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# State of Utah

DEPARTMENT OF NATURAL RESOURCES

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Outgoing

CO410002

#3878

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August 10, 2011

Mark Bunnell, Senior Geologist  
Ark Land Company  
Sufco Mine  
597 S. SR 24  
Salina, Utah 84654

Subject: Minor Coal Exploration, Ark Land Company, X/041/002, Task ID #3878,  
Outgoing File

Dear Mr. Bunnell:

The above-referenced Minor Exploration Letter of Intent has been reviewed as of August 10, 2011. Please have a copy of the Letter of Intent at the exploration site upon inspection.

There are several recommendations that would be helpful to you and the Division.

1) It is advised that the applicant receives US Forest Service permission approval/letter or Special Use and Road Permits. Ark Land Company must comply with all terms and condition in the Special Use and Road Permits.

2) Meet the necessary requirements from Division of Water Rights.

If you have any questions, please feel free to call me at (801) 538-5325 or Stephen J. Demczak at (435) 613-3732.

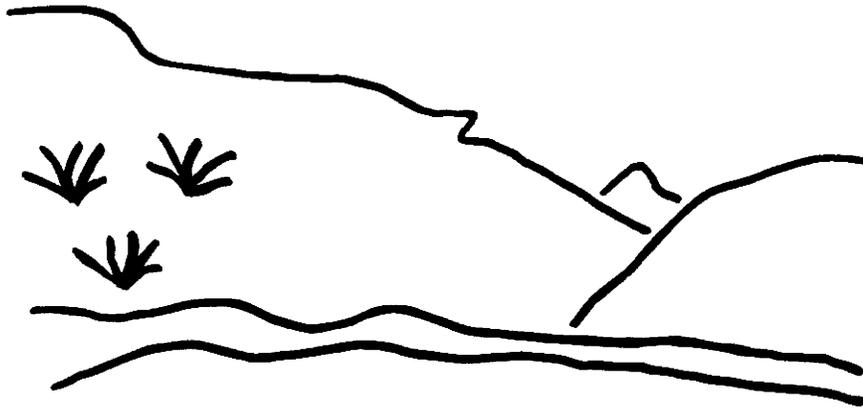
Sincerely,

Daron R. Haddock  
Coal Program Manager

DRH/SJD/sqs  
cc: Price Field Office  
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# State of Utah



## Utah Oil Gas and Mining

### Coal Regulatory Program

Acord Lakes Mountain Retreat Subdivision

X/041/002

Minor Exploration Analysis and Findings

August 2, 2011

## TABLE OF CONTENTS

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INTRODUCTION.....	1
SUMMARY OF PERMIT CONDITIONS.....	2
COAL EXPLORATION.....	3
SCOPE AND RESPONSIBILITIES.....	3
REQUIREMENTS FOR NOTICE OF INTENTION TO CONDUCT MINOR COAL EXPLORATION.....	3
COMPLIANCE DUTIES.....	4
OPERATIONAL STANDARDS.....	5
Biology.....	5
Roads.....	5
Topsoil.....	5
Diversions of Overland flows and streams.....	6
Hydrologic Balance.....	6
Acid- or toxic forming materials.....	6
RECLAMATION STANDARDS.....	6
Approximate original contour.....	6
Revegetation.....	7
Boreholes.....	7
Facilities and Equipment.....	7
PUBLIC AVAILABILITY OF INFORMATION.....	7

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COAL EXPLORATION

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## EXPLORATION TECHNICAL ANALYSIS

### INTRODUCTION

Ark Land Company is submitting a Notice of Intent to conduct Minor Coal Exploration on the Cottonwood Tract. The applicant is proposing to drill four holes (#UPC-A, #UPC-B, #UPC-C, and #UPC-D) into the coal seam. The coal ownership is under Utah Coal Properties, LLC. The surface ownership is all private having several different owners.

Ark Lands have received surface and coal ownership agreements for right of entry to conduct coal exploration. Two drilling sites will use conventional truck-mounted drilling and two helicopter-assisted drilling.

The Applicant will be accessing the drill site by using US Forest Service road. The Applicant most likely will need a US Forest Service Road Use Permit.

The applicant will remove less than 250 tons of coal.

The Applicant plans to start drilling the second week of August 2011. It is planned that the project will take six to eight weeks from start to finish, including the reclamation of the drill site. This may vary due to weather conditions.

