

CP

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: WELL LOG \_\_\_\_\_ ELECTRIC LOGS \_\_\_\_\_ FILE  WATER SANDS \_\_\_\_\_ LOCATION INSPECTED \_\_\_\_\_ SUB REPORT/abd \_\_\_\_\_

DATE FILED **5-25-84**

LAND: FEE & PATENTED \_\_\_\_\_ STATE LEASE NO. \_\_\_\_\_ PUBLIC LEASE NO. **U-15750** INDIAN \_\_\_\_\_

DRILLING APPROVED: **6-4-84 GAS**

SUDDEN IN: \_\_\_\_\_

COMPLETED: \_\_\_\_\_ PUT TO PRODUCING: \_\_\_\_\_

INITIAL PRODUCTION: \_\_\_\_\_

GRAVITY API \_\_\_\_\_

GOR: \_\_\_\_\_

PRODUCING ZONES: \_\_\_\_\_

TOTAL DEPTH: \_\_\_\_\_

WELL ELEVATION: **9250' GR**

DATE ABANDONED: **12-21-84 LA Rescinded APD.**

FIELD: **WILDCAT 3/96**

UNIT: **TRAIL CANYON**

COUNTY: **EMERY**

WELL NO. **LIGHTHOUSE 1-10** API NO **43-015-30196**

LOCATION **1300' FNL** FT. FROM (N) (S) LINE. **1350' FWL** FT. FROM (E) (W) LINE. **NENW** 1/4 - 1/4 SEC **10**

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
				<b>16S</b>	<b>16E</b>	<b>10</b>	<b>BOW VALLEY PRTROLEUM INC</b>



Telephone: (303) 861-4366  
Telecopier: (303) 832-3825  
Telex: 45-0033

May 18, 1984

**RECEIVED**

**MAY 21 1984**

**DIVISION OF OIL  
GAS & MINING**

Bureau of Land Management  
Moab District  
Price River Resource Area  
900 North 7th East  
Price, UT 84501

Attention: Mr. Mark Mackiewicz

RE: LIGHTHOUSE #1-10 WELL  
SEC 10-16S-16E  
EMERY COUNTY, UT

Dear Mr. Mackiewicz:

Enclosed for your handling, please find two (2) copies of Bow Valley's Application for Transportation and Utility Systems & Facilities on Federal Land (OMB No. 1004-0060).

In addition, please find attached the supplemental information requested on Public Corporations, as well as a map showing our road into the location. BLM land was determined by the use of colored land status map supplied by your agency.

Should you require additional information, please do not hesitate to contact me.

Thank you for your kind attention and cooperation. Looking forward to hearing from you at your most earliest convenience.

Sincerely,

BOW VALLEY PETROLEUM INC.

David A. Gomendi  
Manager, Drilling & Production

DAG:jb

cc: State of Utah  
Dept of Nat'l Resources

BLM  
Salt Lake City, UT

State of Utah  
Division of Land

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING

SUBMIT IN TRIPLICATE\*  
(Other instructions on  
reverse side)

3

5. Lease Designation and Serial No.

U15750

6. If Indian, Allottee or Tribe Name

N/A

7. Unit Agreement Name

Trail Canyon

8. Farm or Lease Name

Lighthouse

9. Well No.

1-10

10. Field and Pool, or Wildcat

~~Book 61188~~ - Wildcat

11. Sec., T., R., M., or Blk.  
and Survey or Area

Sec. 10-16S-16E

12. County or Parrish 13. State

Emery UT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL

DEEPEN

PLUG BACK

b. Type of Well

Oil Well

Gas Well

Other

Single Zone

Multiple Zone

2. Name of Operator

Bow Valley Petroleum Inc.

3. Address of Operator

1700 Broadway, Suite 900; Denver, CO 80290

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*

At surface

1350' FWL & 1300' FNL

At proposed prod. zone

same

14. Distance in miles and direction from nearest town or post office\*

83 road miles SE from Price, UT

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drig. line, if any)

1320'

16. No. of acres in lease

2520.12

17. No. of acres assigned to this well

640

18. Distance from proposed location\* to nearest well, drilling, completed, or applied for, on this lease, ft.

4.25 miles

19. Proposed depth

12,500

20. Rotary or cable tools

Rotary

21. Elevations (Show whether DF, RT, GR, etc.)

9230' ungraded GL.

22. Approx. date work will start\*

July 1, 1984

23.

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
17 1/2"	13-3/8	54#	3000'	Cement to surface
12 1/4"	9-5/8	40#	9000'	1900 cu. ft (TOC ~5000')
8-3/4"	7"	26-29#	12,500'	630 cu. ft.

To drill a 12,500' Morrison/Dakota gas test. Evaluation of oil potential will be cone in the Mancos shale.

A rotating head will be used on all holes. Minimum 3000 psi BOPE will be nipped up and tested prior to drilling 8-3/4" hole. All BOPE will be operationally tested every 24 hours, and pressure tested to rated before drilling out any casing shoe or zones in which high pressure is expected. See attached BOPE diagram.

RECEIVED

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

MAY 25 1984

DIVISION OF OIL  
GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen, give normally observed data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

Signed

*[Signature]*

Title

Staff Engineer

Date

5-22-84

(This space for Federal or State office use)

Permit No.

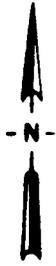
Approval Date

Approved by

Title

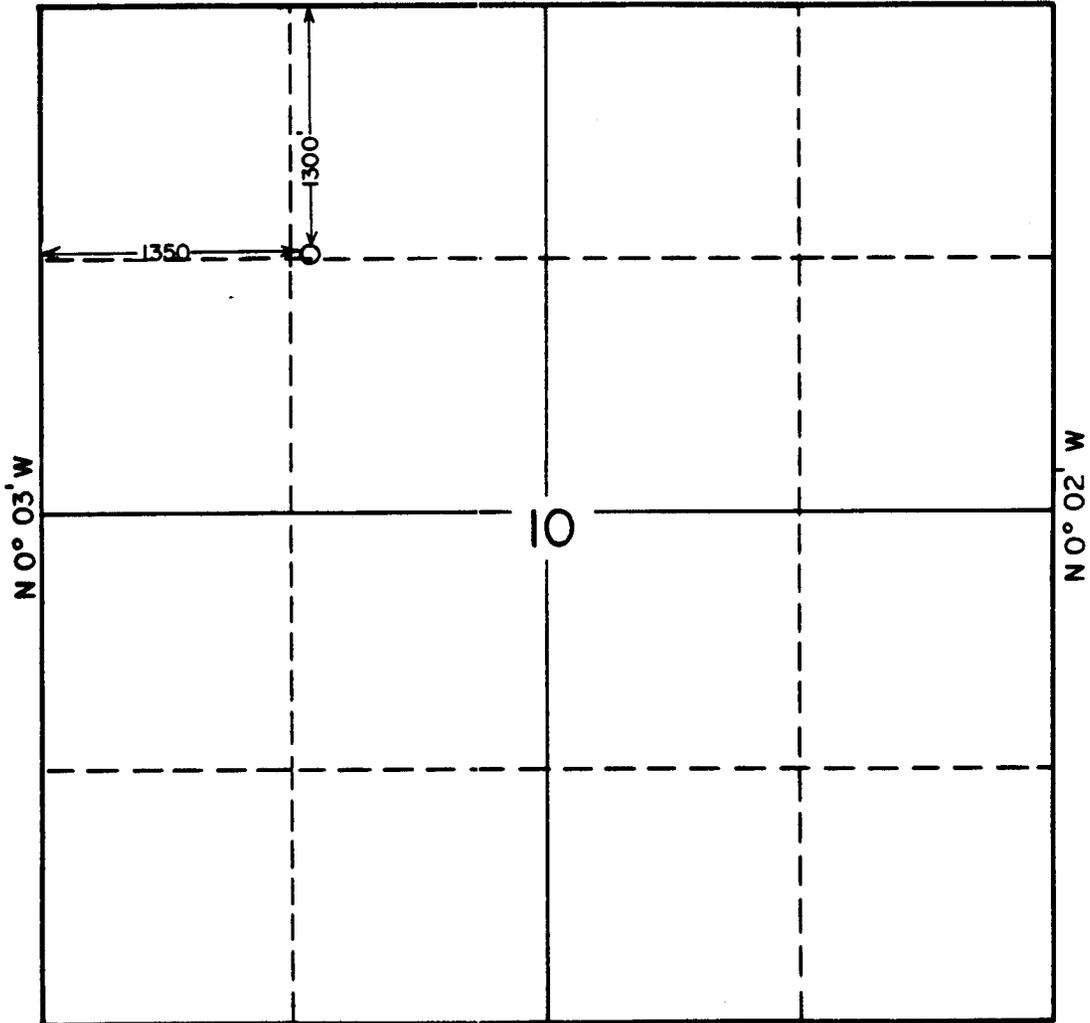
Date

Conditions of approval, if any:



Well location, located as shown in Section 10,  
C NW, T16S, R16E, S.L.B. & M.,  
Emery County, Utah.

T16S, R16E, S.L.B. & M.



- Not surveyed

Scale: 1" = 1000'

 **Bow Valley Petroleum Inc.**  
Western Division

Figure 1

**APPLICATION FOR TRANSPORTATION AND  
 UTILITY SYSTEMS AND FACILITIES  
 ON FEDERAL LANDS**

FORM APPROVED  
 OMB NO. 1004-0060  
 Expires May 31, 1983

**FOR AGENCY USE ONLY**

**NOTE:** Before filing the application, the applicant should completely review this package and schedule a preapplication meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with the help of the agency representative, the application can be completed at the preapplication meeting.

Application Number

Date filed

1. Name and address of applicant (include zip code)

Bow Valley Petroleum Inc.  
 1700 Broadway, Suite 900  
 Denver, CO 80290

A Delaware Corporation

2. Name, title, and address of authorized agent if different from Item 1 (include zip code)

N.A.

3. TELEPHONE (area code)

Applicant

303-861-4366

Authorized Agent

David A. Gomendi

4. As applicant are you? (check one)

- a.  Individual
- b.  Corporation\*
- c.  Partnership/Association\*
- d.  State Government/State Agency
- e.  Local Government
- f.  Federal Agency

\* If checked, complete supplemental page

5. Specify what application is for: (check one)

- a.  New authorization
- b.  Renew existing authorization No. \_\_\_\_\_.
- c.  Amend existing authorization No. \_\_\_\_\_.
- d.  Assign existing authorization No. \_\_\_\_\_.
- e.  Existing use for which no authorization has been received\*
- f.  Other\*

\* If checked, provide details under Item 7

6. If an individual, or partnership are you a citizen(s) of the United States?  Yes  No

7. Project description (describe in detail): (a) Type of system or facility, (e.g. canal, pipeline, road); (b) related structures and facilities; (c) physical specifications (length, width, grading, etc.); (d) term of years needed; (e) time of year of use or operation; (f) volume or amount of product to be transported; (g) duration and timing of construction; and (h) temporary work areas needed for construction. (Attach additional sheets, if additional space is needed.)

Authorization is being requested for use of an existing unimproved road that accesses Federal Land under the jurisdiction of the Bureau of Land Management. The purpose of the access is to drill an exploratory well on a Federal Lease to obtain commercial quantities of oil or gas. Please see the attached map.

The proposed road is marked in green.

Traveling south out of Myton, Utah on county road 53, proceed to the Duchesne/Carbon county line. Go approximately three miles curving eastward to a turnoff on a dirt road going south. Proceed southward on the dirt jeep trail as outlined on the attached map. Please notice the misprint of Township 16W as highlighted in red on the attached map. The following townships and ranges are traveled. Section 16E-12S; 15E-12S, 15E-13S, 14E-13S, 14E-14S, 15E-14S, 15E-15S, 16E-15S, and 16E-16S. Approximately 32 miles will be traveled of which approximately 17½ miles are on BLM land.

8. Attach map covering area and show location of project proposal

9. State or local government approval:  Attached  Applied for  Not required

10. Nonreturnable application fee:  Attached  Not required

11. Does project cross international boundary or affect international waterways?  Yes  No (If "yes," indicate on map)

12. Give statement of your technical and financial capability to construct, operate, maintain, and terminate system for which authorization is being requested.

See the attached annual report.

13a. Describe other reasonable alternative routes and modes considered.

No other reasonable alternatives exist.

b. Why were these alternatives not selected?

Unreasonable because roads would have to be blasted; therefore, destroying more of the environment than necessary.

c. Give explanation as to why it is necessary to cross Federal lands.

A jeep trail is already in use.

14. List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency. (Specify number, date, code, or name.)

BLM road right-of-way granted for the Federal #2-33 well in Mesa County, Colorado.  
(Federal Lease No. C-011859; Federal Serial Number C-31814; Right-of-Way granted 10-26-81)

15. Provide statement of need for project, including the economic feasibility and items such as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and (c) expected public benefits.

- a) Estimated cost to upgrade road is approximately \$50,000.
- b) No reasonable alternative exists.
- c) Increase access to Federal Lands for grazing or hunting purposes.

16. Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles.

Should not have any adverse effect on the sparsely populated area, either socially or economically.

17. Describe likely environmental effects that the proposed project will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land, including vegetation, permafrost, soil, and soil stability.

- a) None
- b) None, the road already exists
- c) None
- d) Not necessary
- e) Temporary increase during operations.
- f) No effect as the road is already in place.

