FORM IV-2
(Obverse)
(6-82)

1) Date: June 20, 19 83
2) Operator's Well No. WI - 010 (rev)
3) API Well No. 47 105 1079
State County Permit

DRILLING CONTRACTOR:

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

OIL AND GAS WELL PERMIT APPLICATION

4) WELL TYPE: A Oil ____ / Gas XX /
B (If "Gas", Production XX / Underground storage ____ / Deep ____ / Shallow XX /)

5) LOCATION: Elevation: 894.79 Watershed: Otter Run
District: Burning Springs County: Wirt Quadrangle: Girta

6) WELL OPERATOR Bow Valley Petroleum
Address 600 Commerce Square
Charleston, WV. 25301

7) OIL & GAS ROYALTY OWNER Herbert Wilson
Address 13320 Island Lake Rd.
Chelsea, Michigan
Acreage 79

8) SURFACE OWNER Herbert Wilson
Address same as above
Acreage 45

9) FIELD SALE (IF MADE) TO:
Address

10) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Mr. Deo Mace
Address Rt. 1 Box 5
Sam d Ridge, WV

11) DESIGNATED AGENT Robert Long
Address P.O. Box 235
Culloden, 25510

12) COAL OPERATOR N/A
Address

13) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name N/A
Address
Name
Address

14) COAL LESSEE WITH DECLARATION ON RECORD:
Name N/A
Address

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DEPT. OF MINES

15) PROPOSED WORK: Drill XX / Drill deeper ____ / Redrill ____ / Fracture or stimulate ____
Plug off old formation ____ / Perforate new formation ____ /
Other physical change in well (specify) ____

16) GEOLOGICAL TARGET FORMATION, Marcellus Shale

17) Estimated depth of completed well, 4900 feet

18) Approximate water strata depths: Fresh, 55 & 140 feet; salt, 1550 feet.

19) Approximate coal seam depths: N/A Is coal being mined in the area? Yes ____ / No XX /

20) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS Size	Grade	Weight per ft.	New	Used	FOOTAGE INTERVALS For drilling	Left in well	CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
Conductor	13			x		50	50	to surface	Kinds
Fresh water	9 5/8			x		300	300	to surface	by Rule 15.05
Coal									Sizes
Intermediate	7			x		2000	2000	to surace	
Production	4½		10.5	x		4850	4850	250 sks	Depths set OR as req by Rule 15.01
Tubing									
Liners									Perforations: Top Bottom

21) EXTRACTION RIGHTS
Check and provide one of the following:
☒ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
☐ The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)

22) ROYALTY PROVISIONS
Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes ☐ No ☒
If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

23) Required Copies (See reverse side.)

24) Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

Notary: ____ Signed: Charlton B Roberts
My Commission Expires ____ Its: Geologist

OFFICE USE ONLY

DRILLING PERMIT

Permit number 47-105-1079 Date July 6, 19 83

09/29/2023

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 10) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

Permit expires July 6, 1985 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
B	✓	✓	✓	612

Michael Fowler
Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

File

Line Item Explanation

1) Date of Application

2) Your well name and number

3) To be filled out by office of oil & gas

4A) "Oil" means natural crude oil or petroleum and other hydrocarbons, regardless of gravity, which are produced at the well in liquid form by ordinary production methods and which are not the result of condensation of gas after it leaves underground reservoirs: "Gas" means all natural gas and all other fluid hydrocarbons not defined as oil.

4B) "Shallow well" means any well drilled and completed in a formation above the top of the uppermost member of the "Onondaga Group" or a depth less than six thousand feet, whichever is shallower.

"Deep well" means any well drilled and completed in a formation at or below the top of the uppermost member of the "Onondaga Group" or at a depth less then six thousand feet, whatever is shallower.

5) Where well is located

6) Before a permit can be issued in a corporation, company partnership, or fictitious name, the name must be registered with the Secretary of State Office

7) Use separate sheet if necessary

8) Present surface owner at time application is filed.

9) Optional

11) See Reg. 7.01 relating to code §22-4-1k

12) "Coal Operator" means any persons, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine. See Note 24

13 & 14) As per §22-4-20; See Note 24

15) Work that will be attempted—A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

16) Anticipated formation for which well will be completed

17) Self explanatory

18) Depth to deepest freshwater, and shallowest salt water, taken from nearby wells corrected for differences in elevation

19) All coal seam depths

20) Proposed casing program and cementing refer to Code 22-4-5, 22-4-6, 22-4-7, 22-4-8, 22-4-8a Reg 9.01, 15.01, 15.02, 15.03, 15.04, 25.01, 25.02, 25.03, 25.04

21) Code 22-4-11(c) - In lieu of filing the lease or leases or other continuing contract or contracts, the applicant for a permit described herein may file the following:
(1)A brief description of the tract of land including the district and county wherein the tract is located;
(2)The identification of all parties to all leases or other continuing contractual agreements by which the right to extract, produce or market the oil or gas is claimed;
(3)The book and page number wherein each such lease or contract by which the right to extract, produce or market the oil or gas is recorded;
(4)A brief description of the royalty provisions of each such lease or contract.

22) Code 22-4-11(d) and 22-4-1l(e).

23) Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code §22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code §22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code §22-4-12a, and (v) if applicable, the consent required by Code §22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

24) **The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.**

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

WAIVER

09/29/2023

The undersigned coal operator_____/ owner_____/ lessee_____/of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

_____

Date: _____, 19_____ By _____

Its _____

FORM IV-2(B) SURFACE OWNER'S COPY
Obverse

1) Date: June 20, 1983 19___
2) Operator's
Well No. WI- 010 (Rev)
3) API Well No. 47 - 105 1079
State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OFFICE OF OIL & GAS

APPLICATION FOR A WELL WORK PERMIT

4) WELL TYPE: A. Oil ___/ Gas X /
B. (If "Gas", Production X / Undergroung storage ___/ Deep ___/ Shallow X /
5) LOCATION: Elevation: 894.79 Watershed Otter Run
District: Burning Springs County: Wirt Quadrangle: Girta
6) WELL OPERATOR Bow Valley Petrleum Inc
Address 600 Commerce Square
Charleston W.V
7) DESIGNATED AGENT Robert Long
Address P.O.Box 235
Culloden W.V. 25510
8) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Deo Mace
Address Rt. 1 Box 5
Sand Ridge W.V
9) DRILLING CONTRACTOR:
Name
Address
10) PROPOSED WELL WORK: Drill X / Drill Deeper ___/ Redrill ___/ Stimulate ___/
Plug off old formation ___/ Perforate new formation ___/
Other physical change in well (specify)
11) GEOLOGICAL TARGET FORMATION, Maecellus Shale
12) Estimated depth of completed well (or actual depth of existing well), 4900 feet
13) Approximate water strate depths: Fresh, 55 & 140 feet; salt, 1550 feet.
14) Approximate coal seam depths: N/A Is coal being mined in the area? Yes ___/No X
15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS Size	Grade	Weight per ft.	New	Used	FOOTAGE INTERVALS For drilling	Left in well	CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
Conductor	13			X		50	50	to surface	Kinds
Fresh water	9 5/8			X		300	300	to surface	
Coal									Sizes
Intermediate	7			X		2000	2000	to surface	
Production	4½		10.5	X		4850	4850	250 sks	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

The law requires a comment period for surface owners. However, the permit can be issued in less than 15 days from the filing of the Application (or less than 5 days if the Application is to plug a well), if the surface owner(s) of record sign(s) the following "Voluntary Statement of No Objection" on a facsimile of this surface owner's copy of the Application.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners on the reverse side of this Application for a Well Work Permit, and that I have received copies of (1) a Notice of Application for a Well Work Permit on Form IV-2(A), (2) an Application for a Well Work Permit on Form IV-2(B), (3) a survey plat on Form IV-6, and (4) a Construction and Reclamation Plan on Form IV-9, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued based on those materials.

(For execution by corporation, partnership, etc.)
NAME: _____
By _____
Its _____ Date: _____

(For execution by natural persons)
Herbert J. Wilson Date: 6/23/8
(Signature)
Lillian C. Wilson Date: 6/23/8
(Signature)
Lillian C. Wilson

09/29/2023

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DEPT. OF MINES

INSTRUCTIONS TO SURFACE OWNERS
AND
EXPLANATION OF METHODS AND TIME LIMITS TO COMMENT
ON OIL AND GAS WELL WORK PERMIT

The well operator named in the Notice and this Application and the attached materials is applying for a permit from the State to do oil or gas well drilling or other well work. You are being served with these materials because surface owners have the right to file comments before the permit is issued. (NOTE: If the surface tract is owned by more than three persons, in multiple heirship for example, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) Permit will be good for 24 months. See Chapter 22, Article 4 of the W. Va. Code.

If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator named in the materials and the Administrator of the Office of Oil and Gas in the West Virginia Department of Mines immediately.

NOTE: You are not required to file any comment at all.

Where to file comments and obtain additional information:

Administrator of the Office of Oil and Gas
West Virginia Department of Mines
1615 Washington Street East
Charleston, WV 25311
(304) 348-2057

Who may file comments? If you wish to file comments, you must be an owner of record of (1) an interest in the surface tract on which the well already is or is about to be located, or (2) an interest in any other surface tract under the same oil or gas lease which will be utilized for roads or other land disturbances.

Time limits for comments. The law requires these materials to be personally served or mailed to you on or before the date the operator files his Application. You have FIFTEEN (15) DAYS after the filing date to file your comments as provided in Methods for Filing Comments below. (This time is changed to FIVE (5) DAYS from the filing date if the permit is only to plug a well.) You may call the Administrator's office at the above telephone number to be sure of the date. However, if you have been contacted by the well operator, and if you have signed a "voluntary statement of no objection" to any of the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments should include your name, address and telephone number, the well operator's name and well number, and the approximate location of the proposed well site including district and county from the Application. You may add other documents, such as sketches, maps or photographs to support your comments.

Methods for filing comments. Comments must be filed in person or received in the mail at the Administrator's office by the time stated above. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling.

The Administrator for Oil and Gas has the power to deny or condition a well work permit based on your comments on the following grounds:

"(1) The proposed well work will constitute a hazard to the safety of persons; or
"(2) The plan for soil erosion and sediment control is not adequate or effective; or
"(3) Damage would occur to publicly owned lands or resources; or
"(4) The proposed well work fails to protect fresh water sources or supplies."

If you want a copy of the permit as it is finally issued, or a copy of the order denying the permit, you should request a copy from the Administrator.

List of Water Testing Laboratories. The Administrator maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Administrator's office or an Oil and Gas Inspector to obtain a copy of the list.

