



1) Date: Nov. 16, 1982  
 2) Operator's Well No. WI 015  
 3) API Well No. 47 105 1024  
 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 X  
 B (If "Gas", Production X / Underground storage      / Deep      / Shallow X)
- 5) LOCATION: Elevation: 1036.58 Watershed: LEE CREEK  
 District: NEWARK County: WIRT Quadrangle: ELIZABETH
- 6) WELL OPERATOR Bow Valley Pet. Inc. 11) DESIGNATED AGENT W.E. STOVER  
 Address 600 Commerce Sq. Address Box 235  
Charleston W. Va. 25301 Culloden WVa
- 7) OIL & GAS ROYALTY OWNER Glen W. Roberts Estate 12) COAL OPERATOR N/A  
 Address ELIZABETH WVA Address
- 8) SURFACE OWNER West Virginia Pulp & Paper 13) COAL OWNER(S) WITH DECLARATION ON RECORD:  
 Address PARKERSBURG, W.VA Name       
 Acreage 202 Address
- 9) FIELD SALE (IF MADE) TO: Name       
 Address
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED Name MR DCO MACE  
 Address RT 1 Box 5  
SAND Ridge WVA
- 15) PROPOSED WORK: Drill X / 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 (DEVONIAN)
- 17) Estimated depth of completed well, 5500 feet
- 18) Approximate water strata depths: Fresh, 60 100 feet; salt,      feet.
- 19) Approximate coal seam depths: N/A Is coal being mined in the area? Yes      / No X

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20) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	13"			X		30		To surface	Kinds
Fresh water	9 5/8"			X		250		To surface	100 SKS
Coal									Sizes
Intermediate	7"		23	X		2200		125 SKS	
Production	4 1/2"		10.5	X		5450		270 SKS	Depths set
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 47-105-1024 Date November 30 1982  
01/12/2024

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 30, 1983 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond: <u>Blanket</u>	Agent: <u>OK</u>	Plat: <u>M. J. M. A.</u>	Casing	Fee <u>417</u>
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Administrator, Office of Oil and Gas

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



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 than 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 22-4-11(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**

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.

01/12/2024

Date: \_\_\_\_\_, 19\_\_\_\_

By \_\_\_\_\_

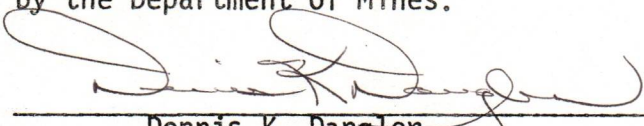
Its \_\_\_\_\_



Line Item 21) - Pursuant to Code 22-4-11(c) the applicant, Bow Valley Petroleum, in lieu of filing the lease with the permit application, does hereby provide the following information:

- 1.) Hale tract is located in Newark and Elizabeth Districts of Wirt County, West Virginia, containing 429 acres more or less and bounded on the  
  
North by Westvaco and Wayne Buchannan  
East by Westvaco  
South by Oliver Belt and James Batton  
West by Naomi Gilbert
  
- 2.) Lessor - Glen W. Roberts (deceased)  
Dorothy Parks Roberts (his wife)  
  
Lessee - Flying Diamond Oil Corporation  
Bow Valley Petroleum is successor in interest.
  
- 3.) Oil and Gas Lease is recorded in Wirt County Records office in Book 152 at Page 722.
  
- 4.) Landowners Royalty is 1/8 of all oil and/or gas produced.  
Overriding Royalty is 4% of 8/8ths of all oil and/or gas produced.  
Both are payable to Glen W. Roberts Estate.

I, Dennis K. Dangler, the undersigned, do hereby certify that the above provided information is correct and accurate to the best of my knowledge and belief and shows all the information required by law and regulations issued and prescribed by the Department of Mines.

  
\_\_\_\_\_  
Dennis K. Dangler  
Land Manager

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DEPT. OF MINES

01/12/2024





DATE NOVEMBER 20, 1982  
WELL NO. # W1015 (REV.)  
API NO. 47-105-1024

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, WV  
Telephone 304-344-8393

DESIGNATED AGENT W. E. STOVER  
Address Box 295 CULLODEN, WV  
Telephone 304-562-3376

LANDOWNER WESTVACO CORP.

