

0004

**COPY**

Mine # C007/0039  
File Incoming  
Record # 0004  
Doc. Date 2-4-04  
Recd. Date 2-9-04



Ark Land Company  
c/o Canyon Fuel Co., LLC  
Skyline Mines  
HC35Box 380  
Helper, Utah 84526  
435-448-2634

February 4, 2004

Pam Grubaugh-Littig  
Permit Supervisor  
Utah Coal Regulatory Program  
Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801

*Exploration  
Incoming  
C/007/0039*

Re: Intent to Conduct Minor Coal Exploration

Dear Pam:

On behalf of the Dugout Canyon Mine, I have attached DOGM change forms C-1 and C-2 and the Notice of Intent to Conduct Minor Coal Exploration. The exploration is proposed for the School and Institutional Trust Lands Administration (SITLA) Dugout Tract in the year 2004. The type of exploration proposed is rotary-spot core, continuous core, or a combination of both.

Enclosed are five copies of the change forms and five copies of the notice. If you have any questions, please contact me at (435-448-2634). We would like to initiate drilling in mid-July, 2004. I appreciate your consideration of this application.

Sincerely,

Mike Stevenson  
Geologist  
Ark Land Company

Encl.

RECEIVED  
FEB 09 2004  
DIV. OF OIL, GAS & MINING

**APPLICATION FOR COAL PERMIT PROCESSING**

**COPY**

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

**Permittee:** Canyon Fuel Company, LLC

**Mine:** Dugout Canyon Mine

**Permit Number:** C/007/039

**Title:** Notice of Intent to Conduct Minor Coal Exploration--SITLA Dugout Tract

**Description,** Include reason for application and timing required to implement:

Coal exploration for seam thickness and quality data. Need approval by July1, 2004

**Instructions:** If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- Yes  No 1. Change in the size of the Permit Area? Acres: \_\_\_\_\_ Disturbed Area: \_\_\_\_\_  increase  decrease.
- Yes  No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_
- Yes  No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes  No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes  No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes  No 6. Does the application require or include public notice publication?
- Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- Yes  No 10. Is the application submitted as a result of other laws or regulations or policies?  
*Explain:* \_\_\_\_\_
- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes  No 13. Does the application require or include collection and reporting of any baseline information?
- Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes  No 15. Does the application require or include soil removal, storage or placement?
- Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes  No 19. Does the application require or include certified designs, maps or calculation?
- Yes  No 20. Does the application require or include subsidence control or monitoring?
- Yes  No 21. Have reclamation costs for bonding been provided?
- Yes  No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

**Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you.** (These numbers include a copy for the Price Field Office)

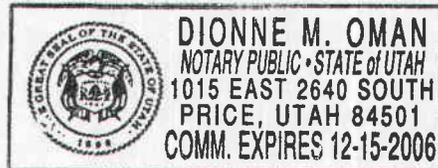
I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Mike Stevenson  
Print Name

Mike Stevenson, Sr. Geologist 2-5-04  
Sign Name, Position, Date

Subscribed and sworn to before me this 5 day of February, 2004

Dionne M. Oman  
Notary Public



My commission Expires: 12-15, 2006

Attest: State of Utah } ss:  
County of Carbon

**For Office Use Only:**

Assigned Tracking Number:

Received by Oil, Gas & Mining  
**RECEIVED**

**FEB 09 2004**

**DIV. OF OIL, GAS & MINING**

**NOTICE OF INTENT TO CONDUCT  
MINOR COAL EXPLORATION**

SCHOOL AND INSTITUTIONAL TRUST LANDS  
ADMINISTRATION DUGOUT TRACT

ARK LAND COMPANY  
A Subsidiary of Arch Coal Inc.

