



1) Date: November 3, 19 83
 2) Operator's Well No. 851
 3) API Well No. 47 - 013 - 3666
 State County Permit

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: 1070.31' Watershed: Beech Fork
 District: Washington County: Calhoun Quadrangle: 7.5' Tariff
- 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.G. 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 / 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, 5450 feet
- 13) Approximate trata depths: Fresh, _____ feet; salt, _____ feet.
- 14) Approximate coal seam depths: 0 Is coal being mined in the area? Yes _____ / No /
- 15) CASING AND TUBING PROGRAM

RECEIVED
 NOV 4 - 1983
 OIL & GAS DIVISION
 DEPT. OF MINE
 No. X

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 <u>by rule 15.05</u>
Coal									Sizes
Intermediate	7"	J-55	20#	X		2230'	2230'	100 sks	OR AS REQ BY Depths set <u>RULE 15.01</u>
Production	4 1/2	ERW	10.5#	X			5450'	250 sks	
Tubing									Perforations:
Liners									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-013-3666 Date November 21, 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 November 21, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: BLANKET BOND	Agent: <u>[Signature]</u>	Plat: <u>MH</u>	Casing: <u>MH</u>	Fee: <u>5825</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

1) WELL OPERATOR: STEERING DRILLING & PROD. CO., INC. DESIGNATED AGENT HARRY L. BERGER, JR.
 2) LOCATION: W. 11th St., Beckers Fork, Cabell Co., KY 40301
 3) PROPOSED WELL WORK: Drill 1 1/2" hole to 300' depth
 4) CASING AND TUBING PROGRAM: 300' 1 1/2" casing
 5) APPROXIMATE COST: \$10,000
 6) APPROXIMATE START DATE: 11/17/83
 7) APPROXIMATE COMPLETION DATE: 11/17/83
 8) IS OIL & GAS INSPECTOR TO BE NOTIFIED? Yes
 9) NAME OF INSPECTOR: W. G. SASSI
 10) ADDRESS OF INSPECTOR: 1000 W. 11th St., Beckers Fork, KY 40301
 11) GEOLOGICAL TARGET FORMATION: 2300' SHALE
 12) ESTIMATED DEPTH OF COMPLETED WELL: 300'
 13) APPROXIMATE TEST DEPTH: 300'
 14) APPROXIMATE COAL SEAM DEPTH: 300'
 15) IS OIL BEING MINED IN THE AREA? Yes

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	"

Application received

Follow-up inspection(s)

Well work started

Completion of the drilling process

Well Record received

Reclamation completed

OTHER INSPECTIONS

Reason:

Reason:

Agent	Part	Casing	Fee
W. G. SASSI	1 1/2"	300'	\$10,000

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

1) Date: November 3, 1983
2) Operator's Well No. 851
3) API Well No. 47-013-3666
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 Sam O. Thompson
Address Milo Rt. Box 17
Linden, W.V. 25256
(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.

6) EXTRACTION RIGHTS

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

7) ROYALTY PROVISIONS

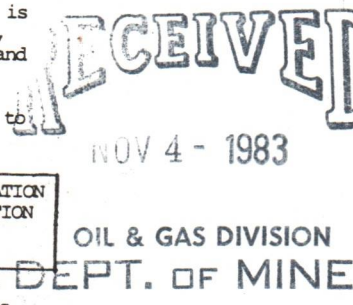
Is the right to extract, produce or market the oil or gas based upon a lease or leases or other contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted,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

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

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

The truth of the information on the Notice and Application is verified and sworn to and the Notice is signed on behalf of the Well Operator in my County and State by Harry L. Berger, Jr. this 3 day of November, 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
Its Designated Agent
Address 710 Virginia St., E,
Charleston, W.V. 25301
Telephone 342 - 0121



I N S T R U C T I O N S T O A P P L I C A N T

CONCERNING THE LINE ITEMS:

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

CONCERNING THE REQUIRED COPIES FOR FILING AND SERVICE:

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

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

INFORMATION SUPPLIED UNDER CODE § 22-4-11(d)

IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

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

- (1) the tract of land is the same tract described in the Application to which this Notice applies, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

<u>Grantor, lessor, etc.</u>	<u>Grantee, lessee, etc.</u>	<u>Royalty</u>	<u>Book Page</u>
Ottice Brannon Arnoldsburg Rd. Spencer, W.V. 25276	Sterling Drilling and Prod. Co., Inc.	1/8	080/246