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: 11-22-82 (Date)

Jarrett Newton  
(SCD Agent)

ACCESS ROAD	
Structure <u>DRAINAGE DITCH</u>	(A)
Spacing _____	
Page Ref. Manual <u>2-12</u>	
Structure <u>CULVERT (18")</u>	(B)
Spacing _____	
Page Ref. Manual <u>2-8</u>	
Structure _____	(C)
Spacing _____	
Page Ref. Manual _____	

LOCATION	
Structure <u>No structures needed</u>	(1)
Material _____	
Page Ref. Manual _____	
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 2 Tons/acre

Seed\* KENTUCKY 31 FESCUE 45 lbs/acre  
LADINO CLOVER 5 lbs/acre  
Rye 5 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 bacterium. Inoculate with 3X recommended amount.

01/12/2024


PLAN PREPARED BY William F. Henrichs, Jr.  
ADDRESS 600 Commerce Sq. CHARLESTON, WV  
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.



ATTACH OR PHOTOCOPY SECTION OF INVOLVED TOPOGRAPHIC MAP. QUADRANGLE ELIZABETH

LEGEND

Well Site 


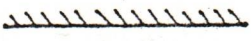









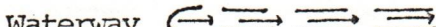
Access Road 

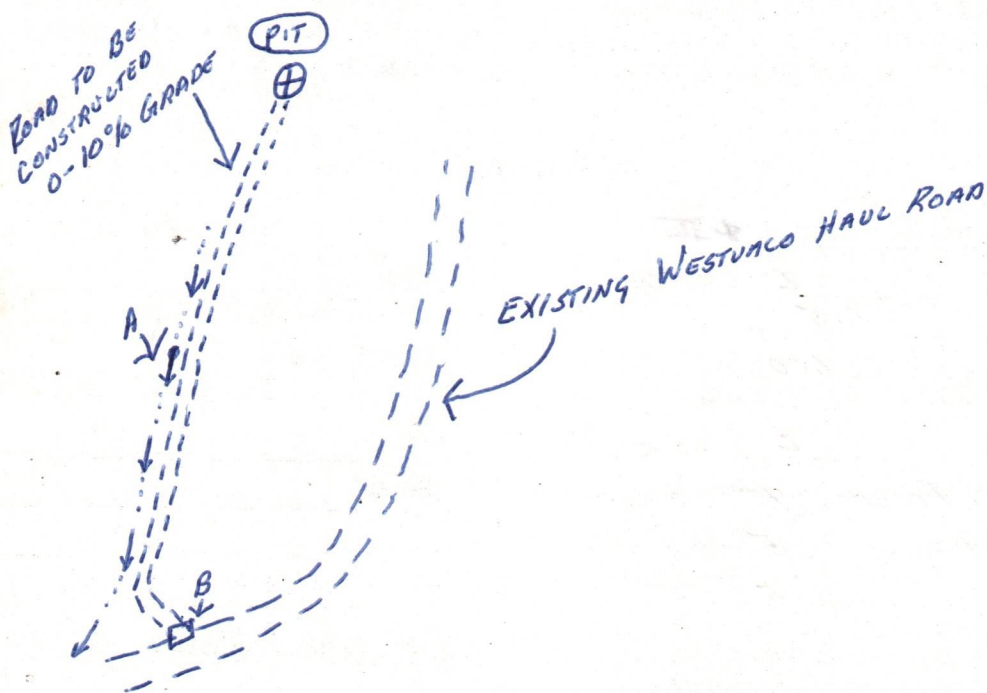
LOCATION IS ON A FLAT RIDGE TOP. ACCESS ROAD WILL BE CONSTRUCTED ACCORDING TO PLAN.

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 	Diversion 
Road 	Spring 
Existing fence 	Wet spot 
Planned fence 	Building 
Stream 	Drain pipe 
Open ditch 	Waterway 



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IV-35  
(Rev 8-81)

DEC 22 1983

OIL & GAS DIVISION  
DEPT. OF MINES

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date December 16, 1983  
Operator's  
Well No. WI015  
Farm Roberts (Hale)  
API No. 47 -105 - 1024

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

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

LOCATION: Elevation: 1036.58 Watershed Lee Creek  
District: Newark County Wirt Quadrangle Elizabeth

COMPANY Bow Valley Petroleum, Inc.  
ADDRESS 600 Commerce Square, Charleston, WV.  
DESIGNATED AGENT Robert Long  
ADDRESS Box 235 Culloden, WV.  
SURFACE OWNER W.VA. Pulp & Paper  
ADDRESS Parkersburg, WV.  
MINERAL RIGHTS OWNER Glen W. Roberts  
ADDRESS Elizabeth, WV.  
OIL AND GAS INSPECTOR FOR THIS WORK Deo  
Mace ADDRESS Sandridge, WV.  
PERMIT ISSUED November 30, 1982  
DRILLING COMMENCED 12/16/82  
DRILLING COMPLETED 12/30/82