## SUMMARY OF PERMIT CONDITIONS

As determined in the analysis and findings of this Technical Analysis, approval of the plan is subject to the following Permit Conditions. The applicant is subject to compliance with the following Permit Conditions and has committed to comply with the requirements of these conditions as referenced in the approved Permit.

Accordingly, the permittee has committed to comply with the requirements of the following Permit Conditions, as specified, and in accordance with the requirements of:

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COAL EXPLORATION

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## COAL EXPLORATION

Regulatory Reference: R645-200.

### SCOPE AND RESPONSIBILITIES

Regulatory Reference: 30 CFR 772.1; 30 CFR 772.10; 30 CFR 772.11; R645-100-400; R645-200-100; R645-200-200; R645-201-100.

#### Analysis:

Ark Land Company has submitted information to address the requirements of the state program and to meet requirements of R645-200 through R645-203. The applicant has classified this action as a Notice of Intention to Conduct Minor Coal Exploration and to comply with the State Program. The applicant has specified that certain material not be available to the public.

#### Findings:

The information given is to address the requirement of State program and R645-200 through R645-203. The information that was submitted is complete.

## REQUIREMENTS FOR NOTICE OF INTENTION TO CONDUCT MINOR COAL EXPLORATION

Regulatory Reference: 30 CFR 772.10; 30 CFR 772.11; R645-100-412; R645-201-200.

#### Analysis:

R645-201-221; This coal rule requires the applicant to give name, address, and telephone number of the applicant's representatives, who will be present at and responsible for conducting the exploration operations. This information was within the Notice of Intent.

R645-100-400, R645-200-100, R645-200-200, and R645-201-100; Ark Land Company has given a Notice of Intention to Conduct Minor Coal Exploration with a narrative and map describing the exploration area and indicating where the exploration will occur.

Two drilling sites (UPC-B and UPC-C) will use conventional truck-mounted drilling and two helicopter-assisted drill holes (UPC-A and UPC-D).

The Applicant will transport all drilling equipment, materials, and personnel by rubber tire equipment, except a dozer will be used for road work and to level off the drill site. The access to the drill site will be by using existing roads. Site UPC-C will have to construct a 300

feet a temporary road.

The four drill site will be approximately creating 0.639 acres of disturbance. Earth excavation for the drill site will be by using a D-8 Cat dozer. Additional work will be done using a trackhoe and /or rubber-tired backhoe. The excavation will include removal and storage of the soil A-horizon. Two to four mud pits will be used for conventional drilling.

The exploration is located in the Acord Lakes Mountain Retreat Subdivision. This private property is located approximately 11 miles from the town of Emery in Emery County. The applicant will remove less than 250 tons of coal. The drill holes will vary from 3 inch NQ to 2.5 inch NQ. Upon completion, the drill hole will be sealed with cement/bentonite from the bottom of the hole to ground level.

The applicant plans to start drilling the second week of August 2011. It is planned that the project will take six to eight weeks from start to finish, including the reclamation of the drill sites.

**Findings:**

The Applicant has given all of the necessary information as requirements of R645-201-221 such as name, address, and telephone number.

The Applicant has submitted the necessary information to comply with regulations R645-100-400, R645-200-100, R645-200-200, and R645-201-100 in the analysis.

## **COMPLIANCE DUTIES**

Regulatory Reference: 30 CFR 772.13; R645-202.

**Analysis:**

Ark Land Company will disturb the natural land surface while conducting conventional drilling by stripping and storing topsoil, constructing berms or cutbanks and two to four mud pits. The drill site size is approximately 120 ft. X 120 ft. The drill sites will be located in an area requiring some leveling. Drilling equipment and material will be brought in by rubber tire equipment to the sites. There will be 300 ft of road construction for UPC-C. The applicant will remove vegetation at the drill site. This process is for conventional drilling with rubber tire equipment.

Ark Land Company will not disturb the natural land surface for helicopter drilling just to level the drilling rig by using picks and shovels. The drill site will be covered with brattices and leaving vegetation and topsoil in place. The applicant might have to remove a small amount of

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**COAL EXPLORATION**

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brush or trees for leveling. No mud pits will be required.

The applicant has committed in the Notice of Intent to clean-up spills and to scarify and seed all disturbed areas.

**Findings:**

The information submitted complies with the requirements of R645-202-100.

**OPERATIONAL STANDARDS**

Regulatory Reference: 30 CFR 772.13; R645-202-200.