851, 852, 853
P 522 051 894

NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to SAM O. THOMPSON	
Street and No. MILO RT. BOX 17	
P.O., State and ZIP Code LINDEN, W.V. 25276	
Postage	\$71
Certified Fee	75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	60
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	206
Postmark or Date	

PS Form 3800, Feb. 1982

CHARLESTON W.V.
NOV 4 1983
25301

RECEIVED
NOV 4 - 1983

OIL & GAS DIVISION
DEPT. OF MINES

05/17/2024



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

FINAL INSPECTION REPORT
INSPECTORS COMPLIANCE REPORT
May 22, 1984

COMPANY Sterling Drilling & Production PERMIT NO 013-3666 (11-21-83)
710 Virginia Street, East FARM & WELL NO Ottice Brannon #851
Charleston, West Virginia 25301 DIST. & COUNTY Washington/Calhoun

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

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

SIGNED Geo Mace

DATE 6-27-85

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

July 3, 1985
DATE

05/17/2024

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

RECEIVED
MAY 17 1984
OIL & GAS DIVISION
DEPT. OF MINES

1.0 API well number: (If not assigned, leave blank. 14 digits.) 47 - 013 - 3666 -

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

3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.) 5440 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.
Street 710 Virginia St. East, Arcade Building
City Charleston, WV 25301 State Zip Code

5.0 Location of this well: [Complete (a) or (b).]
(a) For onshore wells (35 letters maximum for field name.)
Field Name Washington District
County Calhoun 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.)
Brannon #851

(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.)
Name UNDEDICATED
(b) Date of the contract: Mo. Day Yr.
Buyer Code

(c) Estimated total annual production from the well: 7 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>5.778</u>	<u> </u>	<u> </u>	<u> </u>
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.) S/MMBTU	<u>5.778</u>	<u> </u>	<u> </u>	<u> </u>

9.0 Person responsible for this application:
Agency Use Only
Date Received by Juris. Agency MAY 17 1984
Date Received by FERC
Name Harry L. Berger, Jr. Designated Agent
Signature Harry L. Berger, Jr. Title
Date Application is Completed May 14, 1984
Phone Number 304-342-0121

05/17/2024

PARTICIPANTS:

DATE: JUN 14 1984

BUYER-SELLER

WELL OPERATOR:

Sterling Drilling & Production Co.

FIRST PURCHASER:

Uncommitted

OTHER:

W. Va. Department of Mines, Oil & Gas Division
WELL DETERMINATION FILE NUMBER

840.517 .107.013 = 3666

Use Above File Number on all Communications
Relating to Determination of this Well

APPROVED

JUN -7 1984

CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSING

ITEM NO.

- 1. FERC -121 _____ Items not completed - Line No. _____
- 2. IV-1 Agent _____
- 3. IV-2 Well Permit _____
- 4. IV-6 Well Plat _____
- 5. IV-35 Well Record _____ Drilling _____ Deepening _____
- 6. IV-36 Gas-Oil Test: Gas Only _____ Was Oil Produced? _____ Ratio _____
- 7. IV-39 Annual Production _____ years
- 8. IV-40 90 day Production _____ Days off line: _____
- 9. IV-48 Application for certification. Complete? _____
- 10-17. IV Form 51 - 52 - 53 - 54 - 55 - 56 - 57 - 58 Complete? _____ Affidavit Signed _____
- 18-28. Other: Survey _____ Logs _____ Geological Charts _____
Structure Map _____ 1: 4000 Map _____ Well Tabulations _____
Gas Analyses _____
- (5) Date commenced: _____ Date completed _____ Deepened _____
- (5) Production Depth: _____
- (5) Production Formation: _____
- (5) Final Open Flow: _____
- (5) After Frac. R. P. _____
- (6) Other Gas Test: _____
- (7) Avg. Daily Gas from Annual Production: _____
- (8) Avg. Daily Gas from 90-day ending w/1-120 days _____
- (8) Line Pressure: _____ PSIG from Daily _____
- (9) Oil Production: _____ From Completion Report _____
- 10-17. Does lease inventory indicate enhanced recovery being done _____
- 10-17. Is affidavit signed? _____ Notarized? _____
- Does official well record with the Department confirm the submitted information? _____
- Additional information _____ Does computer program confirm? _____
- Was Determination Objected to _____ By Whom? _____