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	20.50	20.50	12 sks.
9 5/8	262.05	262.05	90 sks.
8 5/8			
7	2279.45	2279.45	190 sks.
5 1/2			
4 1/2	5515.75	5515.75	281 sks.
3			
2		5492.80	
Liners used			

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON \_\_\_\_\_

GEOLOGICAL TARGET FORMATION Dev-Shale-Marcellus Depth 5270'-5567' feet  
Depth of completed well 5567' feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh 95 feet; Salt \_\_\_\_\_ feet  
Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA  
Producing formation Devonian Shale Pay zone depth 2633'-5386' feet  
Gas: Initial open flow No Show Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 158 Mcf/d Oil: Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 48 hours  
Static rock pressure 625 psig (surface measurement) after 16 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation \_\_\_\_\_ Pay zone depth 01/12/2024 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)

WIRT 1024



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

1st Stage N<sub>2</sub> Frac Perforation Interval = 3890'-5386' (29 holes)

800 gal (HCL @ 15%)

N<sub>2</sub> Pumped = 1,000,000 Sft.<sup>3</sup>

Partial Ballout

Max. Press. = 3100#

Min. Press. = 2200#

N<sub>2</sub> Injection Rate = 63,000 Sft.<sup>3</sup>/min.

2nd State N<sub>2</sub> Frac Perforation Interval = 2633'-3594' (30 holes)

1000 gal (HCL @ 15%)

N<sub>2</sub> Pumped = 1,034,000 5ft.<sup>3</sup> Injection Rate = 59,000 5ft./min.

Partial Ballout

Max. Press.=3,000#

Min. Press.=2,400#

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Clay			0	5	
Sand & Shale			5	125	Electric Logs
Sand			125	149	K.B. 1046.58
Red Rock			149	161	Elev. 1036.58
Sand			161	191	
Red Rock			191	208	
Sand			208	299	Gr. Lime = 2102'-2180'
Red Rock			299	311	
Sand & Shale			311	348	Big Injun = 2180'-2198'
Red Rock			348	353	Weir = 2198'-2606'
Sand & Shale			353	387	
Red Rock & Shale			387	404	Sunbury = 2606'-2656'
Sand & Shale			404	529	Berea = 2656'-2658'
Red Rock			529	547	Shale = 2658'-5567'
Sand			547	567	
Red Rock			567	589	
Sand & Shale			589	628	
Red Rock			628	634	
Sand & Shale			634	650	
Shale			650	940	
Lime			940	960	
Sand			960	1410	
Sand & Shale			1410	1570	
Sand			1570	1775	
Shale			1775	1820	
Sand			1820	1854	
Shale			1854	1888	
Sand			1888	2084	H <sub>2</sub> O @ 1950'
Shale			2084	2100	
Sand & Shale			2100	3700	
Shale			3700	5550 T.D.	

(Attach separate sheets as necessary)

Bow Valley Petroleum, Inc.

Well Operator

By: Martin Comb 01/12/2024

Date: 12/16/83

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 ..., encountered in the drilling of a well."



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

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DEC 29 1982

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

INSPECTOR'S WELL REPORT

Permit No. 109-1024

Oil or Gas Well

Company Bow Valley

Address \_\_\_\_\_

Farm Roberts

Well No. W1 015

District Newark County Wirt

Drilling commenced 12-16-82

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 Parker
13			
10			Size of
8 1/4			
6 3/4			
5 3/16			
3			
2			
Liners Used			

CASING CEMENTED \_\_\_\_\_ FEET \_\_\_\_\_ FEET \_\_\_\_\_ Date

NAME OF SERVICE COMPANY \_\_\_\_\_

COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES

\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES

\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES

Drillers' Names S. W. Jack #1

Remarks: Rig Shut down for Holiday

12-21-82  
DATE

Wes Mace  
DISTRICT WELL INSPECTOR

01/12/2024

12-27-82  
DATE

Wes Mace  
DISTRICT WELL INSPECTOR







STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

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OCT 11 1983

FINAL INSPECTION REQUEST

INSPECTOR'S COMPLIANCE REPORT

OIL & GAS DIVISION  
DEPT. OF MINES

Permit No. 105-1024 County Wirt  
Company Bow Valley Petroleum Farm Glen W. Roberts Estate  
Inspector Homer H. Dougherty Well No. 015  
Date 10/4/83

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 Strength	—	—
23.02	Maintained Access Roads	✓	—
25.01	Necessary Equipment to prevent Waste	✓	—
23.03	Reclaimed Drilling Site	✓	—
23.04	Reclaimed Drilling Pits	✓	—
23.05	No surface or underground Pollution	✓	—
7.03	Identification Markings	✓	—

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ *Need well rec.* \_\_\_\_\_  
\_\_\_\_\_

I have inspected the above well and ~~(HAVE/HAVE NOT)~~ found it to be in compliance with all of the rules and regulations of the Office of Oil and Gas Department of Mines of the State of West Virginia.