February 2004

## INTRODUCTION

Ark Land Company (a subsidiary of Arch Coal Inc.) is submitting this Notice of Intent to Conduct Minor Coal Exploration on behalf of Canyon Fuel Company, LLC – Dugout Canyon Mine to the Utah Division of Oil, Gas, and Mining (UDOGM) in order to obtain approval to conduct coal exploration and reclamation activities in the summer of 2004. The type of exploration proposed is rotary-spot core, wireline core drilling, or a combination of both. All exploration activities will occur on private surface held by the Milton and Ardith Thayn Trust and C and A Conover, et al. This application is formatted to address the specific requirements of R645-201-200. Other related information is given in Appendix A. Five copies of this notice are submitted for distribution by the UDOGM to other agencies.

### **R645-201 Coal Exploration: Requirements for Exploration Approval**

The proposed exploration plan qualifies as minor exploration as described in the State of Utah Coal Mining Rules R645 section R645-201-200.

R645-201-221

The name, address and telephone number of the applicant are:

Ark Land Company  
C/o Skyline Mines  
HC 35 Box 380  
Helper, Utah 84526  
(work) 435-448-2634

The applicant is the same as the operator of the proposed exploration plan. Correspondence regarding this exploration plan should be addressed to:

Mike Stevenson  
Ark Land Company  
C/o Skyline Mines  
HC 35 Box 380  
Helper, Utah 84526  
(work) 435-448-2634

R645-201-222

The name, address and telephone number of the representative of the applicant who will be present during and be responsible for conducting the exploration is:

Mike Stevenson  
Ark Land Company  
C/o Skyline Mines  
HC 35 Box 380  
Helper, Utah 84526  
(work) 435-448-2634  
(home) 435-636-8546

At times a consulting geologist may act as representative of the applicant. The UDOGM will be notified of the consulting geologist's name and address if one is used.

R645-201-223

The exploration area is located in Eastern Utah 15 miles northeast of Wellington, Utah (Map 1). The legal description of the SITLA Dugout Coal Tract is as follows:

State Lease ML 48435-OBA

T. 13 S., R 13 E., SLB&M

Sec: 17: SW/4, SW/4SE/4:

Sec. 19: NE/4SE/4, S/2SE/4:

Sec. 20: All:

Sec. 21: SW/4NW/4, SW/4:

Sec. 28: NW/4, N/2SW/4, SW/4SW/4:

Sec. 29: All:

Sec 30: E/2, E/2W2.

Containing 2,560.00 acres, more or less.

The tract is totally located in Carbon County, Utah, and is located in Eastern Utah approximately 15 miles northeast of Wellington, Map 1. Map 2 gives the location of drill sites and access routes. Heavy Equipment access to the exploration area will be via an improved, gravel road through Clark Valley east of Wellington, herein called the Clark Valley Road, then existing private ranch or logging roads.

Access routes to the drill sites will either use existing ranch or logging roads (Map 2). As necessary, existing roads will be made travelable by hauling gravel to fill rough areas on bedrock ledges and grading rutted areas. The holes are all located immediately next to or on the roads.

The elevation in the area ranges from 7,200 feet in the south along the base of the Book Cliffs to 8,700 feet in the north atop the high mesas. The terrain is rugged with relatively gently sloping mesas bounded by the steep slopes of the Book Cliffs. Relatively deep and narrow valleys bisect the highlands and drain southward away from the Book Cliffs. The major drainages in the area are the Right Fork of Dugout Creek and Pace Creek.

Rocks exposed in the exploration area belong to the Cretaceous age Blackhawk.

Castlegate, and Price River Formations, and the Cretaceous-Tertiary age North Horn Formation. The rock types are predominantly sandstone, siltstone, shale, and coal. The major geologic features in the exploration area are the escarpments created by the various sandstone outcrops including the 150 ft thick Castlegate Sandstone.

Vegetation in the exploration area is comprised mostly of juniper, conifer timber, aspen, and sage communities. The streams do not support game fish. The exploration area is important habitat for raptors, elk, mule deer, cougar, bobcat, black bear, and small mammals. The area is habitat for a limited number of reptiles and amphibians.