09/29/2023

FORM IV-2(A)

1) Date: June 20, 1983
2) Operator's Well No. WI 010 (Rev)
3) API Well No. 47 / 105 / 1079
State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OFFICE OF OIL & GAS

NOTICE OF APPLICATION FOR A WELL WORK PERMIT

4) SURFACE OWNER(S) OF RECORD TO BE SERVED

(i) Name Herbert J. Wilson
Address 13320 Island Lk Rd
Chelsea Michigan 48118

(ii) Name
Address

(iii) Name
Address

5(i) COAL OPERATOR
Address

5(ii) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name
Address

Name
Address

5(iii) COAL LESSEE WITH DECLARATION ON RECORD:
Name
Address

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OIL & GAS DIVISION
DEPT. OF MINES

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

(1) The Application for a Well Work Permit on Form IV-2(B) (or Form IV-4 if the well is to be plugged, which sets out the parties involved in the drilling or other work, and describes the well and its location and, if applicable, the proposed casing and cementing program;
(2) The plat (surveyor's map) showing the well location on Form IV-6; and
(3) The Construction and Reclamation Plan on Form IV-9)unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM IV-2(B) OR FORM 4, DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Administrator of the Office of Oil and Gas, West Virginia Department of Mines, with respect to a well at the location described on attached Application and depicted on attached Form IV-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Administrator.

6) EXTRACTION RIGHTS

Check and provide one of the following:
☒ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
☐ The requirement of Code 22-4-1-(c)(1) through (4). (See reverse side for specifics.)

7) ROYALTY PROVISIONS

Is the right to extract, produce or market the oil or gas based upon a lease or leases or other contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes (No)

If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

See the reverse side for line item instructions, and for instructions concerning the required copies of the Notice and Application, plat, and Construction and Reclamation Plan.

The truth of the information on the Notice and Application is verified and sworn to and the Notice is signed on behalf of the Well Operator in my County and State by Danny M. Haught,
this 20 day of June, 1983.
My commission expires 7/25, 1985.
Helen Mae Snodgrass
Notary Public, Kanawha County,
State of West Virginia

WELL OPERATOR Bow Valley Petroleum Inc
By Danny M. Haught
Its Senior Landman
Address 600 Commerce Square
Charleston WV 25301
Telephone 344-8393

09/29/2023

Form IV-2 (A)
Reverse

INSTRUCTIONS TO APPLICANT

CONCERNING THE LINE ITEMS:

1) Date of Notice.

2) Your well name and number.

3) To be filled out by the Office of Oil & Gas.

4) & 5) Use separate sheet if necessary.

4) Surface owner(s) of record to be served with Notice and Application. However, see also Code § 22-4-1b(b) if "more than three tenants in common or other co-owners of interest described in subsection (a) of this section hold interests in such lands".

5(i) "Coal Operator" means any person, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine.

5(ii, iii) See Code § 22-4-20.

6) See Code § 22-4-11(c). However, in lieu of filing the lease(s) or other continuing contract(s), the Applicant may fill out the information in the space provided below.

7) See Code § § 22-4-11(d, e).

CONCERNING THE REQUIRED COPIES FOR FILING AND SERVICE:

Filing. Code § 22-4-1k and Regulation 7.02 provide that the original and required copies of the Notice and Application must be filed with the Administrator, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-1k(d) and the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fees required by Code § 22-4-1a(c) and 22-3-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well on dwelling within 200 feet of the proposed well.

Service. In addition, service must be made on the surface owner(s) and the person(s) with an interest in the coal. See Code § § 22-4-1m, 22-4-2, 22-4-2a, and 22-4-2b.

INFORMATION SUPPLIED UNDER CODE § 22-4-11(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on the obverse side of this Notice, I depose and say that I am the person who signed the Notice for the Applicant, and that--

(1) the tract of land is the same tract described in the Application to which this Notice applies, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book	Page

09/29/2023

IV-9
(Rev 8-81)

DATE June 6, 1983
WELL NO. WE 010
API NO. 47 - 105 - 1079

State of West Virginia
Department of Mines
Oil and Gas Division

CONSTRUCTION AND RECLAMATION PLAN

COMPANY NAME Bow Valley Petroleum, Inc.
Address 600 Commerce Sq. Charleston, West Virginia
Telephone 304-344-8393

DESIGNATED AGENT Robert W. Long
Address Box 235 Culloden, WV
Telephone 304-562-3376

LANDOWNER H. J. Wilson

SOIL CONS. DISTRICT Little Kanawha

Revegetation to be carried out by Bow Valley Petroleum, Inc. (Agent)

This plan has been reviewed by Little Kanawha SCD. All corrections and additions become a part of this plan: 6-8-83 (Date)

Jarrett Newlon
(SCD Agent)

ACCESS ROAD

Structure Drainage Ditch (A)
Spacing
Page Ref. Manual 2-15

Structure Culverts (18") (B)
Spacing
Page Ref. Manual 2-8

Structure (C)
Spacing
Page Ref. Manual

LOCATION

Structure Diversion Ditch (1)
Material
Page Ref. Manual 2-12

Structure (2)
Material
Page Ref. Manual

Structure (3)
Material
Page Ref. Manual

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All structures should be inspected regularly and repaired if necessary. All commercial timber is to be cut and stacked and all brush and small timber to be cut and removed from the site before dirt work begins.

REVEGETATION

Treatment Area I + II

Lime 2 Tons/acre
or correct to pH 6.5
Fertilizer 600 lbs/acre
(10-20-20 or equivalent)
Mulch Hay 1½ Tons/acre
Seed* Kentucky 31 Fescue 45 lbs/acre
Ladino Clover 3 lbs/acre
Rye 3 lbs/acre

Treatment Area II

Lime Tons/acre
or correct to pH
Fertilizer lbs/acre
(10-20-20 or equivalent)
Mulch Tons/acre
Seed* lbs/acre
lbs/acre
lbs/acre

Inoculate all legumes such as vetch, trefoil and clovers with the proper bacteria. Inoculate with 3X recommended amount.

09/29/2023

PLAN PREPARED BY William F. Henrichs, III
ADDRESS 600 Commerce Square
Charleston, West Virginia
PHONE NO. 304-344-8393

NOTES: Please request landowners' cooperation to protect new seedling for one growing season. Attach separate sheets as necessary for comments.

IV-9 REVERSE
(REV 8-81)

ATTACH OR PHOTOCOPY SECTION OF
INVOLVED TOPOGRAPHIC MAP.
QUADRANGLE GURTA

LEGEND

Well Site ⊕

Access Road ———

WELL SITE PLAN

Sketch to include well location, existing access road, roads to be constructed, wellsite, drilling pits and necessary structures numbered or lettered to correspond with the first part of this plan. Include all natural drainage.

