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NORTHWEST CARBON CORPORATION

E. PETER MATTHIES
EXECUTIVE VICE PRESIDENT

April 6, 1981

P. O. BOX 1526
SALT LAKE CITY, UTAH 84110
801-534-3559

Mr. Dean Stepanek
Associate State Director
Bureau of Land Management
University Club Building
136 East South Temple
Salt Lake City, Utah 84111

RECEIVED

APR 15 1981

DIVISION OF
OIL, GAS & MINING

Re: Filing of Exploration Plan in Tie Fork Canyon
Emery County, Utah

Dear Mr. Stepanek:

Northwest Carbon Corporation, a wholly-owned subsidiary of Northwest Energy Company, wishes to submit this application for an exploration license in Sections 1 and 2, T16S, R7E and Section 34, T15S, R7E, Salt Lake Meridian, Tie Fork Canyon, Emery County, Utah, pursuant to 43 CFR 3400 Coal Management Regulations. The proposed drilling is scheduled for the summer of 1981.

As shown on the attached map, the drill holes are located:

- one in Section 1
- four in Section 2
- one in Section 34

and are all near existing roads. A road use access permit application has been filed with the Manti LaSal National Forest in Price.

Attached is a \$250.00 check for the exploration license fee, along with three copies of the exploration plan.

To expedite the review, copies of this plan have been submitted to the U.S.G.S. Office in Salt Lake City and the Forest Service Office in Price.

If any questions arise, please call Catherine Chachas, our Environmental Engineer, at (801) 534-3470.

Sincerely,



E. Peter Matthies

eb
attachments

EXPLORATION PLAN

1. The following people are responsible for operations under the plan described below and notices and orders should be delivered to any one of them:

E. Peter Matthies, President (801) 534-3559

Al Amundson, Chief Engineer (801) 534-3329

Catherine V. Chachas (801) 534-3470
Environmental Engineer

Wayne W. Hall, Sr. Geologist (801) 534-3698

All with address at:

Northwest Carbon Corporation
P.O. Box 1526
Salt Lake City, Utah 84110

The area which is the subject of this exploration plan is owned in its entirety by the U.S. Government. Therefore, there are no other owners of record of the parcel's surface or subsurface minerals.

2. The following description pertains to the area where exploration is to be conducted and to the potential effect of applicant's operations.

(i) Geology

The areas of interest are located in Sections 1 and 2, T16S, R7E, and Section 34, T15S, R7E, Salt Lake Meridian. These lands are generally located east of the Huntington Creek Canyon, approximately 12 miles northwest of Huntington, Utah, as shown in the attached map. The property is gently sloping and varies from flat to 20% incline with some very steep sloping canyon walls of up to 60% incline.

The Hiawatha coal seam outcrops on the west portion of the property with an approximate thickness of 5 - 11 feet. It is expected that cover over the coal will reach 2,000 feet toward the east end of Section 11. The economically recoverable coals of intent are expected to be found in the lower 1/3 of the Black Hawk formation. The Starpoint sandstone is found at the base of the Blackhawk formation. There are several major faults trending in a north-south direction through the property. Displacement in the Bear Canyon Fault which marks the east boundary of the area of interest is approximately 250 feet down to the west. The Pleasant Valley Fault, which forms the west side of the Pleasant Valley Fault system, is found near the center of Section 10. Between these two principal breaks, several smaller-displacement faults are known to exist. This exploration program is designed to delineate the character of these features as well as to measure the coal seams found in the area.

The strata immediately above the Hiawatha Seam consists of interbedded sands, mudstones, siltstones, and coals. Based on outcrop information, nearby mine sections and preliminary drilling results, the Hiawatha bed which rests on the Starpoint sandstone, is stratigraphically the lowest potentially mineable coal found in the area. Above the Hiawatha seam, one or more of the Hiawatha A and B, Blind Canyon, Bear Canyon or Wattis bed may have developed mineable height coal in portions of the area of interest.

All coal in the area is of bituminous quality, suitable for the steam market. Coal quality is expected to approximate 12,200 BTU, with a 0.7% sulfur content. Further exploration will supply more complete figures.

(ii) Water

From the Regional Analysis of the Final Environmental Statement for Central Utah, the mean annual precipitation for the area of interest varies between 16 and 24 inches. As is explained in more detail in the Site Specific Analysis for the McKinnon properties, this precipitation is largely in the atmospheric conditions created by air moving along the up-slope on the western side of the Wasatch Plateau. The Huntington Creek is the major source of drainage for the area, in a northwest to southeast direction.