18. Describe the probable effects that the proposed project will have on: (a) populations of fish, plant, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

Wildlife will in no way be endangered or damaged.

19. Name all the Department(s)/Agency(ies) where this application is being filed.

Bureau of Land Management - Price, UT  
State of Utah - Oil & Gas Conservation Commission  
Bureau of Land Management - Salt Lake City, Utah  
State of Utah - Division of Land,

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and believe that the information submitted is correct to the best of my knowledge.

Signature of Applicant

Date



4-30-84

Title 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

**NOTICE OF STAKING**  
 (Not to be used in place of  
 Application to Drill Form 9-331-C)

RECEIVED  
 6 1983  
 BOW VALLEY  
 PETROLEUM INC.

1. Oil Well  Gas Well  Other

**2. Name of Operator**

Bow Valley Petroleum Inc.

**3. Address of Operator or Agent**

1700 Broadway, Suite 900; Denver, CO 80290

**4. Surface Location of Well  
 (Governmental 1/4 or 1/4 1/4)**

1350' FWL & 1300' FNL

Attach: Topographical or other acceptable map  
 showing location, access road, and lease boundaries.

**14. Formation Objective(s)**

Morrison

**15. Estimated Well Depth**

12,500'

**5. Lease Number**

U15750

**6. If Indian, Allottee or Tribe Name**

N/A

**7. Unit Agreement Name**

Trail Canyon

**8. Farm or Lease Name**

Lighthouse

**9. Well No.**

1-10

**10. Field or Wildcat Name**

Book Cliffs - Wildcat

**11. Sec., T., R., M., or  
 Blk and Survey or Area**

Sec. 10-16S-16E

**12. County or Parish**

Emery

**13. State**

UT

**16. To Be Completed by Operator Prior to Onsite**

- a. Location must staked
- b. Access Road Flagged
- c. Sketch and/or map of location, showing road, pad dimensions, reserve pit, cuts, and fills  
 (To be provided at onsite)

**17. To Be Considered By Operators Prior to Onsite**

- a. H<sub>2</sub>S Potential
- b. Private Surface Ownership
- c. Cultural Resources (Archaeology) -
- d. Federal Right of Way

*Not a surveyed  
 Plat*

**18. Additional Information**

*W/cond*

**19. Signed**

*[Signature]*

Title

S

**NOTICE OF STAKING**  
(Not to be used in place of  
Application to Drill Form 9-331-C)

RECEIVED  
6 1983  
BOW VALLEY  
PETROLEUM INC.

1. Oil Well  Gas Well  Other

5. Lease Number

U15750

6. If Indian, Allottee or Tribe Name

N/A

7. Unit Agreement Name

Trail Canyon

8. Farm or Lease Name

Lighthouse

9. Well No.

1-10

10. Field or Wildcat Name

Book Cliffs - Wildcat

11. Sec., T., R., M., or  
Blk and Survey or Area

Sec. 10-16S-16E

12. County or Parish

Emery

13. State

UT

2. Name of Operator

Bow Valley Petroleum Inc.

3. Address of Operator or Agent

1700 Broadway, Suite 900; Denver, CO 80290

4. Surface Location of Well  
(Governmental 1/4 or 1/4 1/4)

1350' FWL & 1300' FNL

Attach: Topographical or other acceptable map  
showing location, access road, and lease boundaries.

14. Formation Objective(s)

Morrison

15. Estimated Well Depth

12,500'

16. To Be Completed by Operator Prior to Onsite

a. Location must staked

b. Access Road Flagged

c. Sketch and/or map of location, showing road, pad dimensions, reserve pit, cuts, and fills  
(To be provided at onsite)

17. To Be Considered By Operators Prior to Onsite

a. H<sub>2</sub>S Potential

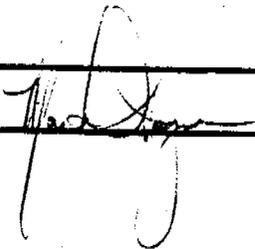
b. Private Surface Ownership

c. Cultural Resources (Archaeology) -

d. Federal Right of Way

18. Additional Information

19. Signed



Title

Staff Engineer

Date

5-22-84



5. Pressure Control - Schematic Attached

<u>Depth Interval</u>	<u>Pressure Rating</u>	<u>Test Schedule</u>
0-3500	2000 psi	Rotating head - entire well
3500-9000	5000	Operationally one time a day as below
9000-12,500	500	All BOPE tested to rated pressure when first nipple up and after back casing string set. Also tested prior to drilling any high pressured zones.

6. Circulating Media

<u>Depth</u>	<u>Mud Type</u>	<u>Vis</u>	<u>MW</u>	<u>Minimum Surface Vol</u>	<u>Barite On Loc</u>	<u>Comments</u>
3000	air/mist	N/A	N/A	N/A		look for water
3000-9000	air/mist	N/A	N/A	N/A	"	watch condition of hole
9000-12500	air/mist	N/A	N/A	N/A	"	

7. Auxiliary Equipment

Kelly Cocks yes Stabbing Valve yes  
 DP Floats yes Geolograph yes  
 Mud Monitoring yes Mud logging @ 8000'

8. Well Evaluation

Coring: None  
 Flow Testing: None during drilling, DST in Mancos  
 Logging:

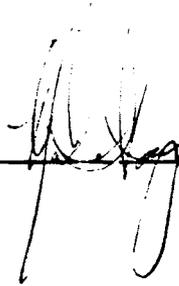
<u>Log Type</u>	<u>Depth</u>	<u>Scale</u>	<u>Log Type</u>	<u>Depth</u>	<u>Scale</u>
DIL-GR	8200-12500	5"	Dipmeter	9000-12500	5"
Sonic	8200-12500	5"			
Density Neutron	8200-12500	5"			

9. Potential Hazards (Abnormal pressure, lost circ, sour gas)

<u>Depth</u>	<u>Hazard</u>	<u>Preparation</u>
0-4000	Possible lost circulation	LCM material and sufficient mud
	If it becomes necessary to mud up.	will be on location

10. Anticipated Starting Date July 1, 1984

Duration of Operation 100 days

Signed 

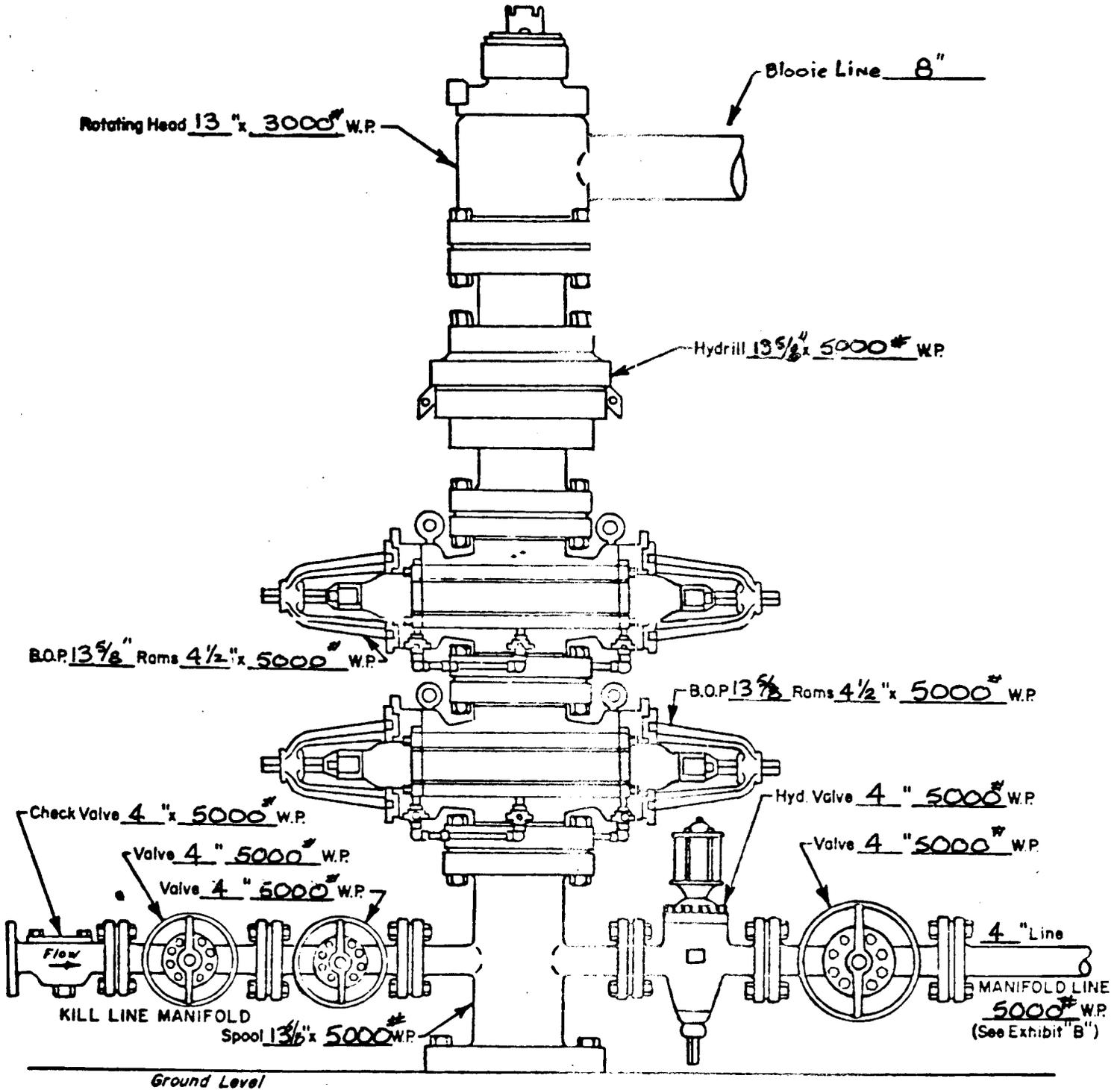
# BOW VALLEY PETROLEUM

## EXHIBIT A-\_\_\_

WELL NAME: Lighthouse 1-10

LOCATION: Sec. 10 T16S R16E

EMERY Co UTAH



WELL HEAD B.O.P.  
5000 # W.P.

- Manual
- Hydraulic

Will DRILL 12 1/4" / 8 3/4" HOLES  
THROUGH THIS EQUIP.

## MULTIPOINT SURFACE USE AND DEVELOPEMENT PLAN

ATTACHED TO FORM 9-331C  
LIGHTHOUSE 1-10  
BOCK CLIFFS-WILDCAT

### I. Existing Roads: See the attached map.

- A. The proposed wellsite will be staked as shown in Figure 1.
- B. From Myton go south on county road 53 approximately 30 miles to Nine Mile Creek. Then East and South on BLM road (Dry Creek Canyon) to Bruin Point. Then Southeast along the top of the Roan Cliffs 17 miles (BLM and Private road) into Section 5, T16S, R16E. Finally 1 3/4 miles on jeep trail to location in Section 10, T16S, R16E. This will be upgraded.
- C. The access road is shown on the map Figure 2 in red. A BLM right-of-way permit is being processed. A private ROW agreement has been acquired.
- D. The well is a Wildcat.
- E. All existing roads within one mile are shown in Figure 2.
- F. The roads from Bruin Point and into Section four can accomodate the rig trucks and equipment, in their present condition. (The jeep trail into Section ten will have to be improved, crowned and ditched per BLM and landowner specifications.)

### 2. Planned Access Roads: See the attached map.

Approximately 9240ft of existing jeep trail on BLM land will be upgraded to accomodate trucks, bulldozers and other equipment to the location in Section ten.

- A. Width 30'.
- B. Maximum Grades, 2% or less.
- C. Turnouts, none.
- D. Culverts, as needed & specified by individuals in charge. No cuts and fills anticipated; existing road.
- E. The road will be crowned, ditched and graveled per BLM and landowner specifications.
- F. New gates will be installed as desired by landowners per ROW agreement.

### 3. Location of Existing Wells: There are no existing wells within a four mile radius of the proposed location. (See attached map) Figure 3.

Lighthouse 1-10  
Multipoint Surface Use and  
Development Plan

1. Water Wells - none.
2. Abandoned Wells - none.
3. Temporarily abandoned wells - none.
4. Disposal wells - none.
5. Drilling wells - none.
6. Producing wells - none.
7. Shut-in wells - none.
8. Injection wells - none.
9. Monitoring wells - none.
10. One spring located within 1300 feet.
11. Bow Valley has agreed to restore and reclaim the Chevron Lighthouse #1 location during our operations this summer. (Landowner ROW agreement).

4. Location of Existing or Proposed Facilities:

- A. No existing facilities.
- B. New Facilities.

1. The proposed production facilities will be located within the drilling pad. A separator, dehydrator, metering facilities and pipeline will be installed if commercial production is established. (Figure 4).
2. The drill pad will be 300' x 235'. An open pit 50' x 75' will be required.
3. Outside construction materials will be purchased from private landowners within six miles of the location.
4. The reserve pit will be fenced on three sides during drilling operations, and closed in on four sides until reclamation is commenced. (See fence diagram Figure 5).

- C. Plans for rehabilitation of disturbed area no longer needed for operations after construction is complete.

1. The reserve pit will be fenced. When the pit is dry, the pit will be backfilled and the fence removed.
2. The area of the drill site no longer needed for production operations, including the reserve pit, will be recontoured to the natural level. The top soil will be redistributed and will be reseeded with a seed mixture per BLM and landowner specifications.