05/17/2024

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 1070.31

WELL OPERATOR Sterling Drilling and Production Watershed Beech Fork
Co., Inc.
ADDRESS 710 Virginia St., East Washington County Calhoun Quad. Tariff 7
Charleston, WV 25301

GAS PURCHASER UNDEDICATED

ADDRESS _____

Gas Purchase Contract No. _____

Meter Chart Code _____

Date of Contract _____

* * * * *

Date surface drilling began: March 8, 1984

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

Bottom Hole Pressure. PSIA -- Pf = Pwe XLGS

$t = 60 + (0.0075 \times 5440) + 459.67 = 560$. $x = \frac{1}{53.34} \times 560 = .0000335$

$Pf = 850 \times 2.7183 \times .0000335 \times 4296 \times .690 \times 1.09 = 947$ 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)(1) 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 14 day of May, 1984, has acknowledged the same before me, in my county aforesaid.

05/17/2024

Given under my hand and official seal this 14th day of May, 1984.
My term of office expires on the 27 day of October, 1991.

(NOTARIAL SEAL)

JoAnn K. Brooks
Notary Public

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

Date May 14, 19 84

Operator's Well No. Brannon #851

API Well No. 47 - 013 - 3666
State County Permit

STATE APPLICATION FOR WELL CLASSIFICATION

Previous File No. _____
(If Applicable)

WELL OPERATOR Sterling Drilling and Production Co., Inc. DESIGNATED AGENT Harry L. Berger, Jr.
ADDRESS 710 Virginia St., East ADDRESS Sterling Drilling & Production Co., Inc.
Charleston, WV 25301 Arcade Building, Charleston, WV. 25301

Gas Purchase Contract No. _____ and Date _____
Meter Chart Code _____ (Month, day and year)

Name of First Purchaser UNDEDICATED

(Street or P. O. Box)
(City) (State) (Zip Code)

FERC Seller Code 018084 FERC Buyer Code _____

TYPE OF DETERMINATION BEING SOUGHT:

- (1) Initial determination (See FERC Form 121.) 107 Section of NGPA 107 Category Code _____
- (2) Determination that increased production is the result of enhanced recovery technology.
- (3) Determination of a seasonally affected well.

Harry L. Berger, Jr. Agent
Name (Print) Title
Harry L. Berger, Jr. Signature

Sterling Drilling & Production Co., Inc.
Street or P. O. Box
Arcade Bldg., Charleston, WV 25301
City State (Zip Code)
(304) 342-0121
Area Code Phone Number

(Certificate of Proof of Service to Purchaser)

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

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

The Department of Mines has received a request, for certification of the above described well as meeting the requirements of Section _____ under the Natural Gas Policy Act of 1974. (NGPA); or for determination that increased production is the result of enhanced recovery technology under Section 108 of (NGPA); or for determination of a seasonally affected well under Section 108 of (NGPA).

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

This Application is assigned File No. _____

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

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

WEST VIRGINIA DEPARTMENT OF MINES

MAY 17 1984

05/17/2024

Date received by
Jurisdictional Agency

By [Signature]
Title _____

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.: 47-013-3666 Well Name: Brannon # 851

West Virginia Office of Oil and Gas County: Calhoun
 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 = 175 * API Units
2. Remarks: *scale = 0-200 API Units*

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

1. GR Value = 122.5 * API Units
2. Calculation: $\frac{0.7 \text{ (GR Value at Base Line)}}{0.7 \text{ (175 *)}} = \underline{122.5}$ 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***		
2507	5444	2937	118'

