



1) Date: Sept. 1, 1983
 2) Operator's Well No. 840
 3) API Well No. 47 105 -2002- 1102
 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: 666.05' Watershed: Striaight 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
XXXXXXXXXXXXXX Sandridge, W.V.
- 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 tratra depths: Fresh, feet; salt, feet.
- 14) Approximate coal seam depths: OWN Is coal being mined in the area? Yes / No X
- 15) CASING AND TUBING PROGRAM

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 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									
Fresh water	9 5/8	LS	33#	X		300'	300'	To Surface	Kinds <i>By Rule 1505</i>
Coal									Sizes
Intermediate	7"	J-55	20#	X		1820'	1820'	100 sks	
Production	4 1/2	FRW	10.5#	X			5000'	250 sks	Depths set
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-105-2002- 1102 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: <i>BB</i>	Agent: <i>OK</i>	Plat: <i>[Signature]</i>	Casing: <i>[Signature]</i>	Fee: <i>3550</i>
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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

1) WELL OPERATOR: Sealing Drilling & Prod. Co., Inc. Designated Agent
 2) LOCATION: Danier Springs
 3) PROPOSED WELL WORK: Drill 1/2" Dia. well
 4) CASING AND TUBING PROGRAM: Approximate true depth: 500'
 5) APPROXIMATE TRUE DEPTH: 500'
 6) ESTIMATED DEPTH OF COMPLETED WELL: 500'
 7) OTHER PHYSICAL CHANGE IN WELL (Specify): None
 8) OIL & GAS INSPECTOR TO BE NOTIFIED: None
 9) DRILLING CONTRACTOR: UNKNOWN AT THIS TIME

OFFICE USE ONLY

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

Date	Date(s)
Application received	Follow-up inspection(s)
Well work started	"
Completion of the drilling process	"
Well Record received	"
Reclamation completed	"

OTHER INSPECTIONS

Reason: _____

Reason: _____

Board	Agent	File	Case No.	Rec
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

01/05/2024



1) Date: September 1, 1983
2) Operator's Well No. 840
3) API Well No. 47 105 2002 1102
State County Permit

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
B (If "Gas", Production X Underground storage Deep Shallow X)
- 5) LOCATION: Elevation: 666.05' Watershed: Straight Fork & Little Kanawha River
District: Burning Springs County: Wirt Quadrange: 7.5' Annamoriah
- 6) WELL OPERATOR Sterling Drilling & Prod. Co., Inc
Address 360 Madison Ave. Fifth Floor
New York, New York 10017
- 7) OIL & GAS ROYALTY OWNER Parkersburg National Bank
Address Parkersburg, W.V. 26101
Acreage 88
- 8) SURFACE OWNER Westvaco Corporation
Address #2 Ferguson Dr.
Parkersburg, W.V. 26101
Acreage 138.04
- 9) FIELD SALE (IF MADE) TO:
Address
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Deo Mace
Address Rt. 1 Box 5
Sandridge, W.V. 25274
- 11) DESIGNATED AGENT Harry L. Berger, Jr.
Address 710 Virginia St., E.
Charleston, WV 25301
- 12) COAL OPERATOR UNOPERATED
Address
- 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
Name UNKNOWN
Address
Name
Address
- 14) COAL LESSEE WITH DECLARATION ON RECORD:
Name
Address
- 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, BROWN SHALE
- 17) Estimated depth of completed well, 5000' feet
- 18) Approximate water strata depths: Fresh, feet; salt, feet.
- 19) Approximate coal seam depths: 0 Is coal being mined in the area? Yes / No X

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DEPT. OF MINES

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									
Fresh water	9 5/8	LS	33#	X		300'	300'	To Surface	Kinds
Coal									
Intermediate	7"	J-55	20#	X		1820'	1820'	100 sks	Sizes
Production	4 1/2	ERW	10.5#	X			5000'	250 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: 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
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. In addition, the well operator or his contractor shall notify the 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.
Bond: Agent: Plat: Casing Fee

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

01/05/2024

A-6

1) Date: Sept. 1, 19 83
2) Operator's Well No. 840
3) API Well No. 47 105 2002 State County Permit 1102

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 Furguson 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 Harold J. Berger
Its Designated Agent
Address 710 Virginia St., E.
Charleston, W.V. 25301
Telephone 342 - 0121

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SEP 28 1983

OIL & GAS DIVISION
DEPT. OF MINES

- 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 XX

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

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

01/05/2024

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INSTRUCTIONS TO APPLICANT

CONCERNING THE LINE ITEMS:

- 1) Date of Notice.
- 2) Your well name and number.
- 3) To be filled out by the Office of Oil & Gas.
- 4) & 5) Use separate sheet if necessary.
- 4) Surface owner(s) of record to be served with Notice and Application. However, see also Code § 22-4-1b(b) if "more than three tenants in common or other co-owners of interest described in subsection (a) of this section hold interests in such lands".
- 5(i) "Coal Operator" means any person, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine.
- 5(ii, iii) See Code § 22-4-20.
- 6) See Code § 22-4-11(c). However, in lieu of filing the lease(s) or other continuing contract(s), the Applicant may fill out the information in the space provided below.
- 7) See Code § 22-4-11(d, e).