To the north of the property lies Tie Fork Canyon; to the east is the Left Fork of the Cedar Creek, that runs in a west-east direction into the Huntington Creek. Most of the immediate drainage is of an intermittent type, flowing into the perennial Huntington Creek. Ground water flow from this area is expected to be similar to that associated with the McKinnon properties. The flow would probably follow the pattern of the surface water courses as a result of the fracturing associated with the faults in the area.

(iii) Vegetation

The vegetation over the property is similar to that outlined in the Final Environmental Statement for Central Utah with reference to the Belina Mines and the McKinnon Mines. The northern slopes, because of their steepness, do not propagate vegetation. The upper areas are largely covered with conifer and aspen type trees on the north-facing slopes and aspen interspersed with mountain meadows on the south-facing slopes. Because of the high elevation, which ranges from 7200 feet to 9200 feet, mountain brush and ponderosa pine are also found. (Figure II-14 of Final E.I.S. shows the typical vegetation according to elevation).

(iv) Fish Habitat

Huntington Creek, the northernmost tributary of the San Rafael River, originates on the Wasatch Plateau and flows in a southeast direction. The headwaters of the Huntington Creek come from the Electric Lake, which is a 476-acre reservoir managed for cut-throat trout. The area of the Creek north of the Electric Lake is closed for fishing. Twenty-two miles of the Huntington Creek, between the

Electric Lake Dam, and the main river diversion, bear cut-throat, brown and rainbow trout. Brown and rainbow are stocked annually while cut-throats are naturally reproduced in the stream. Below the main diversion the Creek is dewatered for irrigation, and the return water downstream is too low in quality to support game fish. No endangered species are known to inhabit the waters of the area.

(v) Wildlife

The Wasatch Plateau is one of the major areas of mule deer population, which represents the main wildlife species in this property. One of the three major elk herd units in Central Utah is also in this area. North of the lands of interest, moose are present in the Fish Creek area, bordering with the Moose Management District. Also known to exist in the area are cougar and black bear.

Small species of wildlife include cottontail and snowshoe rabbit, pheasant, quail, and grouse.

Gold eagles are found throughout the region and several active eyries are present. Because established roads into the area will be used for access to the exploration locations, the area's fish and animal habitats will not be disturbed.

(iv) Present Land Use

The land including the adjacent to the area to be explored is part of the Manti-LaSal National Forest, characterized in large part by natural vegetation and grazing for wild animal species. Some land surrounding the area is steeply sloping and cannot support vegetation or animal habitation.

3. The following description concerns the exploration operations to be conducted by applicant on the land under application:

(i) Method of Exploration and Types of Equipment to be Used

The proposed exploration will consist of drilling one hole in Section 1, four holes in Section 2, T16S, R7E and one hole in Section 34, T15S, R7E, Salt Lake Meridian. Geophysical logging of these holes is proposed. The approximate locations of these holes are as follows as indicated on the attached map.

1. NW 1/4 of NW 1/4, Section 1, T16S, R7E
2. NE 1/4 of NE 1/4, Section 2, T16S, R7E
3. NW 1/4 of SE 1/4, Section 2, T16S, R7E
4. SE 1/4 of NW 1/4, Section 2, T16S, R7E
5. SW 1/4 of SW 1/4, Section 2, T16S, R7E
6. SE 1/4 of SE 1/4, Section 34, T15S, R7E

These holes will be drilled from the surface to the depth of the underlying sandstone. At least one of the holes will be core-drilled from approximately 200 feet above the coal-bearing member to the underlying sandstone member, and a geophysical log will be taken on that hole. The remaining holes will be plug-drilled and logged geophysically. The expected depth of all holes is approximately 2,000 feet. Equipment will consist of one or more truck-mounted drill rigs, water trucks, and several pick-up trucks. Access to the drilling holes will be from existing roads.

(ii) Prevention of Damage to the Environment

For fire prevention, each rig, water truck, and pick-up truck will be equipped with a fire extinguisher. Drilling sump water will also be used in the event of a fire.

Soil disturbance will be kept to a minimum and all disturbed areas will be graded in such a manner that excessive soil erosion will be minimized. For the most part, existing access roads into the area will be used. Construction of additional roads for the proposed exploration operations will be kept at a minimum, as shown in the attached map.