5. Location and Type of Water Supply:

- A. Water will be obtained from local sources (Snap Creek).
- B. No water well will be drilled.

Lighthouse 1-10  
Multipoint Surface Use and  
Development Plan

6. Source of Construction Materials:

- A. The proposed location will utilize soil material which is on the location. Some outside material (gravel) will be required to upgrade the proposed access road. This material will be provided by private landowners within six miles of the proposed location.
- B. The proposed location is on Federal land with Federal minerals. No Indian land is involved.
- C. Topsoil will be stock piled at the wellsite for restoration purposes. The soil material will be obtained from the immediate area of the drilling operations and will be used to fill in the low areas. Excess material from the reserve pit will be stockpiled and used in recontouring the location.
- D. The 9240ft access road will be across private/BLM land. No Indian land is involved. (This is a jeep trail that will be upgraded).

7. Methods for Handling Waste Disposal:

- A. Cuttings will be buried in the reserve pit.
- B. Drilling Fluids will be disposed of in the reserve pit. The water will be allowed to evaporate and the remaining solids will be buried.
- C. Produced fluids will be handled through the production facilities to be located on the drilling/production pad. No produced water is expected. If water is produced, it will be disposed of in accordance with NTL-2B.
- D. A chemical toilet will be provided and sewage will be hauled to an appropriate disposal facility.
- E. A fenced and covered trash pit for flammable materials will be provided. The pit will be completely enclosed with small mesh wire. All non-flammable waste will be removed to approved dump facilities.
- F. When the rig moves out, all extraneous material will be disposed of as garbage or hauled to an approved dump site. When the pits have dried, they will be backfilled and recontoured. Note restoration program.

8. Ancillary Facilities: No camps or airstrips will be needed.

9. Well Site Layout: See the attached plat. (Figure 6).

Until surveying can be completed after weather conditions permit, a cut and fill diagram cannot be provided. This will be provided prior to the onsite inspection.

It is anticipated that maximum cut and fill will be less than 8ft. The reserve pit will be 10ft deep. The reserve pit will be cut to prevent seepage and possible spillage. A 30' x 40' flare pit will be built on the SW corner of the location at least 125' from the wellbore. Both pits will be unlined.

Lighthouse 1-10  
Multipoint Surface Use and  
Development Plan

10. Restoration Program:

- A. A portion of the reserve pit will be used for completion operations.
- B. The location will be reseeded as specified by the BLM and surface landowners. The new seeds will be drilled or raked in and fertilized. Native grass plugs will also be planted to speed growth throughout the disturbed area.
- C. Prior to rig release, the reserve pit will be fenced and so maintained until cleanup.
- D. Pits will be maintained free of oil. Pits will be flagged if temporary conditions require so doing.
- E. Timetable
  - 1. the reserve pit will be backfilled within one year of releasing rig, pending weather conditions.
  - 2. The location will be recontoured and rehabilitated within one summer after plugging and abandoning wellbore, or the completion operations have ceased.
  - 3. Reseeding will be done within the first summer, following the cessation of dirtwork on unused areas.

11. General Information:

- A. Topography: Relatively level.  
Soil: Rocky - sandy  
Geologic Features: The location is located near the edge of a gently NE dipping mesa top.  
Flora: Native grasses and small shrubs.  
Fauna: Animals native to area include deer, rabbits, black bears, mountain lions, coyotes, native birds, fish, small rodents, snakes, lizards, etc.
- B. Other Surface Use: The land is used for cattle grazing, hunting and tourism.
- C. The nearest water sources are natural creeks and springs found within 1 mile to the north west of the proposed location. Range Creek is approximately 1 mile SW of location and the Green River is 1½ miles East.
- D. There are known ancient Indian pictographs and historical sites, within 10 miles of the location. An archeological study of access roads and drilling location will be completed prior to or during on site inspection.

Lighthouse 1-10  
Multipoint Surface Use and  
Development Plan

12. Operator's Representative:

David A. Gomendi  
1700 Broadway, Suite 900  
Denve, Colorado 80290  
Phone; 303-861-4366

13. Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route: that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Bow Valley Petroleum Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

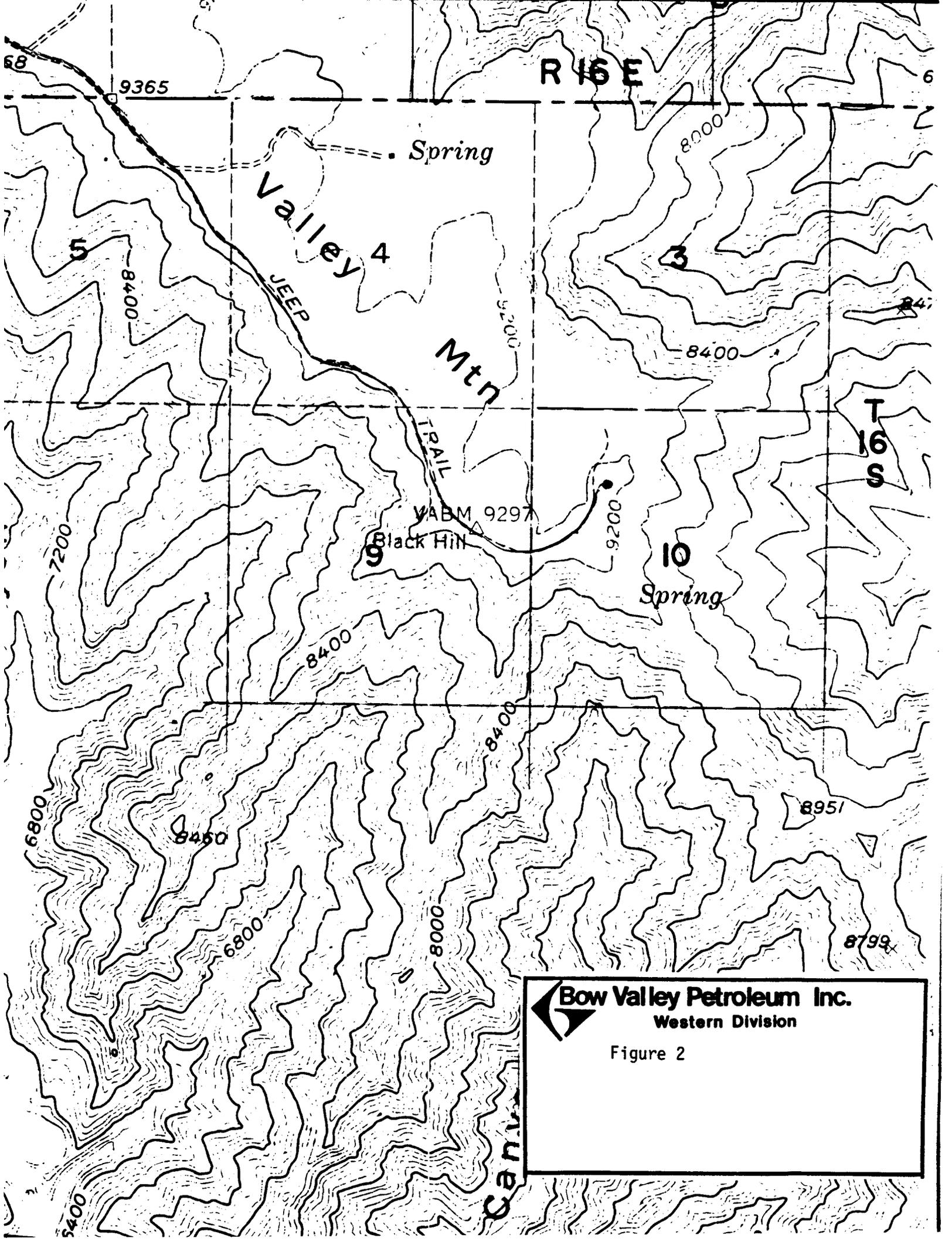
5-24-84

Date

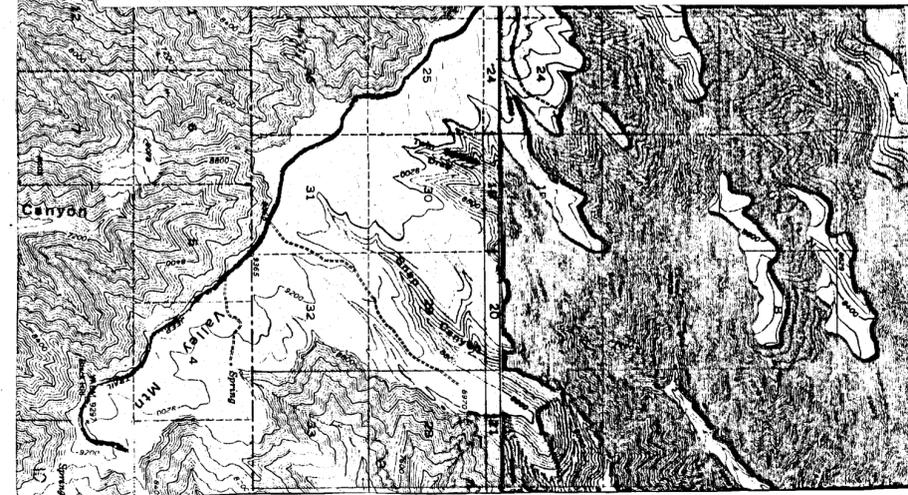
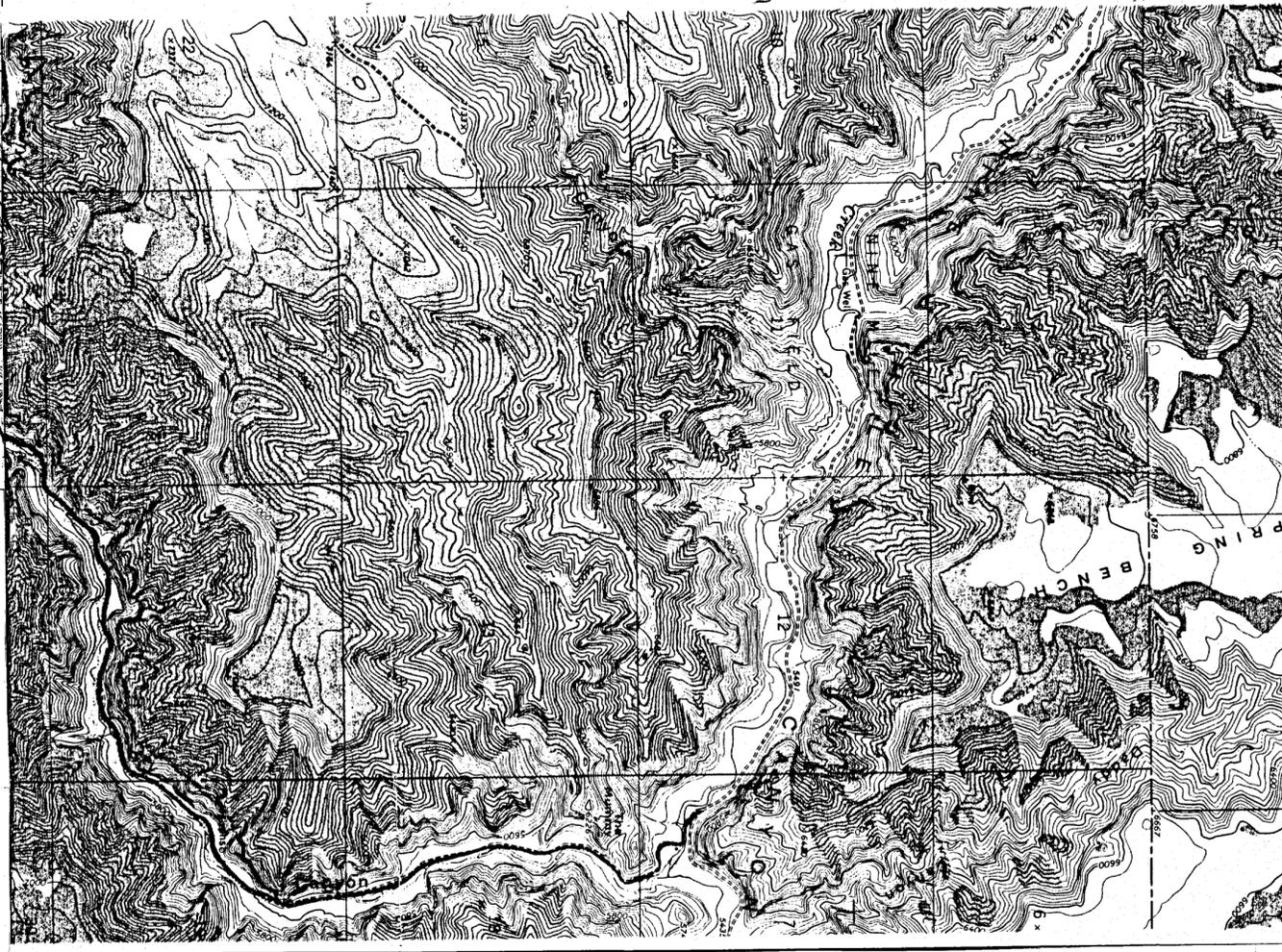
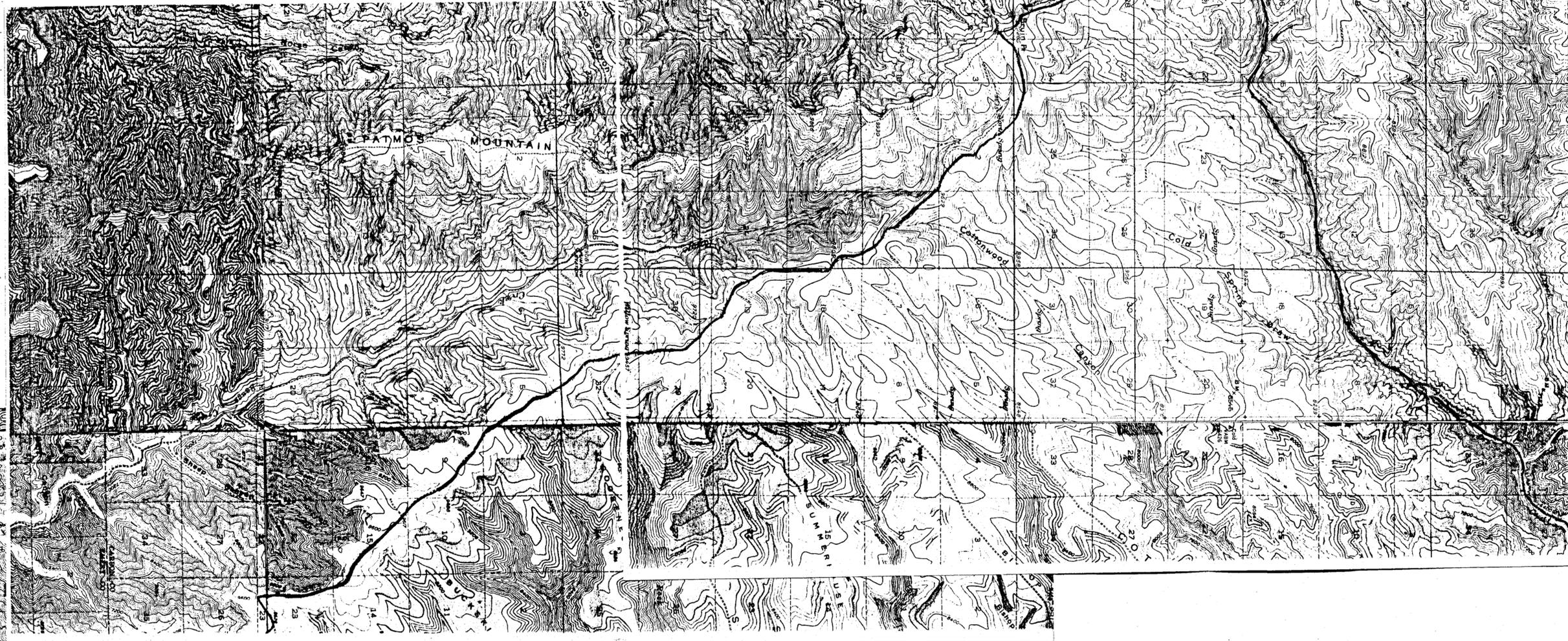
May 24, 1984

