



STATE OF UTAH
 NATURAL RESOURCES & ENERGY
 Oil, Gas & Mining

Scott M. Matheson, Governor
 Temple A. Reynolds, Executive Director
 Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

July 20, 1982

J.E. Vaninetti
 Manager Exploration Services
 Norwest Resource Consultants, Inc.
 Suite 606
 10 Exchange Place
 Salt Lake City, Utah 84111

RE: Notice of Intention to
 Commence Coal Exploration
 Emery County, Utah
 CEP/015/002

Dear Mr. Vaninetti:

Thank you for your July 19, 1982 letter regarding West Appa Company's proposed coal exploration operations in Emery County, Utah. The plan meets the requirements of parts 776 and 815 of the regulations promulgated under the 1979 Act, "Regulation of Coal Mining and Reclamation Operations", Title 40-10-1 et seq, Utah Code Annotated, 1953.

1. The Division is concerned about the use of explosives during the seismic survey and requests that assurances be received from West Appa Coal and Norwest Resource Consultants that all requirements of UMC 817.61 - 817.68 be met.

The Division hereby issues approval for the exploration operations as described in the exploration plans.

The Division requires no additional information at the present time. Upon completion of the exploration operations the Division will require notification of completion and a description of the plugging and reclamation activities which have taken place for each site.

Thank you for your cooperation. In reply, please refer to CEP/015/015. If any questions should arise please call me.

Sincerely,

THOMAS N. TETTING
 ENGINEERING GEOLOGIST

TNT/mm

cc: Jackson Moffitt, MMS
 Paul Pratt, State Lands (Moab Office)

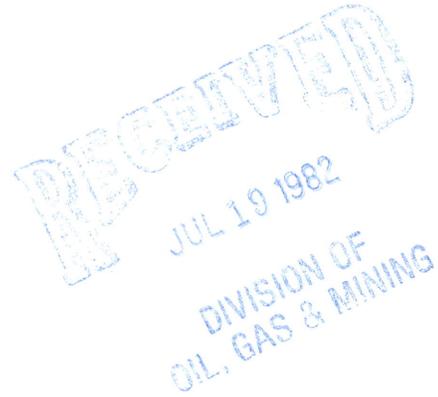
Board: Charles R. Henderson, Chairman; John L. Bell; E. Steele McIntyre; Edward J. Beck; Robert R. Norman; Margaret R. Bird; Herm Olsen



Norwest
Resource
Consultants, Inc.

Suite 606
10 Exchange Place
Salt Lake City, Utah 84111
(801) 364-5343

July 16, 1982



Utah State Division of Oil,
Gas, and Mining
Tom Tetting
4241 State Office Bldg.
Salt Lake City, UT 84114

Dear Sirs:

Norwest Resource Consultants, Inc. has been commissioned to represent West Appa Coal Company in regards to coordinating geologic activities for coal lands controlled by them in the Rilda Canyon area of Emery County, Utah. As part of these responsibilities, we have been requested to represent them in regards to obtaining the necessary approvals for conducting high resolution seismic surveys on the subject lands. As such, this letter is written to request permission for conducting two surveys across the subject lands, which are more fully discussed below.

Background

West Appa filed an Exploration Plan with the appropriate federal and state agencies concerning the lands noted below in early July 1982. The plan is a resubmission of an approved Exploration Plan and License which was earlier issued to Northwest Carbon Coal Company. The plan includes the activities necessary to drill five drill holes in the area: two on state lands, one on a federal lease, and two on federal lands to be issued as a lease to West Appa as a result of a recent federal lease auction.

- Federal Lease No. SL-50862
- Federal Lease No. U-7653
- Federal Lease No. U-47977 (to be issued)
- State of Utah Lease No. ML-22509

Supplementary Exploration Activities

The exploration activities noted above are to be supplemented by high resolution seismic surveys which are to be conducted on Federal Lease U-7653 and on State Lease ML-22509. The location of the proposed surveys are shown on the attached map as lines WA-1 and WA-3. The activities are to be conducted in accordance with the following information:

Purpose: To obtain information concerning the structural geology of the subject lands including faults, fault displacements, dips, and folds. The two seismic traverses are oriented so as to perpendicularly transect the trace of faults which have been identified on lands to the south (refer Fry and Orange, 1982, attached).

Contact Personnel: Personnel who represent West Appa in regards to the seismic surveys include:

Leonard D. Witkowski, Vice President, Manager of Engineering
Michael J. Minkel, Manager of Geology
West Appa Coal Company
2851 South Parker Road, Suite 650
Aurora, Colorado 80014
Phone (303) 752-2981

The field supervision will be handled by:

Gerald E. Vaninetti, Manager of Exploration Services
Norwest Resource Consultants, Inc.
Suite 606
10 Exchange Place
Salt Lake City, Utah 84111
Phone (801) 364-5343

Timing: Seismic surveys are scheduled for the first week of August 1982. The survey activities should be completed within 8 days of initiation which includes 7 days of shot hole drilling and 3 days of data collection (the days overlap).

Geophysical Contractor: Emerald Exploration Consultants, Inc. will coordinate the activities of seismic crews retained to obtain geophysical seismic data. This is the same group who will be conducting similar activities for Utah Power and Light Company on adjacent lands.

Data Collection Process: The collection of seismic data involves a six step process which consists of the following steps:

- 1) locate survey line in field by flagging routes
- 2) drill shot holes at prescribed spacing patterns along the traverse
- 3) load each shot hole with a small explosive charge (1 to 5 pounds) at the bottom of the hole
- 4) layout geophone arrays generally on as straight a line as possible and immediately adjacent to the shot holes; the geophones are hooked

to a truck-mounted geophysical recording unit which is positioned in a central location along the survey line

- 5) survey location of geophones
- 6) detonate dynamite charges and record data.

