



1) Date: September 1, 19 83  
 2) Operator's Well No. 838  
 3) API Well No. 47 105 -2000- 1100  
 State County Permit  
 (CORRECTED PERMIT NUMBER)

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
 APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil      / Gas X /  
 B (If "Gas", Production X / Underground storage      / Deep      / Shallow X /)
- 5) LOCATION: Elevation: 698.22' Watershed: Straight Fork & Little Kanawha River  
 District: Burning Springs County: Wirt Quadrangle: 7.5' Annamoriah
- 6) WELL OPERATOR Sterling Drilling & Prod. Co., Inc. DESIGNATED AGENT Harry L. Berger, Jr.  
 Address 360 Madison Ave. Fifth Floor Address 710 Virginia St., E.  
New York, New York 10017 Charleston, W.V. 25301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Deo Mace  
 Address Rt. 1 Box 5  
Sandridge, W.V. 25274
- 9) DRILLING CONTRACTOR: Name UNKNOWN AT THIS TIME  
 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, BROWN SHALE
- 12) Estimated depth of completed well, 5000 feet
- 13) Approximate trata depths: Fresh,      feet; salt,      feet.
- 14) Approximate coal seam depths: 0 Is coal being mined in the area? Yes      / No X
- 15) CASING AND TUBING PROGRAM

RECEIVED  
 SEP 28 1983  
 OIL & GAS DIVISION  
 DEPT. OF MINES

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									Kinds
Fresh water	9 5/8	LS	33#	X		300'	300'	To Surface	By Rule 1505
Coal									Sizes
Intermediate	7"	J-55	20#	X		1860'	1860'	100 sks	
Production	4 1/2	ERW	10.5#	X			5000'	250 sks	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-105-2000-1100 Date October 20 19 83

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. 8) 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.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires October 20, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BB</u>	Agent: <u>OK</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>5550</u>
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[Signature]  
 Administrator, Office of Oil and Gas

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





OFFICE USE ONLY

PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK

Form sections 1-10: 1) LOCATION, 2) WELL OPERATOR, 3) OIL & GAS INSPECTOR TO BE NOTIFIED, 4) PROPOSED WELL WORK, 5) GEOLOGICAL TARGET FORMATION, 6) APPROXIMATE DATA DEPTH, 7) APPROXIMATE COAL BEING MINED, 8) CASING AND TUBING PROGRAM, 9) ESTIMATED DEPTH OF PROPOSED WELL, 10) OTHER PHYSICAL CHANGE IN WELL (SPECIFY).

Table with 4 columns: Casing or Tubing Type, Specifications, Portability, Cement Pillars. Includes handwritten entries like '300' 300'', '150' 1500'', '100' 200''.

OFFICE USE ONLY

This part of Form IV-2(b) is to record the dates of certain occurrences and any follow-up inspections.

Table with 2 columns: Date, Date(s). Rows include: Application received, Well work started, Completion of the drilling process, Well Record received, Reclamation completed.

OTHER INSPECTIONS

Reason: [Handwritten signature]

Table with 4 columns: Bond, Agent, Date, Fee. Includes handwritten entries.

01/05/2024



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.

01/05/2024

**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.



A-2

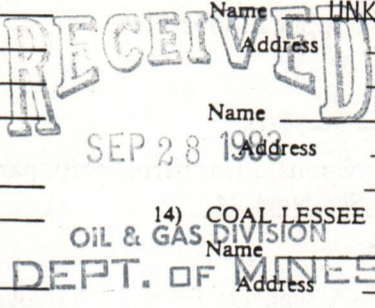


1) Date: September 1, 19 83
2) Operator's Well No. 838
3) API Well No. 47 State 105 County Permit 1100

DRILLING CONTRACTOR: UNKNOWN AT THIS TIME

STATE OF WEST VIRGINIA DEPARTMENT OF MINES, OIL AND GAS DIVISION OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil Gas X
5) LOCATION: Elevation: 698.22' District: Burning Springs
6) WELL OPERATOR Sterling Drilling & Prod. Co., Inc.
7) OIL & GAS ROYALTY OWNER Parkersburg Nat'l. Bank
8) SURFACE OWNER Westvaco Corp.
9) FIELD SALE (IF MADE) TO:
10) OIL & GAS INSPECTOR TO BE NOTIFIED Deo Mace
11) DESIGNATED AGENT Harry L. Berger, Jr.
12) COAL OPERATOR Unoperated
13) COAL OWNER(S) WITH DECLARATION ON RECORD: UNKNOWN
14) COAL LESSEE WITH DECLARATION ON RECORD:
15) PROPOSED WORK: Drill X
16) GEOLOGICAL TARGET FORMATION, BROWN SHALE
17) Estimated depth of completed well, 5000 feet
18) Approximate water strata depths: Fresh, salt, feet.
19) Approximate coal seam depths: 0 Is coal being mined in the area? Yes No X



20) CASING AND TUBING PROGRAM

Table with columns: 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 (Kinds, Sizes, Depths set, 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.
[X] 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 [X]

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: David M. Gillespie My Commission Expires May 10, 1989

Signed: Harry L. Berger, Jr. Its: Designated Agent 01/05/2024

OFFICE USE ONLY

DRILLING PERMIT

Permit number \_\_\_\_\_ Date \_\_\_\_\_ 19 \_\_\_\_\_

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 \_\_\_\_\_ unless drilling is commenced prior to that date and prosecuted with due diligence.

