0.137	0.214
<i>Variance</i>	0.003	0.011	0.010	0.038	0.002	0.009	0.019	0.046
<i>Coef. of Var.</i>	0.516	1.139	0.687	1.343	0.703	2.216	0.859	1.471
<i>Lower Quartile</i>	0.072	0.011	0.074	0.040	0.037	0.000	0.070	0.015
<i>Median</i>	0.108	0.060	0.113	0.080	0.068	0.000	0.122	0.061
<i>Upper Quartile</i>	0.162	0.142	0.158	0.171	0.107	0.059	0.203	0.170

**Table 14-8. Block vs Composite Descriptive Statistics (Pod 06 - Pod 09)**

	Pod 06 (IDW)		Pod 07 (NN)		Pod 08 (IDW)		Pod 09 (IDW)	
	Block	Comp.	Block	Comp.	Block	Comp.	Block	Comp.
<i>Count</i>	2,502	1,256	516	300	634	1,018	559	476
<i>Min.</i>	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000
<i>Max.</i>	0.733	1.000	1.000	1.000	0.857	1.000	0.879	1.000
<i>Mean</i>	0.134	0.191	0.213	0.108	0.084	0.081	0.079	0.164
<i>Std. Deviation</i>	0.091	0.212	0.199	0.192	0.077	0.131	0.128	0.278
<i>Variance</i>	0.008	0.045	0.039	0.037	0.006	0.017	0.016	0.077
<i>Coef. of Var.</i>	0.682	1.111	0.933	1.777	0.914	1.603	1.608	1.698
<i>Lower Quartile</i>	0.070	0.070	0.040	0.000	0.038	0.009	0.009	0.000
<i>Median</i>	0.100	0.120	0.200	0.000	0.063	0.040	0.053	0.050
<i>Upper Quartile</i>	0.183	0.220	0.300	0.130	0.109	0.090	0.070	0.150

The overall volume of the fourteen wireframe solids (pods) estimated at Daneros is 4,131,140 ft<sup>3</sup> whereas the volume of the block model is 3,939,227 ft<sup>3</sup>.

Pod 05 contains approximately 73% of the reported Mineral Resource at Daneros and, therefore, was looked at in detail for block model validation. A second estimation of that pod was run using nearest neighbor methods. The estimated grades for the IDW method (primary estimator) and NN methods were 0.159% eU<sub>3</sub>O<sub>8</sub> and 0.164% eU<sub>3</sub>O<sub>8</sub> respectively. These two methods show good correlation with only a 3% difference between the two.

#### 14.2.11 Resource Classification

Canadian Institute of Mining, Metallurgy and Petroleum (CIM) definition Standards for Minerals Resources and Mineral Reserves (adopted by the CIM Council on May 10, 2014) were followed for classification of Mineral Resources.

Classification of Mineral Resources for Daneros are based on drill hole spacing and geologic continuity. The July 2012 Technical Report for Daneros classified all material as Inferred. The inclusion of additional surface drill holes as well as 583 underground long holes allowed material in the most continuous pod, Pod 05 (Figure 14-1) to be upgraded from Inferred to the Indicated category. This pod was extensively mined in the past and still contains mineralization in the face of many of the workings. All other pods in this Technical Report have been classified as Inferred.

#### 14.2.12 Cut-Off Grade

The cut-off grades were calculated based on historical process recoveries and operating costs for Daneros. The Daneros Mineral Resource was calculated at a 0.23% U<sub>3</sub>O<sub>8</sub> cut-off grade.

Cut-off grade calculation assumptions at \$55/lb U<sub>3</sub>O<sub>8</sub> ("Base Case" in Table 14-9):

- Mining cost of \$130/ton
- Haulage cost of \$18/ton
- Process cost of \$80/ton
- G&A cost included in unit rates
- Metallurgical recovery of 95%
- Utah effective severance tax of \$2/ton

- Average royalty cost of \$13/ton

The Mineral Resource estimate for Daneros is sensitive to changes in uranium prices. Table 14-9 below details the resource sensitivity at various uranium prices. All other cut-off grade assumptions were held constant.