LEGEND

Property boundary

Road

Existing fence

Planned fence

Stream

Open ditch

Diversion

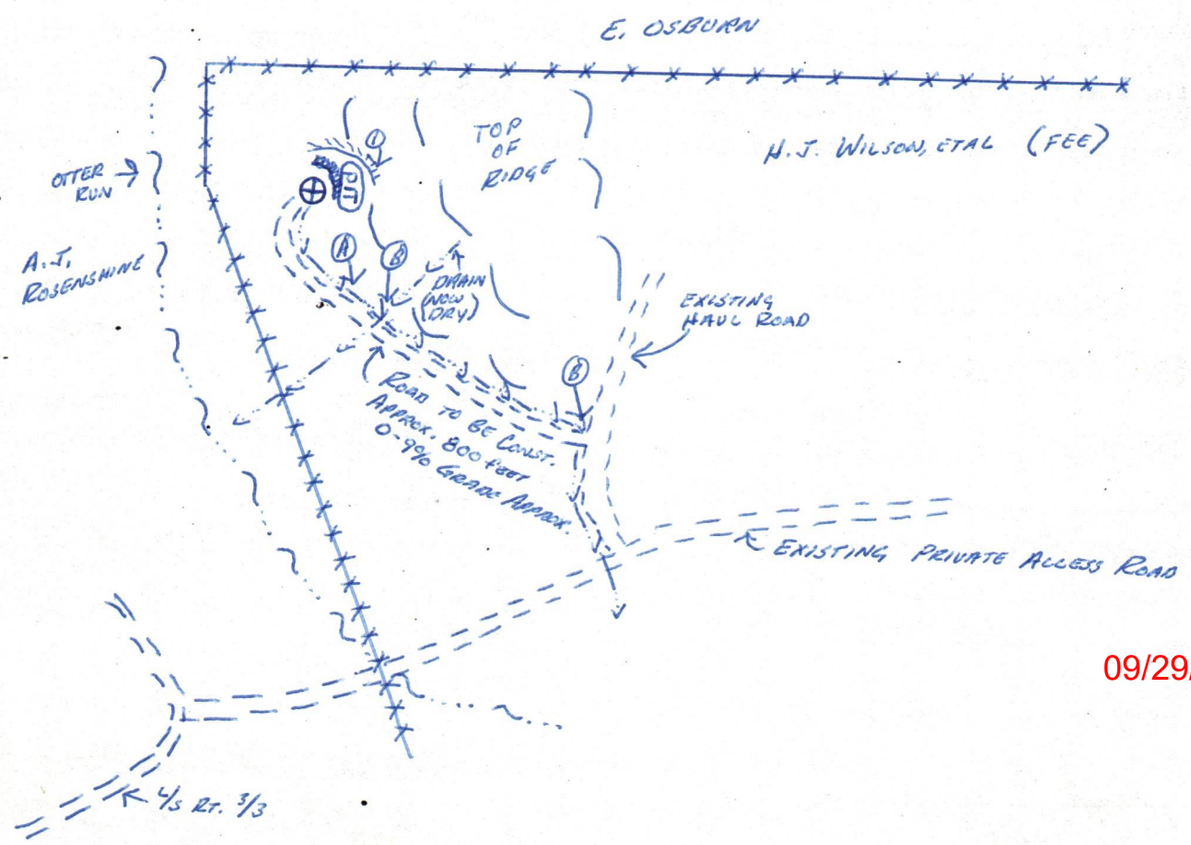
Spring

Wet spot

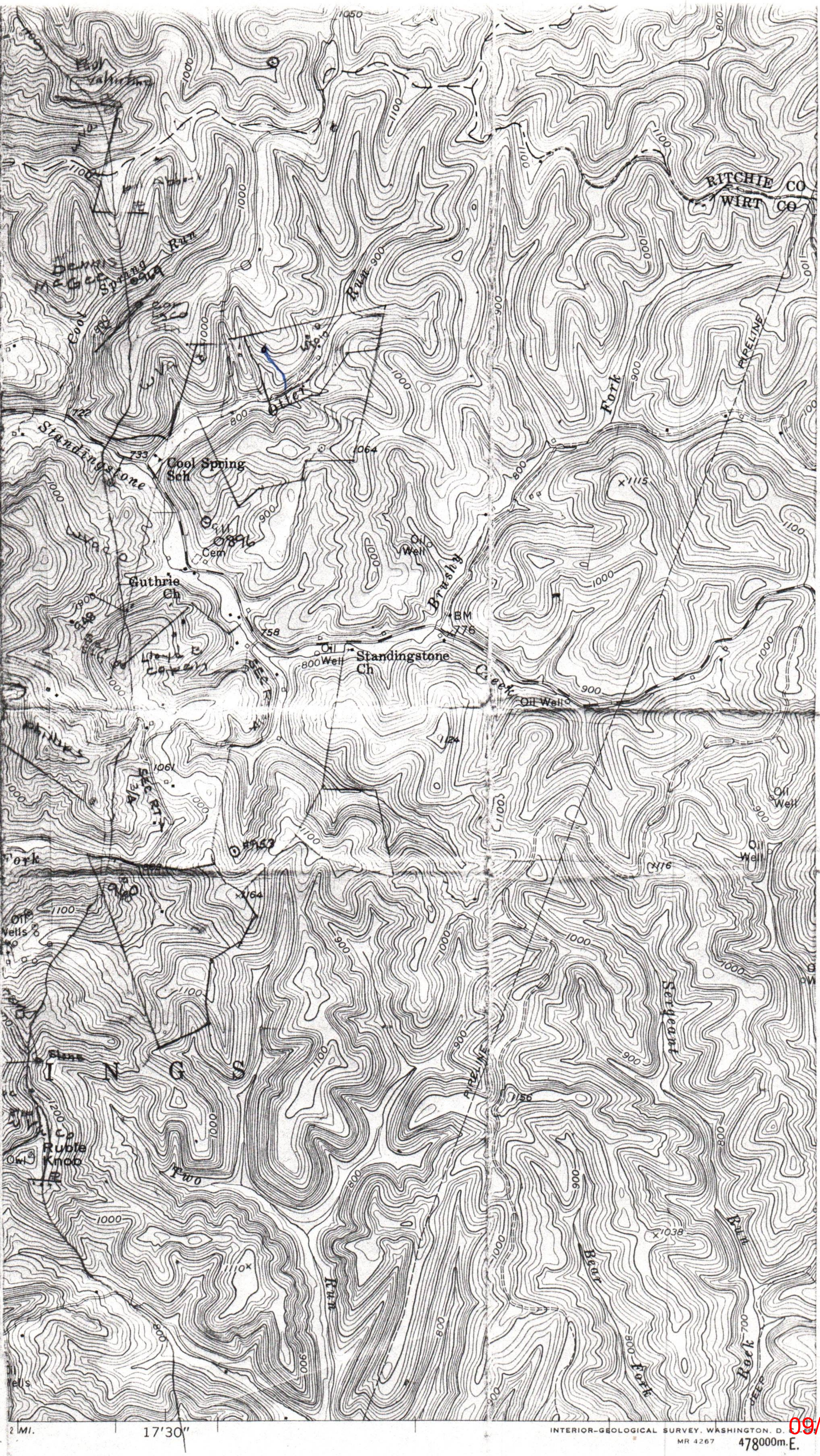
Building

Drain pipe

Waterway



09/29/2023



2 MI. 17'30"

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.

MR 4267 478000m.E.

1 MILE

7000 FEET

1 KILOMETER

ROAD CLASSIFICATION

Heavy-duty Light-duty

Medium-duty Unimproved dirt

○ State Route

QUADRANGLE LOCATION

GIRTA, W. V

SE/4 ELIZABETH 15' QUA

N3900—W8115/

09/29/2023

BOOK 162 PAGE 561

Lease No. 2448

8-107 2448

OIL AND GAS LEASE

AGREEMENT, made and entered into this 27TH day of JULY A. D. 19 81

by and between ROGER G. ROBERTS AND SALLY P. ROBERTS HIS WIFE

of WHEELING, WEST VIRGINIA party of the first part, hereinafter called Lessor (whether one or more),

and BOW VALLEY PETROLEUM, INC. party of the second part, hereinafter called Lessee;

1. WITNESSETH: That the Lessor, in consideration of the sum of One Dollar, the receipt of which is hereby acknowledged, and the covenants and agreements hereinafter contained, does hereby grant unto the Lessee all of the oil and gas and all of the constituents of either in and under the land hereinafter described, together with the exclusive right to drill for, produce and market oil and gas and their constituents ~~and of storing gas~~ of any kind in any formation underlying the land, and also the right to enter thereon at all times for the purpose of drilling and operating for oil, gas and water, laying pipe lines, erecting tanks, machinery, powers and structures, and to possess, use, and occupy so much of said premises as is necessary and convenient for said purposes and to convey the above named products therefrom or thereto by pipe lines or otherwise; said land being situate in BURNING SPRS. ~~Township~~ District, County of WIRT, State of WEST VIRGINIA, and described as follows, to-wit: Bounded on the NORTH by lands of NOTTINGHAM; ADAMS,

EAST by lands of JENNIE BELL,

SOUTH by lands of J. L. EVANS; GEORGE W. BONAR,

WEST by lands of WHEATON,

Containing SEVENTY-EIGHT (78) acres, more or less and being the same land conveyed to lessor by by deed dated and recorded in said county records in Book No. Page

2. It is agreed that this lease shall remain in force for a primary term of FIVE (5) years from this date and as long thereafter as operations for oil or gas are being conducted on the premises, or oil or gas is found in paying quantities thereon, ~~or any formation underlying the herein leased land is used for storage of gas as provided under paragraph 7 hereof~~.

3. The Lessee shall deliver to the credit of the Lessor free of cost, in the pipe line to which he may connect his wells, the equal one-eighth (⅛) part of all oil produced and saved from the leased premises, and shall pay Lessor ONE-EIGHTH (1/8) OF THE PROCEEDS DERIVED BY LESSEE FROM THE SALE OF GAS AT THE WELL, for all gas and casing head gas produced and sold from the premises, payable monthly; provided, Lessee shall pay Lessor a royalty at the rate of ~~Fifty~~ ONE THOUSAND (1000.00) Dollars per year on each gas well while, through lack of market, gas therefrom is not sold or used off the premises, and while said royalty is so paid said well shall be held to be a paying well under paragraph 2 hereof.

4. The Lessee shall commence operations for a well on the premises on or before JULY 27, 1982, unless Lessee pays thereafter a rental of SEVEN HUNDRED EIGHTY AND NO/100 DOLLARS ($780.00) for each TWELVE (12) months that operations are delayed from the time above mentioned. The consideration first recited herein, the down payment, shall cover not only the privilege granted to the date when first said rental is payable as aforesaid, but also the Lessee's option of extending that period as aforesaid, and any and all other rights conferred. The drilling of a non-productive well shall be accepted by the Lessor in lieu of delay rental for a period of one year after its completion, and following the exhaustion or abandonment of all wells the Lessee shall have the right for a period of one year to resume the payment of delay rental or commence operations for another well. Upon the resumption of payment of rentals the provisions hereof governing such payment and the effect thereof shall continue in force as though they had not been interrupted.

5. All moneys coming due hereunder shall be paid or tendered to 1/4- ROGER G. ROBERTS direct, or by check payable to his (or her) order mailed to 25 STRATFORD RD, WHEELING, W.VA. 26003 and no default shall be declared against the Lessee by the Lessor for failure of the Lessee to make any payment or perform any conditions provided for herein unless the Lessee shall refuse or neglect to pay or perform the same for ten days after having received written notice by registered mail from the Lessor of his intention to declare such default.

6. Lessor reserves 200,000 cubic feet of gas per annum for domestic use, to be taken through his own appliances at any producing gas well, and agrees to pay Lessee a fair domestic rate for any gas used in excess thereof. Lessor further covenants and agrees that his taking and use of gas shall be wholly at his own risk, the Lessee not to be held liable for any accident or damage caused thereby, nor shall Lessee be liable for any shortage or failure in the supply of gas for said domestic use.

~~7. Lessee shall have the right to use any formation underlying the leased premises for the storage of gas and shall have all rights and rights-of-way necessary to store and produce such stored gas. As full payment for such storage rights, the Lessee shall pay to the Lessor a rental at the rate of per acre per year, while the premises are so used, and so long as the storage payment is made, all provisions of this lease shall remain in full effect.~~

8. Lessor further grants to the Lessee, his heirs and assigns, the right to unitize this lease with other leases to form a drilling unit or units according to the rules and regulations which may be adopted for the proper development and conservation of the field. In the event this lease is so unitized, the Lessor agrees to accept, in lieu of the royalty hereinbefore recited, such proportion of the royalty above provided, as the acreage covered by this lease bears to the total acreage comprising the unit.

9. If said Lessor owns a less interest in the above described land than the undivided fee simple estate therein, then the royalties and rentals herein provided shall be paid the Lessor only in the proportion which his interest bears to the whole and undivided fee.

10. No well may be drilled nearer than 200 feet to the house or barn now on said premises without the written consent of Lessor. Lessee shall have and enjoy all rights and privileges necessary and convenient for the proper use and development of this lease, and shall have the right to use, free of cost, gas, oil and water produced on said land for its operations thereon, except water from wells of Lessor. Lessee shall also have the right at any time to remove all or any part of the machinery, fixtures or structures placed on said premises, including the right to draw and remove casing. Lessee shall pay for damages caused by its operations to growing crops on said lands, and, when requested by Lessor, shall bury its pipe lines below plow depth.

11. The interest or estate of either party hereto may be assigned, the privilege of assigning in whole or in part being expressly allowed. In event this lease shall be assigned as to any part or parts of the above described land and the assignee or assignees of such part or parts shall fail or make default in the payment of the proportionate part of the rents due from him or them, such default shall not operate to defeat or affect this lease insofar as it covers a part or parts of said land upon which the said Lessee or any assignee thereof shall make due payment of said rental. No change of ownership in the land or in the rentals or royalties shall be binding on the Lessee until after notice to the Lessee and it has been furnished with a written transfer or assignment or a certified copy thereof.