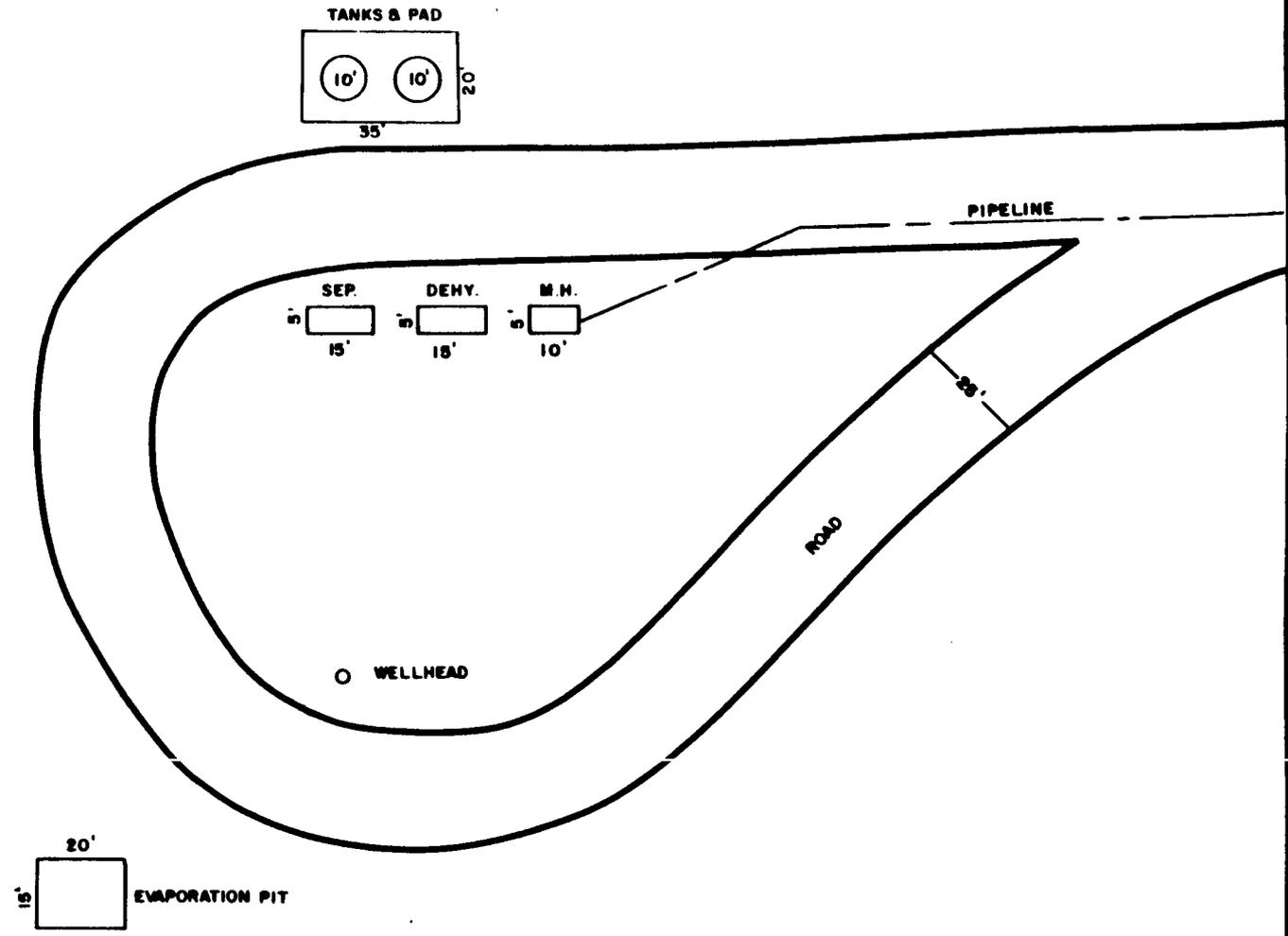
David Gomendi  
David A. Gomendi, Manager  
Drilling and Production

Mark Wagner  
Mark Wagner, Staff Engineer



**Bow Valley Petroleum Inc.**  
Western Division  
Figure 2



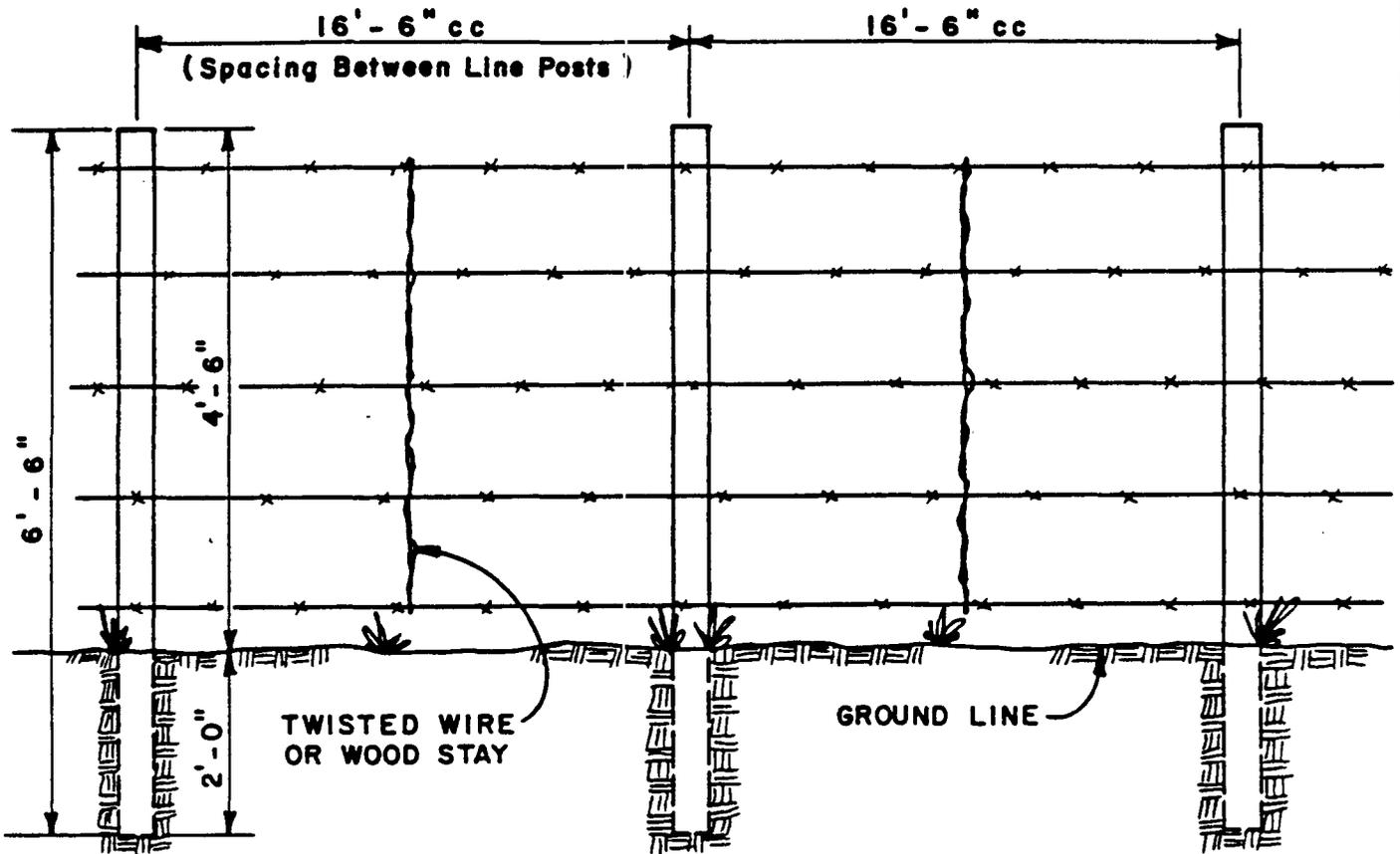


Scale: 1" = 40'

**Bow Valley Petroleum Inc.**  
 Western Division

Figure 4

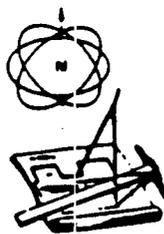
# PIT FENCE DIAGRAM



TYPICAL 5-WIRE BARBED WIRE FENCE

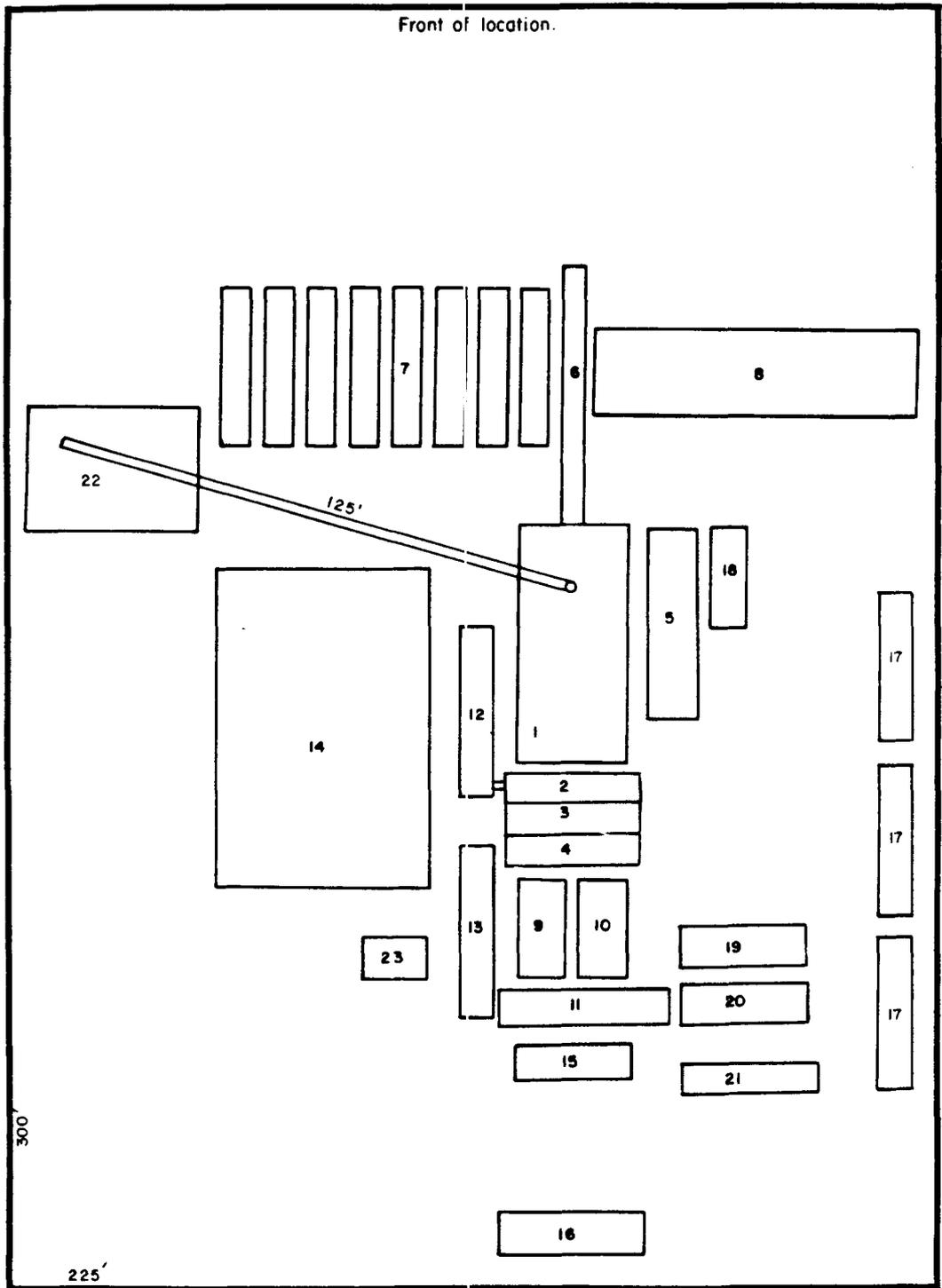
Reserve Pit to be Fenced 3 sides  
Prior to Drilling. 4th Side Must be  
Completed Before Rig Release.