Table with columns: Bond, Agent, Plat, Casing, Fee



1) Date: September 1, 19 83  
2) Operator's Well No. 838  
3) API Well No. 47 105 ~~2000~~ 1100  
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 Westvaco Corp.  
Address #2 Ferguson Dr.  
Parkersburg, W.V. 26101
  - (ii) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (iii) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5(i) COAL OPERATOR UNOPERATED  
Address \_\_\_\_\_
- 5(ii) COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name UNKNOWN  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5(iii) COAL LESSEE WITH DECLARATION ON RECORD:  
Name \_\_\_\_\_  
Address \_\_\_\_\_

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.

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

Harry L. Berger, Jr.,  
this 1 day of September, 1983.  
My commission expires May 10, 1989.

David M. Gillespie  
Notary Public, Kanawha County,  
State of West Virginia

WELL OPERATOR Sterling Drilling & Prod. Co., Inc.  
By Harry L. Berger, Jr.  
Its Designated Agent  
Address 710 Virginia St., E.  
Charleston, W.V. 25301  
Telephone 342 - 0121

RECEIVED  
SEP 28 1983

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.

OIL & GAS DIVISION  
DEPT. OF MINES

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.

01/05/2024



A-5

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".
- 6) "Coal Operator" means any person, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine.
- 7) See Code § 22-4-20.
- 8) 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.
- 9) 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 22, (iii) unless previously paid on the same well, the fees required by Code § 22-4-1a(c) and § 22-4-12a, and (iv) 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:

<u>Grantor, lessor, etc.</u>	<u>Grantee, lessee, etc.</u>	<u>Royalty</u>	<u>Book Page</u>
Parkersburg Nat'l. Bank	Sterling Drilling and Production Co., Inc.	1/8	161/434





1) Date: September 1, 19 83  
 2) Operator's Well No. 838  
 3) API Well No. 47 State 105 County --2000-- Permit 1100

(CORRECTED PERMIT NUMBER)

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
 APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil \_\_\_\_\_ / Gas X /  
 B (If "Gas", Production X / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow X /)
- 5) LOCATION: Elevation: 698.22' Watershed: Straight Fork & Little Kanawha River  
 District: Burning Springs County: Wirt Quadrangle: 7.5' Annamoriah
- 6) WELL OPERATOR Sterling Drilling & Prod. Co., Inc DESIGNATED AGENT Harry L. Berger, Jr.  
 Address 360 Madison Ave. Fifth Floor Address 710 Virginia St., E.  
New York, New York 10017 Charleston, W.V. 25301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Deo Mace  
 Address Rt. 1 Box 5  
Sandridge, W.V. 25274
- 9) DRILLING CONTRACTOR: Name UNKNOWN AT THIS TIME  
 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, BROWN SHALE  
 12) Estimated depth of completed well, 5000 feet  
 13) Approximate strata depths: Fresh, \_\_\_\_\_ feet; salt, \_\_\_\_\_ feet.  
 14) Approximate coal seam depths: 0 Is coal being mined in the area? Yes \_\_\_\_\_ / No X /
- 15) 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		Kinds	Sizes
Conductor										
Fresh water	<u>9 5/8</u>	<u>LS</u>	<u>33#</u>	<u>X</u>		<u>300'</u>	<u>300'</u>	<u>To Surface</u>		
Coal										
Intermediate	<u>7"</u>	<u>J-55</u>	<u>20#</u>	<u>X</u>		<u>1860'</u>	<u>1860'</u>	<u>100 sks</u>		
Production	<u>4 1/2</u>	<u>ERW</u>	<u>10.5#</u>	<u>X</u>			<u>5000'</u>	<u>250 sks</u>		
Tubing										
Liners										

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

The 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. October 20 83

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 the filing of the Application.

WAIVER

The undersigned coal operator \_\_\_\_\_ / owner \_\_\_\_\_ / lessee \_\_\_\_\_ of the coal under this well location has examined this proposed well location. 20 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: \_\_\_\_\_

01/05/2024  
Coal Owner





IV-9  
(Rev 8-81)

DATE 8-27-83

WELL NO. Parkersburg Bank # 838

State of West Virginia

API NO. 47-105-1100

Department of Mines  
Oil and Gas Division

CONSTRUCTION AND RECLAMATION PLAN

COMPANY NAME Sterling Drilling & Prod. Co WELL OPERATOR Sterling Drilling & Prod

Address 360 Madison Ave.- NY, NY 10017 Address c/o H.L. Berger - Chars., WV

Telephone (212) 949-9100 Telephone (304) 342-0121

LANDOWNER Westvaco Corp. SOIL CONS. DISTRICT Little Kanawha SCD

Revegetation to be carried out by Sterling Drilling & Prod. Co.-H.L. Berger (Agent)

This plan has been reviewed by Little Kanawha SCD. All corrections and additions become a part of this plan: 9-1-83

(Date)

Jarrett Newton  
(SCD Agent)

ACCESS ROAD

LOCATION

Structure \_\_\_\_\_ (A) Structure Diversion Ditch (1)