CONCERNING THE REQUIRED COPIES FOR FILING AND SERVICE:

Filing. Code § 22-4-1k and Regulation 7.02 provide that the original and required copies of the Notice and Application must be filed with the Administrator, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-1k(d) and the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fees required by Code § 22-4-1a(c) and 22-3-12a, and (v) if applicable, the consent required by Code § 22-4-3a 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 Prod. Co., Inc.	1/8	161/434



IV-9
(Rev 8-81)

A-8

DATE 8-27-83

WELL NO. Parkersburg Bank #840

State of West Virginia

API NO. 47-105-1102

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 <u>Culverts</u> (A)	Structure <u>see sketch</u> (1)
Spacing <u>Size - 12"</u>	Material _____
Page Ref. Manual <u>R-8</u>	Page Ref. Manual _____
Structure <u>Drainage Ditches</u> (B)	Structure <u>Rip-Rap</u> (2)
Spacing <u>Roadside</u>	Material <u>Rock</u>
Page Ref. Manual <u>R/R</u>	Page Ref. Manual <u>R-9</u>
Structure <u>Cross Ditches</u> (C)	Structure _____ (3)
Spacing _____	Material _____
Page Ref. Manual _____	Page Ref. Manual _____

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OIL & GAS DIVISION
DEPT. OF MINES

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	
Lime <u>2</u> Tons/acre	or correct to pH <u>6.5</u>
Fertilizer <u>600</u> lbs/acre	(10-20-20 or equivalent)
Mulch <u>Hay</u> 2 Tons/acre	
Seed* <u>Ky-31</u> 30 lbs/acre	
<u>Orchardgrass</u> 10 lbs/acre	
<u>Ladino Clover</u> 4 lbs/acre	

Treatment Area II	
Lime <u>2</u> Tons/acre	or correct to pH <u>6.5</u>
Fertilizer <u>600</u> lbs/acre	(10-20-20 or equivalent)
Mulch <u>Hay</u> 2 Tons/acre	
Seed* <u>Ky-31</u> 30 lbs/acre	
<u>Orchardgrass</u> 10 lbs/acre	
<u>Ladino Clover</u> 4 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