Surface waters that run across the disturbed areas will be diverted into the sump used for drilling operations. This will prevent water crossing the disturbed area from entering into natural drainages. No ephemeral, intermittent, or perennial streams will be diverted during these exploration activities. In the event ground water were encountered during drilling activities, the natural cementing of the drilling operation would keep drilling muds from contaminating it. All aquifers encountered will be cemented off as each hole is plugged upon completion of drilling.

The only significant air-born emissions from the exploration operation will be amounts of suspended particules and fugitive dusts created by traffic on access roads. Travel on these roads will be intermittent and activities are not expected to create significant amounts of particulate matter. Most dust particles will be large enough to rapidly settle out of the atmosphere. Since most drilling operations will be using water as a drilling medium, no significant amount of dust will be released.

Significant impact on natural wildlife is not expected, because all roads are already existing. The drilling location is remote from any populated area or controlled public activities so that no hazard to public health and safety will exist. As explained above, no fish habitat is present in the vicinity.

(iii) Plugging of Drill Holes

All drill holes will be plugged in accordance with USGS standards. Cuttings will be disposed of down the hole or scattered. The

entire length of the hole will be plugged with cement. All aquifers will therefore be cemented off on each side of the water-bearing zone.

(iv) Surface Reclamation

Immediately following the completion of drilling activities and plugging of drill holes, the disturbed land area will be reclaimed in accordance with surface mining regulations. The drillsites will be back-filled to conform with the surrounding terrain, water barred where necessary, tilled with shovels or portable roto-tillers to loosen the soil, and reseeded with the mixture specified by the authorized officers. Slash material pushed aside during clearing operations will be scattered over the area. Debris will be hauled away. Topsoil will be stockpiled prior to operations and replaced during reclamation. Where the area is steep, it will be terraced to prevent deterioration of the soil prior to the re-establishment of vegetation. Planting will be done by the broadcast method for grasses and undergrowth-type vegetation. Shrubs, if necessary, will be planted by starter plants.

4. Timetable

Drilling operations are expected to begin as soon as possible after drilling of the Tie Fork property in the summer of 1981. Operations are presently anticipated to last approximately two months. Completion of operations is expected by October, 1981. If postponement is necessary, work will be completed the spring of 1982.

5. Topographic Maps

The attached map shows topographic and drainage features within the property. No bodies of water are known to exist.

6. Additional Information

The area has not been surveyed for cultural, paleontological, or other known site specific determinations. Before drilling and drillsite establishment, general surveys will be conducted to assure that no existing cultural locations are destroyed.

The major source of impact on terrestrial fauna will result from surface disturbance and increased human activity. Increase in human activity and vehicular traffic in the area will result in the harassment of a variety of wildlife species, such as deer, small mammals, and birds. The relatively small amount of surface disturbance will make these impacts minor. Due to the remote location of the drillsites, very few people, if any, will view the operations.

Adverse environmental effects will be short in duration. Dust, noise, personnel, and vehicular traffic will be intermittent, and will have little effect on plant and animal life. Soil disturbances will be minimal and all disturbed areas will be properly graded and/or

reseeded. The activity will be monitored by inspections, and adverse environmental effects reduced as much as possible. The remoteness of the drillsite locations will minimize public irritation.

There are no alternatives to the proposed plan. If the coal is to be mined, additional information is required to develop mining plans. Exploration by drillhole methods is necessary to determine existence, thickness, and quality of coal, and to investigate the overburden rock structure for use in mine planning. Drill will cause the least adverse environmental effect of known exploration methods, including shaft sinking and trenching.

DETACH BEFORE DEPOSITING	VOUCHER NUMBER	
INVOICE NUMBER	DESCRIPTION	AMOUNT
032005	For exploration license fee to do drilling in open federal lands north of Tie Fork Properties. Sections 1 & 2, T16S, R7E and Section 34 T15S, R7E	\$250.00

NORTHWEST CARBON CORPORATION, P.O. Box 1526, Salt Lake City, Utah 84110

CHECK REQUEST

FORM NWP 1013 (12-76)

Company

Northwest Carbon Corporation

Request Date 3/23/81

PLEASE ISSUE A CHECK IN THE AMOUNT OF \$ 250.00

TO: Mailing Date _____

Name: Bureau of Land Management

Address: 136 East South Temple

City-State-Zip Code: Salt Lake City, Utah 84111

To Attention Of: _____

<input type="checkbox"/> Mail To Payee and attach _____	<input checked="" type="checkbox"/>	Deliver To: <u>Catherine Chachas</u> When: _____ Ext.: <u>3470</u>	<input type="checkbox"/> Special Handling _____
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TO BE TYPED ON CHECK