Overhead Flaggng or Netting Must  
be Placed on All "Permanent Pits."



**Bow Valley Petroleum Inc.**  
Western Division

Figure 5



**Bow Valley Petroleum Inc.**  
 Western Division

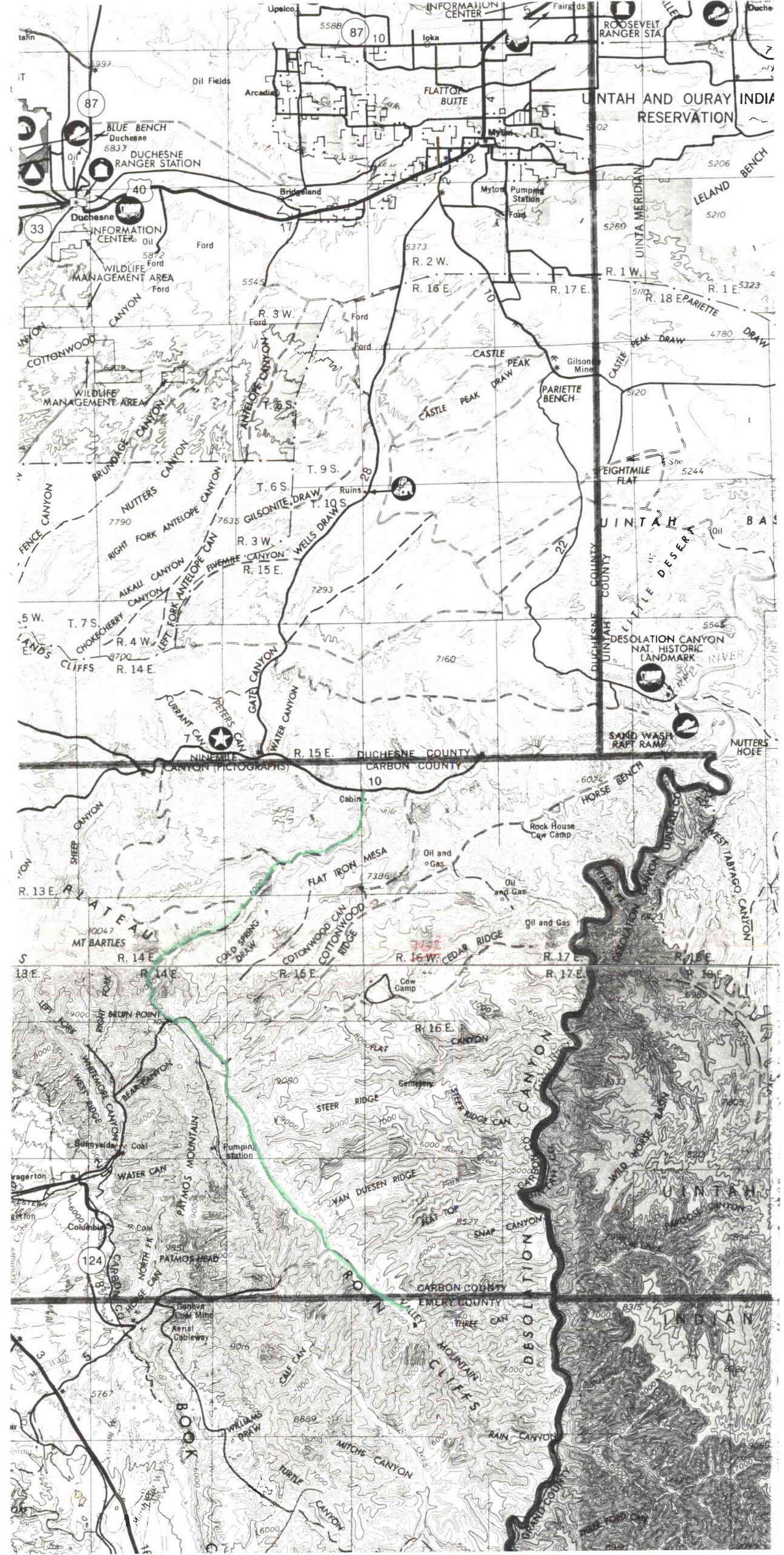
Figure 6

GEOLOGIST \_\_\_\_\_ DATE \_\_\_\_\_  
 GEOPHYSICIST \_\_\_\_\_ REVISED BY \_\_\_\_\_

RIG #2 LAYOUT & LOCATION DIMENSIONS  
APPROXIMATELY 1.6 ACRES

EQUIPMENT & DIMENSIONS:

- #1 - Substructure - 26'3" x 55'11"
- #2 - Motor - 7'-0" x 32'0"
- #3 - Motor - 7'10" x 32'0"
- #4 - Motor - 7'0" x 32'0"
- #5 - Water Tank - 11' x 45'
- #6 - Catwalk - 5' x 60'
- #7 - Pipe Baskets - 7' x 36' each
- #8 - Pipe Racks - 20' x 75'
- #9 - Pump No. 2 - 11' x 24'
- #10 - Pump No. 1 - 11' x 24'
- #11 - Suction Pit - 8' x 40'
- #12 - Shale Pit - 8' x 40'
- #13 - Mud Pit - 8' x 40'
- #14 - Reserve Pit - 50' x 75'
- #15 - Fuel Tank - 8' x 27'
- #16 - Boiler - 9' x 34'
- #17 - Trailer House - 8' x 35'
- #18 - Koomey House - 8'10" x 22'
- #19 - Utility House - 9' x 29'
- #20 - Mud Mixing House - 9' x 29'
- #21 - Mud Storage House - 7'10" x 32'
- #22 - Flare Pit 30' x 40'
- #23 - Trash Pit 10' x 15' x 5'



## TITLE 8

## CORPORATIONS

## CHAPTER 1. GENERAL CORPORATION LAW

## SUBCHAPTER I. FORMATION

## § 101. Incorporators; how corporation formed; purposes

(a) Any person, partnership, association or corporation, singly or jointly with others, and without regard to his or their residence, domicile or state of incorporation, may incorporate or organize a corporation under this chapter by filing with the Secretary of State a certificate of incorporation which shall be executed, acknowledged, filed and recorded in accordance with section 103 of this title.

(b) A corporation may be incorporated or organized under this chapter to conduct or promote any lawful business or purposes, except as may otherwise be provided by the constitution or other law of this State.

(c) Corporations for constructing, maintaining and operating public utilities, whether in or outside of this State, may be organized under this chapter, but corporations for constructing, maintaining and operating public utilities within this State shall be subject to, in addition to the provisions of this chapter, the special provisions and requirements of Title 26 applicable to such corporations.

## DECISIONS

- |  |   |
|--|---|
| 1. Corporations defined.                                     | 3. Construction of general corporation law. |
| 2. Status of corporations under the General Corporation Law. |   |

**1. Corporations defined.**—The term "corporation" is defined in the following cases:

*Lawson v. Household Finance Corp.*, 17 Del. Ch. 343, 152 A. 723 (1930); *Joseph Greenspon's Sons etc. Co. v. Pecos Valley Gas Co.*, 4 W. W. Harr. 567, 156 A. 350 (1931). The following cases have defined "corporations" prior to the enactment of the General Corporation Law: *Smyrna etc. Co. v. Whildin*, 4 Harr. 228 (1845); *State v. Bank of Smyrna*, 2 Houst. 99 (1859); *Coyle v. Cray*, 7 Houst. 44, 30 A. 728 (1884); *Higgins v. Downward &*

*Sons*, 8 Houst. 227, 14 A. 720, 32 A. 133 (1888).

See *Eastern Shore Public Service Co. v. Town of Seaford*, 21 Del. Ch. 214, 187 A. 115 (1936) for the right of a municipal corporation to erect an electric light plant.

**2. Status of corporations under the General Corporation Law.**—The General Corporation Law of Delaware enacted March 10, 1899 was held constitutional in *Wil. City R. Co. v. People's R. Co.*, 38 Del. Ch. 1, 47 A. 245 (1900), in that the Legislature



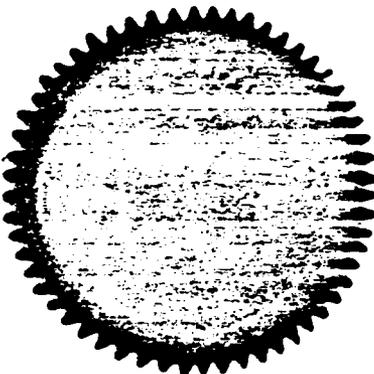
# State of DELAWARE



Office of SECRETARY OF STATE

*I, Glenn C. Kenton Secretary of State of the State of Delaware,*  
*do hereby certify that the above and foregoing is a true and correct copy of*  
Certificate of Incorporation of the "BOW VALLEY (F.D.) IV INC.", as received and  
filed in this office the first day of February, A.D. 1978, at 9 o'clock A.M.

In Testimony Whereof, *I have hereunto set my hand*  
*and official seal at Dover this* \_\_\_\_\_ *first* \_\_\_\_\_ *day*  
*of* \_\_\_\_\_ *February* \_\_\_\_\_ *in the year of our Lord*  
*one thousand nine hundred and* \_\_\_\_\_ *seventy-eight.*



*Glenn C. Kenton*

Glenn C. Kenton, Secretary of State

*John J. [Signature]*

Assistant Secretary of State

**CERTIFICATE OF INCORPORATION**

**OF**

**BOW VALLEY (F.D.) IV INC.**

**PAUL. WEISS. RIFKIND. WHARTON & GARRISON**  
**ATTORNEYS AND COUNSELLORS AT LAW**  
**345 PARK AVENUE, NEW YORK, N. Y. 10022**

CERTIFICATE OF INCORPORATION

OF

BOW VALLEY (F.D.) IV INC.

The undersigned incorporator, in order to form a corporation under the General Corporation Law of the State of Delaware, certifies as follows:

1. Name. The name of the corporation is BOW VALLEY (F.D.) IV INC. (hereinafter called the "Corporation").

2. Address; Registered Agent. The address of the Corporation's registered office is 306 South State Street, City of Dover, County of Kent, State of Delaware; and its registered agent at such address is United States Corporation Company.

3. Nature of Business; Purposes. The nature of the business and purposes to be conducted or promoted by the Corporation are to engage in, carry on and conduct any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

4. Number of Shares. The total number of shares of stock which the Corporation shall have authority to issue is: one thousand (1,000), all of which shall be shares of Common Stock of the par value of one dollar (\$1.00) each.

5. Name and Address of Incorporator. The name and mailing address of the incorporator are: Stephen E. Fox, 345 Park Avenue, New York, New York 10022.

6. Election of Directors. Members of the Board of Directors may be elected either by written ballot or by voice vote.

7. Adoption, Amendment and/or Repeal of By-Laws. The Board of Directors may from time to time (after adoption by the undersigned of the original by-laws of the Corporation) make, alter or repeal the by-laws of the Corporation; provided, that any by-laws made, amended or repealed by the Board of Directors may be amended or repealed, and any by-laws may be made, by the stockholders of the Corporation.

8. Compromise and Arrangements. Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them and/or between this Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this Corporation under the provisions of section 291 of Title 8 of the Delaware

Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under the provisions of section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this Corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this Corporation, as the case may be, and also on this Corporation.

IN WITNESS WHEREOF, this Certificate has been signed on this 3/~~4~~ day of January, 1978, and the signature of the undersigned shall constitute the affirmation and acknowledgment of the undersigned, under penalties of perjury, that the Certificate is the act and deed of the undersigned and that the facts stated in the Certificate are true.

  
\_\_\_\_\_  
Stephen E. Fox



RESTATED CERTIFICATE OF  
INCORPORATION OF  
BOW VALLEY (F.D.) IV INC.