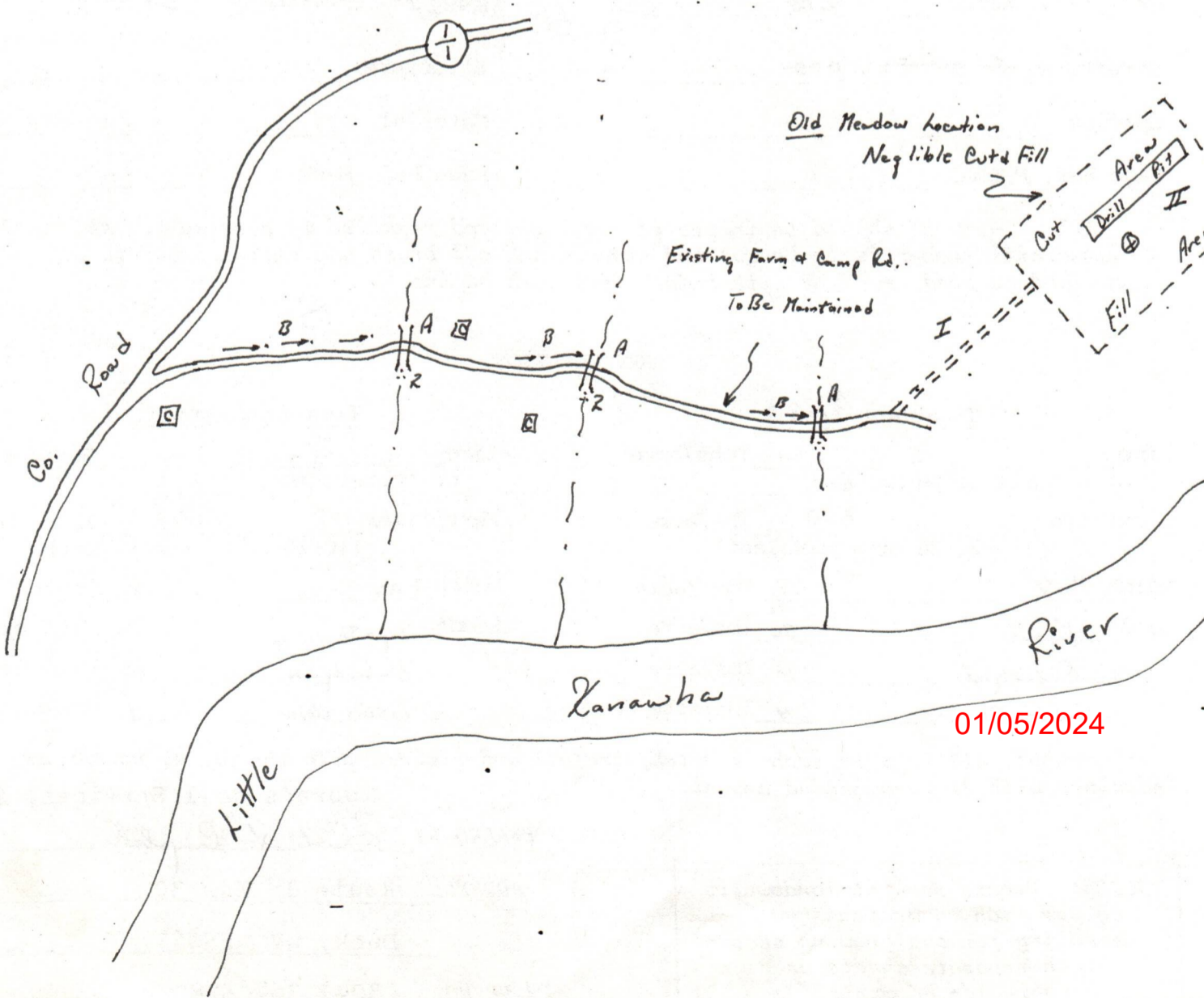
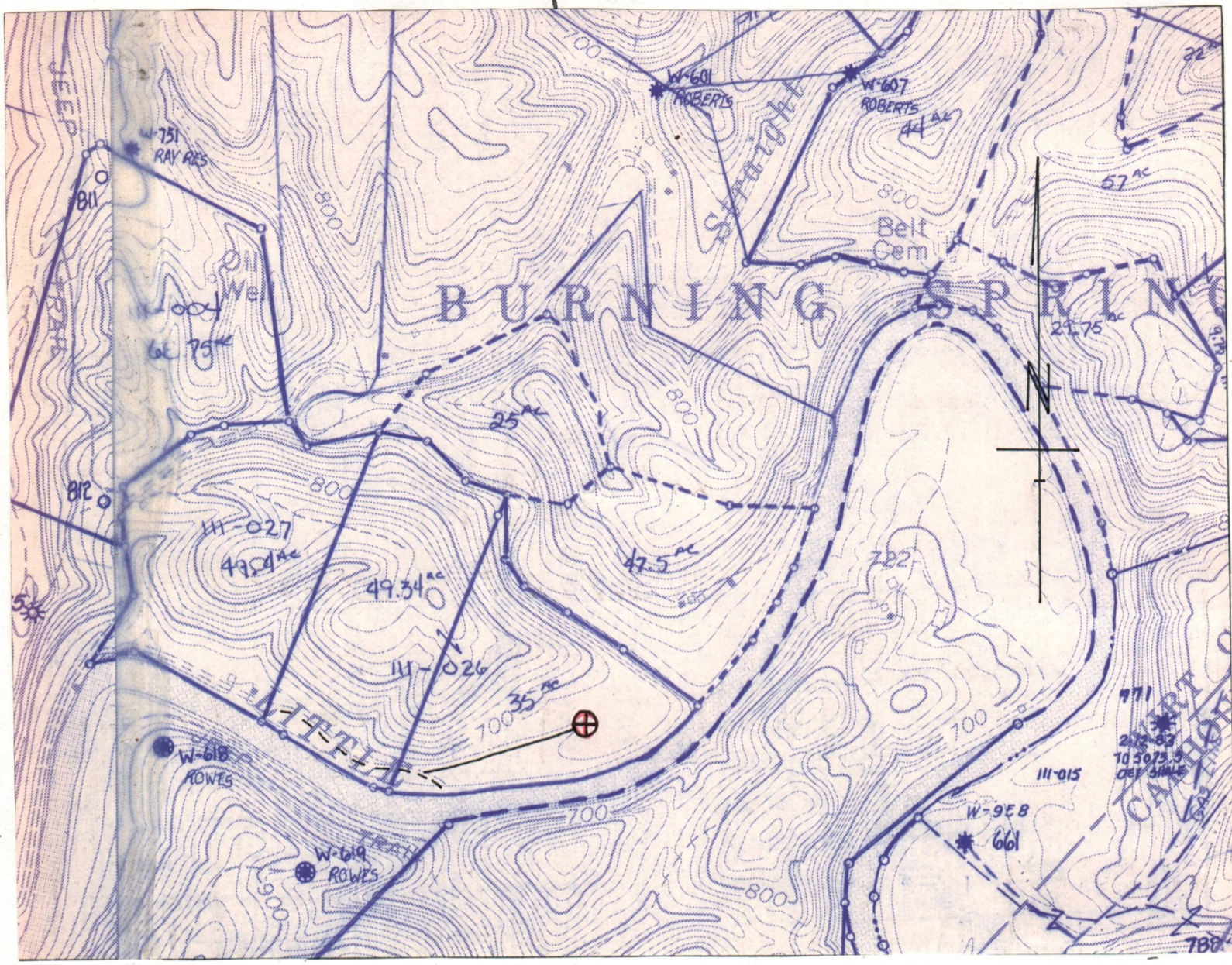
Duck, WV 25063