**Table 14-9. Daneros Mineral Resource Sensitivity to Uranium Price**

US\$/lb U <sub>3</sub> O <sub>8</sub>	Cutoff Grade (% U <sub>3</sub> O <sub>8</sub> )	<i>Indicated</i>			<i>Inferred</i>		
		Tonnage (Tons)	Grade (%eU <sub>3</sub> O <sub>8</sub> )	Contained Metal (U <sub>3</sub> O <sub>8</sub> lb.)	Tonnage (Tons)	Grade (%eU <sub>3</sub> O <sub>8</sub> )	Contained Metal (U <sub>3</sub> O <sub>8</sub> lb.)
\$35	0.37%	7,000	0.50	70,000	3,000	0.45	27,000
\$45	0.29%	12,000	0.43	104,000	5,000	0.43	43,000
\$55 ( <i>Base Case</i> )	0.23%	20,000	0.36	142,000	7,000	0.37	52,000
\$65	0.20%	25,000	0.33	167,000	9,000	0.33	61,000
\$75	0.17%	33,000	0.29	193,000	13,000	0.29	73,000

**14.2.13 Comparison with Previous Resource Estimates**

The previous resource estimate for Daneros was included in the July 18, 2012 Technical Report titled *The Daneros Mine Project, San Juan County, Utah, U.S.A.* prepared by Douglas C. Peters, Certified Professional Geologist of Peters Geosciences, Golden, Colorado. That Technical Report stated an Inferred Mineral Resource of 156,600 tons grading 0.263% eU<sub>3</sub>O<sub>8</sub>, containing 824,109 lbs of eU<sub>3</sub>O<sub>8</sub>. The Mineral Resource contained in this technical report represents a significant decrease in the overall contained pounds as well as reclassifies some of the material as Indicated Mineral Resources. The major changes to the resource are attributed to the following:

1. This updated resource estimate accounts for all historical mining at Daneros, including mining that took place following issuance of the 2012 Technical Report
2. The 2012 resource estimate used approximately 286 drill holes containing 1,251 assay values, all of which were from surface drilling. This resource estimate used 1,186 drill holes containing 123,536 assay values, a significant increase in data.
3. The methods used in generating the wireframe solids were slightly different, including differences in grades used to limit the extent of the wireframe.

## 15.0 MINERAL RESERVE ESTIMATE

There is no current Mineral Reserve estimate at Daneros.

## 16.0 MINING METHOD

Daneros is not considered an Advanced Property under NI 43-101 and this section is not applicable.



## **17.0 RECOVERY METHODS**

Daneros is not considered an Advanced Property under NI 43-101 and this section is not applicable.

## 18.0 PROJECT INFRASTRUCTURE

The Daneros Mine portal area is accessed by a gravel-covered side road off Radium King Road (a county-maintained gravel road). The mine facilities consist of a modular trailer for the mine office, two reinforced mine portals, a generator building, and an equipment storage and maintenance building. The underground mine is accessed by a decline down to the mineralized zones. Two ventilation shafts daylight on the topographic bench above the mine. The bench above the mine, where past drilling also had been conducted, is accessed by a dirt road connecting to the mine access road south of the mine portal area.

All power at Daneros is produced via generator; there is currently no line power to the site. Water is supplied by an on-site water well.

## **19.0 MARKET STUDIES AND CONTRACTS**

Daneros is not considered an Advanced Property under NI 43-101 and this section is not applicable.

## **20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

Daneros is not considered an Advanced Property under NI 43-101 and this section is not applicable.

## 21.0 CAPITAL AND OPERATING COSTS

Daneros is not considered an Advanced Property under NI 43-101 and this section is not applicable.

## 22.0 ECONOMIC ANALYSIS

Daneros is not considered an Advanced Property under NI 43-101 and this section is not applicable.

## 23.0 ADJACENT PROPERTIES

None of the other historic mines in the White Canyon District are currently producing. Several other parties own claims near or contiguous to the Energy Fuels property. Mapping of Shinarump channels in the district by previous workers indicate that some of the surrounding property has seen past production and could have potential. Historical resource estimates have been made on adjacent properties by other companies but are not included in this report. The closest historical mine not within the Daneros project boundary is the Yankee Girl, approximately 1.5 miles to the west. According to AEC records, the Yankee Girl produced approximately 8,500 tons at an average grade of 0.22%  $U_3O_8$  for a total of approximately 38,000 lbs.  $U_3O_8$  (AEC, undated report).