Spacing \_\_\_\_\_ Material Earthen

Page Ref. Manual \_\_\_\_\_ Page Ref. Manual 2-12

Structure Drainage Ditches (B) Structure Rip-Rap (2)

Spacing Roadside Material Rock

Page Ref. Manual 2-12 Page Ref. Manual 2-9

Structure Cross Ditches (C) Structure \_\_\_\_\_ (3)

Spacing 135' for 4-6 in grade Material \_\_\_\_\_

Page Ref. Manual 2-4 Page Ref. Manual \_\_\_\_\_

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

Treatment Area II

Line 2 Tons/acre  
or correct to pH 6.5

Line 2 Tons/acre  
or correct to pH 6.5

Fertilizer 600 lbs/acre  
(10-20-20 or equivalent)

Fertilizer 600 lbs/acre  
(10-20-20 or equivalent)

Mulch Hay 2 Tons/acre

Mulch Hay 2 Tons/acre

Seed\* Ky-31 40 lbs/acre

Seed\* Ky-31 40 lbs/acre

Ladino Clover 4 lbs/acre

Ladino Clover 4 lbs/acre

lbs/acre

lbs/acre

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

Moore's Well Services, Inc.

PLAN PREPARED BY Richard A. Campbell

ADDRESS Route 1 Box 30

Duck, WV 25063

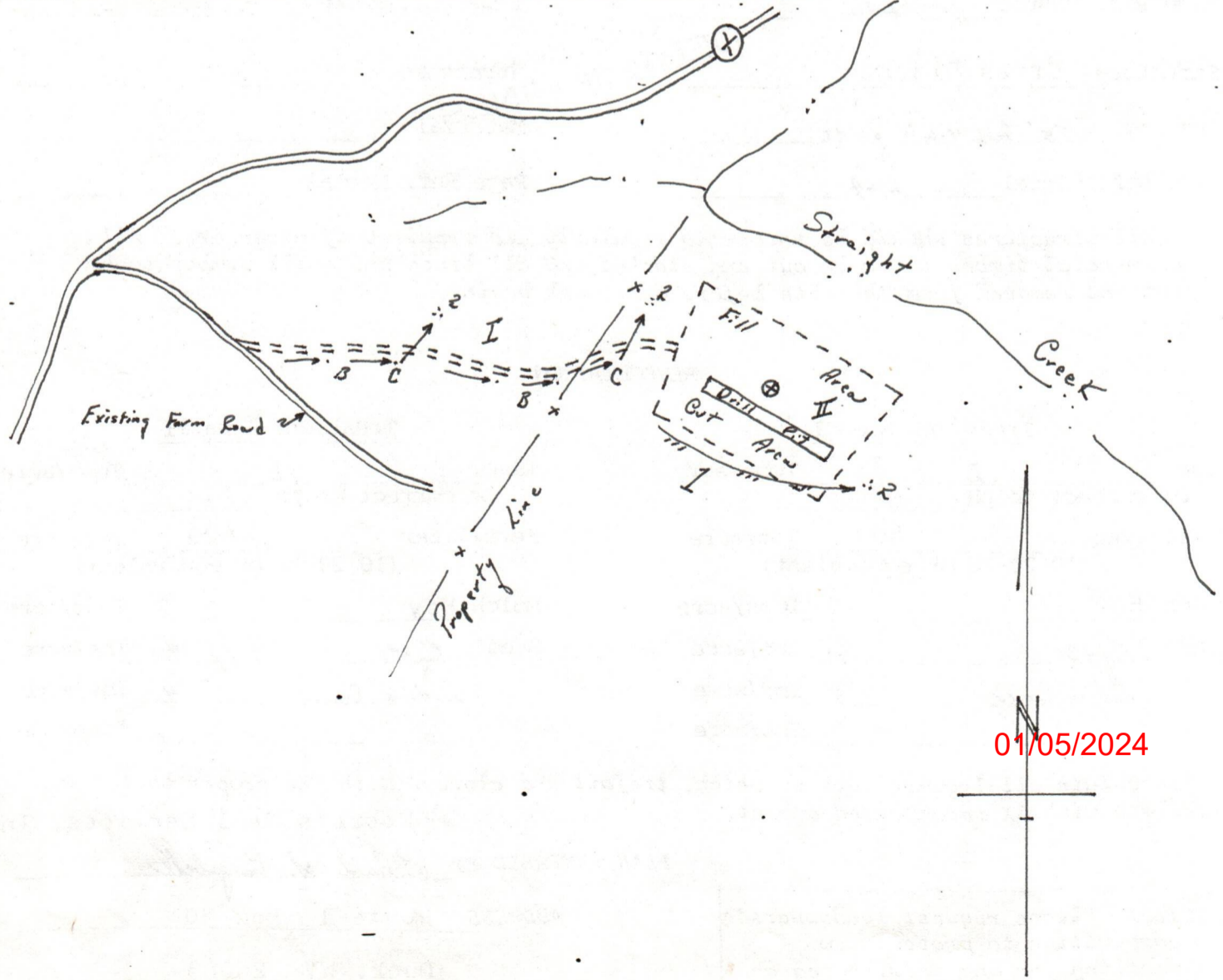
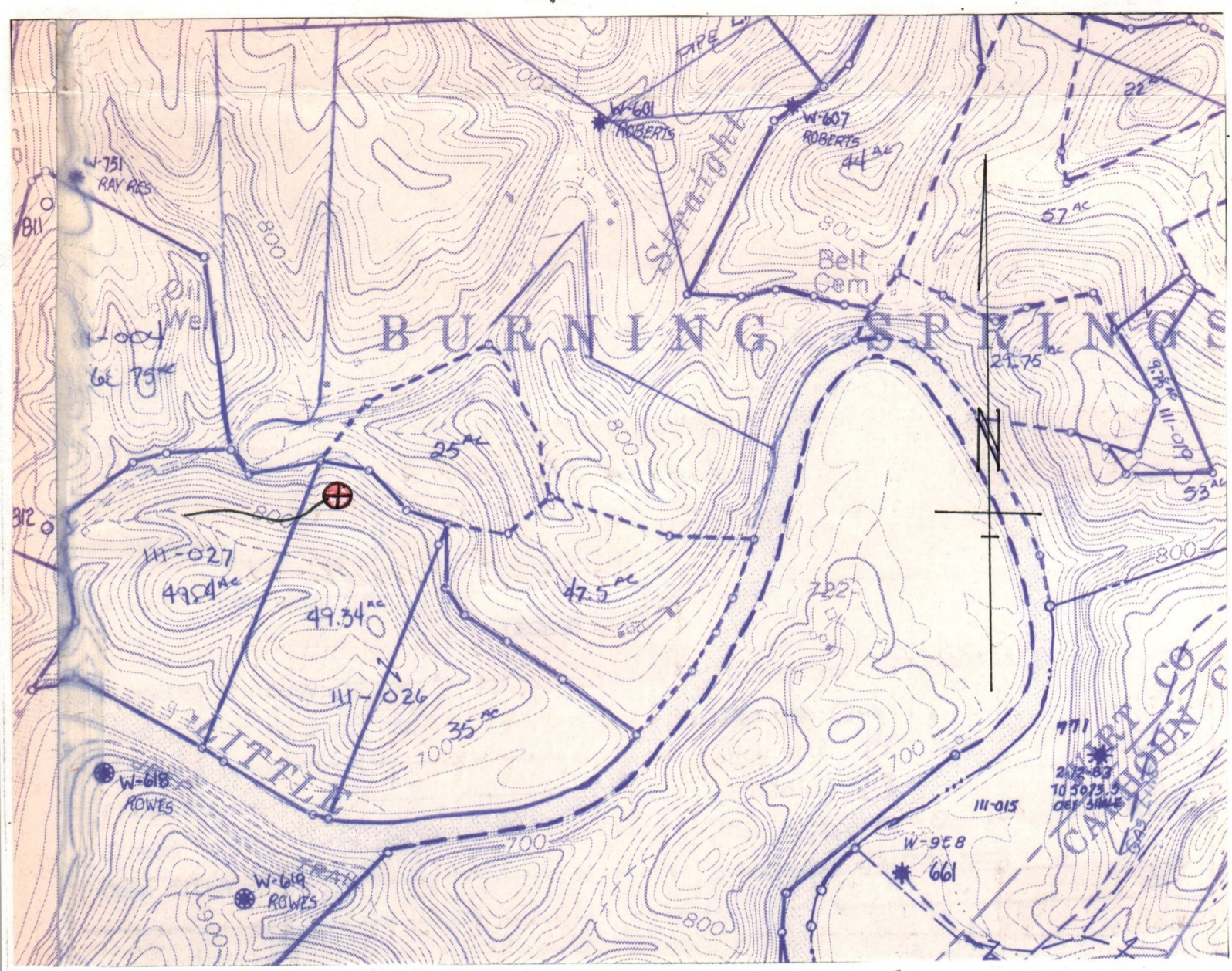
PHONE NO. (304) 364-5780