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-9



01/05/2024

A-10


839, 840

P 522 056 692

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to STEVE RICHARDS	
WESTVACO CORP.	
Street and No.	
#2 FURBUSDN DR.	
P.O., State and ZIP Code	
PARKERSBURG, W. V. 26101	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark	Date
	

PS Form 3800, Feb. 1982

01/05/2024

P 522 051 882

A-11

(See Reverse)

Sent to WESTVACO CORP.	
Street and No. #2 FURGUSON DR.	
P.O., State and ZIP Code PARKERSBURG, W.V. 26101	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$1.72
Postmark or Date	

840
P 522 051 882

(See Reverse)

Sent to WESTVACO CORP.	
Street and No. #2 FURGUSON DR.	
P.O., State and ZIP Code PARKERSBURG, W.V. 26101	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$1.72
Postmark or Date	

S Form 3800, Feb. 1982

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SEP 28 1983

OIL & GAS DIVISION
DEPT. OF MINES

1102
~~105-2002~~

01/05/2024

IV-35
(Rev 8-81)

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NOV 28 1984
OIL & GAS DIVISION
DEPT. OF MINES



State of West Virginia
Department of Mines
Oil and Gas Division

Date 10/24/84
Operator's
Well No. 840
Farm Parkersburg Nat'l Bank
API No. 47 - 105 - 1102

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: 666.05 Watershed Straight Fork and Little Kanawha River
District: Burning Springs County Wirt Quadrangle 7.5' Annamoriah

COMPANY Sterling Drilling & Production Co., Inc.

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

DESIGNATED AGENT Harry L. Berger

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

SURFACE OWNER Westvaco Corp.

ADDRESS #2 Furguson Dr., Parkersburg, WV 26101

MINERAL RIGHTS OWNER Parkersburg Nat'l Bank

ADDRESS Parkersburg, WV 26101

OIL AND GAS INSPECTOR FOR THIS WORK Deo Mace

ADDRESS Rt. 1, Box 5, Sandridge, WV 25274

PERMIT ISSUED October 20, 1984

DRILLING COMMENCED July 16, 1984

DRILLING COMPLETED July 22, 1984

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	312'	312'	140 sks.
8 5/8			
7	1862'	1862'	160 sks.
5 1/2			
4 1/2		5075'	290 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5000' feet

Depth of completed well 5109' KB feet Rotary x / Cable Tools

Water strata depth: Fresh 80 feet; Salt 605 feet

Coal seam depths: none Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3173 - 5050 feet

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

Final open flow 140 Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests 66.5 hours

Static rock pressure 1000 psig (surface measurement) after 72 ~~11/05/84~~ 01/05/84 in

(If applicable due to multiple completion--)

Second producing formation Pay zone depth feet

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

Final open flow Mcf/d Oil: Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure psig (surface measurement) after hours shut in

(Continue on reverse side)

WIRT
1102

B-2

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

Perforations

1st Stage: 26 holes from 4527' to 5050'
 2nd Stage: 27 holes from 3831' to 4412'
 3rd Stage: 24 holes from 3173' to 3703'

Treatment

1st Stage: 1000 gals. of 15% HCL; 1,584 MSCF of N₂
 2nd Stage: 1000 gals. of 15% HCL; 1,584 MSCF of N₂
 3rd Stage: 1000 gals. of 15% HCL; 1,584 MSCF of N₂

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	1345	All measurements 10' KB
Salt Sand			1345	1380	Fresh water @ 80'
Shale			1380	1443	Salt water @ 605'
Maxon			1443	1556	
Shale			1556	1566	
Big Lime			1566	1687	
Big Injun			1687	1726	
Siltstone and Shale			1726	2080	
Sunbury Shale			2080	2095	
Berea			2095	2098	
Siltstone and Shale			2098	2548	
Shale			2548	4532	Top of Java formation 4296'
Siltstone			4532	4550	Gas shows 3173' - 3703'
Shale			4550	5109	3831' - 4412'
TD			5109		4527' - 5050'

(Attach separate sheets as necessary)

Sterling Drilling and Production Co., Inc.
 Well Operator
 By: Harry J. Bergin 01/05/2024
 Date: 11-20-84

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."