Threatened and endangered species in the exploration area include bald eagle and peregrine falcon. Exploration and reclamation activities will not occur during breeding and nesting periods nor within one half mile of known breeding and nesting areas.

There are no known districts, sites, buildings, structures, or objects listed on, or eligible for listing on, the National Register of Historic Places in the proposed exploration area. There are no known archeological resources located in the proposed exploration area. A site-specific cultural resource evaluation will be conducted in the spring of 2004 and submitted to the Division.

R645-201-224

It should be noted that these holes are planned to be drilled as part of a 3-hole drilling project drilled over two years—2004 and 2005. Hole DUG0103 will be drilled in 2004, with holes DUG0105 and DUG0205 drilled in 2005. A timetable for all exploration related activities is given below and would relate to the relevant year. It is anticipated that exploration activities will start the third week of July 2004/2005.

EVENT	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8
Prepare Roads								
Prepare Access/Sites								
Core Drilling								
Reclamation								

R645-201-225

The general method to be followed during drill hole exploration, reclamation, and abandonment is: 1) repair the ranch and logging roads as needed, repair of roads will include hauling gravel to fill rough areas on bedrock ledges and grading rutted areas 2) set temporary water tank, pump, and water line as needed. 3) drill and log holes. 3) reclaim the drill sites and remove all waterlines, tank, and pump. No blasting is planned.

Core drilling typically involves one truck-mounted 2000 ft rated core drill, one 3000 gallon water truck, one 1500 gallon water truck, one auxiliary air compressor, one supply trailer, four pick-up trucks, a geophysical logging truck and one covered trailer. The drilling procedure for the exploration holes will be either continuously core to total depth, rotary drilling and spot coring of selected zones, or a combination of both. If the rotary drilling and spot coring method is used, casing will be set in the hole to below the Price

## River Formation.

Water will be pumped and/or hauled from the Right Fork of Dugout Creek and/or Pace Creek to the drill sites (Map 2). Typically, the following pieces of equipment are used to complete the project. A supply trailer will carry drill steels, coring equipment, drilling additives, cutting and welding equipment, a dog house and other supplies. Two pick-up trucks will be used by the drillers to carry personnel, fuel, and supplies and two pickup trucks will be used by the dirt contractor. The logging contractor will use a single axle 1 ton rated truck. The company representative and geological consultant will also use pick-up trucks for transportation.

The only coal removed during exploration activities will be cores. Cores will be a nominal three inches in diameter. Assuming an average thickness of 7 ft for the Rock Canyon Coal Seam and 8 ft for the Gilson Coal Seam, an estimated 300 pounds of coal will be removed.

Earth excavation will mostly be done for the drill sites using a D-8 Cat and road grader. A track mounted backhoe and/or a rubber-tired backhoe may be used at times for construction of mud pits. Excavation will include grubbing, removal and separate storage of the soil A horizon and, if needed, removal and separate storage of material below the soil A horizon to make a level drill site. Two mud pits will be excavated in the material below the soil A horizon if there is sufficient soil depth. The only material disposed of at the drill sites will be cuttings and any drilling foam and/or mud which will be placed in the mud pits.

Reclamation is an integral part of the exploration activities and will progress as contemporaneously as practical with the other exploration activities. The exploration drill holes will be plugged with a cement, cement/bentonite slurry, or bentonite chips to their full depth. The completion method includes pulling surface casing when possible; but when not possible, cutting it flush with the ground, then pumping the cement/bentonite slurry through the drill pipe starting at the bottom of the hole. Plugging will then be done in stages by tripping-out of the hole 3-4 joints (60-80 ft) and pumping again. This process will be repeated to the surface. If bentonite chips are used, the chips will be dumped down the annulus of the hole in such a manner to prevent bridging in the hole and drilling water added to the hole as specified by the manufacturer.

There will be no diversion of overland flows.

The roads existing prior to starting the exploration program will not be reclaimed.

It is not anticipated that acid- or toxic- forming materials will be encountered during exploration because none have been encountered previously.