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

01/05/2024



A-8





RECEIVED

NOV 5 - 1984



IV-35  
(Rev 8-81)

OIL AND GAS DIVISION  
DEPT. OF MINES  
State of West Virginia  
Department of Mines  
Oil and Gas Division

Date Oct. 23, 1984  
Operator's Well No. 838  
Farm Pkg Nat'l Bank  
API No. 47 - 105 - 1100

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: 698.22 Watershed Straight Fk of Little Kanawha R.  
District Burning Sprng County Wirt Quadrangle 7 1/2' Annamoriah

COMPANY Sterling Drilling & Production Co., Inc.

ADDRESS 710 Virginia St., E, Charleston, WV 25301

DESIGNATED AGENT Harry L. Berger, Jr.

ADDRESS 710 Va. St., E. Charleston, WV 25301

SURFACE OWNER Westvaco Corp.

ADDRESS Box 577, Rupert, WV 25984

MINERAL RIGHTS OWNER Parkersburg Nat'l Bank

ADDRESS Parkersburg, WV 26101

OIL AND GAS INSPECTOR FOR THIS WORK Deo

Mace ADDRESS Rt 1, Bx 5 Sandridge, WV 25274

PERMIT ISSUED 10/20/83

DRILLING COMMENCED 7/23/84

DRILLING COMPLETED 7/29/84

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"			
9 5/8	304'	304'	to surface
8 5/8			
7	1859'	1859'	175 sx
5 1/2			
4 1/2		5140	290 sx
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5000' feet

Depth of completed well 5154 feet Rotary x / Cable Tools    

Water strata depth: Fresh 250 feet; Salt 1510 feet

Coal seam depths:     Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 2208'-5105' feet

Gas: Initial open flow     Mcf/d Oil: Initial open flow     Bbl/d

Final open flow 335 Mcf/d Final open flow     Bbl/d

Time of open flow between initial and final tests     hours

Static rock pressure 895 psig (surface measurement) after 96 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

01/05/2024

WIRT 1100



B-2

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

Perforations: 100 holes 2208' - 5105'

Treatment: 4250 gal 15% HCl; 6088 MSCF N<sub>2</sub>

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sandstone and Shale			0	1029	all measurements 10' KB
Salt Sand			1029	1200	
Sand and Shale			1200	1490	
Maxon			1490	1580	
Shale and Lime			1580	1605	
Big Lime			1605	1710	
Big Injun			1710	1743	
Shale			1743	1762	
Big Injun Sand			1762	1772	
Siltstone			1772	2127	
Sunbury Shale			2127	2141	
Sandy Siltstone and Shale			2141	2495	
Gordon			2495	2501	
Silty Shale			2501	4575	
Grey Siltstone			4575	4590	
Grey and Dark Shale			4590	5154	TD 5154' KB

(Attach separate sheets as necessary)

Sterling Drilling and Production Co., Inc.  
Well Operator

01/05/2024

By:

*Henry J. Bergard*

Date:

Oct. 23, 1984

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."



B-3

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

RECEIVED

AUG - 1 1984

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION  
DEPT. OF MINES

Permit No. 105-1100

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

Company Sterling Drilling & Prod.  
 Address Charleston, W. Va.  
 Farm Parkersburg Nat. Bank.  
 Well No. 8380  
 District Burningsprings County West  
 Drilling commenced 7/23/84  
 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			Kind of Packer _____
16			
13			Size of _____
10			
8 1/4			Depth set _____
6 5/8			
5 3/16			Perf. top _____
3			Perf. bottom _____
2			Perf. top _____
Liners Used			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 Randy Short Pusher Ronnie Costo

Remarks: Clint Hust Rig #8  
7/23/84 Rig moved on & rigged up starting to drill  
Rot hole on air. pit constructed on upper side of Loc

7/23/84  
DATE

Homer H. Dougherty  
DISTRICT WELL INSPECTOR

04/05/2024



**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

DISTRICT WELL INSPECTOR  
**01/05/2024**







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

\_\_\_\_\_  
DISTRICT WELL INSPECTOR  
01/05/2024



B-5

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

RECEIVED

OCT 2 - 1984

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION

DEPT. OF MINES  
(KIND)

Permit No. 105-1180

Company	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
<u>Sterling Drilling + Prod.</u>	Size			
<u>Charleston, W. VA.</u>	16			Kind of Packer
<u>Parkersburg National Bank</u>	13			
<u>838</u>	10			Size of
<u>Burnings Springs County West</u>	8 1/4			
Drilling commenced	6 5/8			Depth set
Drilling completed	5 3/16			
Date shot	3			Perf. top
Depth of shot	2			Perf. bottom
Initial open flow	Liners Used			Perf. top
/10ths Water in				Perf. bottom
Inch				
Open flow after tubing				
/10ths Merc. in				
Inch				
Volume	CASING CEMENTED	SIZE	No. FT.	Date
Cu. Ft.				
Rock pressure	NAME OF SERVICE COMPANY			
lbs.				
hrs.				
Oil	COAL WAS ENCOUNTERED AT			
bbls., 1st 24 hrs.				FEEET INCHES
Fresh water				FEEET INCHES
feet				FEEET INCHES
feet				FEEET INCHES
Salt water				FEEET INCHES
feet				FEEET INCHES

Drillers' Names Status Report

Remarks: 9-24-84 - Inspected reclamation on road + location reclamation done, location + road seeded and mulched with straw by Ronald Lane Inc. can be released when grass grows.

9-24-84  
DATE

Homer H. Dougherty  
01/05/2024  
DISTRICT WELL INSPECTOR



Form 26  
2/16/82

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS WELLS DIVISION  
**INSPECTOR'S PLUGGING REPORT**

**RECEIVED**  
OCT 5 - 1982

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

\_\_\_\_\_ DISTRICT WELL INSPECTOR

01/05/2024





RECEIVED

OCT 23 1984

OIL & GAS DIVISION  
DEPT. OF MINES

State of West Virginia

Department of Mines

Oil and Gas Division

Charleston 25305

FINAL INSPECTION REPORT  
INSPECTORS COMPLIANCE REPORT

COMPANY Stearling Drilling + Prod.  
Charleston, W.V.A.

710 Virginia St., East

PERMIT NO 47-105-1100  
Parkersburg National Bank  
FARM & WELL NO # 838

DIST. & COUNTY B. Springs - Wirt.

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

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

SIGNED Homer H. Dougherty  
DATE 10/17/84

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.