SIGNED: Homer H. Dougherty  
DATE: 10/4/83 01/12/2024





State of West Virginia

Department of Mines

Charleston 25305

January 11, 1984

WALTER N. MILLER  
Director

JOHN D. ROCKEFELLER, IV.  
Governor

Bow Valley Petroleum, Inc.  
600 Commerce Square  
Charleston, W.Va. 25301

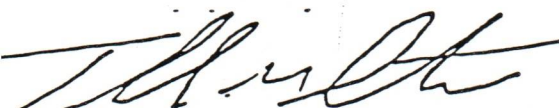
Gentlemen:

The required records and reports have been received in this office and the District Inspectors have submitted FINAL INSPECTIONS for the following wells listed below:

<u>PERMIT NUMBER</u>	<u>FARM AND WELL NUMBER</u>	<u>DISTRICT</u>
WIRT-1022	Westvaco/G. Roberts # WI-017	Spring Creek
WIRT-1023	Westvaco/G. Roberts # WI-018	Spring Creek
WIRT-1024	W.Va. Pulp & Paper/G. Roberts # WI-015	Newark

In accordance with Chapter 22, Article 4, Section 2, the above captioned wells will remain under bond coverage for "life of wells." Reclamation requirements have been approved.

Very truly yours,

  
Theodore M. Streit, Administrator  
Dept. Mines-Office of Oil & Gas

TMS/r1

01/12/2024



1.0 API well number: (If not available, leave blank. 14 digits.) 47-105-1024

2.0 Type of determination being sought: (Use the codes found on the front of this form.) 103  
Section of NGPA Category Code

3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.) 5567 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. 040189  
Name 600 Commerce Square OIL & GAS DIVISION  
Street Charleston, WV 25301 DEPT. OF MINES  
City State Zip Code

5.0 Location of this well: [Complete (a) or (b).]  
(a) For onshore wells (35 letters maximum for field name.)  
NEWARK  
Field Name  
WIRT WV  
County 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.) ROBERTS WI-015

(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)

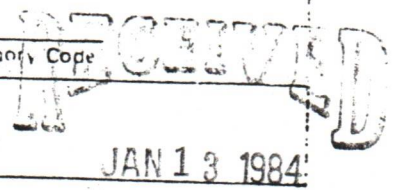
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)  
Columbia Gas Transmission Corp 04030  
Name Buyer Code

(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.)	<u>2.841</u>	---	---	---
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	<u>2.841</u>	---	---	---

9.0 Person responsible for this application:  
Agency Use Only  
Date Received by Agency JAN 13 1984  
Date Received by FERC  
Name Robert Hart Title General Mgr. V.P.  
Signature Robert Hart  
Date Application is Completed 1-11-84 Phone Number (304) 344-8393



01/12/2024



PARTICIPANTS:

DATE: MAR 9 1984

BUYER-SELLER CODE

WELL OPERATOR: Bow Valley Petroleum

040189

FIRST PURCHASER: Columbia Gas Trans. Corp.

004030

OTHER: \_\_\_\_\_

W. Va. Department of Mines, Oil & Gas Division  
 WELL DETERMINATION FILE NUMBER  
840113-103-105 = 1024  
 Use Above File Number on all Communications  
 Relating to Determination of this Well

*Qualified*  
*WJ*

**APPROVED**  
MAR 26 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 Report \_\_\_\_\_
- (5) Oil Production: \_\_\_\_\_ From Completion Report \_\_\_\_\_
- 10-17. Does lease inventory indicate enhanced 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? \_\_\_\_\_

01/12/2024



Operator's Well No. WI-015  
API Well No. 47 - 105 - 102  
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 Being negotiated  
(Month, day and year)

Meter Chart Code             
Name of First Purchaser Columbia Gas Transmission Corporation  
Box 1273  
Charleston WV 25325  
(City) (State) (Zip Code)

FERC Seller Code 040189 FERC Buyer Code 004030

TYPE OF DETERMINATION BEING SOUGHT:

- (1) Initial determination (See FERC Form 121.) 103 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 Manager  
Name (Print)            Title             
Robert Hart  
Signature             
600 Commerce Sq.  
Street or P. O. Box             
Charleston, WV 25301  
City            State            (Zip Code)             
(304) 344-8393  
Area Phone Number             
Code           