B3

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

RECEIVED

JUL 17 1984

OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 165-1102

Oil or Gas Well _____
(KIND)

Company	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
<u>Sterling Drilling & Prod.</u>				
<u>Charleston, W.Va.</u>	Size			
<u>Parkersburg National Bank</u>	16			Kind of Packer
<u>840</u>	13	<u>Conductors</u>	<u>66</u>	
<u>Burningsprings county Wirt</u>	10			Size of
<u>7/16/84</u>	<u>9 5/8</u>		<u>298</u>	
	6 5/8			Depth set
	5 3/16			
	3			Perf. top
	2			Perf. bottom
	Liners Used			Perf. top
				Perf. bottom

CASING CEMENTED 9 5/8 SIZE 298 No. FT. 7/16/84 Date

NAME OF SERVICE COMPANY Dowell

COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

Drillers' Names Randy Short Pusher Ronnie Costo

Remarks: 7/9/84 Moved on & started drilling & set 66 ft of 13" conductors.
7/10/84 Ran 298 ft. of 9 5/8" surface pipe & cemented with 120 sacks
of neat 3% C.C. & 1/2 lb. Celflake Plug down 7:00 AM by Dowell.
7/12/84 Ran 1850 ft of 7" pipe & cemented with 160 sacks
of neat 3% C.C. & 1/2 lb. Celflake Plug down 12:30 P.M. by Dowell
7/12/84 Rig Weighting on Cement
Homer H. Dougherty
DATE

07/05/2024
DISTRICT WELL INSPECTOR

**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-4

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

RECEIVED

AUG - 1 1984

OIL & GAS DIVISION
DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No. 105-1102

Oil or Gas Well _____
(KIND)

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, Nat. Bank</u>	13			
<u>840</u>	10			Size of _____
<u>Burning Springs County, West</u>	8 1/4			
<u>7/9/84</u>	6 3/8			Depth set _____
<u>7/15/84</u> Total depth <u>5100</u>	5 3/16			
	4 1/2		<u>5086</u>	Perf. top _____
	2			Perf. bottom _____
	Liners Used			Perf. top _____
				Perf. bottom _____
	CASING CEMENTED <u>4 1/2</u> SIZE <u>5086</u> No. FT. <u>7/15/84</u> Date			
	NAME OF SERVICE COMPANY <u>Dowell</u>			
	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			

Drillers' Names Randy Short Pusher Ronnie Costo

Hurst Rig #8

Remarks: 7/15/84 S.D. of Well 5100 ft. Ran 5086 ft of 4 1/2" pipe and cemented with 290 sacks of Lightweight Cement 10% salt 2% Gel Plug down 8:00 P.M. by Dowell.

7/23/84
DATE

Homer H. Dougherty
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

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OCT 2 - 1984

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION

DEPT. OF MINES
(KIND)

Permit No. 105-1102

Company Sterling Drilling + Prod.
 Address Charleston, W. VA.
 Farm Parkersburg National Bank
 Well No. 840
 District Burning Springs County Skirt
 Drilling commenced _____
 Drilling completed _____ Total depth _____
 Date shot _____ Depth of shot _____
 Initial open flow _____ /10ths Water in _____ Inch
 Open flow after tubing _____ /10ths Merc. in _____ Inch
 Volume _____ Cu. Ft.
 Rock pressure _____ lbs. _____ hrs.
 Oil _____ bbls., 1st 24 hrs.
 Fresh water _____ feet _____ feet
 Salt water _____ feet _____ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			Kind of Packer _____
16			Size of _____
13			Depth set _____
10			Perf. top _____
8 1/4			Perf. bottom _____
6 5/8			Perf. top _____
5 3/16			Perf. bottom _____
3			
2			
Liners Used			

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 Status Report

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

9-24-84
DATE

Homer H. Dougherty
010510024
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
OIL & GAS DIVISION
DEPT. OF MINES

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-12



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 Sterling Drilling + Prod.
Charleston, WVA 25301
710 Virginia St., East

PERMIT NO 47-105-1102
Parkersburg National Bank.
FARM & WELL NO 840
DIST. & COUNTY B. Springs

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 checked="" 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. H. ...
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 - 1102

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

3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.) 5109 feet

4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)
Name Sterling Drilling and Production Co. Inc.
Street 710 Virginia St. East, Arcade Building
City Charleston, 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.)
Field Name Burning Springs District
Wirt
County _____ 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.)
Parkersburg Nat'l Bank #840

(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 _____ Seller Code _____
(b) Date of the contract:
Mo. Day Yr. _____

(c) Estimated total annual production from the well: 4 Million Cubic Feet

RECEIVED
NOV 28 1984
OIL & GAS DIV.
DEPT. OF MINES
8084
Seller Code

	(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 8 8 4</u>	-----	-----	-----
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.) S/MMBTU	<u>5 8 8 4</u>	-----	-----	-----

9.0 Person responsible for this application:

Agency Use Only Date Received by Juris. Agency NOV 28 1984 Date Received by FERC	Name <u>Harry L. Berger, Jr.</u> Signature <u>Harry L. Berger, Jr.</u> Nov. 19, 1984 Date Application is Completed	Designated Agent Title _____ 304-342-0121 Phone Number
--	---	---

01/05/2024

DEC 14 1984

DEPARTMENT OF MINES, OIL AND GAS DIVISION

COVER SHEET, STATE APPLICATION FOR WELL CLASSIFICATION

47-105-1102

Date: Nov. 19, 1984

AGENCY USE ONLY

Dev

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

WELL DETERMINATION FILE NUMBER

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

841128 - 107 - 105 - 1102

Use Above File Number on all
Communications Relating to This Well

Gas Purchaser Contract No. _____

Date of Contract _____
(Month, day and year)

SDP#840

First Purchaser: UNDEDICATED

Designated Agent: Harry L. Berger, Jr.