12. At any time, Lessee, its successors or assigns, shall have the right to surrender this lease or any part thereof for cancelation, after which all payments and liabilities hereunder thereafter shall cease and determine, and if the whole is surrendered, then this lease shall become absolutely null and void. This surrender may be made to the Lessor, or if more than one Lessor, then to any one of them, or to the heirs or assigns of any one of them by delivery of a duly executed surrender thereof in person or by mail addressed to the post office address of such person, or by recording a duly executed surrender thereof in the Recorder's office of the County in which the land is located.

13. Lessor hereby ~~warrants and agrees to defend the title to the land herein described and~~ agrees that the Lessee at its option may pay, discharge or redeem any taxes, mortgages, or other liens existing, levied, or assessed on or against the above described lands, and in event it exercises such option, it shall be subrogated to the rights of any holder or holders thereof and may reimburse itself by applying any royalty or rentals accruing hereunder to the discharge of any such taxes, mortgages or other liens.

14. It is expressly agreed that if the Lessee shall commence drilling operations at any time while this lease is in force, it shall remain in force and its terms continue so long as such operations are prosecuted, and if production results therefrom, then as long as production continues. If after the expiration of the term of this lease production from the leased premises shall cease from any cause, this lease shall not terminate provided Lessee resumes operations within sixty days from such cessation, and this lease shall remain in force during the prosecution of such operations, and, if production results therefrom, then as long as oil or gas is produced in paying quantities.

15. This lease embodies the entire contract and agreement between Lessor and Lessee, and no warranties, representations, promises or inducements not herein expressed have been made or relied upon by either party. The terms, conditions and stipulations hereof shall extend to the respective heirs, executors, administrators, successors and assigns of the parties hereto.

Witness the hands and seals of the parties hereto the day and year first above written.

WITNESS:
Mary Ann Armstrong
Mary K. Hasemanne

Roger G. Roberts (SEAL)
Sally P. Roberts (SEAL)
(SEAL)
(SEAL)
(SEAL)
(SEAL)
(SEAL)
(SEAL)

THIS INSTRUMENT PREPARED BY THORN C. ROBERTS BOX 92 ELIZABETH, W.VA. 26143

WEST VIRGINIA ACKNOWLEDGMENT

STATE OF WEST VIRGINIA
COUNTY OF OHIO } To-wit:

I, MARY K PROHASKA, a Notary Public of said County, do hereby certify that ROGER G. AND SALLY P. ROBERTS whose names ARE signed to the within writing bearing date the 27TH day of JULY, 1981 have this day acknowledged the same before me in my said County.

Given under my hand this 27TH day of JULY, 1981.

Mary K. Prohaska
Notary Public

My Commission expires 8-18-88

WEST VIRGINIA ACKNOWLEDGMENT

STATE OF WEST VIRGINIA
COUNTY OF _____ } To-wit:

I, _____, a Notary Public of said County, do hereby certify that _____ whose name _____ signed to the within writing bearing date the _____ day of _____, 19____ ha_____ this day acknowledged the same before me in my said County.

Given under my hand this _____ day of _____, 19____.

Notary Public

My Commission expires _____

OHIO ACKNOWLEDGMENT

STATE OF OHIO,
COUNTY OF _____, } SS.

Before me, a Notary Public in and for said county, personally appeared the above named _____ who acknowledged that _____ he _____ did sign the foregoing instrument, and that the same is _____ free act and deed. In testimony whereof I have hereunto subscribed my name at _____, this _____ day of _____, 19____.

My Commission expires _____

Notary Public

RECORDING DATA:

Received for Record on the 14 day of July 1981 at 2:30 O'clock A.M. Recorded in the Office of the Clerk of the County Commission of Wirt County, W. Va.

In Deed Book No. 162 at page 561

Clerk Wirt County Commission

$200 PAID

Globe Form 100 - Rev. (Standard Ohio & W. Va.)

Oil and Gas Lease

#2148

BOW VALLEY PETROLEUM INC.
600 COMMERCE SQUARE
CHARLESTON, WV 25301

Date _____, 19____

Acres _____

Location _____

County _____ State _____

Term _____

Globe Printing & Binding Co., Parkersburg, W. Va.

BOOK 104 PAGE [illegible]

RECEIVED

NOV 21 1980

Ans'd.....

Lease # 2248

RECEIVED

FEB 10 1981

Map 2 Parcel 1
Map 2 Parcel 7

OIL AND GAS LEASE

AGREEMENT, made and entered into this 15TH day of OCTOBER A. D. 19 80

by and between WILLIAM B. REED AND MABEL G. REED HIS WIFE

of APACHE JUNCTION, ARIZONA party of the first part, hereinafter called Lessor (whether one or more), and PAY RESOURCES DIV. OF BOW VALLEY PETROLEUM, INC. party of the second part, hereinafter called Lessee;

1. WITNESSETH: That the Lessor, in consideration of the sum of One Dollar, the receipt of which is hereby acknowledged, and the covenants and agreements hereinafter contained, does hereby grant unto the Lessee all of the oil and gas and all of the constituents of either in and under the land hereinafter described, together with the exclusive right to drill for, produce and market oil and gas and their constituents ~~and of storing gas~~ of any kind in any formation underlying the land, and also the right to enter thereon at all times for the purpose of drilling and operating for oil, gas and water, laying pipe lines, erecting tanks, machinery, powers and structures, and to possess, use, and occupy so much of said premises as is necessary and convenient for said purposes and to convey the above named products therefrom or thereto by pipe lines or otherwise; said land being situate in BURNING SPRS. ~~Township~~ District, County of WIRT, State of WEST VIRGINIA, and described as follows, to-wit: Bounded on the

NORTH by lands of NOTTINGHAM, ADAMS

EAST by lands of JENNIE BELL

SOUTH by lands of J.C. EVANS, GEO. W. BONAR

WEST by lands of WHEATON

Containing SEVENTY-EIGHT (78) acres, more or less and being the same land conveyed to lessor by ..... by deed dated ..... and recorded in said county records in ..... Book No. ..... Page .....

2. It is agreed that this lease shall remain in force for a primary term of FIVE (5) years from this date and as long thereafter as operations for oil or gas are being conducted on the premises, or oil or gas is found in paying quantities thereon, ~~or any formation underlying the herein leased land is used for storage of gas as provided under paragraph 7 hereof.~~

3. The Lessee shall deliver to the credit of the Lessor free of cost, in the pipe line to which he may connect his wells, the equal one-eighth (⅛) part of all oil produced and saved from the leased premises, and shall pay Lessor ONE-EIGHTH (1/8) OF THE PROCEEDS DERIVED BY LESSEE FROM THE SALE OF GAS AT THE WELL. for all gas and casing head gas produced and sold from the premises, payable monthly; provided, Lessee shall pay Lessor a royalty at the rate of Fifty Dollars per year on each gas well while, through lack of market, gas therefrom is not sold or used off the premises, and while said royalty is so paid said well shall be held to be a paying well under paragraph 2 hereof.

4. The Lessee shall commence operations for a well on the premises on or before OCTOBER 15, 1981, unless Lessee pays thereafter a rental of TWO HUNDRED THIRTY-FOUR AND NO/100 DOLLARS ($234.00) for each TWELVE (12) months that operations are delayed from the time above mentioned. The consideration first recited herein, the down payment, shall cover not only the privilege granted to the date when first said rental is payable as aforesaid, but also the Lessee's option of extending that period as aforesaid, and any and all other rights conferred. The drilling of a non-productive well shall be accepted by the Lessor in lieu of delay rental for a period of one year after its completion, and following the exhaustion or abandonment of all wells the Lessee shall have the right for a period of one year to resume the payment of delay rental or commence operations for another well. Upon the resumption of payment of rentals the provisions hereof governing such payment and the effect thereof shall continue in force as though they had not been interrupted.

5. All moneys coming due hereunder shall be paid or tendered to 1/4 - WILLIAM B. REED OR MABEL G. REED direct, or by check payable to his (or her) order mailed to P.O. BOX 62, QUEEN VALLEY, APACHE JCT., ARIZ, 85273 and no default shall be declared against the Lessee by the Lessor for failure of the Lessee to make any payment or perform any conditions provided for herein unless the Lessee shall refuse or neglect to pay or perform the same for ten days after having received written notice by registered mail from the Lessor of his intention to declare such default.

6. Lessor reserves 200,000 cubic feet of gas per annum for domestic use, to be taken through his own appliances at any producing gas well, and agrees to pay Lessee a fair domestic rate for any gas used in excess thereof. Lessor further covenants and agrees that his taking and use of gas shall be wholly at his own risk, the Lessee not to be held liable for any accident or damage caused thereby, nor shall Lessee be liable for any shortage or failure in the supply of gas for said domestic use.

~~7. Lessee shall have the right to use any formation underlying the leased premises for the storage of gas and shall have all rights and rights of way necessary to store and produce such stored gas. As full payment for such storage rights, the Lessee shall pay to the Lessor a fixed sum at the rate of ..... per acre per year, while the premises are so used, and so long as the storage payment is made, all provisions of this lease shall remain in full effect.~~

8. Lessor further grants to the Lessee, his heirs and assigns, the right to unitize this lease with other leases to form a drilling unit or units according to the rules and regulations which may be adopted for the proper development and conservation of the field. In the event this lease is so unitized, the Lessor agrees to accept, in lieu of the royalty hereinbefore recited, such proportion of the royalty above provided, as the acreage covered by this lease bears to the total acreage comprising the unit.

9. If said Lessor owns a less interest in the above described land than the undivided fee simple estate therein, then the royalties and rentals herein provided shall be paid the Lessor only in the proportion which his interest bears to the whole and undivided fee.

10. No well may be drilled nearer than 200 feet to the house or barn now on said premises without the written consent of Lessor. Lessee shall have and enjoy all rights and privileges necessary and convenient for the proper use and development of this lease, and shall have the right to use, free of cost, gas, oil and water produced on said land for its operations thereon, except water from wells of Lessor. Lessee shall also have the right at any time to remove all or any part of the machinery, fixtures or structures placed on said premises, including the right to draw and remove casing. Lessee shall pay for damages caused by its operations to growing crops on said lands, and, when requested by Lessor, shall bury its pipe lines below plow depth.

11. The interest or estate of either party hereto may be assigned, the privilege of assigning in whole or in part being expressly allowed. In event this lease shall be assigned as to any part or parts of the above described land and the assignee or assignees of such part or parts shall fail or make default in the payment of the proportionate part of the rents due from him or them, such default shall not operate to defeat or affect this lease insofar as it covers a part or parts of said land upon which the said Lessee or any assignee thereof shall make due payment of said rental. No change of ownership in the land or in the rentals or royalties shall be binding on the Lessee until after notice to the Lessee and it has been furnished with a written transfer or assignment or a certified copy thereof.