T. L. ...  
Administrator-Oil & Gas Division

January 18, 1985

DATE



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

1.0 API well number: (If not assigned, leave blank. 14 digits.) 47 -105 - 1100

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

3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.) 5154 feet

4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)  
 Sterling Drilling and Production Co. Inc. **OIL & GAS DIV. DEPT. OF MINES**  
 Name 710 Virginia St. East, Arcade Building  
 Street Charleston, WV 25301  
 City WV State WV Zip Code 25301

5.0 Location of this well: (Complete (a) or (b).)  
 (a) For onshore wells (35 letters maximum for field name.)  
 Burning Springs District  
 Field Name Wirt  
 County WV State WV  
 (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.)  
Pkbg Nat'l Bank #838

(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.)  
UNDEDICATED  
 Name \_\_\_\_\_ Buyer Code \_\_\_\_\_

(b) Date of the contract:  
 \_\_\_\_\_  
 Mo. Day Yr.

(c) Estimated total annual production from the well: 10 Million Cubic Feet

	(a) Base Price	(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.)	S/MMBTU <u>5.866</u>	_____	_____	_____
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	S/MMBTU <u>5.866</u>	_____	_____	_____

9.0 Person responsible for this application:

Agency Use Only	<u>Harry L. Berger, Jr.</u>	<u>Designated Agent</u>
Date Received by Juris. Agency	Name <u>Harry L. Berger, Jr.</u>	Title _____
<u>NOV - 1 1984</u>	Signature _____	_____
Date Received by FERC	<u>Oct. 23, 1984</u>	<u>304-342-0121</u>
	Date Application is Completed _____	Phone Number _____

RECEIVED

NOV - 1 1984

OIL & GAS DIV. DEPT. OF MINES

01/05/2024



DEPARTMENT OF MINES, OIL AND GAS DIVISION

47-105-1100

COVER SHEET, STATE APPLICATION FOR WELL CLASSIFICATION

Date: Oct. 23, 19 84

AGENCY USE ONLY

Applicant's Name: Sterling Drilling & Production Co., Inc.

WELL DETERMINATION FILE NUMBER

Address: 710 Virginia Street, E. Arcade Bldg  
Charleston, WV 25301

841101 -107-105-1100

Gas Purchaser Contract No.

Use Above File Number on all  
Communications Relating to This Well

Date of Contract  
(Month, day and year)

Designated Agent: Harry L. Berger, Jr.

First Purchaser: UNDEDICATED

Address: Sterling Drilling & Prod. Co., Inc.  
710 Virginia St., E. Arcade Bldg.  
Charleston, WV 25301

Address:  
(Street or P.O. Box)

(City) (State) (Zip Code)

FERC Seller Code 018084

FERC Buyer Code

NAME AND TITLE OF PERSON TO WHOM QUESTIONS CONCERNING THIS APPLICATION SHALL  
BE ADDRESSED:

Name: Harry L. Berger, Jr.

Agent

Signature:

(Print)  
*Harry L. Berger Jr.*

(Title)

Address:

Sterling Drilling & Prod. Co., Inc.  
710 Virginia St., E., Arcade Bldg.

(Street or P.O. Box)  
Charleston, WV 25301  
(City) (State) (Zip Code)

Telephone:

(304) 342-0121  
(Area Code) (Phone Number)

(Certificate of Proof of Service to Purchaser)

NGPA Category Applied For

NGPA SECTION/SUBSECTION

102 New Natural Gas

- 102-2 2.5 Mile Test
- 102-3 1000 Foot Deeper Test
- 102-4 New Onshore Reservoir

108 Stripper Well Natural Gas

- 108- Stripper Well
- 108-1 Seasonally Affected
- 108-2 Enhanced Recovery
- 108-3 Temporary Pressure Buildup

103 New Onshore Production Well

- 103 New Onshore Production Well

107 High Cost Natural Gas

- 107-0 Deep (more than 15,000 feet)
- 107-1 Geopressured Brine
- 107-2 Coal Seams
- 107-3 Devonian Shale
- 107-5 Production enhancement
- 107-6 New Tight Formation
- 107-7 Recompletion Tight Formation

AGENCY USE ONLY

QUALIFIED

01/05/2024

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NOV - 1 1984

OIL & GAS DIV.  
DEPT. OF MINES

Date Received

Determination Date



API Well No.

47 - 105 - 1100  
State County Permit

WELL CLASSIFICATION FORM

HIGH COST GAS WELL - DEVONIAN SHALE

NGPA Section 107

DESIGNATED AGENT Harry L. Berger, Jr.

ADDRESS Arcade Building; 710 Virginia St., E  
Charleston, WV 25301

LOCATION Elevation 698.22

WELL OPERATOR Sterling Drilling and Production Watershed Straight Fk of Little Kanawha R.

ADDRESS 710 Virginia St., East Co., Inc. Dist. Brng Spr County Wirt Quad. 7 1/2' Anamor  
Charleston, WV 25301

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

GAS PURCHASER UNDEDICATED

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

ADDRESS \_\_\_\_\_

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

\* \* \* \* \*

Date surface drilling began: 7/23/84

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

Bottom Hole Pressure. PSIA -- Pf = Pwe XLGS

$t = 60 + (0.0075 \times 5154) + 459.67 = 558$  .  $x = \frac{1}{53.34} \times 558 = .0000336$

$Pf = 895 \times 2.7183 \times .0000336 \times 3657 \times .690 \times 1.08 = 981$  PSI

AFFIDAVIT

I, Harry L. Berger, Jr., 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.