(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

JAN 13 1984

Date received by  
Jurisdictional Agency

By            Director  
Title            01/12/2024



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

Date 1-11- 1984

Operator's Well No. WI-015

API Well No. 47 - 105 - 1024  
State County Permit

WELL CLASSIFICATION FORM  
NEW ONSHORE PRODUCTION WELL  
NGPA Section 103

DESIGNATED AGENT Robert Hart

ADDRESS 600 Commerce Square

Charleston, W. Va. 25301

WELL OPERATOR Bow Valley Petroleum

LOCATION: Elevation 1036.58'

ADDRESS 600 Commerce Square

Watershed LEE CREEK

Charleston, W. Va. 25301

Dist NEWARK County WIRT Quad Elizabeth

GAS PURCHASER Columbia Gas Trans.

Gas Purchase Contract No. \_\_\_\_\_

ADDRESS Box 1273

Meter Chart Code \_\_\_\_\_

Charleston, W. Va. 25325

Date of Contract \_\_\_\_\_

\* \* \* \* \*

Date surface drilling was begun: 12/16/82

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

$BHP = P_f + P_{fe} \left( \frac{GL}{53.54 \times T} \right)^{-1}$

$P_f = 625 \#$

$G = .70$

$L = 4015'$

$T = 93^\circ$

$BHP = 730.7 \#$

AFFIDAVIT

I, MARVIN COMBS, having been first sworn according to law state that surface drilling of the well for which this determination is sought was begun on or after February 19, 1977; the well satisfies applicable state or federal well spacing requirements and the well is not within a proration unit, in existence at the time surface drilling began, which was applicable to the reservoir from which gas is or will be produced and which applied to any other well producing gas in commercial quantities or on which surface drilling began on or after February 19, 1977, and which was capable of producing gas in commercial quantities. I state, further, that I have concluded, to the best of my information, knowledge and belief, that the well for which this determination is sought is a new onshore production well and that I am not aware of any information not described in the application which is inconsistent with this conclusion.

Marvin Combs

STATE OF WEST VIRGINIA,

COUNTY OF Kanawha TO WIT:

I, Helen Mae Ludgras, a Notary Public in and for the state and county aforesaid, do certify that Marvin Combs, whose name is signed to the writing above, bearing date the 11<sup>th</sup> day of January, 1984, has acknowledged the same before me, in my county aforesaid.

Given under my hand and official seal this 11<sup>th</sup> day of January, 1984.

My term of office expires on the 25<sup>th</sup> day of July, 1988.

[NOTARIAL SEAL]

Helen Mae Ludgras  
Notary Public

01/12/2024



47-105-1024

RECEIVED

JAN 13 1984

1.0 API well number: (If not available, leave blank. 14 digits.)

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.)

5567 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  
600 Commerce Square  
Street  
Charleston, WV 25301  
City State Zip Code

OIL & GAS DIVISION  
DEPT. OF MINES

5.0 Location of this well: [Complete (a) or (b).]  
(a) For onshore wells (35 letters maximum for field name.)

NEWARK  
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.)

ROBERTS WI-015

(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 04030  
Name 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.)	5.682	---	---	---
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	5.682	---	---	---

9.0 Person responsible for this application:  
Agency Use Only  
Date Received by Juris. Agency  
Date Received by FERC

Robert Hart General Mgr. V.P.  
Name Title  
Robert Hart  
Signature  
1-11-84 (304) 344-8393  
Date Application is Completed Phone Number

01/12/2024



PARTICIPANTS:

DATE: MAR 9 1984

BUYER-SELLER CODE

WELL OPERATOR: Bow Valley Petroleum,

040189

FIRST PURCHASER: Columbia Gas Trans. Corp.

004030

OTHER: \_\_\_\_\_

Dev.

W. Va. Department of Mines, Oil & Gas Division  
 WELL DETERMINATION FILE NUMBER  
840113-107-105-1024  
 Use Above File Number on all Communications  
 Relating to Determination of this Well

**APPROVED**

MAR 21 1984

CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSING

ITEM NO.