12. At any time, Lessee, its successors or assigns, shall have the right to surrender this lease or any part thereof for cancelation, after which all payments and liabilities hereunder thereafter shall cease and determine, and if the whole is surrendered, then this lease shall become absolutely null and void. This surrender may be made to the Lessor, or if more than one Lessor, then to any one of them, or to the heirs or assigns of any one of them by delivery of a duly executed surrender thereof in person or by mail addressed to the post office address of such person, or by recording a duly executed surrender thereof in the Recorder's Office of the County in which the land is located.

13. Lessor hereby warrants and agrees to defend the title to the land herein described and agrees that the Lessee at its option may pay, discharge or redeem any taxes, mortgages, or other liens existing, levied, or assessed on or against the above described lands, and in event it exercises such option, it shall be subrogated to the rights of any holder or holders thereof and may reimburse itself by applying any royalty or rentals accruing hereunder to the discharge of any such taxes, mortgages or other liens.

14. It is expressly agreed that if the Lessee shall commence drilling operations at any time while this lease is in force, it shall remain in force and its terms continue so long as such operations are prosecuted, and if production results therefrom, then as long as production continues. If after the expiration of the term of this lease production from the leased premises shall cease from any cause, this lease shall not terminate provided Lessee resumes operations within sixty days from such cessation, and this lease shall remain in force during the prosecution of such operations, and, if production results therefrom, then as long as oil or gas is produced in paying quantities.

09/29/2023

15. This lease embodies the entire contract and agreement between Lessor and Lessee, and no warranties, representations, promises or inducements not herein expressed have been made or relied upon by either party. The terms, conditions and stipulations hereof shall extend to the respective heirs, executors, administrators, successors and assigns of the parties hereto.

Witness the hands and seals of the parties hereto the day and year first above written.

WITNESS:

William B. Reed (SEAL)
Mabel G. Reed (SEAL)
(SEAL)
(SEAL)
(SEAL)
(SEAL)
(SEAL)
(SEAL)

THIS INSTRUMENT PREPARED BY THORN C. ROBERTS

WEST VIRGINIA ACKNOWLEDGMENT

STATE OF ~~WEST VIRGINIA~~ ARIZONA
COUNTY OF PINAL } To-wit:

I, JANICE LEE LEDFORD, a Notary Public of said County, do hereby certify that WILLIAM B. AND MABEL G. REED whose names signed to the within writing bearing date the 15 day of Oct, 1980 has this day acknowledged the same before me in my said County.

Given under my hand this 24 day of Oct, 1980.

Janice Lee Ledford
Notary Public

My Commission expires Dec 5, 1981

WEST VIRGINIA ACKNOWLEDGMENT

STATE OF WEST VIRGINIA
COUNTY OF ..... } To-wit:

I, ..., a Notary Public of said County, do hereby certify that .....

whose name..... signed to the within writing bearing date the ..... day of ....., 19....
has..... this day acknowledged the same before me in my said County.

Given under my hand this..... day of ....., 19....

Notary Public

My Commission expires.....

OHIO ACKNOWLEDGMENT

STATE OF OHIO,
COUNTY OF ..... } SS.

Before me, a Notary Public in and for said county, personally appeared the above named ..... who acknowledged that..... he..... did sign the foregoing instrument, and that the same is..... free act and deed. In testimony whereof I have hereunto subscribed my name at ....., this ..... day of ....., 19....

My Commission expires .....

Notary Public

Globe Form 100 - Rev.
(Standard Ohio & W. Va.)

Oil and Gas Lease

#2248

TO
RAY RESOURCES DIVISION
BOW VALLEY PETROLEUM INC.
630 Commerce Square
Charleston, W. Va. 25301

Date....., 19....
Acres.....
Location.....
County..... State.....
Term.....

RECORDING DATA:

Received for Record on the 26 day of January, 19 81 at 8:30 o'clock A.M. Recorded in the Office of the Clerk of the County Commission of Wirt County, W. Va.

In Deed Book No. 159 at page 980

Arthur Chrisman
Clerk Wirt County Commission

$1.25 PAID

Globe Printing & Binding Co., Parkersburg, W. Va.

IV-35
(Rev 8-81)

State of West Virginia
Department of Mines
Oil and Gas Division

Date January 13, 1984
Operator's
Well No. WI010
Farm Wilson
API No. 47 - 105 1079

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil X / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production ___ / Underground Storage ___ / Deep ___ / Shallow ___ /)

LOCATION: Elevation: 894.79 Watershed Otter Run of Standing Stone
District: B.Springs County Wirt Quadrangle Girts

COMPANY Bow Valley Petroleum, Inc.
ADDRESS 600 Commerce Sq.Charleston,WV.
DESIGNATED AGENT Robert Long
ADDRESS P.O. Box 235,Culloden,WV.
SURFACE OWNER Herbert Wilson
ADDRESS 13320 Island Lake Rd.Chelsen,MI.
MINERAL RIGHTS OWNER Herbert Wilson
ADDRESS 13320 Island Lake Rd.Chelsen MI.
OIL AND GAS INSPECTOR FOR THIS WORK Homer Daugherty ADDRESS Looneyville,WV.
PERMIT ISSUED 7/6/83
DRILLING COMMENCED 7/28/83
DRILLING COMPLETED 8/02/83
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON ___

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.	17	17	15sks
13-10"	330	330	100sks
9 5/8			
8 5/8	1932	1932	170sks
7			
5 1/2			
4 1/2	4972	4972	375sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth ___ feet
Depth of completed well 5001 feet Rotary X / Cable Tools ___
Water strata depth: Fresh 230 feet; Salt 1340 feet
Coal seam depths: None Encountered Is coal being mined in the area? ___

OPEN FLOW DATA
Producing formation Devonian Shale Pay zone depth 4755-2297 feet
Gas: Initial open flow 0 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 189 Mcf/d Final open flow 59 Bbl/d
Time of open flow between initial and final tests ___ hours
Static rock pressure 800 psig (surface measurement) after 72 hours shut in
(If applicable due to multiple completion--)
Second producing formation ___ Pay zone depth ___ feet
Gas: Initial open flow ___ Mcf/d Oil: Initial open flow ___ Bbl/d
Final open flow ___ Mcf/d Oil: Final open flow ___ Bbl/d
Time of open flow between initial and final tests ___ hours
Static rock pressure ___ psig (surface measurement) after ___ hours shut in

(Continue on reverse side)

WWR 1079

FORM IV-35
(REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

1st Stage - 4755-3738 perforate 28 holes drop 1000 gals 15% HCL frac with 1,117,000 SCF N_2. Breakdown 1840# Average Injection 51,000 SCF/m ISIP 2660.

2nd Stage - 3649-3172' 28 holes drop 500 gals 15% HCL frac with 997,000 SCF N_2. Breakdown 1550 average injection rate 48,000 SCF/min. ISIP 1500#.

3rd Stage - 3105-2297' perforate 27 holes drop 500 gals 15% HCL Frac with 1,003,000 SCF/N_2. Breakdown 1650# Average injection 50,000 SCF/Min. ISIP 1700

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Soil		Soft	0	12	
Shale & Sand	Gray	Hard	12	200	
Shale	Red&Gray	Soft	200	360	Water @ 230'
Red Rock	Red	Soft	360	940	Salt Water @ 1340'
Shale	Gray	Soft	940	1060	
Sand	Gray	Med	1060	1139	
Shale	Black	Soft	1139	1170	
Sand	Gray(D)	Med	1170	1248	
Shale	Black	Soft	1248	1286	
Sandy Shale	Gray	Soft	1286	1385	
Shale	Black	Soft	1385	1440	
Sand & Shale	Gray&White	Med	1440	1530	
Shale	Black	Soft	1530	1575	
Shale	Gray	Soft	1575	1610	
Sand	White	Hard	1610	1680	
Lime	Gray	Hard	1680	1845	
Sand			1845	1862	
Shale	Black	Soft	1862	2945	
Shale	Gray	Soft	2945		

Electric Log

Sunbury Base	2296'
Gordon Zone	2664-2701
Ben.Zone	4564'
Rhinestreet	4880

(Attach separate sheets as necessary)

Bow Valley Petroluem, Inc.
Well Operator

By: Bart Roberts

Date: January 13, 1984

09/29/2023

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

OG-11

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

RECEIVED
AUG - 8 1983
OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 169-1079

Oil or Gas Well _____
(KIND)

Company Bow Valley

Address _____

Farm _____

Well No. _____

District _____ County _____

Drilling commenced _____

Drilling completed _____ Total depth _____

Date shot _____ Depth of shot _____

Initial open flow _____ /10ths Water in _____ Inch

Open flow after tubing _____ /10ths Merc. in _____ Inch

Volume _____ Cu. Ft.

Rock pressure _____ lbs. _____ hrs.

Oil _____ bbls., 1st 24 hrs.

Fresh water _____ feet _____ feet

Salt water _____ feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer
13			
10			Size of
8¼			
6⅝			Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. FT. _____ Date

NAME OF SERVICE COMPANY _____

COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

Drillers' Names Ray Res. 14

Remarks: 338' of 11 3/4" casing, Halb.

7-29-83
DATE

Don Moore
DISTRICT WELL INSPECTOR

09/29/2023

Form 26
2/16/82

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

INSPECTOR'S PLUGGING REPORT

Permit No._____ Well No._____

COMPANY_____ ADDRESS_____

FARM_____ DISTRICT_____ COUNTY_____

Filling Material Used_____

Liner	Location	Amount	Packer	Location

PLUGS USED AND DEPTH PLACED			BRIDGES	CASING AND TUBING		
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LOCATION	RECOVERED	SIZE	LOST

Drillers' Names_____

Remarks:

_____ I hereby certify I visited the above well on this date.
DATE

09/29/2023

_____
DISTRICT WELL INSPECTOR

OG-11

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

RECEIVED
AUG - 9 1983
OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 105-1079

Oil or Gas Well _____ (KIND)

Company Bow Valley

Address

Farm WILSON

Well No. W1 010

District B. S. County WIRT

Drilling commenced

Drilling completed Total depth

Date shot Depth of shot

Initial open flow /10ths Water in Inch

Open flow after tubing /10ths Merc. in Inch

Volume Cu. Ft.

Rock pressure lbs. hrs.

Oil bbls., 1st 24 hrs.

Fresh water feet feet

Salt water feet feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer
13			
10			Size of
8¼			
6⅝			Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED SIZE No. FT. Date

NAME OF SERVICE COMPANY

COAL WAS ENCOUNTERED AT FEET INCHES

FEET INCHES FEET INCHES

FEET INCHES FEET INCHES

Drillers' Names Ray Res. 14

Remarks:
Hole completed, 4½" casing has been cemented. rig is ready to move, but is shut down.