**Analysis:**

**Biology**

**Cultural Resources**

EarthTouch, LLC, conducted the Cultural Resource inventory of four drill holes location was conducted in May 31, 2011. No cultural resource properties were identified on the proposed drill pad or access road.

Threatened or Endangered Species was conducted by Tetra Tech for Ark Land on June 9, and June 16, 2011. Survey was conducted following guidance from 2010 State of Utah Department of Natural Resources, Division of Oil, Gas and Mining Raptor Survey Guildlines. The summary was during June 9 and June 16, 2011 exploration areas surveys, no northern goshawk, nesting raptors, or special status species of flora and fauna on Forest Service management indicator species list were found within this area.

**Roads**

R645-202-232; Ark Land Company will use existing U.S. Forest Service Development Road, County Road, and private roads to conduct exploration. The permittee will obtain a Road Use Permit from the U.S. Forest Service. This permit contains a bond in case the roads are damaged.

The operator proposes to widen to a 14-foot width; for transporting drilling equipment.

**Topsoil**

Topsoil will be saved and protected by silt fences or other types of sediment control measures. The A-horizon will be saved and soils below the A-horizon will be saved during the

in the construction of the mud pits.

### **Diversions of Overland flows and streams**

The applicant states on page 13 of the submittal that there will be no diversion of overland flows. Water will be pumped or hauled to the drills from the Sufco mine. No water will be utilized on the project without an approved Temporary Change of Water from the Division of Water Rights. Projected use is 2.39 acre feet.

A one to three-foot high berm will be constructed around the drill site to prevent runoff of water or other fluids from the drill pad. Silt fence will be installed around the pad to prevent downslope movement of sediment from the drill site. The applicant states that all fluids will be contained on the project site in mud pits or portable containers.

### **Hydrologic Balance**

The applicant states that the drill hole will be sealed using cement or cement/bentonite slurry.

The applicant states that the conventional drill hole may be used as a monitoring well.

### **Acid- or toxic forming materials**

The applicant has committed to monitoring the core samples for acid and toxic forming materials. Samples will be taken from the 10 ft. interval above and below the coal seam.

### **Findings:**

The information provided does meet the minimum regulatory requirements of this section.

## **RECLAMATION STANDARDS**

Regulatory Reference: 30 CFR 772.13; R645-202-200.

### **Analysis:**

#### **Approximate original contour**

Ark Land Company will scrape off the vegetation and remove the topsoil from the drill site. The total disturbed area, including the upgrade of an existing road and drill pad, is 0.639 acres.

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COAL EXPLORATION

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**Revegetation**

The Division has found that using the extreme surface roughening methods described in The Practical Guide to Reclamation in Utah ([www.dogm.utah.gov](http://www.dogm.utah.gov)) work better for controlling erosion and establishing vegetation than crimping mulch. Surface mulch can be incorporated during the roughening process.

All organic material grubbed from the drill pad will be salvaged to use as a surface mulch during reclamation operations. It is recommended that only materials native to the site be used as mulch. Noxious weed-free straw or hay will introduce additional non-noxious weeds.

The seed mixture was used in Quitcupah Canyon area which is next to plan drilling sites. This seed mix was approved by DOGM and the US Forest Service.

**Boreholes**

The main drill hole diameter will be 3-3/16 inches diameter. The depth of the hole will vary from 900 ft. to 1800 ft. with 200 to 300 feet of surface casing.

Upon completion of the drilling, the hole will be plugged with cement or cement/bentonite slurry to its full depth. The collar of the monitor well will be identified as to hole number and operator. A brass tag will be placed at the top of the drill hole stating the operator's name, drill hole number, and legal description.

**Facilities and Equipment**

R645-202-244 through R645-202-244.300: All drilling equipment and materials will be removed from the drill area once drilling is completed. Sealing will start thereafter, and all equipment and material for sealing the drill hole will be removed, when sealing is completed.

No facilities are to be built during this exploration program.

**Findings:**

The information provided meets the minimum regulatory requirements of this section.

**PUBLIC AVAILABILITY OF INFORMATION**

Regulatory Reference: 30 CFR 772.15; R645-203.

**Analysis:**

**COAL EXPLORATION**

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Ark Land Company has requested that the Division not make any drilling information available for public inspection relative to coal seam thickness or quality.

**Findings:**

The permittee has met the minimum requirements of this section in the Notice of Intent.