- 1. FERC -121 \_\_\_\_\_ Items not completed - Line No. \_\_\_\_\_
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- 4. IV-6 Well Plat \_\_\_\_\_
- 5. IV-35 Well Record \_\_\_\_\_ Drilling \_\_\_\_\_ Deepening \_\_\_\_\_
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- 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 \_\_\_\_\_
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- (5) Production Depth: \_\_\_\_\_
- (5) Production Formation: \_\_\_\_\_
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- (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 \_\_\_\_\_
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- Additional information \_\_\_\_\_ Does computer program confirm? \_\_\_\_\_
- Was Determination Objected to \_\_\_\_\_ By Whom? \_\_\_\_\_

01/12/2024



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 Being negotiated  
(Month, day and year)

Meter Chart Code \_\_\_\_\_  
Name of First Purchaser Columbia Gas Transmission Corporation  
Box 1273  
Charleston WV 25325  
(City) (State) (Zip Code)

FERC Seller Code 040189 FERC Buyer Code 004030

TYPE OF DETERMINATION BEING SOUGHT:

- (1) Initial determination (See FERC Form 121.) Section of NGPA 107 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 Manager  
Name (Print) title  
Robert Hart  
Signature  
600 Commerce Sq.  
Street or P. O. Box  
Charleston, WV 25301  
City State (Zip Code)  
304 344-8393  
Area Phone Number  
Code

(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

JAN 13 1984

Date received by Jurisdictional Agency \_\_\_\_\_

By [Signature] Director  
Title \_\_\_\_\_  
01/12/2024



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

Operator: Bow Valley Petroleum Agent: MARVIN COMBS

Type Determination being sought - 107 (Devonian Shale)

API Well No.: 47-105-1024 Well Name: ROBERTS WI-015

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

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 = 160 \* API Units
2. Remarks:

0-200 Scale

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

1. GR Value = 160 \* API Units
2. Calculation:  $0.7$  (GR Value at Base Line)  
 $0.7$  (160 \*) = 112 API Units

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

Interval		Thickness of Interval Feet	Feet of less than* 0.7 (Shale Base Line) Feet
From**	To***		
<u>2642'</u>	<u>5388'</u>	<u>2746'</u>	<u>15'</u>

Total Devonian Interval 2746'

Total Less Than 0.7 (Shale Base) 15'

% Less Than 0.7 (Shale Base Line) =  $.0054 \times 100 = \underline{.546\%}$

\*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.

01/12/2024



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

Date 1-11-84  
Operator's Well No. WI-015  
API Well No. 105 1024  
State WV

WELL CLASSIFICATION FORM  
HIGH COST GAS WELL - DEVONIAN SHALE

WVGA Section 107

DESIGNATED AGENT Robert N. Hart  
ADDRESS 600 Commerce Sq.  
Charleston, WV 25301  
LOCATION: Elevation 1036.58'  
Watershed LEE CREEK  
Dist. NEWARK County: WIRT Elizabeth  
Gas Purchase Contract No. \_\_\_\_\_  
Meter Chart Code \_\_\_\_\_  
Date of Contract \_\_\_\_\_

WELL OPERATOR Bow Valley Petroleum Inc.  
ADDRESS 600 Commerce Sq.  
Charleston, WV 25301  
GAS PURCHASER Columbia Gas Transmission  
ADDRESS Box 1273  
Charleston, WV 25325

\* \* \* \* \*

Date surface drilling began: 12/16/82

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

$BHP = P_F + P_F e^{(GL/53.54XT) - 1}$   
730.7# Bottom Hole Pressure  
 $P_F = 625\#$   
 $G = .70$

BHP-Bottom Hole Pressure  
P<sub>F</sub>-Pressure Formation  
e=constant=2  
G-Specific gravity  
L-Lenght of pipe to middle of producing formation  
T-Temp rankin BHP + Temp @ head  
2

AFFIDAVIT

I, MARVIN COMBS, 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 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.

Marvin Combs

STATE OF WEST VIRGINIA,  
COUNTY OF Letcher, TO WIT.

I, Helene Mae Snodgrass a Notary Public in and for the state and county aforesaid do certify that Marvin Combs whose name is signed to the writing above, bearing date the 11<sup>th</sup> day of January, 1984, has acknowledged the same before me, in my county aforesaid.

Given under my hand and official seal this 11<sup>th</sup> day of January, 1984.  
My term of office expires on the 25<sup>th</sup> day of July, 1988.