---

Pursuant to Section 245  
of the General Corporation Law  
of the State of Delaware

---

FILED

DEC 8 1978

*Minister*  
SECRETARY OF STATE

STATE OF DELAWARE }  
DEWENT COUNTY

INDEXED

RECORDED, In the Office for the Recording of Deeds, Etc

at Dover, In and for the said County of DELAWARE, We *PAKED* *WEISER* RIFKIND, WHARTON & GARRISON

Vol. 61 Page 120 ATTORNEYS AND COUNSELLORS AT LAW  
No. 8th day of December, D. 1978 PARK AVENUE, NEW YORK, N. Y. 10022

WITNESS my Hand and the Seal of said office.

*Robert J. Donaway* Recorder

RESTATED CERTIFICATE OF  
INCORPORATION  
OF  
BOW VALLEY (F.D.) IV INC.

Pursuant to Section 245 of the General  
Corporation Law of the State of Delaware

BOW VALLEY (F.D.) IV INC., a corporation organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), desiring to amend the name and purposes sections and to restate the provisions of its Certificate of Incorporation, as filed in the office of the Secretary of State on February 1, 1978, does hereby certify that the following Restated Certificate of Incorporation was duly adopted by resolution of the Corporation's Board of Directors and thereafter by vote of its stockholders in the manner and by the vote prescribed by Section 242 of the General Corporation Law of the State of Delaware:

1. Name. The name of the corporation is BOW VALLEY PETROLEUM INC. (hereinafter called the "Corporation").

2. Address; Registered Agent. The address of the Corporation's registered office is 306 South State Street, City of Dover, County of Kent, State of Delaware; and its registered agent at such address is the United States Corporation Company.

3. Nature of Business; Purposes. The nature of the business to be conducted and the purposes to be promoted by the Corporation are as follows:

To acquire, collect, explore, develop, refine, process, store, utilize, sell, transport, transmit, distribute or otherwise use, apply or dispose of any and all natural resources, of whatever nature or character and wherever located, and whether now known or hereafter discovered;

To acquire, buy, hold, invest in, sell, lease, exchange, deal in, manage, operate, control, improve, develop, explore, maintain and dispose of lands, properties, leases, mineral rights, royalties, participations and other interest of whatsoever nature (including oil and gas leases covering state, federal and Indian properties) in petroleum and other oils, gas, coal, sulphur, lignite, sand, clay, gravel, stone and other minerals and mineral substances, salt, brine, and other mineral solutions in any form or of any kind whatsoever;

To acquire, buy, hold, store, use, own, sell, lease,

exchange, dispose of, transport, transmit, distribute, deal in, manufacture, produce, refine, furnish and supply petroleum and other oils, gas, coal, sulphur, lignite, sand, clay, gravel, stone and other minerals and mineral substances, salt, brine and other mineral solutions in any form or of any kind whatsoever, and any substances, articles or things of which or in the production of which petroleum, other oils, gas, minerals or mineral substances or mineral solutions form a part;

To produce, manufacture, buy or otherwise acquire, distribute, use, sell or otherwise dispose of petroleum and other oils, natural gas, or artificial gas or a mixture of natural and artificial gas for light, heat, power and other purposes, and to produce, acquire, use, sell and distribute the by-products and residual products therefrom, and to construct or in any manner acquire, maintain, operate, encumber, sell, or in any manner dispose of works therefor and any and all equipment and appurtenances relating or incident thereto; and generally

To engage in, carry on and conduct any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

4. Number of Shares. The total number of shares of stock which the Corporation shall have authority to issue is:

1,000, all of which shall be shares of common stock of the  
par value of \$1.00 each.

5. Name and Address of Incorporator. The name and mailing address of the original incorporator are: Stephen E. Fox, 345 Park Avenue, New York, New York 10022.

6. Election of Directors. Members of the Board of Directors may be elected either by written ballot or by voice vote.

7. Adoption, Amendment and/or Repeal of By-Laws.  
The Board of Directors may from time to time (after adoption by the undersigned of the original by-laws of the Corporation) make, alter or repeal the by-laws of the Corporation; provided, that any by-laws made, amended or repealed by the Board of Directors may be amended or repealed, and any by-laws may be made, by the stockholders of the Corporation.

8. Compromise and Arrangements. Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them and/or between this Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof or on the application

BOOK K VOL. 61 PAGE 124

of any receiver or receivers appointed for this Corporation under the provisions of section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under the provisions of section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this Corporation as a consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this Corporation, as the case may be, and also on this Corporation.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed and attested, this 6th day of December,

1978, by its duly authorized officers, whose signatures shall constitute an affirmation and acknowledgement, under penalties of perjury, that the Certificate is the act and deed of the Corporation and that the facts stated therein are true.

BOW VALLEY (F.D.) IV INC.

By   
F.J. Ahern, Vice President

ATTEST:

L.V. Quigley, Asst. Secretary

BY-LAWS  
OF  
BOW VALLEY (F.D.) IV INC.  
(A Delaware Corporation)

---

ARTICLE I  
DEFINITIONS

As used in these By-laws, unless the context otherwise requires, the term:

1.1 "Assistant Secretary" means an Assistant Secretary of the Corporation.

1.2 "Assistant Treasurer" means an Assistant Treasurer of the Corporation.

1.3 "Board" means the Board of Directors of the Corporation.

1.4 "By-laws" means the initial by-laws of the Corporation, as amended from time to time.

1.5 "Certificate of Incorporation" means the initial certificate of incorporation of the Corporation, as amended, supplemented or restated from time to time.

1.6 "Corporation" means Bow Valley (F.D.) IV Inc.

1.7 "Directors" means directors of the Corporation.

1.8 "General Corporation Law" means the General Corporation Law of the State of Delaware, as amended from time to time.

1.9 "Office of the Corporation" means the executive office of the Corporation, anything in Section 131 of the General Corporation Law to the contrary notwithstanding.

1.10 "President" means the President of the Corporation.

1.11 "Secretary" means the Secretary of the Corporation.

1.12 "Stockholders" means stockholders of the Corporation.

1.13 "Total number of directors" means the total number of directors which the Corporation would have if there were no vacancies.

1.14 "Treasurer" means the Treasurer of the Corporation.

1.15 "Vice President" means a Vice President of the Corporation.

## ARTICLE 2

### STOCKHOLDERS

2.1 Place of Meetings. Every meeting of the stockholders shall be held at the office of the Corporation or at such other place within or without the State of Delaware as

shall be specified or fixed in the notice of such meeting or in the waiver of notice thereof.

2.2 Annual Meeting. A meeting of stockholders shall be held annually for the election of directors and the transaction of other business at such hour and on such business day in August or September as may be determined by the Board and designated in the notice of meeting.

2.3 Deferred Meeting for Election of Directors, Etc. If the annual meeting of stockholders for the election of directors and the transaction of other business is not held within the months specified in Section 2.2, the Board shall call a meeting of stockholders for the election of directors and the transaction of other business as soon thereafter as convenient.

2.4 Other Special Meetings. A special meeting of stockholders (other than a special meeting for the election of directors), unless otherwise prescribed by statute, may be called at any time by the Board or by the President or by the Secretary. At any special meeting of Stockholders only such business may be transacted which is related to the purpose or purposes of such meeting set forth in the notice thereof given pursuant to Section 2.6 of the By-laws or in any waiver of notice thereof given pursuant to Section 2.7 of the By-laws.

2.5 Fixing Record Date. For the purpose of determining the stockholders entitled to notice of or to vote at any

meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or for the purpose of determining stockholders entitled to receive payment of any dividend or the allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board may fix, in advance, a date as the record date for any such determination of stockholders. Such date shall not be more than sixty nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. If no such record date is fixed:

2.5.1 The record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held;

2.5.2 The record date for determining stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the Board is necessary, shall be the day on which the first written consent is expressed;

2.5.3 The record date for determining stockholders for any purpose other than that specified in

Sections 2.5.1 and 2.5.2 shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

When a determination of stockholders entitled to notice of or to vote at any meeting of stockholders has been made as provided in this Section 2.5 such determination shall apply to any adjournment thereof, unless the Board fixes a new record date for the adjourned meeting.

2.6 Notice of Meetings of Stockholders. Except as otherwise provided in Sections 2.5 and 2.7 of the By-laws, whenever under the General Corporation Law or the Certificate of Incorporation or the By-laws, stockholders are required or permitted to take any action at a meeting, written notice shall be given stating the place, date and hour of the meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called. A copy of the notice of any meeting shall be given, personally or by mail, not less than ten nor more than sixty days before the date of the meeting, to each stockholder entitled to notice of or to vote at such meeting. If mailed, such notice shall be deemed to be given when deposited in the United States mail, with postage prepaid, directed to the stockholder at his address as it appears on the records of the Corporation. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent of the Corporation that the notice required by this section has been given

shall, in the absence of fraud, be prima facie evidence of the facts stated therein. When a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken, and at the adjourned meeting any business may be transacted that might have been transacted at the meeting as originally called. If, however, the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

2.7 Waivers of Notice. Whenever notice is required to be given to any stockholder under any provision of the General Corporation Law or of the Certificate of Incorporation or the By-laws, a written waiver thereof, signed by the stockholder entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a stockholder at a meeting shall constitute a waiver of notice of such meeting, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice.

2.8 List of Stockholders. The Secretary shall prepare and make, or cause to be prepared and made, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

2.9 Quorum of Stockholders; Adjournment. The holders of one-third of the shares of stock entitled to vote at any meeting of stockholders, present in person or represented by proxy, shall constitute a quorum for the transaction of any business at such meeting. When a quorum is once present to organize a meeting of stockholders, it is not broken by the subsequent withdrawal of any stockholders. The holders of a

majority of the shares of stock present in person or represented by proxy at any meeting of stockholders, including an adjourned meeting, whether or not a quorum is present, may adjourn such meeting to another time and place.

2.10 Voting; Proxies. Unless otherwise provided in the Certificate of Incorporation every stockholder of record shall be entitled at every meeting of stockholders to one vote for each share of capital stock standing in his name on the record of stockholders determined in accordance with Section 2.5 of the By-laws. If the Certificate of Incorporation provides for more or less than one vote for any share, on any matter, every reference in the By-laws or the General Corporation Law to a majority or other proportion of stock shall refer to such majority or other proportion of the votes of such stock. The provisions of Sections 212 and 217 of the General Corporation Law shall apply in determining whether any shares of capital stock may be voted and the persons, if any, entitled to vote such shares; but the Corporation shall be protected in treating the persons in whose names shares of capital stock stand on the record of stockholders as owners thereof for all purposes. At any meeting of stockholders (at which a quorum was present to organize the meeting), all matters, except as otherwise provided by law or by the Certificate of Incorporation or by the By-laws, shall be decided by a majority

of the votes cast at such meeting by the holders of shares present in person or represented by proxy and entitled to vote thereon, whether or not a quorum is present when the vote is taken. All elections of directors shall be by written ballot unless otherwise provided in the Certificate of Incorporation. In voting on any other question on which a vote by ballot is required by law or is demanded by any stockholder entitled to vote, the voting shall be by ballot. Each ballot shall be signed by the stockholder voting or by his proxy, and shall state the number of shares voted. On all other questions, the voting may be viva voce. Every stockholder entitled to vote at a meeting of stockholders or to express consent or dissent without a meeting may authorize another person or persons to act for him by proxy. The validity and enforceability of any proxy shall be determined in accordance with Section 212 of the General Corporation Law.

2.11 Selection and Duties of Inspectors at Meetings of Stockholders. The Board, in advance of any meeting of stockholders, may appoint one or more inspectors to act at the meeting or any adjournment thereof. If inspectors are not so appointed, the person presiding at such meeting may, and on the request of any stockholder entitled to vote thereat shall, appoint one or more inspectors. In case any person

appointed fails to appear or act, the vacancy may be filled by appointment made by the Board in advance of the meeting or at the meeting by the person presiding thereat. Each inspector, before entering upon the discharge of his duties, shall take and sign an oath faithfully to execute the duties of inspector at such meeting with strict impartiality and according to the best of his ability. The inspector or inspectors shall determine the number of shares outstanding and the voting power of each, the shares represented at the meeting, the existence of a quorum, the validity and effect of proxies, and shall receive votes, ballots or consents, hear and determine all challenges and questions arising in connection with the right to vote, count and tabulate all votes, ballots or consents, determine the result, and do such acts as are proper to conduct the election or vote with fairness to all stockholders. On request of the person presiding at the meeting or any stockholder entitled to vote thereat, the inspector or inspectors shall make a report in writing of any challenge, question or matter determined by him or them and execute a certificate of any fact found by him or them. Any report or certificate made by the inspector or inspectors shall be prima facie evidence of the facts stated and of the vote as certified by him or them.

2.12 Organization. At every meeting of stockholders, the President, or in the absence of the President a Vice President, and in case more than one Vice President shall be present, that Vice President designated by the Board (or in the absence of any such designation, the most senior Vice President, based on age, present), shall act as chairman of the meeting. The Secretary, or in his absence one of the Assistant Secretaries, shall act as secretary of the meeting. In case none of the officers above designated to act as chairman or secretary of the meeting, respectively, shall be present, a chairman or a secretary of the meeting, as the case may be, shall be chosen by a majority of the votes cast at such meeting by the holders of shares of capital stock present in person or represented by proxy and entitled to vote at the meeting.