INVOICE NO.	DESCRIPTION	AMOUNT
	For exploration license fee to do drilling in open federal lands north of Tie Fork Properties. Sections 1 & 2, T16S, R7E and Section 34 T15S, R7E	\$ 250 00

EXPLANATION

DISTRIBUTION

ACCOUNT DESCRIPTION	Co. XX	Loc. XXX	Acct./W.O. XXXXX	Sub. Acct. XX	Variable XXXXXXXXXXXX	AMOUNT
Northwest Carbon Corporation						\$250 00

FOR USE BY CONTROLLER'S AREA

APPROVALS

Calculations OK:

Requested By:

Coding Checked By:

Approved By:

Catherine Chachas

NORTHWEST CARBON CORPORATION

315 EAST 200 SOUTH
P O BOX 1526
SALT LAKE CITY, UTAH 84110
801-534-3500

April 6, 1981

Mr. Ira W. Hatch
District Forest Ranger
U.S. Forest Service
10 North Carbon Ave.
Price, Utah 84501

Dear Mr. Hatch:

Attached are two copies of the permit application for road access to perform exploratory drilling in Sections 1 and 2, T16S, R73, and Section 34, T15S, R7E, SLM.

All drill holes, maximum of six, will be accessed via existing roads as outlined in green on the attached map.

An application for an exploration license has been filled with the Bureau of Land Management in the Salt Lake office. A copy of this application is attached for your reference.

Your prompt consideration will be appreciated.

Sincerely,

Catherine V. Chachas

Catherine V. Chachas
Environmental Engineer

CVC/bno

Attachments

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

APPLICATION FOR PERMIT
NON-FEDERAL COMMERCIAL USE OF ROADS RESTRICTED BY ORDER
(Reference FSM 7770)

NOTE: This report form is authorized by Acts of June 30, 1914; April 24, 1950; June 12, 1960, and October 14, 1964 (USC 478, 572, 530 and 532-38). No permit may be issued unless a completed Form 7700-40 is received.

FOR OFFICIAL USE ONLY					DATE OF APPLICATION
REGION	STATE	COUNTY	FOREST	RANGER DISTRICT	

1. APPLICANT (Name, address, and Zip code) TELEPHONE NUMBER

Northwest Carbon Corporation
P.O. Box 1526
Salt Lake City, Utah 84110

2. DESCRIPTION AND MILEAGE OF ROAD(S) OR ROAD SEGMENT(S) TO BE USED (as shown on attached map)

Access to the drill holes shown on the attached map will be via existing roads in Section 1 and 2, T16S R7E and Section 34, T15S R7E, SLM.

3. PURPOSE OF USE

HAULING LOGS OR LUMBER _____ MBF
(Quantity)

HAULING OTHER MATERIALS _____ TONS
(Quantity)

DESCRIBE MATERIALS These roads will be used for the transportation of

a drilling rig, water truck, and pick-up trucks.

4. USE SCHEDULE

SEASON	NUMBER OF DAYS OF USE	TYPE OF TRUCK(S) TO BE USED	TYPE OF LOADING TO BE USED
June 1, 1981	180 days	drill rig	25,000 lbs.
Oct. 31, 1981		water truck	20,000 lbs.
		pick-up truck	6,000 lbs.

5. PLANS FOR FUTURE USE (Not applied for on this application)

HAULING LOGS OR LUMBER _____ MBF
(Estimated Quantity)

HAULING OTHER MATERIALS _____ TONS
(Estimated Quantity)

DESCRIBE MATERIALS _____

ESTIMATED PERIOD OF USE FROM June 1, 1981 TO Oct. 31, 1981

SIGNATURE OF APPLICANT

Northwest Carbon Corporation

(OVER)

DATE

April 6, 1981

REPORT ON APPLICATION
(To Be Completed By District Ranger)

1. GENERAL DESCRIPTION AND ADAPTABILITY OF ROAD(S) FOR PROPOSED USE. (Show road(s) on 1/2" Forest Transportation Map)

2. IMPROVEMENTS OR BETTERMENT WORK NEEDED ON ROAD(S) TO SAFELY ACCOMMODATE THE ADDITIONAL TRAFFIC

3. IMPROVEMENTS OR BETTERMENT WORK DESIRED

4. RECOMMENDATIONS OR COMMENTS. (Include any factors which might affect the granting of the hauling permit or future use of the road(s)).

REPORT SUBMITTED	NAME AND SIGNATURE	TITLE	DATE
REPORT APPROVED	NAME AND SIGNATURE	TITLE	DATE