Helene Mae Snodgrass  
Notary Public

[NOTARIAL SEAL]

01/12/2024





Date December 16, 1983

State of West Virginia  
Department of Mines  
Oil and Gas Division

Operator's  
Well No. WI015  
Farm Roberts (Hale)  
API No. 47 -105 - 1024

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

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

LOCATION: Elevation: 1036.58 Watershed Lee Creek  
District: Newark County Wirt Quadrangle Elizabeth

COMPANY Bow Valley Petroleum, Inc.  
ADDRESS 600 Commerce Square, Charleston, WV.  
DESIGNATED AGENT Robert Long  
ADDRESS Box 235 Culloden, WV.  
SURFACE OWNER W.VA. Pulp & Paper  
ADDRESS Parkersburg, WV.  
MINERAL RIGHTS OWNER Glen W. Roberts  
ADDRESS Elizabeth, WV.  
OIL AND GAS INSPECTOR FOR THIS WORK Deo  
Mace ADDRESS Sandridge, WV.  
PERMIT ISSUED November 30, 1982  
DRILLING COMMENCED 12/16/82  
DRILLING COMPLETED 12/30/82  
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.			
13-10"	20.50	20.50	12 sks.
9 5/8	262.05	262.05	90 sks.
8 5/8			
7	2279.45	2279.45	190 sks.
5 1/2			
4 1/2	5515.75	5515.75	281 sks.
3			
2		5492.80	
Liners used			

GEOLOGICAL TARGET FORMATION Dev-Shale-Marcellus Depth 5270'-5567' feet  
Depth of completed well 5567' feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh 95 feet; Salt \_\_\_\_\_ feet  
Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 2633'-5386' feet  
Gas: Initial open flow No Show Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 158 Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 48 hours  
Static rock pressure 625 psig (surface measurement) after 16 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



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

1st Stage N<sub>2</sub> Frac Perforation Interval = 3890'-5386' (29 holes)

800 gal (HCL @ 15%)

N<sub>2</sub> Pumped = 1,000,000 Sft.<sup>3</sup>

Partial Ballout

Max. Press. = 3100#

Min. Press. = 2200#

N<sub>2</sub> Injection Rate = 63,000 Sft.<sup>3</sup>/min.

2nd State N<sub>2</sub> Frac Perforation Interval = 2633'-3594' (30 holes)

1000 gal (HCL @ 15%)

N<sub>2</sub> Pumped = 1,034,000 Sft.<sup>3</sup> Injection Rate = 59,000 Sft.<sup>3</sup>/min.

Partial Ballout

Max. Press.=3,000#

Min. Press.=2,400#

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fre and salt water, coal, oil and g
Clay	0	5	
Sand & Shale	5	125	Electric Logs
Sand	125	149	K.B. 1046.58
Red Rock	149	161	Elev. 1036.58
Sand	161	191	
Red Rock	191	208	
Sand	208	299	Gr. Lime = 2102'-2180'
Red Rock	299	311	
Sand & Shale	311	348	Big Injun = 2180'-2198'
Red Rock	348	353	Weir = 2198'- <del>2298</del> '
Sand & Shale	353	387	
Red Rock & Shale	387	404	Sunbury = <del>2294</del> '-2590'
Sand & Shale	404	529	Berea = 2591'-2641'
Red Rock	529	547	Shale = 2642'-5567'
Sand	547	567	
Red Rock	567	589	
Sand & Shale	589	628	
Red Rock	628	634	
Sand & Shale	634	650	
Shale	650	940	
Lime	940	960	
Sand	960	1410	
Sand & Shale	1410	1570	
Sand	1570	1775	
Shale	1775	1820	
Sand	1820	1854	
Shale	1854	1888	
Sand	1888	2084	H <sub>2</sub> O @ 1950'
Shale	2084	2100	
Sand & Shale	2100	3700	
Shale	3700	5550 T.D.	

(Attach separate sheets as necessary)

Bow Valley Petroleum, Inc.