2.13 Order of Business. The order of business at all meetings of stockholders shall be as determined by the chairman of the meeting, but the order of business to be followed at any meeting at which a quorum is present may be changed by a majority of the votes cast at such meeting by the holders of shares of capital stock present in person or represented by proxy and entitled to vote at the meeting.

2.14 Written Consent of Stockholders Without a Meeting. Unless otherwise provided in the Certificate of Incorporation,

poration, any action required by the General Corporation Law to be taken at any annual or special meeting of stockholders of the Corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

### ARTICLE 3

#### DIRECTORS

3.1 General Powers. Except as otherwise provided in the Certificate of Incorporation, the business and affairs of the Corporation shall be managed by or under the direction of the Board. The Board may adopt such rules and regulations, not inconsistent with the Certificate of Incorporation or the By-laws or applicable laws, as it may deem proper for the conduct of its meetings and the management of the Corporation.

In addition to the powers expressly conferred by the By-laws, the Board may exercise all powers and perform all acts which are not required, by the By-laws or the Certificate of Incorporation or by law, to be exercised and performed by the stockholders.

3.2 Number; Qualification; Term of Office. The Board shall consist of one or more members. The total number of directors shall be fixed initially by the incorporator and may thereafter be changed from time to time by action of the stockholders or of the Board. Directors need not be stockholders. Each director shall hold office until his successor is elected and qualified or until his earlier death, resignation or removal.

3.3 Election. Directors shall, except as otherwise required by law or by the Certificate of Incorporation, be elected by a plurality of the votes cast at a meeting of stockholders by the holders of shares entitled to vote in the election.

3.4 Newly Created Directorships and Vacancies. Unless otherwise provided in the Certificate of Incorporation, newly created directorships resulting from an increase in the number of directors and vacancies occurring in the Board for any reason, including the removal of directors without cause, may be filled by vote of a majority of the directors then in

office, although less than a quorum, or by a sole remaining director, at any meeting of the Board or may be elected by a plurality of the votes cast by the holders of shares of capital stock entitled to vote in the election at a special meeting of stockholders called for that purpose. A director elected to fill a vacancy shall be elected to hold office until his successor is elected and qualified, or until his earlier death, resignation or removal.

3.5 Resignations. Any director may resign at any time by written notice to the Corporation. Such resignation shall take effect at the time therein specified, and, unless otherwise specified, the acceptance of such resignation shall not be necessary to make it effective.

3.6 Removal of Directors. Except as otherwise provided by law, any or all of the directors may be removed (i) for cause, by vote of the stockholders or by action of the Board, and (ii) without cause, by vote of the stockholders.

3.7 Compensation. Each director, in consideration of his service as such, shall be entitled to receive from the Corporation such amount per annum or such fees for attendance at directors' meetings, or both, as the Board may from time to time determine, together with reimbursement for the reasonable expenses incurred by him in connection with the performance of

his duties. Each director who shall serve as a member of any committee of directors in consideration of his serving as such shall be entitled to such additional amount per annum or such fees for attendance at committee meetings, or both, as the Board may from time to time determine, together with reimbursement for the reasonable expenses incurred by him in the performance of his duties. Nothing in this section contained shall preclude any director from serving the Corporation or its subsidiaries in any other capacity and receiving proper compensation therefor.

3.8 Place and Time of Meetings of the Board. Meetings of the Board, regular or special, may be held at any place within or without the State of Delaware. The times and places for holding meetings of the Board may be fixed from time to time by resolution of the Board or (unless contrary to resolution of the Board) in the notice of the meeting.

3.9 Annual Meetings. On the day when and at the place where the annual meeting of stockholders for the election of directors is held, and as soon as practicable thereafter, the Board may hold its annual meeting, without notice of such meeting, for the purposes of organization, the election of officers and the transaction of other business. The annual meeting of the Board may be held at any other time and place specified in a notice given as provided in Section 3.11

of the By-laws for special meetings of the Board or in a waiver of notice thereof.

3.10 Regular Meetings. Regular meetings of the Board may be held at such times and places as may be fixed from time to time by the Board. Unless otherwise required by the Board, regular meetings of the Board may be held without notice. If any day fixed for a regular meeting of the Board shall be a Saturday or Sunday or a legal holiday at the place where such meeting is to be held, then such meeting shall be held at the same hour at the same place on the first business day thereafter which is not a Saturday, Sunday or legal holiday.

3.11 Special Meetings. Special meetings of the Board shall be held whenever called by the President or the Secretary or by any two or more directors. Notice of each special meeting of the Board shall, if mailed, be addressed to each director at the address designated by him for that purpose or, if none is designated, at his last known address at least two days before the date on which the meeting is to be held; or such notice shall be sent to each director at such address by telegraph, cable or wireless, or be delivered to him personally, not later than the day before the date on which such meeting is to be held. Every such notice shall state the time and place of the meeting but

need not state the purposes of the meeting, except to the extent required by law. If mailed, each notice shall be deemed given when deposited, with postage thereon prepaid, in a post office or official depository under the exclusive care and custody of the United States post office department. Such mailing shall be by first class mail.

3.12 Adjourned Meetings. A majority of the directors present at any meeting of the Board, including an adjourned meeting, whether or not a quorum is present, may adjourn such meeting to another time and place. Notice of any adjourned meeting of the Board need not be given to any director whether or not present at the time of the adjournment. Any business may be transacted at any adjourned meeting that might have been transacted at the meeting as originally called.

3.13 Waiver of Notice. Whenever notice is required to be given to any director or member of a committee of directors under any provision of the General Corporation Law or of the Certificate of Incorporation or By-laws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the

meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the directors, or members of a committee of directors, need be specified in any written waiver of notice.

3.14 Organization. At each meeting of the Board, the President of the Corporation, or in the absence of the President, a chairman chosen by the majority of the directors present, shall preside. The Secretary shall act as secretary at each meeting of the Board. In case the Secretary shall be absent from any meeting of the Board, an Assistant Secretary shall perform the duties of secretary at such meeting; and in the absence from any such meeting of the Secretary and Assistant Secretaries, the person presiding at the meeting may appoint any person to act as secretary of the meeting.

3.15 Quorum of Directors. One-third of the total number of directors shall constitute a quorum for the transaction of business or of any specified item of business at any meeting of the Board.

3.16 Action by the Board. All corporate action taken by the Board or any committee thereof shall be taken at a meeting of the Board, or of such committee, as the case may be, except that any action required or permitted to be

taken at any meeting of the Board, or of any committee thereof, may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or committee. Members of the Board, or any committee designated by the Board, may participate in a meeting of the Board, or of such committee, as the case may be, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Section 3.16 shall constitute presence in person at such meeting. Except as otherwise provided by the Certificate of Incorporation or by law, the vote of a majority of the directors present (including those who participate by means of conference telephone or similar communications equipment) at the time of the vote, if a quorum is present at such time, shall be the act of the Board.

#### ARTICLE 4

##### COMMITTEES OF THE BOARD

The Board may, by resolution passed by a majority of the whole Board, designate one or more committees, each

committee to consist of one or more of the directors of the corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, recommending to the stockholders the sale, lease or exchange of all of substantially all of the Corporation's property and assets, recommending to the stockholders a dissolution of the Corporation or a revocation of a dissolution, or amending the By-laws of the Corporation; and, unless the resolution designating it expressly so provides, no such committee shall have

5.2 Removal of Officers. Any officer elected or appointed by the Board may be removed by the Board with or without cause. The removal of an officer without cause shall be without prejudice to his contract rights, if any. The election or appointment of an officer shall not of itself create contract rights.

5.3 Resignations. Any officer may resign at any time in writing by notifying the Board or the President or the Secretary. Such resignation shall take effect at the date of receipt of such notice or at such later time as is therein specified, and, unless otherwise specified, the acceptance of such resignation shall not be necessary to make it effective. The resignation of an officer shall be without prejudice to the contract rights of the Corporation, if any.

5.4 Vacancies. A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled for the unexpired portion of the term in the manner prescribed in the By-laws for the regular election or appointment to such office.

5.5 Compensation. Salaries or other compensation of the officers may be fixed from time to time by the Board. No officer shall be prevented from receiving a salary or

other compensation by reason of the fact that he is also a director.

5.6 President. The President shall be the chief executive officer of the Corporation and shall have general supervision over the business of the Corporation, subject, however, to the control of the Board and of any duly authorized committee of directors. The President shall, if present, preside at all meetings of the stockholders and at all meetings of the Board. He may, with the Secretary or the Treasurer or an Assistant Secretary or an Assistant Treasurer, sign certificates for shares of capital stock of the Corporation. He may sign and execute in the name of the Corporation deeds, mortgages, bonds, contracts and other instruments, excepts in cases where the signing and execution thereof shall be expressly delegated by the Board or by the By-laws to some other officer or agent of the Corporation, or shall be required by law otherwise to be signed or executed; and, in general, he shall perform all duties incident to the office of President and such other duties as from time to time may be assigned to him by the Board.

5.7 Vice Presidents. At the request of the President, or, in his absence, at the request of the Board,

the Vice Presidents shall (in such order as may be designated by the Board or, in the absence of any such designation, in order of seniority based on age) perform all of the duties of the President and so acting shall have all the powers of and be subject to all restrictions upon the President. Any Vice President may also, with the Secretary or the Treasurer or an Assistant Secretary or an Assistant Treasurer, sign certificates for shares of capital stock of the Corporation; may sign and execute in the name of the Corporation deeds, mortgages, bonds, contracts or other instruments authorized by the Board, except in cases where the signing and execution thereof shall be expressly delegated by the Board or by the By-laws to some other officer or agent of the Corporation, or shall be required by law otherwise to be signed or executed; and shall perform such other duties as from time to time may be assigned to him by the Board or by the President.

5.8 Secretary. The Secretary, if present, shall act as secretary of all meetings of the stockholders and of the Board, and shall keep the minutes thereof in the proper book or books to be provided for that purpose; he shall see that all notices required to be given by the Corporation are duly given and served; he may, with the President or a Vice

President, sign certificates for shares of capital stock of the Corporation; he shall be custodian of the seal of the Corporation and may seal with the seal of the Corporation, or a facsimile thereof, all certificates for shares of capital stock of the Corporation and all documents the execution of which on behalf of the Corporation under its corporate seal is authorized in accordance with the provisions of the By-laws; he shall have charge of the stock ledger and also of the other books, records and papers of the Corporation relating to its organization and management as a Corporation, and shall see that the reports, statements and other documents required by law are properly kept and filed; and shall, in general, perform all the duties incident to the office of Secretary and such other duties as from time to time may be assigned to him by the Board or by the President.

5.9 Treasurer. The Treasurer shall have charge and custody of, and be responsible for, all funds, securities and notes of the Corporation; receive and give receipts for moneys due and payable to the Corporation from any sources whatsoever; deposit all such moneys in the name of the Corporation in such banks, trust companies or other depositories as shall be selected in accordance with these By-laws; against

proper vouchers, cause such funds to be disbursed by checks or drafts on the authorized depositories of the Corporation signed in such manner as shall be determined in accordance with any provisions of the By-laws, and be responsible for the accuracy of the amounts of all moneys so disbursed; regularly enter or cause to be entered in books to be kept by him or under his direction full and adequate account of all moneys received or paid by him for the account of the Corporation; have the right to require, from time to time, reports or statements giving such information as he may desire with respect to any and all financial transactions of the Corporation from the officers or agents transacting the same; render to the President or the Board, whenever the President or the Board, respectively, shall require him so to do, an account of the financial condition of the Corporation and of all his transactions as Treasurer; exhibit at all reasonable times his books of account and other records to any of the directors upon application at the office of the Corporation where such books and records are kept; and, in general, perform all the duties incident to the office of Treasurer and such other duties as from time to time may be assigned to him by the Board or by the President; and he may sign with the President or a Vice President certificates for shares of capital stock of the Corporation.

5.10 Assistant Secretaries and Assistant Treasurers.

Assistant Secretaries and Assistant Treasurers shall perform such duties as shall be assigned to them by the Secretary or by the Treasurer, respectively, or by the Board or by the President. Assistant Secretaries and Assistant Treasurers may, with the President or a Vice President, sign certificates for shares of capital stock of the Corporation.

ARTICLE 6

CONTRACTS, CHECKS, DRAFTS, BANK ACCOUNTS, ETC.

6.1 Execution of Contracts. The Board may authorize any officer, employee or agent, in the name and on behalf of the Corporation, to enter into any contract or execute and satisfy any instrument, and any such authority may be general or confined to specific instances, or otherwise limited.

6.2 Loans. The President or any other officer, employee or agent authorized by the By-Laws or by the Board may effect loans and advances at any time for the Corporation from any bank, trust company or other institutions or from any firm, corporation or individual and for such loans and advances may make, execute and deliver promissory notes bonds or other certificates or evidence of indebtedness of

the Corporation, and when authorized by the Board so to do may pledge and hypothecate or transfer any securities or other property of the Corporation as security for any such loans or advances. Such authority conferred by the Board may be general or confined to specific instances or otherwise limited.

6.3 Checks, Drafts, Etc. All checks, drafts and other orders for the payment of money out of the funds of the Corporation and all notes or other evidences of indebtedness of the Corporation shall be signed on behalf of the Corporation in such manner as shall from time to time be determined by resolution of the Board.

6.4 Deposits. The funds of the Corporation not otherwise employed shall be deposited from time to time to the order of the Corporation in such banks, trust companies or other depositories as the Board may select or as may be selected by an officer, employee or agent of the Corporation to whom such power may from time to time be delegated by the Board.