8-3-83
DATE

Wes [illegible]
DISTRICT WELL INSPECTOR

09/29/2023

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

INSPECTOR'S PLUGGING REPORT

Permit No._____ **Well No.**_____

COMPANY_____ ADDRESS_____

FARM_____ DISTRICT_____ COUNTY_____

Filling Material Used_____

Liner	Location	Amount	Packer	Location

PLUGS USED AND DEPTH PLACED			BRIDGES	CASING AND TUBING		
CEMENT–THICKNESS	WOOD–SIZE	LEAD	CONSTRUCTION–LOCATION	RECOVERED	SIZE	LOST

Drillers' Names_____

Remarks:

_____ I hereby certify I visited the above well on this date.

DATE

09/29/2023

_____

DISTRICT WELL INSPECTOR

OG-11

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

RECEIVED
SEP 20 1983
OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 105-1079

Oil or Gas Well _____ (KIND)

Company Bow Valley

Address

Farm Wilson

Well No. W1 010

District B.S. County Wirt

Drilling commenced

Drilling completed Total depth

Date shot Depth of shot

Initial open flow /10ths Water in Inch

Open flow after tubing /10ths Merc. in Inch

Volume Cu. Ft.

Rock pressure lbs. hrs.

Oil bbls., 1st 24 hrs.

Fresh water feet feet

Salt water feet feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer
13			
10			Size of
8¼			
6⅝			Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED SIZE No. FT. Date

NAME OF SERVICE COMPANY

COAL WAS ENCOUNTERED AT FEET INCHES

FEET INCHES FEET INCHES

FEET INCHES FEET INCHES

Drillers' Names

Remarks: Frac. today with Nitrogen

9-15-83
DATE

Dwo Maci
DISTRICT WELL INSPECTOR

09/29/2023

Form 26
2/16/82

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

INSPECTOR'S PLUGGING REPORT

Permit No._____ Well No._____

COMPANY_____ ADDRESS_____

FARM_____ DISTRICT_____ COUNTY_____

Filling Material Used_____

Liner	Location	Amount	Packer	Location

PLUGS USED AND DEPTH PLACED			BRIDGES	CASING AND TUBING		
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LOCATION	RECOVERED	SIZE	LOST

Drillers' Names_____

Remarks:

_____ I hereby certify I visited the above well on this date.
DATE

09/29/2023

_____
DISTRICT WELL INSPECTOR

FERC-121

1.0 API well number: (If not available, leave blank. 14 digits.)	47 105 1079
2.0 Type of determination being sought: (Use the codes found on the front of this form.)	107 Section of NGPA ; Category Code
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	5002 feet
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	Bow Valley Petroleum, Inc. (Name) ; 040189 (Seller Code) 600 Commerce Square (Street) Charleston, (City) WV (State) 25301 (Zip Code)
5.0 Location of this well: [Complete (a) or (b).] (a) For onshore wells (35 letters maximum for field name.)	Burning Springs (Field Name) Wirt (County) WV (State)
(b) For OCS wells:	Area Name ; Block Number Date of Lease: Mo. Day Yr. ; OCS Lease Number
(c) Name and identification number of this well: (35 letters and digits maximum.)	Wilson WI 010
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	Columbia Gas Transmission Corp (Name) ; 04030 (Buyer Code)
(b) Date of the contract:	Mo. Day Yr.
(c) Estimated annual production:	MMcf.

	(a) Base Price ($/MMBTU)	(b) Tax	(c) All Other Prices [Indicate (+) or (-).]	(d) Total of (a), (b) and (c)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	5.718	—.—	—.—	—.—
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	5.718	—.—	—.—	—.—

9.0 Person responsible for this application:	Robert Hart (Name) ; General Mgr.-V.P. (Title) x Robert Hart (Signature) Date Application is Completed ; (304) 344-8393 (Phone Number)
Agency Use Only Date Received by Juris. Agency: MAR 5 1984 Date Received by FERC	

RECEIVED MAR - 5 1984 OIL & GAS DIVISION DEPT. OF MINES

FT7900806/2-2

09/29/2023

PARTICIPANTS:

DATE: APR 25 1984

BUYER-SELLER COD

WELL OPERATOR: Bow Valley Petroleum, Inc. 040189

FIRST PURCHASER: Columbia Gas Trans. 004030

OTHER:

Dev

W. Va. Department of Mines, Oil & Gas Division
WELL DETERMINATION FILE NUMBER
840305-107-3-105-1079
Use Above File Number on all Communications
Relating to Determination of this Well

OK

APPROVED

APR 27 1984

CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSING

ITEM NO.

1. FERC -121 _____ Items not completed - Line No. _____

2. IV-1 Agent _____

3. IV-2 Well Permit _____

4. IV-6 Well Plat _____

5. IV-35 Well Record _____ Drilling _____ Deepening _____

6. IV-36 Gas-Oil Test: Gas Only _____ Was Oil Produced? _____ Ratio _____

7. IV-39 Annual Production _____ years

8. IV-40 90 day Production _____ Days off line: _____

9. IV-48 Application for certification. Complete? _____

10-17. IV Form 51 - 52 - 53 - 54 - 55 - 56 - 57 - 58 Complete? _____ Affidavit Signed _____

18-28. Other: Survey _____ Logs _____ Geological Charts _____
Structure Map _____ 1: 4000 Map _____ Well Tabulations _____
Gas Analyses _____

(5) Date commenced: _____ Date completed _____ Deepened _____

(5) Production Depth: _____

(5) Production Formation: _____

(5) Final Open Flow: _____

(5) After Frac. R. P. _____

(6) Other Gas Test: _____

(7) Avg. Daily Gas from Annual Production: _____

(8) Avg. Daily Gas from 90-day ending w/1-120 days _____

(8) Line Pressure: _____ PSIG from Daily Re

(5) Oil Production: _____ From Completion Report _____

10-17. Does lease inventory indicate enbanced recovery being done _____

10-17. Is affidavit signed? _____ Notarized? _____

Does official well record with the Department confirm the submitted information? _____

Additional information _____ Does computer program confirm? _____

Was Determination Objected to _____ By Whom? _____

09/29/2023

FORM IV-48WC
[12-78]

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES, OIL AND GAS DIVISION

Date Feb 29, 1984

Operator's Well No. WI 010

API Well No. 47 - 105 - 1079
State County Permit

Previous File No. _____ (If Applicable)

STATE APPLICATION FOR WELL CLASSIFICATION

WELL OPERATOR Bow Valley Petroleum Inc.

ADDRESS 600 Commerce Sq.
Charleston, WV 25301

DESIGNATED AGENT Robert N. Hart

ADDRESS 600 Commerce Sq.
Charleston, WV 25301

Gas Purchase Contract No. _____ and Date Prior negotiate
(Month, day and year)

Meter Chart Code _____

Name of First Purchaser Columbia Gas Transmission Corporation
Box 1273
(Street or P. O. Box)
Charleston WV 25325
(City) (State) (Zip Code)

FERC Seller Code _____ FERC Buyer Code _____

TYPE OF DETERMINATION BEING SOUGHT:

[X] (1) Initial determination (See FERC Form 121.) 107 Section of NGPA _____ Category Code

[ ] (2) Determination that increased production is the result of enhanced recovery technology.

[ ] (3) Determination of a seasonally affected well.

Robert Hart — Vice President-General Manage
Name (Print) — Title

X Robert Hart
Signature

600 Commerce Sq.
Street or P. O. Box

Charleston, WV 25301
City State (Zip Code)

(304) 344-8393
Area Code Phone Number

(Certificate of Proof of Service to Purchaser)

Mailed copy to Columbia Gas Transmission - Contract DEpartment c/o Jackie Sydnor

(All of the above to be completed by the Operator/Applicant)

(To be completed by Jurisdictional Agency. Executed copy to be returned to Operator/Applicant and purchaser, if known).

The Department of Mines has received a request, [ ] for certification of the above described well as meeting the requirements of Section _____ under the Natural Gas Policy Act of 1978, (NGPA); [ ] or for determination that increased production is the result of enhanced recovery technology under Section 108 of (NGPA); [ ] or for determination of a seasonally affected well under Section 108 of (NGPA).

All interested parties are hereby notified that on the ____ day of _____, 19___, at the office of the Oil and Gas Division in Charleston, West Virginia, or as soon thereafter as it may be heard, there will be a public hearing, if requested, or if objection is filed.

This Application is assigned File No: _____.

Initial review of information submitted indicates the well [ ] is, [ ] is not entitled to certification as claimed under the Natural Gas Policy Act (NGPA). A review of this evidence and any additional evidence will be made at the time appointed for a public hearing or as soon thereafter as the matter may be heard.

Unless objections are timely filed or a request for a hearing is made within fifteen (15) days, a hearing will not be held except on ex parte motion of the department and the matter will go to determination.

WEST VIRGINIA DEPARTMENT OF MINES

_____
Director

MAR 5 1984
Date received by Jurisdictional Agency

By _____

Title _____

09/29/2023

FORM IV-55WC
(12-78)

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES OIL AND GAS DIVISION

Date 2/29/84

Operator's
Well No. WI-010

API Well No.

47 - 105 - 1079
State County Permit

WELL CLASSIFICATION FORM

HIGH COST GAS WELL - DEVONIAN SHALE

NGPA Section 107

DESIGNATED AGENT Robert N. Hart

ADDRESS 600 Commerce Square
Charleston, WV

LOCATION Elevation 894.79
Watershed Standingstone Creek

Dist. B. Springs County Wirt Quad. Girta

Gas Purchase
Contract No.

Meter Chart Code

Date of Contract

WELL OPERATOR Bow Valley Petroleum

ADDRESS 600 Commerce Square
Charleston, WV 25301

GAS PURCHASER Columbia Gas Transmission

ADDRESS P.O. BOX 1273
Charleston, WV 25325

* * * * * * * *

Date surface drilling began: 7-28-83

Indicate the bottom hole pressure of the well and explain how this was calculated.

$$BHP_2 = \overset{800}{PWH} + \overset{800}{PWH}\left[2.71828^{(0.0000347\ \overset{.63}{G}\ \overset{3700}{L})} - 1\right]$$ WHERE

0.0000347 IS A FACTOR TAKING INTO ACCOUNT TEMPERATURE AND SUPERCOMPRESSIBILITY.

BHP_2 = 864

PWH - WELL HEAD PRESSURE
L - DEPTH TO MIDDLE OF PRODUCING FORM.
G - SPECIFIC GRAVITY OF THE GAS
TWH - TEMPERATURE AT WELL HEAD °F
TBH - TEMPERATURE BOTTOM HOLE °F

AFFIDAVIT

I, Charlton B. Roberts, having been first sworn according to law, state that I have calculated the percentage of footage of the producing interval which is not Devonian Shale as indicated by a Gamma Ray index of less than 0.7 if a Gamma Ray log described in subparagraph (3)(i) or (3)(ii)(A) has been filed, or as indicated by the report described in subparagraph (3)(ii)(B); I have demonstrated that the percentage of potentially disqualifying non-shale footage is equal to or less than five (5) percent of the gross Devonian age interval; and I have no knowledge of any information not described in the application which is inconsistent with a conclusion that the well qualifies as a high-cost natural gas well.