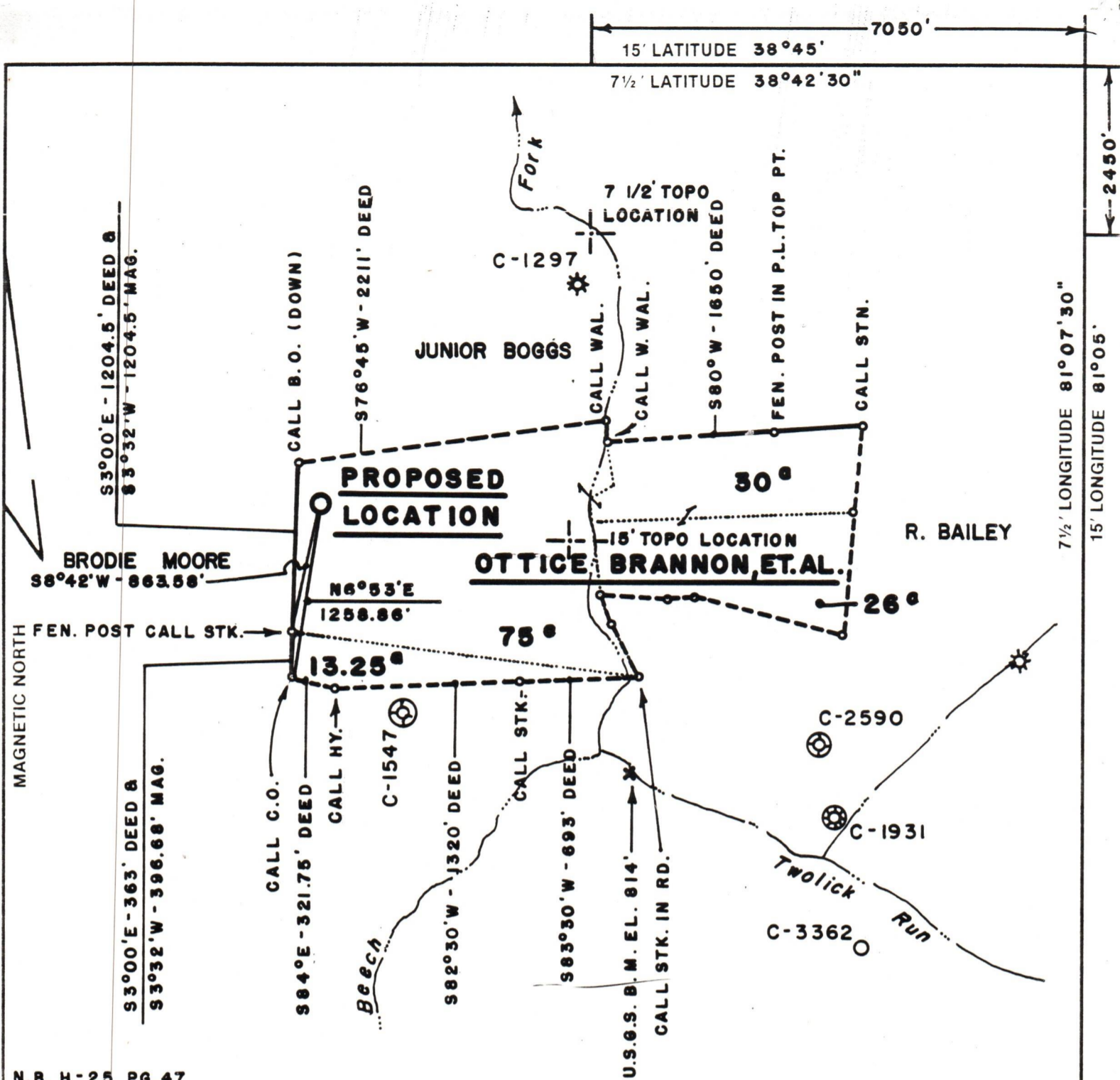
Total Devonian Interval 2937

Total Less Than 0.7 (Shale Base)

% Less Than 0.7 (Shale Base Line) = $\frac{0.0401}{1} \times 100 = \underline{4.0\%}$

118'
05/17/2024

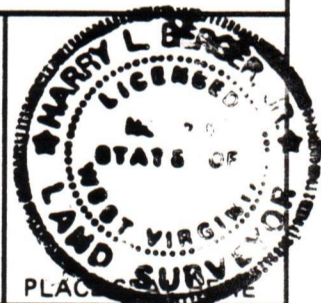
*Marked on log included with analysis.
 **Top of Devonian Section Recorded on First Interval in this Column.
 ***Lesser of TD or Bottom of Devonian Section Recorded as last Interval in this Column.



N.B. H-25 PG. 47

FILE NO. 045-032 NO. 1
 MAP NO. 74-A
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION U.S.G.S. DATA B.M. SHOWN EL. 814'

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 (8-78)



DATE OCT. 3, 19 83
 OPERATOR'S WELL NO. 851
 API WELL NO. 47-013-3666
 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 1070.31 WATER SHED BEECH FORK
 DISTRICT WASHINGTON COUNTY CALHOUN
 QUADRANGLE 7 1/2' TARIFF (OTTER N.W.)
 SURFACE OWNER SAM O. THOMPSON ACREAGE 134 TOTAL
 OIL & GAS ROYALTY OWNER OTTICE BRANNON, ET. AL. LEASE ACREAGE 134
 LEASE NO. 045-032