Harry L. Berger, Jr.

STATE OF WEST VIRGINIA

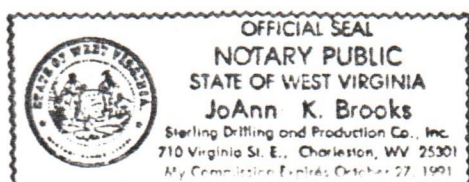
COUNTY OF Kanawha, TO-WIT:

I, JoAnn K. Brooks, a Notary Public in and for the state and county aforesaid, do certify that Harry L. Berger, Jr., whose name is signed to the writing above, bearing date the 24 day of October, 19 84, has acknowledged the same before me, in my county aforesaid.

01/05/2024

Given under my hand and official seal this 24 day of October, 19 84.  
My term of office expires on the 29 day of October, 19 91.

(NOTARIAL SEAL)



JoAnn K. Brooks  
Notary Public



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

Operator: Starling Drilling and Production Co., Inc. Agent: H. L. Berger  
 Type Determination being sought - 107 (Devonian Shale)  
 API Well No.: 47-105-1100 Well Name: Parkersburg Nat'l Bank #830  
 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:

*Gamma Ray Scale = 0 → 200 API Units*

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

1. GR Value = 160 \* API Units
2. Calculation:  $\frac{0.7 \text{ (GR Value at Base Line)}}{0.7 \text{ (160 *)}} = \underline{112}$  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>2141'</u>	<u>5152'</u>		

Total Devonian Interval 3011'

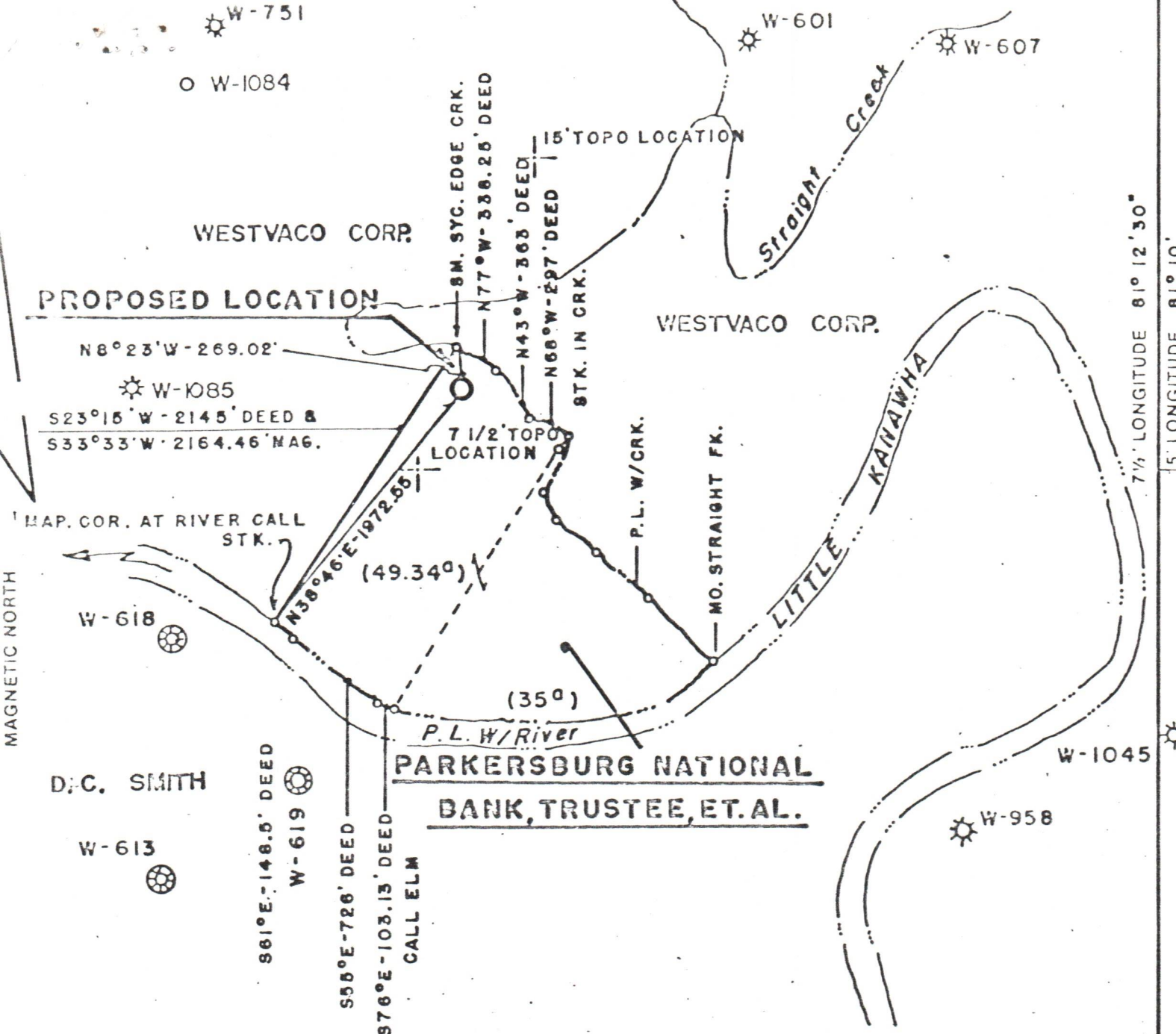
Total Less Than 0.7 (Shale Base) 44'