Charlton B. Roberts

STATE OF WEST VIRGINIA

COUNTY OF Kanawha, TO-WIT:

I, Helen MacGregor, a Notary Public in and for the state and county aforesaid, do certify that Charlton B. Roberts, whose name is signed to the writing above, bearing date the 29th day of February, 19 84, has acknowledged the same before me, in my county aforesaid.

09/29/2023

Given under my hand and official seal this 29th day of February, 1984.
My term of office expires on the 25th day of July, 19 88.

(NOTARIAL SEAL)

Helen M MacGregor
Notary Public

APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL PRICE UNDER THE NATURAL GAS POLICY ACT

Operator: Bow Valley Petroleum Agent: BART ROBERTS

Type Determination being sought - 107 (Devonian Shale)

API Well No.: 47 105 1079 Well Name: WILSON

West Virginia Office of Oil and Gas References: SJA File No. County: WIRT

Vol. ____ Page ____ Line ____

I. NOTE: A Gamma Ray Log has been marked with the (a) Shale Base Line, (b) a line representing 0.7 x (Shale Base Line), (c) intervals with Gamma Ray units less than 0.7 x (Shale Base Line) and that log is included with this analysis.

II. Gamma Ray elevation indices:

A. Shale Base Line (API Units)

1. GR Value at Base Line = 180 * API Units
2. Remarks:

0 - 200 Scale

B. Gamma Ray Log Value at 0.7 x Value at Base Line

1. GR Value = 180 * API Units
2. Calculation: 0.7 (GR Value at Base Line)
   0.7 (180 *) = 126 API Units

III. Intervals with GR index less than 0.7 x (Value at Base Line):

Interval From**	Interval To***	Thickness of Interval Feet	Feet of less than* 0.7 (Shale Base Line) Feet
2297	5002	2705	25

Total Devonial Interval 2705

Total Less Than 0.7 (Shale Base) 25

% Less Than 0.7 (Shale Base Line) = .0092 x 100 = 0.92 %

*Marked on log included with analysis.
**Top of Devonian Section Recorded on First Interval in this Column.
***Lesser of TD or Bottom of Devonian Section Recorded as last Interval in this Column.

09/29/2023

IV-20
Obverse
1-84

OK to Release

State of West Virginia
Department of Mines
Oil and Gas Division
Charleston 25305

RECEIVED
OCT 16 1984
OIL & GAS DIVISION
DEPT. OF MINES

FINAL INSPECTION REPORT
INSPECTORS COMPLIANCE REPORT
May 30, 1984

COMPANY Bow Valley Petroleum, Inc.

600 Commerce Square

Charleston, West Virginia 25301

PERMIT NO 105-1079

FARM & WELL NO Herbert Wilson 010

DIST. & COUNTY BurningSprings/Wirt

RULE	DESCRIPTION	IN COMPLIANCE YES	NO
23.06	Notification Prior to Starting Work		
25.04	Prepared before Drilling to Prevent Waste		
25.03	High-Pressure Drilling		
16.01	Required Permits at Wellsite		
15.03	Adequate Fresh Water Casing		
15.02	Adequate Coal Casing		
15.01	Adequate Production Casing		
15.04	Adequate Cement Strenght		
15.05	Cement Type		
23.02	Maintained Access Roads	✓	
25.01	Necessary Equipment to Prevent Waste	✓	
23.04	Reclaimed Drilling Pits	✓	
23.05	No Surface or Underground Pollution	✓	
23.07	Requirements for Production & Gathering Pipelines	✓	
16.01	Well Records on Site		
16.02	Well Records Filed		
7.05	Identification Markings	✓	

I HAVE INSPECTED THE ABOVE CAPTIONED WELL AND RECOMMEND THAT IT BE RELEASED:

SIGNED Homer H. Dougherty

DATE 10/9/84

Your well record was received and reclamation requirements approved. In accordance with Chapter 22, Article 4, Section 2, the above well will remain under bond coverage for the life of the well.

Administrator-Oil & Gas Division

January 4, 1985
DATE

TMS/nw

09/29/2023

See Line E

09/29/2023

BOOK 165 PAGE 889

Lease No 2527

2527

105-1029

OIL AND GAS LEASE

AGREEMENT, made and entered into this 24th day of August A.D. 19 82, by and between Herbert L. Wilson and Lillian C. Wilson, husband and wife

13320 Island Lake Rd

of Chelsea Michigan party of the first part, hereinafter called Lessor (whether one or more), and Bow Valley Petroleum Inc party of the second part, hereinafter called Lessee;

1. WITNESSETH: That the Lessor, in consideration of the sum of One Dollar, the receipt of which is hereby acknowledged, and the covenants and agreements hereinafter contained, does hereby grant unto the Lessee all of the oil and gas and all of the constituents of either in and under the land hereinafter described, together with the exclusive right to drill for, produce and market oil and gas and their constituents; the right to use free from royalty, sufficient oil, gas and water produced from the premises for all operations thereon (provided it finds said water at its own expense), the right to enter thereon at all times for the purpose of drilling and operating for oil, gas and water, erecting cathotic protection sites, tanks, machinery, structures, electric and telephone lines; to lay pipelines for the transportation thereon and thereover of oil, gas or water from said premises or other lands operated by the Lessee; the right to construct roadways to well sites and pipelines both on and off the leased premises and to possess, use, and occupy so much of said premises as is necessary and convenient for said purposes and to convey the above named products therefrom or thereto by pipe lines or otherwise; said land being situate in Burning Springs ~~Township~~ District, County of Wirt State of West Virginia, and described as follows, to-wit: Bounded on the NORTH by lands of Nottingham and Adams EAST by lands of Lennie Bell SOUTH by lands of J.L. Evans and George W Bonar WEST by lands of Wheaton Heirs Containing seventy eight (78) acres, more or less, and being the same land conveyed to Lessor by ..... by deed dated ..... and recorded in said county records in ..... Book No. ..... Page .....

RECEIVED JUL - 1 1983 OIL & GAS DIVISION DEPT. OF MINES

2. It is agreed that this lease shall remain in force for a primary term of one (1) years from this date and as long thereafter as operations for oil and gas are being conducted on the premises, or oil or gas is found in paying quantities thereon, ~~or any formation underlying the herein leased land is used for storage of gas as provided under paragraph 6 hereof.~~ HJW RCW

3. The royalties to be paid by lessee may be paid either quarterly or annually and are: (a) on oil, one-eighth of that produced and saved from said land, the same to be delivered at the wells or to the credit of lessor into the pipelines to which the wells may be connected; lessee may, from time to time, purchase any royalty oil in its possession, paying the market price therefor prevailing for the field where produced on the date of purchase, and lessee may sell any royalty oil in its possession and pay lessor the price received by lessee for such oil computed at the well; (b) on gas, including casinghead gas or other gaseous substance, produced from said land and sold or used off the premises or for the extraction of gasoline or other product therefrom, the market value at the well of one-eighth of the gas so sold or used, provided that on gas sold by lessee the market value shall not exceed the amount received by lessee for such gas computed at the mouth of the well, and on gas sold at the well the royalty shall be one-eighth of the amount realized by lessee from such sale. If the price of any mineral or substance upon which royalty is payable hereunder is regulated by any governmental agency, the market value or market price of such mineral or substance for the purpose of computing royalty hereunder shall not be in excess of the price which lessee may receive and retain; provided, Lessee shall pay Lessor a royalty at the rate of ~~Fifty Dollars~~ $1000.00 per year on each gas well while, through lack of market, gas therefrom is not sold or used off the premises, and while said royalty is so paid said well shall be held to be a paying well under paragraph 2 hereof. HJW RCW

4. Lessee agrees to pay a rental of ten dollars per acre for each twelve months that operations for a well on the premises are delayed from the 24th day of August A.D., 19 82. The consideration first recited herein, the down payment, shall cover not only the privilege granted to the date when first said rental is payable as aforesaid, but also the Lessee's option of extending that period as aforesaid, and any and all other rights conferred. The drilling of a non-productive well shall be accepted by the Lessor in lieu of delay rental for a period of one year after its completion, and following the exhaustion or abandonment of all wells the Lessee shall have the right for a period of one year to resume the payment of delay rental or commence operations for another well. Upon the resumption of payment of rentals the provisions hereof governing such payment and the effect thereof shall continue in force as though they had not been interrupted.

5. All moneys coming due hereunder shall be paid or tendered to Herbert L. Wilson and/or Lillian C. Wilson direct, or by check payable to his (or her) order mailed to 13320 Island Lake Road, Chelsea, Michigan 48118 and no default shall be declared against the Lessee by the Lessor for failure of the Lessee to make any payment or perform any conditions provided for herein unless the Lessee shall refuse or neglect to pay or perform the same for ten days after having received written notice by registered mail from the Lessor of his intention to declare such default.

~~6. Lessee shall have the right to use any formation underlying the leased premises for the storage of gas and shall have all rights and rights-of-way necessary to store and produce such stored gas. As full payment for such storage rights, the Lessee shall pay to the Lessor a rental at the rate of ..... per acre per year, while the premises are so used, and so long as the storage payment is made, all provisions of this lease shall remain in full effect.~~ HJW RCW

7. No part of the surface of the leased premises shall, without the written consent of Lessee, be let, granted or licensed by Lessor to any other party for the location, construction or maintenance of structures, tanks, pits, reservoirs, equipment, or machinery to be used for the purpose of exploring, developing, or operating adjacent lands for oil, gas or other minerals.

~~8. Lessor further grants to the Lessee, his heirs and assigns, the right to unitize this lease with other leases to form a drilling unit or units according to the rules and regulations which may be adopted for the proper development and conservation of the field. In the event this lease is so unitized, the Lessor agrees to accept, in lieu of the royalty hereinbefore recited, such proportion of the royalty above provided, as the acreage covered by this lease bears to the total acreage comprising the unit.~~ HJW RCW

9. If said Lessor owns a less interest in the above described land than the undivided fee simple estate therein, then the royalties and rentals herein provided shall be paid the Lessor only in the proportion which his interest bears to the whole and undivided fee.