The method of revegetation is intended to encourage prompt revegetation and recovery of a diverse, effective, and permanent vegetative cover. The following seed mixture will be used:

## Seed Mix

SPECIES	# pls/acre	# pls/sq. ft.**
<b>Grasses, Forbs, and Shrubs</b>		
Kentucky Bluegrass (1.390.000 seeds/lb)*	0.5	16
Mountain Brome (64.000 seeds/lb)*	2.0	3
Sandberg Bluegrass (1.100.000 seeds/lb)*	1.0	25
Bluebunch Wheatgrass (126.000 seeds/lb)*	4.0	12
Bottlebrush Squirreltail (192.000 seeds/lb)*	1.0	4
Rocky Mountain Penstemon (478.000 seeds/lb)*	1.0	11
Mountain Lupine (12.000 seeds/lb)*	3.0	1
Mtn. Snowberry (54.000 seeds/lb)*	4.0	5
Wyoming Big Sage (2.500.000 seeds/lb)*	<u>0.5</u>	<u>29</u>
<b>TOTAL</b>	<b>17.0</b>	<b>106</b>

\* Native Plants

\*\* Rounded nearest whole seed

The drill holes may range from a nominal 3 3/16 inches to 10 inches in diameter, depending on the drilling method. The estimated depths of the proposed drill holes and other drill hole information is given in the following table. Drill site acreage is estimated for a 100 ft X 100 ft pad. Access routes are estimated to be 14 ft wide.

Drill Hole	Location	Total Depth (ft)	Disturbed Acreage		Total
			Drill Site	Access Route	
DUG0104	T13S, R13E, Sec.20, SE	1.700	0.25		0.25
DUG0105	T13S, R13E, Sec.17, SE	2.075	0.25		0.25
DUG0205	T13S, R13E, Sec.17, SE	<u>3.150</u>	<u>0.25</u>		<u>0.25</u>
	Total	6.925	0.75		0.75

No drill holes will be turned into water monitoring wells.

There are no occupied dwellings nor pipelines located in the exploration area. No trenches will be dug and no structures constructed nor debris disposed of in the exploration area.

The permittee or his representative will have a copy of this Notice of Intention To Conduct Minor Coal Exploration while in the exploration area available for review by an authorized representative of the Division by request.

R645-203-200

Ark Land Company requests that the Division not make any drilling information available for public inspection relative to coal seam thickness or quality. This information is considered crucial to Ark Land's competitive rights.

R645-202.230

No adverse impacts to the stream channel will occur during pumping activities. No water will be pumped from the North Fork of Dugout or Pace Canyon Creeks without an approved "Temporary Change of Water" from the Division of Water Rights. A copy of the approved Temporary Change will be forwarded to DOGM and will be in possession of the on-site geologist.