## ARTICLE 7

### STOCK AND DIVIDENDS

7.1 Certificates Representing Shares. The shares of capital stock of the Corporation shall be represented

by certificates in such form (consistent with the provisions of Section 158 of the General Corporation Law) as shall be approved by the Board. Such certificates shall be signed by the President or a Vice President and by the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer, and may be sealed with the seal of the Corporation or a facsimile thereof. The signatures of the officers upon a certificate may be facsimiles, if the certificate is countersigned by a transfer agent or registrar other than the Corporation itself or its employee. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon any certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, such certificate may, unless otherwise ordered by the Board, be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

7.2 Transfer of Shares. Transfers of shares of capital stock of the Corporation shall be made only on the books of the Corporation by the holder thereof or by his duly authorized attorney appointed by a power of attorney duly executed and filed with the Secretary or a transfer agent of the Corporation, and on surrender of the certifi-

cate or certificates representing such shares of capital stock properly endorsed for transfer and upon payment of all necessary transfer taxes. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled," with the date of cancellation, by the Secretary or an Assistant Secretary or the transfer agent of the Corporation. A person in whose name shares of capital stock shall stand on the books of the Corporation shall be deemed the owner thereof to receive dividends, to vote as such owner and for all other purposes as respects the Corporation. No transfer of shares of capital stock shall be valid as against the Corporation, its stockholders and creditors for any purpose, except to render the transferee liable for the debts of the Corporation to the extent provided by law, until such transfer shall have been entered on the books of the Corporation by an entry showing from and to whom transferred.

7.3 Transfer and Registry Agents. The Corporation may from time to time maintain one or more transfer offices or agents and registry offices or agents at such place or places as may be determined from time to time by the Board.

7.4 Lost, Destroyed, Stolen and Mutilated Certificates. The holder of any shares of capital stock of the Corporation shall immediately notify the Corporation of any loss, destruction, theft or mutilation of the certificate

representing such shares, and the Corporation may issue a new certificate to replace the certificate alleged to have been lost, destroyed, stolen or mutilated. The Board may, in its discretion, as a condition to the issue of any such new certificate, require the owner of the lost, destroyed, stolen or mutilated certificate, or his legal representatives, to make proof satisfactory to the Board of such loss, destruction, theft or mutilation and to advertise such fact in such manner as the Board may require, and to give the Corporation and its transfer agents and registrars, or such of them as the Board may require, a bond in such form, in such sums and with such surety or sureties as the Board may direct, to indemnify the Corporation and its transfer agents and registrars against any claim that may be made against any of them on account of the continued existence of any such certificate so alleged to have been lost, destroyed, stolen or mutilated and against any expense in connection with such claim.

7.5 Regulations. The Board may make such rules and regulations as it may deem expedient, not inconsistent with the By-laws or with the Certificate of Incorporation, concerning the issue, transfer and registration of certificates representing shares of its capital stock.

7.6 Restriction on Transfer of Stock. A written restriction on the transfer or registration of transfer of

capital stock of the Corporation, if permitted by Section 202 of the General Corporation Law and noted conspicuously on the certificate representing such capital stock, may be enforced against the holder of the restricted capital stock or any successor or transferee of the holder including an executor, administrator, trustee, guardian or other fiduciary entrusted with like responsibility for the person or estate of the holder. Unless noted conspicuously on the certificate representing such capital stock, a restriction, even though permitted by Section 202 of the General Corporation Law shall be ineffective except against a person with actual knowledge of the restriction. A restriction on the transfer or registration of transfer of capital stock of the Corporation may be imposed either by the Certificate of Incorporation or by an agreement among any number of stockholders or among such stockholders and the Corporation. No restriction so imposed shall be binding with respect to capital stock issued prior to the adoption of the restriction unless the holders of such capital stock are parties to an agreement or voted in favor of the restriction.

7.7 Dividends, Surplus, Etc. Subject to the provisions of the Certificate of Incorporation and of law, the Board:

7.7.1 May declare and pay dividends or

make other distributions on the outstanding shares of capital stock in such amounts and at such time or times as, in its discretion, the condition of the affairs of the Corporation shall render advisable;

7.7.2 May use and apply, in its discretion, any of the surplus of the Corporation in purchasing or acquiring any shares of capital stock of the Corporation, or purchase warrants therefor, in accordance with law, or any of its bonds, debentures, notes, scrip or other securities or evidences of indebtedness;

7.7.3 May set aside from time to time out of such surplus or net profits such sum or sums as, in its discretion, it may think proper, as a reserve fund to meet contingencies, or for equalizing dividends or for the purpose of maintaining or increasing the property or business of the Corporation, or for any purpose it may think conducive to the best interests of the Corporation.

ARTICLE 8  
INDEMNIFICATION

8.1 Indemnification of Officers and Directors.

The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director or an officer of the Corporation, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding to the fullest extent and in the manner set forth in and permitted by the General Corporation Law, and any other applicable law, as from time to time in effect. Such right of indemnification shall not be deemed exclusive of any other rights to which such director or officer may be entitled apart from the foregoing provisions. The foregoing provisions of this Section 8.1 shall be deemed to be a contract between the Corporation and each director and officer who serves in such capacity at any time while this Article 8 and the relevant provisions of the General Corporation Law and other applicable law, if any, are in effect, and any repeal or modification thereof shall not affect any rights or obligations then existing with respect

to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

8.2 Indemnification of Other Persons. The Corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative by reason of the fact that he is or was an employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding to the extent and in the manner set forth in and permitted by the General Corporation Law, and any other applicable law, as from time to time in effect. Such right of indemnification shall not be deemed exclusive of any other rights to which any such person may be entitled apart from the foregoing provisions.

8.3 Insurance. The Corporation shall have power to purchase and maintain insurance on behalf of any person

who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation or a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify him against such liability under the provisions of Sections 8.1 and 8.2 of the By-laws or under Section 145 of the General Corporation Law or any other provision of law.

## ARTICLE 9

### BOOKS AND RECORDS

9.1 Books and Records. The Corporation shall keep correct and complete books and records of account and shall keep minutes of the proceedings of the stockholders, the Board and any committee of the Board. The Corporation shall keep at the office designated in the Certificate of Incorporation or at the office of the transfer agent or registrar of the Corporation in Delaware, a record containing the names and addresses of all stockholders, the number and class of shares held by each and the dates when they respectively became the owners of record thereof.

9.2 Form of Records. Any records maintained by the Corporation in the regular course of its business, including its stock ledger, books of account, and minute books, may be kept on, or be in the form of, punch cards, magnetic tape, photographs, microphotographs, or any other information storage device, provided that the records so kept can be converted into clearly legible written form within a reasonable time. The Corporation shall so convert any records so kept upon the request of any person entitled to inspect the same.

9.3 Inspection of Books and Records. Except as otherwise provided by law, the Board shall determine from time to time whether, and, if allowed, when and under what conditions and regulations, the accounts, books, minutes and other records of the Corporation, or any of them, shall be open to the inspection of the stockholders.

## ARTICLE 10

### SEAL

The Board may adopt a corporate seal which shall be in the form of a circle and shall bear the full name of the Corporation, the year of its incorporation and the word "Delaware."

ARTICLE 11

FISCAL YEAR

The fiscal year of the Corporation shall be determined, and may be changed, by resolution of the Board.

ARTICLE 12

VOTING OF SHARES HELD

Unless otherwise provided by resolution of the Board, the President may, from to time, appoint one or more attorneys or agents of the Corporation, in the name and on behalf of the Corporation, to cast the votes which the Corporation may be entitled to cast as a stockholder or otherwise in any other corporation, any of whose shares or securities may be held by the Corporation, at meetings of the holders of stock or other securities of such other corporation, or to consent in writing to any action by any such other corporation, and may instruct the person or persons so appointed as to the manner of casting such votes or giving such consent, and may execute or cause to be executed on behalf of the Corporation and under its corporate seal, or otherwise, such written proxies, consents, waivers or other instruments as he may deem necessary or proper in the premises; or the President may himself attend any meeting of the holders of the stock or other securities of any such other

corporation and thereat vote or exercise any or all other powers of the Corporation as the holder of such stock or other securities of such other corporation.

### ARTICLE 13

#### AMENDMENTS

The By-laws may be altered, amended, supplemented or repealed, or new By-laws may be adopted, by vote of the holders of the shares entitled to vote in the election of directors. The By-laws may be altered, amended, supplemented or repealed, or new By-laws may be adopted, by the Board, provided that the vote of a majority of the entire Board shall be required to change the number of authorized directors. Any By-laws adopted, altered, amended, or supplemented by the Board may be altered, amended, or supplemented or repealed by the stockholders entitled to vote thereon.

OPERATOR Bow Valley Petroleum, Inc DATE 5-30-84

WELL NAME Lighthouse #1-10

SEC NE NW 10 T 16S R 16E COUNTY Emery

43-015-30196  
API NUMBER

Fed.  
TYPE OF LEASE

POSTING CHECK OFF:

<input type="checkbox"/>	INDEX	<input type="checkbox"/>	HL	<input type="checkbox"/>
<input type="checkbox"/>	NID	<input type="checkbox"/>	PI	<input type="checkbox"/>
<input type="checkbox"/>	MAP	<input type="checkbox"/>		<input type="checkbox"/>

PROCESSING COMMENTS:

Unit well.

Need water permit

---



---

APPROVAL LETTER:

SPACING:  A-3 Trail Canyon UNIT  c-3-a \_\_\_\_\_ CAUSE NO. & DATE

c-3-b  c-3-c

SPECIAL LANGUAGE:

1- Water

2-

---



---



---



---

RECONCILE WELL NAME AND LOCATION ON APD AGAINST SAME DATA ON PLAT MAP.

AUTHENTICATE LEASE AND OPERATOR INFORMATION

VERIFY ADEQUATE AND PROPER BONDING

AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.

APPLY SPACING CONSIDERATION

ORDER \_\_\_\_\_

UNIT Trail Canyon

c-3-b

c-3-c

CHECK DISTANCE TO NEAREST WELL.

CHECK OUTSTANDING OR OVERDUE REPORTS FOR OPERATOR'S OTHER WELLS.

IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER

IF IN OIL SHALE DESIGNATED AREA, SPECIAL APPROVAL LANGUAGE.

June 5, 1984

Bow Valley Petroleum Inc.  
1700 Broadway, Suite 900  
Denver, CO 80290

RE: Well No. Lighthouse 1-10  
NE1/4 Sec. 10, T. 16S, R. 16E  
1300' FNL, 1350' FWL  
Emery County, Utah

Gentlemen:

Approval to drill the above referenced gas well is hereby granted in accordance with Section 40-6-18, Utah Code Annotated, as amended 1983; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water.
2. Submittal of a Survey Plat prepared by a licensed Surveyor or Engineer.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify R. J. Firth, Associate Director, Telephone (801) 533-5771 (Office), 571-6068 (Home).
4. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-015-30196.

Sincerely,



R. J. Firth  
Associate Director, Oil & Gas



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

Scott M. Matheson, Governor  
Temple A. Reynolds, Executive Director  
Dianne R. Nielson, Ph.D., Division Director

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

December 21, 1984

Bow Valley Petroleum, Inc.  
1700 Broadway, Suite 900  
Denver, Colorado 80290

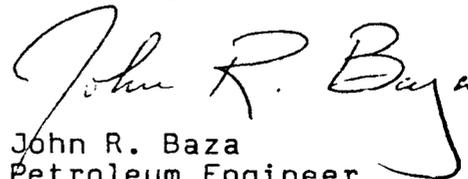
Gentlemen:

Re: Well No. Lighthouse 1-10 - Sec. 10, T. 16S., R. 16E.  
Emery County, Utah - API #43-015-30196

In concert with action taken by the Bureau of Land Management, December 4, 1984, approval to drill the above referred to well is hereby rescinded without prejudice.

A new "Application for Permit to Drill" must be filed with this office, for approval, prior to future drilling of the subject location.

Sincerely,

  
John R. Baza  
Petroleum Engineer

cc: Dianne R. Nielson  
Ronald J. Firth  
File

12201984/2

3162 (U-065)  
(U-15750)

Moab District  
P. O. Box 970  
Moab, Utah 84532

DEC 04 1984

Bow Valley Petroleum, Inc.  
1700 Broadway, Suite 900  
Denver, CO 80290

Re: Application for Permit to Drill  
Well No. Trail Canyon Lighthouse 1-10  
NENW Sec. 10, T. 16 S., R. 16 E.  
Emery County, Utah  
Lease U-15750

Gentlemen:

The referenced Application for Permit to Drill was received in this office on May 29, 1984.

Your Company advised us per telephone conversation with Lynn Jackson, Chief, Branch of Fluid Minerals that you are no longer interested in drilling this location. Per your instructions, we are returning your Application for Permit to Drill.

Any future plans for drilling this well, will need to be resubmitted with a new APD proposal.

If you have any questions, please contact the Branch of Fluid Minerals (801) 259-6111.

Sincerely,

/s/ James J. Travis

ACTING

District Manager

Enclosure:  
Application for Permit to Drill

cc: Price River Resource Area

C. Freudinger/cf 12/4/84

cc: State of Utah,  
Division of Oil, Gas & Mining

RECEIVED  
DEC 06 1984

DIVISION OF  
OIL, GAS & MINING

*J. Travis 12/9/84*

*Jackson 12/14*

*C. Freudinger 12/4/84*