Well Operator

By: *M. Marin*

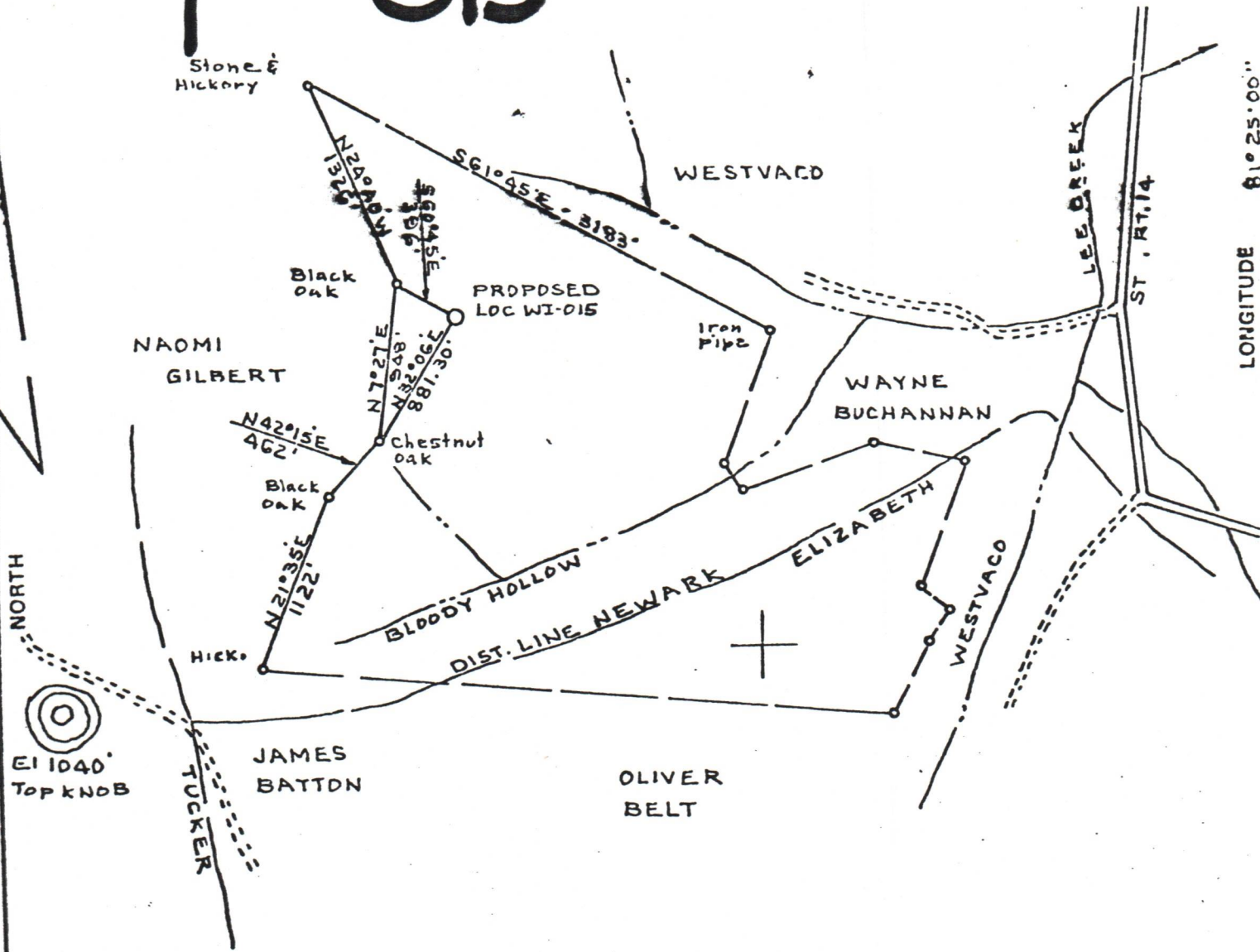
01/12/2024

Date: *12/16/83*

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 ..., encountered in the drilling of a well."



# 1-015



FILE NO. BK 73 P 62  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1-200'  
 PROVEN SOURCE OF ELEVATION TOP Knob S.W. Loc EL 1040'

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. S. Valley 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)



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE NOV 12, 1982  
 OPERATOR'S WELL NO. WI-015  
 API WELL NO. \_\_\_\_\_  
47 - 105 - 1024  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1036.58 WATER SHED LEE CREEK  
 DISTRICT NEWARK COUNTY WIRT  
 QUADRANGLE ELIZABETH 7.5'  
 SURFACE OWNER WESTVACO ACREAGE 202  
 OIL & GAS ROYALTY OWNER GLEN W. ROBERTS, ESTATE LEASE ACREAGE 429

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 \_\_\_\_\_ ESTIMATED DEPTH \_\_\_\_\_  
 WELL OPERATOR BOW VALLEY PETRO. DESIGNATED AGENT W.E. STOVER  
 ADDRESS 600 COMMERCE SQUARE ADDRESS BOX 235  
CHARLESTON WVA 25301 CULLODEN, WVA 25510

01/12/2024



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

RECEIVED

JAN 4 - 1983

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

INSPECTOR'S WELL REPORT

Permit No. 105-1024

Oil or Gas Well \_\_\_\_\_  
(KIND)

Company Bow Valley  
 Address \_\_\_\_\_  
 Farm Roberts  
 Well No. W1 015  
 District Newark 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 \_\_\_\_\_ bbla., 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 _____
8 1/4			
6 3/8			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 S. W. Jack 1

Remarks:  
239' of 9 5/8" casing Dowell cemented 12-17-82  
2261' of 7" casing Dowell cemented 12-20-82 26 Barrel cement

12-27-82  
DATE

D. S. Mace 01/12/2024  
DISTRICT WELL INSPECTOR