Address: _____
(Street or P.O. Box)

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

(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
(Print) (Title)

Signature: *Harry L. Berger, Jr.*
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
- 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

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

AGENCY USE ONLY

QUALIFIED 01/05/2024

RECEIVED

NOV 26 1984

OIL & GAS DIV.
DEPT. OF MINES

Date Received

Determination Date

DEPARTMENT OF MINES OIL AND GAS DIVISION

Operator's
Well No. Pkbg Nat'l Bank

API Well No.

47 - 105 - 1102
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 666.05

WELL OPERATOR Sterling Drilling & Production Co Watershed Straight Fork & Little Kanawha River

ADDRESS 710 Virginia Street, East
Charleston, WV 25301

Dist. Brn Spr. County Wirt Quad Annamorh 7 1/2'

Gas Purchase
Contract No. _____

GAS PURCHASER UNDEDICATED

Meter Chart Code _____

ADDRESS _____

Date of Contract _____

* * * * *

Date surface drilling began: July 16, 1984

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

Bottom Hole Pressure. PSIA -- Pf = Pwe XLGS

$$t = 60 + (0.0075 \times 5109) + 459.67 = 558 \cdot X = \frac{1}{53.34} \times 558 = 10.000336$$

$$Pf = 1000 \times 2.7183 \cdot 10.000336 \times 4112 \times 1.690 \times 1.08 = 1108 \text{ PSIA}$$

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.

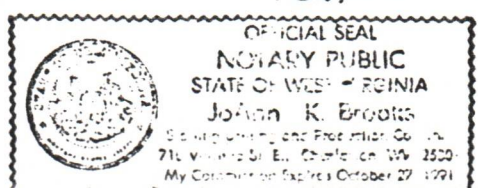
STATE OF WEST VIRGINIA

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 19th day of November, 1984 01/05/2024 acknowledged the same before me, in my county aforesaid.

Given under my hand and official seal this 19th day of November, 1984.
My term of office expires on the 27th day of October, 1991.

(NOTARIAL SEAL)



JoAnn K Brooks
Notary Public

DEVONIAN SHALE GAMMA RAY LOG ANALYSIS
APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL
PRICE UNDER THE NATURAL GAS POLICY ACT

Operator: _____ Agent: _____

Type Determination being sought - 107 (Devonian Shale)

API Well No.: 47-165-1160 Well Name: Parkersburg Nat'l B.R.K #

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 = 170 * API Units
 2. Remarks:

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

1. GR Value = 119 * API Units
 2. Calculation: $\frac{0.7 \text{ (GR Value at Base Line)}}{0.7 \text{ (170 *)}} = \underline{119}$ 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>2098'</u>	<u>5096</u>	<u>2998'</u>	<u>97'</u>

Total Devonian Interval 2998'

Total Less Than 0.7 (Shale Base) 97'

% Less Than 0.7 (Shale Base Line) = $\frac{0.0323}{1} \times 100 = \underline{3.2\%}$ 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.

IV-35
(Rev 8-81)



State of West Virginia
Department of Mines
Oil and Gas Division

Date 10/24/84
Operator's
Well No. 840
Farm Parkersburg Nat'l Bank
API No. 47 - 105 - 1102

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: 666.05 Watershed Straight Fork and Little Kanawha River
District: Burning Springs County Wirt Quadrangle 7.5' Annamoriah

COMPANY Sterling Drilling & Production Co., Inc.

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

DESIGNATED AGENT Harry L. Berger

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

SURFACE OWNER Westvaco Corp.

ADDRESS #2 Furguson Dr., Parkersburg, WV 26101

MINERAL RIGHTS OWNER Parkersburg Nat'l Bank

ADDRESS Parkersburg, WV 26101

OIL AND GAS INSPECTOR FOR THIS WORK Deo Mace

ADDRESS Rt. 1, Box 5, Sandridge, WV 25274

PERMIT ISSUED October 20, 1984

DRILLING COMMENCED July 16, 1984

DRILLING COMPLETED July 22, 1984

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	312'	312'	140 sks.
8 5/8			
7	1862'	1862'	160 sks.
5 1/2			
4 1/2		5075'	290 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5000' feet

Depth of completed well 5109' KB feet Rotary x / Cable Tools

Water strata depth: Fresh 80 feet; Salt 605 feet

Coal seam depths: none Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3173 - 5050 feet

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

Final open flow 140 Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests 66.5 hours

Static rock pressure 1000 psig (surface measurement) after 72 hours shut in

(If applicable due to multiple completion--)