R645-202-231

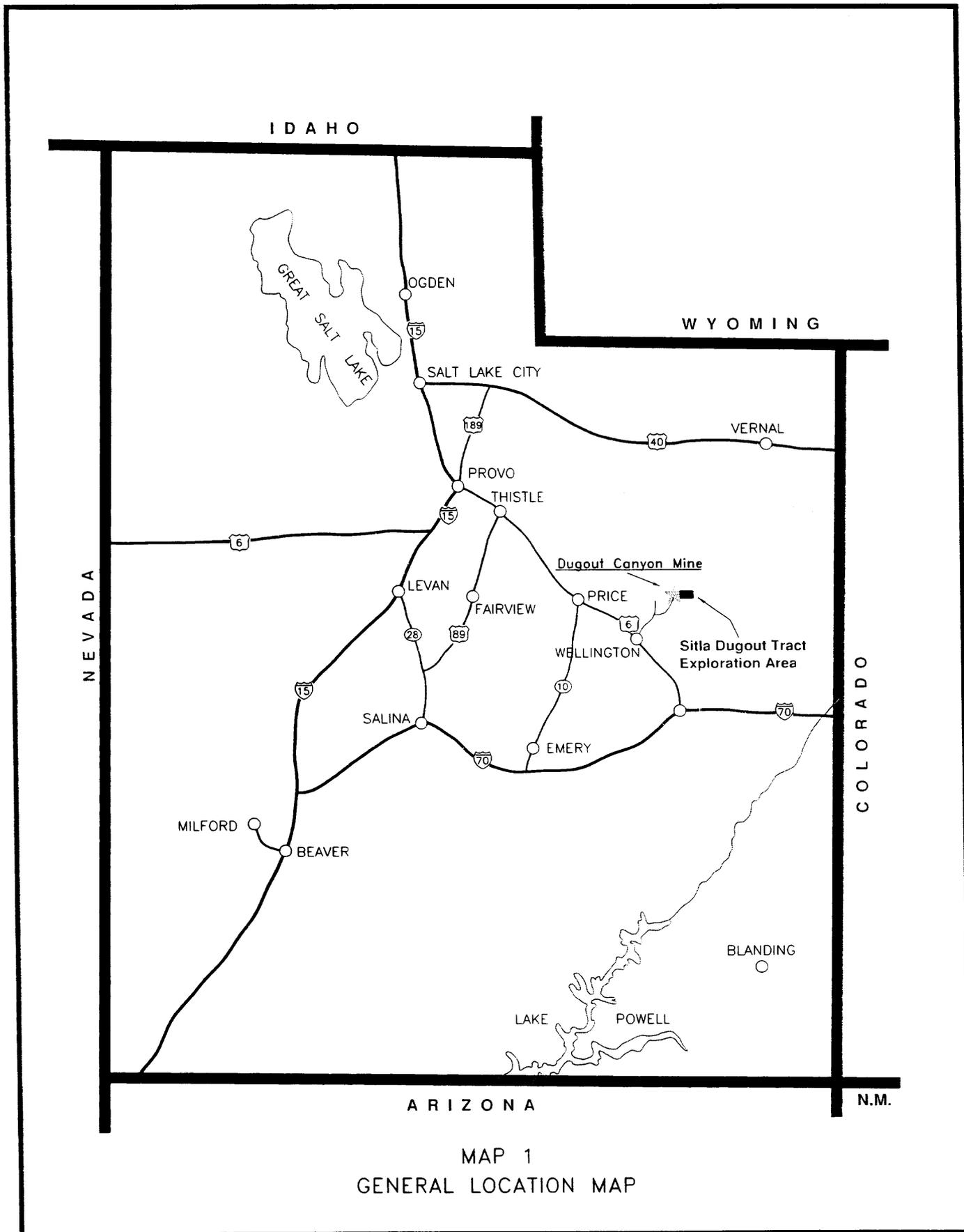
A site specific cultural resource survey will be conducted in the spring of 2004 and forwarded to UDOGM.

R645-202-232

No road construction is planned for this project.

## APPENDIX A

1. The potential for water pollution will be minimized by keeping pollutants away from the drill hole and in their containers. Materials used during drilling operations will be selected to be as non-polluting as possible. All spills of polluting materials will be removed from the area and properly disposed of.
2. No mixing of surface and ground waters is possible because all drill sites will be above perennial and ephemeral stream drainages.
3. Dugout Canyon Mine will retain all drill and geophysical logs. Copies of the drill and geophysical logs will be provided to the School and Institutional Trust Lands Administration.