Additional information regarding the data collection process are discussed in the attached publication.

Surface Disturbance: Surface disturbances are negligible for seismic surveys of the type contemplated for this program. This is because, when possible, activities are conducted on access roads. Where access roads are not available, back-pack type equipment is used. Generally only a 2' to 3' radius circle around shot holes is disturbed.

Reclamation: All surface disturbances will be reclaimed by means of a rake, shovel, and hoe where cuttings from shot holes are shoveled into the drill hole and the surface raked to blend with natural surroundings. In the case of blow-outs where explosive charges disrupt the surface, if they occur, will be reclaimed in a similar method.

Vehicals: Several rubber-tired vehicals will be required to implement the program. Approximately eight 3/4 ton 4 x 4 pickups, a single 4 x 4 Bronco which houses the geophysical recording equipment, and a single small truck-mounted drill rig will be used for the program.

Duration: The time required to complete the shot holes will vary due to drilling conditions but should approximate 1500' of traverse per day for the drill rig and 1000' per day for the back-pack auger. Upon completion of the shot holes, approximately one line-mile of data can be obtained per day. The total program should be completed within an 8 day period.

Mitigating Measures: All vehicles are equipped with five extinguishers and spark arrestors in order to minimize fire hazards. Field crews carry shovels to address potential fires in areas where vehicals are not used.

All effort will be taken to minimize surface damage which includes the avoidance of endangered and threatened species, archaeological sites, surface improvements, cultural resources, and any other sites of particular concern to the regulatory authorities. Littering and the use of firearms will be prohibited.

Noise Abatement: The detonation of small charges of dynamite in shot holes, such as is planned for this program, results in a muffled sound which can only be heard within a few hundred feet of the detonation site. The charges

detonated in the shallow auger holes is somewhat louder than for the deeper drill holes.

Related Experience: The high resolution seismic program to be conducted on the subject lands will utilize the same contractors who will use the exact same methods used in similar programs conducted for Utah Power and Light Company on adjacent lands over the past two years. The regulatory authorities are invited to refer to these prior surveys to judge the extent and scope of the proposed program.

Line WA-1: This seismic survey line is located within State Lease ML-22509 (see map). The line generally parallels or is located on existing roads. Shot holes are to be drilled on 200 foot centers all along the traverse, each to a depth of 60 feet. Five pound explosive charges will be placed at 60 and 45 feet in these holes. The holes will be drilled in the center of access roads where possible. Road construction activities are not required to provide access to the small truck-mounted rig for the sage-covered flats over which the southern part of the traverse passes.

Geophones will be positioned at the surface all along the seismic line in as straight a line as possible. The geophone arrays will extend about 1200 feet beyond the two ends of the seismic lines.

Line WA-3: This seismic survey line is located within Federal Lease U-7653 (see map). The line utilizes the road already constructed to provide access to drill hole R-3 and extends beyond to the margin of the lease.

Shot holes are to be drilled by a truck-monitored drill rig to a depth of 60 feet each on 200 foot centers on the access road to R-3. Shot holes will be drilled by means of a gas-powered back-pack auger drill for the remainder of the survey line in order to minimize surface disturbance and avoid road construction activities. Groups of three holes, each 6 to 10 feet deep and about 25 feet apart, will be drilled on 100 foot centers in these roadless areas. One pound explosive charges will be placed at the bottom of these holes.

Geophones will be positioned at the surface all along the seismic survey line in as straight a line as possible. The geophone arrays will extend about 1200 feet beyond the northern end of the seismic line.

Staging Areas: Staging areas will not be required in implementing the high resolution seismic survey. All vehicles and most equipment will be driven to Price each night. An explosives magazine secured in a locked metal structure will be positioned in an unobtrusive location removed from the seismic survey lines for the period of time necessary for drilling and loading shot holes.

Travel: The travel requirements in regards to the seismic surveys will involve traversing USFS roads from the cattleguard at the USFS boundary at the Trail Mountain Mine to the project site. These requirements are estimated as follows:

	<u>Road Mileage</u>	<u>Veheical Trips</u>			<u>Total</u>	<u>Total Mileage</u>
		<u>Drill Rig</u>	<u>Crew Pickup</u>	<u>Seismic Crew Vehicals</u>		
● USFS boundary to Mill Canyon turnoff	5.0	2	14	24	40	200.0
● Mill Canyon to Pine Spring turnoff	2.5	2	14	24	40	100.0
● Pine Spring turnoff to WA-1	1.1	2	8	16	26	28.6
● Seismic line WA-1	1.1	2	4	8	14	15.4
● Pine Spring turnoff to fee land	0.6	2	6	12	20	12.0
● Fee land to WA-3	1.7	2	6	12	20	34.0
● Seismic line WA-3	0.5	2	2	6	10	<u>5.0</u>
						395.0

Summary

USFS Lands	345.6 miles
Fee Lands	34.0 miles
State lands	<u>15.4 miles</u>
	395.0 miles

Crews: The crews necessary to implement the seismic surveys consist of the following:

- shot hole drilling crew - 2 persons
- seismic and auger drilling crew - 30 persons
- supervisory personnel - 2 persons

Bonding: No bonds have yet been placed by West Appa in regards to exploration activities for the subject lands. West Appa is prepared to comply with reasonable bonding requirements established by the regulatory authorities.

Site Inspection: A site inspection on the part of regulatory authorities, if required, should be arranged through Norwest Resource Consultants, Inc. Norwest is prepared to conduct a site inspection at the convenience of concerned personnel.

Should you require additional information, please contact me at your earliest convenience.

Sincerely,

NORWEST RESOURCE CONSULTANTS, INC.



J.E. Vaninetti
Manager, Exploration Services

JEV:cc

Attachments