Second producing formation Pay zone depth feet

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

Final open flow Mcf/d Oil: Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure psig (surface measurement) after hours shut in

01/05/2024

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

Perforations

1st Stage: 26 holes from 4527' to 5050'
 2nd Stage: 27 holes from 3831' to 4412'
 3rd Stage: 24 holes from 3173' to 3703'

Treatment

1st Stage: 1000 gals. of 15% HCL; 1,584 MSCF of N₂
 2nd Stage: 1000 gals. of 15% HCL; 1,584 MSCF of N₂
 3rd Stage: 1000 gals. of 15% HCL; 1,584 MSCF of N₂

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	1345	All measurements 10' KB
Salt Sand			1345	1380	Fresh water @ 80'
Shale			1380	1443	Salt water @ 605'
Maxon			1443	1556	
Shale			1556	1566	
Big Lime			1566	1687	
Big Injun			1687	1726	
Siltstone and Shale			1726	2080	
Sunbury Shale			2080	2095	
Berea			2095	2098	
Siltstone and Shale			2098	2548	
Shale			2548	4532	Top of Java formation 4296'
Siltstone			4532	4550	Gas shows 3173' - 3703'
Shale			4550	5109	3831' - 4412'
TD			5109		4527' - 5050'

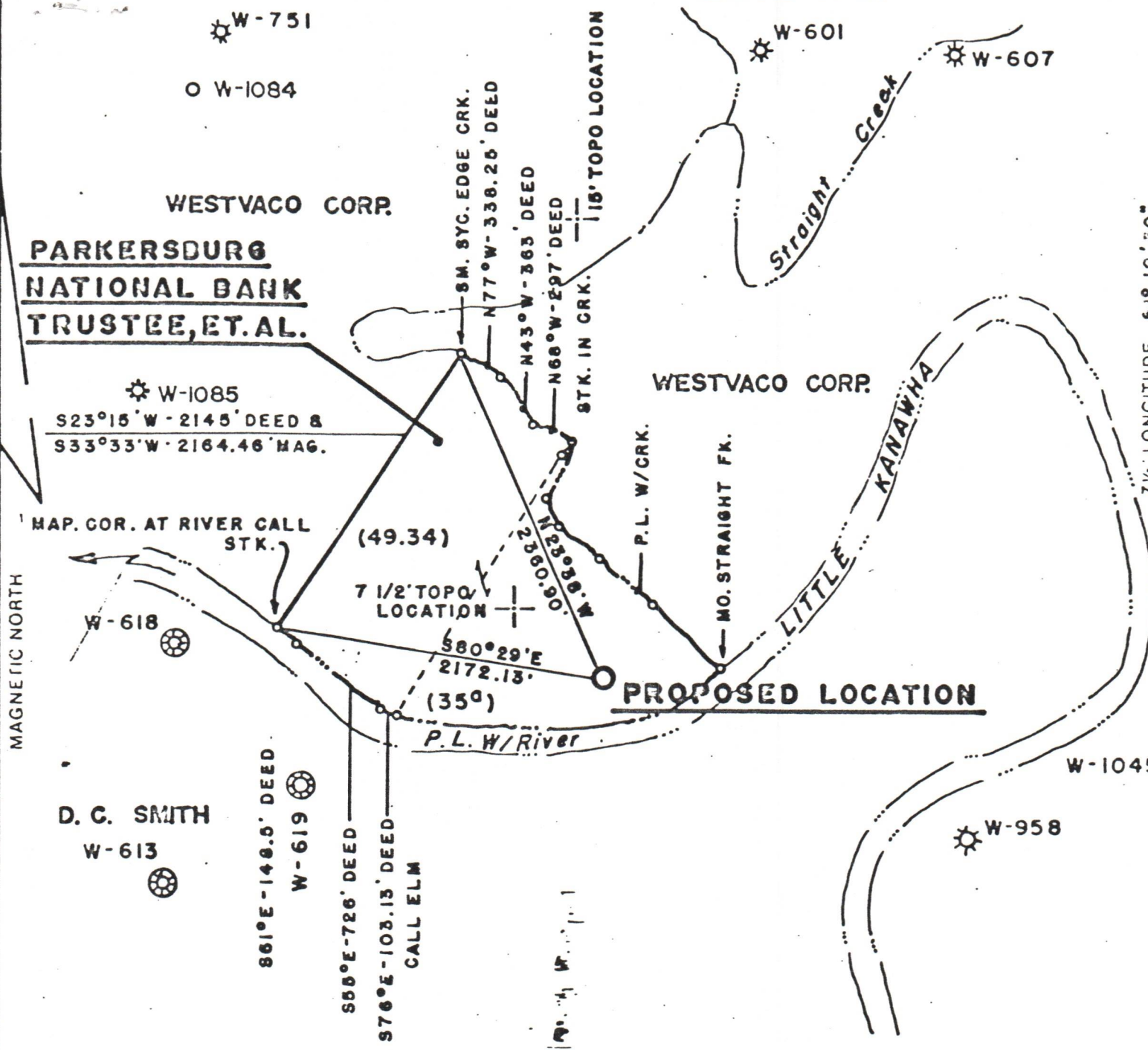
(Attach separate sheets as necessary)

3206
 Sterling Drilling and Production Co., Inc. 01/05/2024
 Well Operator
 By: Harry J. Bergin
 Date: 11-20-84

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."