## **24.0 OTHER RELEVANT DATA AND INFORMATION**

No other information is known beyond that referenced or discussed in this report.



## 25.0 INTERPRETATION AND CONCLUSIONS

Peters Geosciences has reviewed the Energy Fuels resource estimate and supporting documentation and is of the opinion that classification of the mineralized material as Indicated and Inferred Mineral Resources meets the definition stated by NI 43-101, and also meets the definitions and guidelines of the CIM Standards on Mineral Resources and Reserves (adopted by the CIM Council on May 10, 2014).

There is potential to expand the estimated resource with additional surface drilling and underground development and long hole drilling.

## 26.0 RECOMMENDATIONS

The Author recommends that Energy Fuels proceed with the following efforts at Daneros as it plans for future production.

### Exploration

Perform surface drilling to confirm resources and connectivity of resources in the Shinarump paleochannel system, of which the Daneros Mine is a part, where mineralization is known, but distribution still is uncertain. (Estimated \$400,000)

After mine restart, perform underground long hole drilling to determine in advance of mining where likely resources exist and where accordingly to drive mine headings to best access these resources. (Estimated \$100,000)

### Mine Development

After mine restart, continue advancing mine headings toward the Lark Mine and previously defined mineralization to the north and northwest of the Daneros Mine in order to access known and potential resources in these areas. This includes short downward drilling in the area of Lark Mine Pod L-03 from the existing Daneros mine workings where it was believed that the already developed heading was too high stratigraphically to have intersected the expected pod of mineralization. If the pod can be located with such drilling, then workings should be developed to mine this pod. (Estimated \$850,000)

## 27.0 REFERENCES

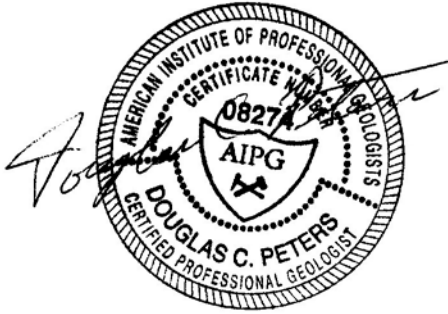
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## 28.0 SIGNATURE PAGE AND CERTIFICATE OF QUALIFICATIONS

I, Douglas C. Peters, do hereby certify:

- 1) That I graduated from the University of Pittsburgh with a Bachelor of Science degree in Earth & Planetary Sciences in 1977.
- 2) That I graduated from the Colorado School of Mines with a Master of Science degree in Geology in 1981 and with a Master of Science degree in Mining Engineering in 1983.
- 3) That 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. I hold the following certifications and memberships applicable to these requirements:
  - A. Certified Professional Geologist #8274 (American Institute of Professional Geologists)
  - B. Registered Member #2516800 (Society for Mining, Metallurgy, and Exploration, Inc.)
- 4) That I have practiced my profession for over 35 years, the last 22 of which have been as an independent consulting geologist.
- 5) That I am responsible for this technical report titled: “Updated Report on the Daneros Mine Project, San Juan County, Utah, U.S.A.”, dated March 2, 2018, and that property was visited by me on July 12, 2012.
- 6) That I have had prior experience with the Daneros Property that is the subject of this Technical Report and have had previous experience with other uranium properties in Colorado, New Mexico, Utah, and Wyoming.
- 7) That this report dated March 2, 2018 and titled “Updated Report on the Daneros Mine Project, San Juan County, Utah, U.S.A.” is based on published and unpublished maps and reports, on discussions with representatives of Energy Fuels Resources (USA) Inc. and discussions with other persons familiar with this type of mineral deposit.
- 8) That I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission of which would make the Technical Report misleading or would affect the stated conclusions.
- 9) That I am independent of Energy Fuels Inc. applying all of the tests in section 1.4 of NI 43-101.
- 10) That I am the owner of Peters Geosciences, whose business address is 1910 Owens Court, Lakewood, Colorado 80215.
- 11) That I have read NI 43-101 and NI 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 12) That I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or on its website accessible by the public.

Signed and dated this 2nd day of March, 2018.



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Douglas C. Peters, CPG