% Less Than 0.7 (Shale Base Line) =  $\frac{0.0146}{1} \times 100 = \underline{1.46\%}$

01/05/2024

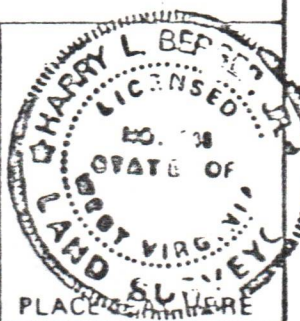
\*Marked on log included with analysis.  
 \*\*Top of Devonian Section Recorded on First Interval in this Column.  
 \*\*\*Lesser of TD or Bottom of Devonian Section Recorded as last Interval in this Column.





N.B. H-24, PG. 28  
 FILE NO 111-026 NO. 1  
 MAP NO 58-A  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION U.S.G.S. DATA B.M. ROCK RUN EL. 649'

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) HARRY L. BERGER, JR.  
 HARRY L. BERGER, JR. L.L.S. 248



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6  
 (878)



DATE AUG. 19, 19 83  
 OPERATOR'S WELL NO. 838  
 API WELL NO. EXP. 10/20/25  
47-105-1100  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS.") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION ELEVATION 698.22' WATER SHED STRAIGHT FORK & LITTLE KANAWHA RIVER  
 DISTRICT BURNING SPRINGS COUNTY WIRT  
 QUADRANGLE 7 1/2' ANNAMORIAN (ARNOLDSBURG N.W.)  
 SURFACE OWNER WESTVACO CORP. ACREAGE 138.04  
 OIL & GAS ROYALTY OWNER PARKERSBURG NAT. BANK LEASE ACREAGE 88  
 LEASE NO. 111-026

01/05/2024

PROPOSED WORK DRILL  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 BROWN SHALE ESTIMATED DEPTH 5000'  
 OPERATOR STERLING DRILLING & PRODUCTION CO INC. AGENT HARRY L. BERGER  
 ADDRESS 360 MADISON AVE 5TH FLOOR ADDRESS 710 VIRGINIA ST. E.  
NEW YORK NY 10017 CHARLESTON, WV 25314





IV-35  
(Rev 8-81)

Date Oct. 23, 1984

Operator's

Well No. 838

Farm Pkbg Nat'l Bank

API No. 47 - 105 - 1100

State of West Virginia  
Department of Mines  
Oil and Gas Division

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: 698.22 Watershed Straight Fk of Little Kanawha R.  
District Burning Sprng County Wirt Quadrangle 7 1/2' Annamoriah

COMPANY Sterling Drilling & Production Co., Inc.

ADDRESS 710 Virginia St., E, Charleston, WV 25301

DESIGNATED AGENT Harry L. Berger, Jr.

ADDRESS 710 Va. St., E. Charleston, WV 25301

SURFACE OWNER Westvaco Corp.

ADDRESS Box 577, Rupert, WV 25984

MINERAL RIGHTS OWNER Parkersburg Nat'l Bank

ADDRESS Parkersburg, WV 26101

OIL AND GAS INSPECTOR FOR THIS WORK Deo Mace

ADDRESS Rt 1, Bx 5 Sandridge, WV 25274

PERMIT ISSUED 10/20/83

DRILLING COMMENCED 7/23/84

DRILLING COMPLETED 7/29/84

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"			
9 5/8	304'	304'	to surface
8 5/8			
7	1859'	1859'	175 sx
5 1/2			
4 1/2		5140	290 sx
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5000' feet

Depth of completed well 5154 feet Rotary x / Cable Tools

Water strata depth: Fresh 250 feet; Salt 1510 feet

Coal seam depths: ----- Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 2208'-5105' feet

Gas: Initial open flow --- Mcf/d Oil: Initial open flow --- Bbl/d

Final open flow 335 Mcf/d Final open flow --- Bbl/d

Time of open flow between initial and final tests --- hours

Static rock pressure 895 psig (surface measurement) after 96 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

01/05/2024



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

Perforations: 100 holes 2208' - 5105'  
Treatment: 4250 gal 15% HCl; 6088 MSCF N<sub>2</sub>

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fre and salt water, coal, oil and g
					all measurements 10' KB
Sandstone and Shale			0	1029	
Salt Sand			1029	1200	
Sand and Shale			1200	1490	
Maxon			1490	1580	
Shale and Lime			1580	1605	
Big Lime			1605	1710	
Big Injun			1710	1743	
Shale			1743	1762	
Big Injun Sand			1762	1772	
Siltstone			1772	2127	
Sunbury Shale			2127	2141	
Sandy Siltstone and Shale			2141 <i>Dev</i>	2495	
Gordon			2495	2501	
Silty Shale			2501	4575	
Grey Siltstone			4575	4590	
Grey and Dark Shale			4590	5154	TD 5154' KB

(Attach separate sheets as necessary)

1.4606

Sterling Drilling and Production Co., Inc.  
Well Operator

By: *Henry J. Bergend*

01/05/2024

Date: Oct. 23, 1984

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."