02-10-7-23

15 LATITUDE 39°00'
7 1/2 LATITUDE 39°00'

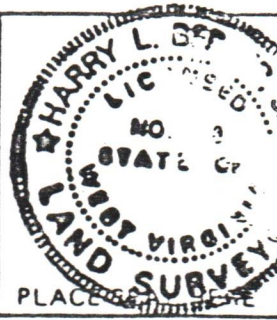


N.B. H-24, PG. 28

FILE NO 042-026 NO. 3
 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
 (8781)



DATE AUG. 19 19 83
 OPERATOR'S WELL NO. 840
 API WELL NO 47-105-2007
 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 666.05' 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 III-026

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

01/05/2024

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.



1) Date: Sept. 1, 1983
 2) Operator's Well No. 840
 3) API Well No. 47 State 105 County 2002 Permit

A-5

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

- 4) WELL TYPE: A Oil / Gas /
 B (If "Gas", Production / Underground storage / Deep / Shallow /)
- 5) LOCATION: Elevation: 666.05' Watershed: Striaight Fork & Little Kanawha River
 District: Burning Springs County: Wirt Quadrangle: 7.5' Annamoriah
- 6) WELL OPERATOR Sterling Drilling & Prod. Co., Inc. 7) 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
XXXXXXXXXXXXXX Sandridge, W.V.
- 9) DRILLING CONTRACTOR: Name UNKNOWN AT THIS TIME
 Address _____
- 10) PROPOSED WELL WORK: Drill / 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: OWN Is coal being mined in the area? Yes / No /
- 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		
Conductor									Kinds
Fresh water	<u>9 5/8</u>	<u>LS</u>	<u>33#</u>	<input checked="" type="checkbox"/>		<u>300'</u>	<u>300'</u>	<u>To Surface</u>	Sizes
Coal									Depths set
Intermediate	<u>8 7/8"</u>	<u>J-55</u>	<u>20#</u>	<input checked="" type="checkbox"/>		<u>1820'</u>	<u>1820'</u>	<u>100 sks</u>	Perforations:
Production	<u>4 1/2"</u>	<u>ERW</u>	<u>10.5#</u>	<input checked="" type="checkbox"/>			<u>5000'</u>	<u>250 sks</u>	Top Bottom
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. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____, 19 _____

By _____

Its _____

01/05/2024
 Coal Owner



1) Date: September 1, 1983
2) Operator's Well No. 840
3) API Well No. 47 105 2002 1102
State County Permit

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 _____
B (If "Gas", Production X _____ / Underground storage _____ / Deep _____ / Shallow X _____)
- 5) LOCATION: Elevation: 666.05' Watershed: Straight Fork & Little Kanawha River
District: Burning Springs County: Wirt Quadrangle: 7.5' Annamoriah
- 6) WELL OPERATOR Sterling Drilling & Prod. Co., Inc 11) DESIGNATED AGENT Harry L. Berger, Jr.
Address 360 Madison Ave. Fifth Floor Address 710 Virginia St., E.
New York, New York 10017 Charleston, WV 25301
- 7) OIL & GAS ROYALTY OWNER Parkersburg National Bank 12) COAL OPERATOR UNOPERATED
Address Parkersburg, W.V. 26101 Address _____
- 8) SURFACE OWNER Westvaco Corporation 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
Address #2 Ferguson Dr. Name UNKNOWN
Parkersburg, W.V. 26101 Address _____
Acreage 138.04 Name _____
Address _____
- 9) FIELD SALE (IF MADE) TO:
Address _____
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Deo Mace 14) COAL LESSEE WITH DECLARATION ON RECORD:
Address Rt. 1 Box 5 Name _____
Sandridge, W.V. 25274 Address _____
- 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, BROWN SHALE
- 17) Estimated depth of completed well, 5000' feet
- 18) Approximate water strata depths: Fresh, _____ feet; salt, _____ feet.
- 19) Approximate coal seam depths: 0 Is coal being mined in the area? Yes _____ / No X _____

RECEIVED
SEP 28 1983

OIL & GAS DIVISION
DEPT. OF MINES

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									
Fresh water	9 5/8	LS	33#	X		300'	300'	To Surface	Kinds
Coal									Sizes
Intermediate	7"	J-55	20#	X		1820'	1820'	100 sks	
Production	4 1/2	ERW	10.5#	X			5000'	250 sks	Depths set
Tubing									Perforations:
Liners									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: 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.

Bond:	Agent:	Plat:	Casing	Fee
-------	--------	-------	--------	-----

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 erator has complied with all applicable requirements of the West Virginia Code and the governing regulations.