10. No well may be drilled nearer than 200 feet to the house or barn now on said premises without the written consent of Lessor. Lessee shall have and enjoy all rights and privileges necessary and convenient for the proper use and development of this lease, and shall have the right to use, free of cost, gas, oil and water produced on said land for its operations thereon, except water from wells of Lessor. Lessee shall also have the right at any time to remove all or any part of the machinery, fixtures or structures placed on said premises, including the right to draw and remove casing. Lessee shall pay for damages caused by its operations to growing crops on said lands.

11. The interest or estate of either party hereto may be assigned, the privilege of assigning in whole or in part expressly allowed. In event this lease shall be assigned as to any part or parts of the above described land and the assignee or assignees of such part or parts fail or make default in the payment of the proportionate part of the rents due from him or them, such default shall not operate to defeat or affect this lease insofar as it covers a part or parts of said land upon which the said Lessee or any assignee thereof shall make due payment of said rental. No change of ownership in the land or in the rentals or royalties shall be binding on the Lessee until after notice to the Lessee and it has been furnished with a written transfer or assignment or a certified copy thereof.

use in running an electric gen. motor and Lessee shall provide all pipeline, fixtures, regulators and labor for all hookups from the well head to the house of Lessee. All gas over 600000 cu ft to be paid for at the well head price to the Lessee

12. At any time, Lessee, its successors or assigns, shall have the right to surrender this lease or any part thereof for cancelation, after which all payments and liabilities thereafter shall cease and determine, and if the whole is surrendered, then this lease shall become absolutely null and void. This surrender may be made to the Lessor, or if more than one Lessor, then to any one of them, or to the heirs or assigns of any one of them by delivery of a duly executed surrender thereof in person or by mail addressed to the post office address of such person, or by recording a duly executed surrender thereof in the recorder's office of the County in which the land is located.

13. Lessor hereby warrants and agrees to defend the title to the land herein described and agrees that the Lessee at its option may pay, discharge or redeem any taxes, mortgages, or other liens existing, levied, or assessed on or against the above described lands, and in event it exercises such option, it shall be subrogated to the rights of any holder or holders thereof and may reimburse itself by applying any royalty or rentals accruing hereunder to the discharge of any such taxes, mortgages or other liens.

14. It is expressly agreed that if the Lessee shall commence drilling operations at any time while this lease is in force, it shall remain in force and its terms continue so long as such operations are prosecuted, and if production results therefrom, then as long as production continues. If after the expiration of the term of this lease production from the leased premises shall cease from any cause, this lease shall not terminate provided Lessee resumes operations within sixty days from such cessation, and this lease shall remain in force during the prosecution of such operations, and, if production results therefrom, then as long as oil or gas is produced in paying quantities.

15. This lease embodies the entire contract and agreement between Lessor and Lessee, and no warranties, representations, promises or inducements not herein expressed have been made or relied upon by either party. The terms, conditions and stipulations hereof shall extend to the respective heirs, executors, administrators, successors and assigns of the parties hereto.

Lessee shall maintain well road in passable condition during actual drilling operations. Lessee shall reclaim the land used during drilling to as near original condition as possible.

Witness the hands and seals of the parties hereto the day and year first above written.

WITNESS:

Herbert H Wilson (SEAL)
(SEAL)
Lillian C Wilson (SEAL)
(SEAL)
(SEAL)
(SEAL)
(SEAL)
(SEAL)

WEST VIRGINIA ACKNOWLEDGMENT

Prepared by: Danny M. Knight
600 Commerce Sq.
Charleston WV

STATE OF WEST VIRGINIA
COUNTY OF Wirt } To-wit:

I, Danny M. Knight, a Notary Public of said County, do hereby certify that Herbert H Wilson and Lillian C Wilson whose names are signed to the within writing bearing date the 24th day of August, 1982 have this day acknowledged the same before me in my said County.

Given under my hand this 24th day of August, 1982.

Danny M. Knight
Notary Public

My Commission expires January 8th, 1984

WEST VIRGINIA ACKNOWLEDGMENT

STATE OF WEST VIRGINIA
COUNTY OF _____ } To-wit:

I, _____, a Notary Public of said County, do hereby certify that _____ whose name_____ signed to the within writing bearing date the _____ day of _____, 19____ ha_____ this day acknowledged the same before me in my said County.

Given under my hand this _____ day of _____, 19____.

_____
Notary Public

My Commission expires _____

RECORDING DATA:

Received for Record on the 31 day of August 1982 at 8:30 o'clock A.M.
Recorded in the Office of the Clerk of the County Commission of Wirt County, W. Va.
In Deed Book No. 185 at page 889
Charles W. Clemens
Clerk Wirt County Commission
$12.00 PAID

Term _____
County _____ State _____
Location _____
Acres _____
Date _____, 19____

BOW VALLEY PETROLEUM INC.
600 COMMERCE SQUARE
CHARLESTON, WV 25301

Oil and Gas Lease

#3287

BOOK 185 PAGE 889

All well sites shall be mutually agreed upon by Lessee and Lessor but such agreement shall not be unreasonably withheld.

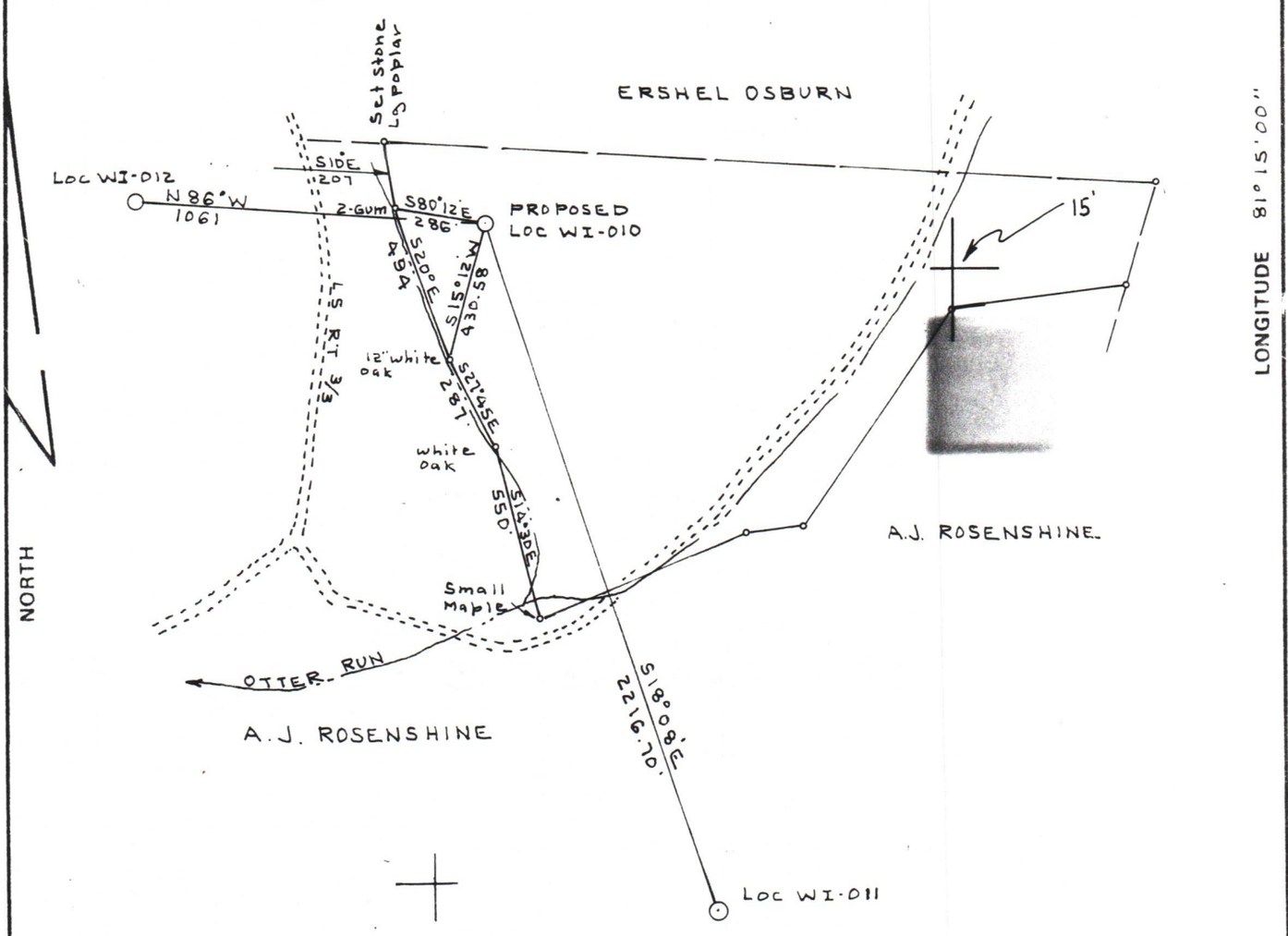
All marketable timber cut by Lessee shall be cut into logs and stacked on the property in an area designated by the Lessor.

JARRETT PRINTING COMPANY, CHARLESTON, W. VA.

7-6-82

10,400

LATITUDE 39° 05' 00"



FILE NO. BK 77 PG 46
DRAWING NO.
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1-200'
PROVEN SOURCE OF ELEVATION USGS Rd Forks S.W. Loc El 733.0

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.

(SIGNED) C. J. Tullos Jr.
R.P.E. L.L.S. 92

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV-6
(8-78)

DATE JUNE 9, 1983
OPERATOR'S WELL NO. WI-010
API WELL NO.
47 - 105 - 1079
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION: ELEVATION 894.79 WATER SHED OTTER RUN
DISTRICT BURNING SPRINGS COUNTY WIRT
QUADRANGLE GIRTA 7.5'

SURFACE OWNER HERBERT WILSON ACREAGE 45
OIL & GAS ROYALTY OWNER HERBERT WILSON, ETAL LEASE ACREAGE 79
LEASE NO.

09/29/2023

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___

TARGET FORMATION MARCELLUS SHALE ESTIMATED DEPTH 4900'
WELL OPERATOR BDW VALLEY PETRO. INC DESIGNATED AGENT ROBERT W. LONG
ADDRESS 600 COMMERCE SQUARE ADDRESS BOX 235
CHARLESTON WVA 25301 CULLODEN WVA, 25510

47-105-1079