IDAHO

WYOMING

NEVADA

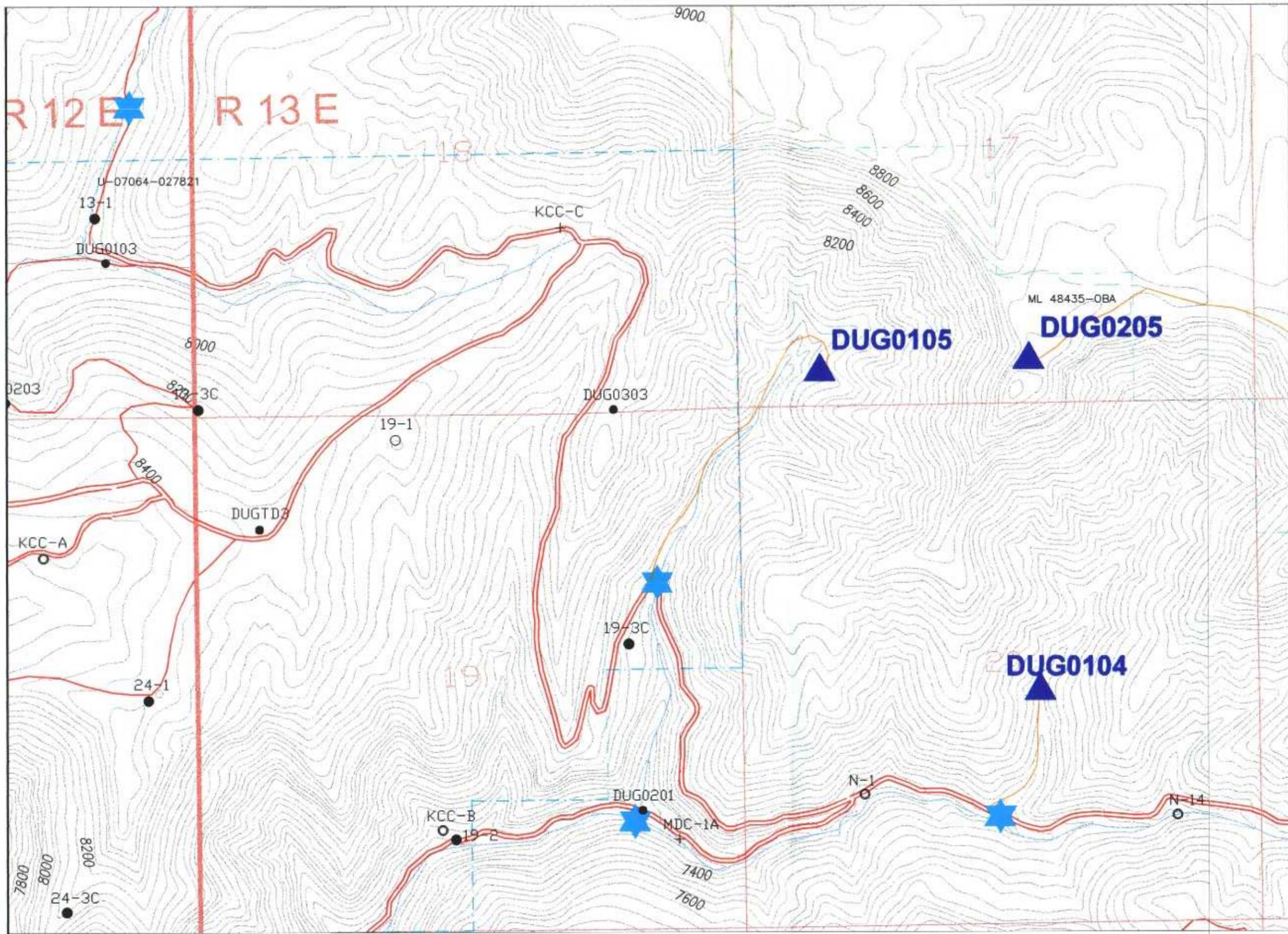
COLORADO

ARIZONA

N.M.

MAP 1  
GENERAL LOCATION MAP





**EXPLANATION**

-  Existing Road No Upgrade
-  Existing Road Requires Upgrade
-  Newly Constructed Road
-  Trail
-  Lease Boundary
-  Core Holes
-  Water Locations
-  Burn

Scale: 1" = 1000'

	Canyon Fuel Co., LLC. Dugout Canyon Mine
	<b>Map 3</b> <b>Borehole Locations</b>
P.O. BOX 1029 WELLINGTON, UTAH 84542	DATE: 30-Jan-2004