05/17/2024

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


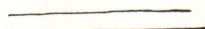
PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION BROWN SHALE ESTIMATED DEPTH 5450'
 OPERATOR STERLING DRILLING & PRODUCTION CO. INC. AGENT HARRY L. BERGER
 ADDRESS 360 MADISON AVE. - 5TH FLOOR ADDRESS 710 VIRGINIA ST., E.
NEW YORK, N.Y. 10017 CHARLESTON, WV 25301

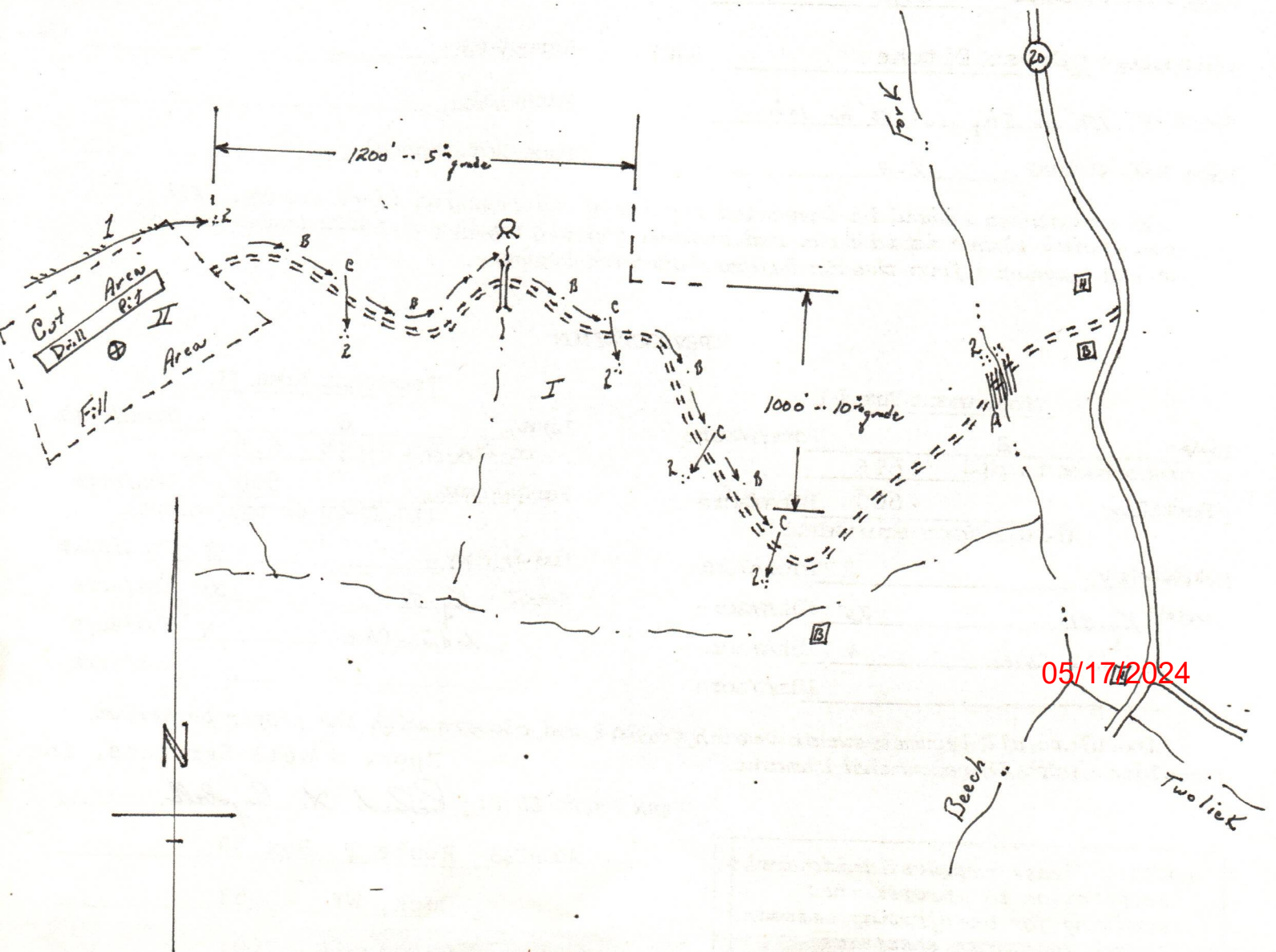
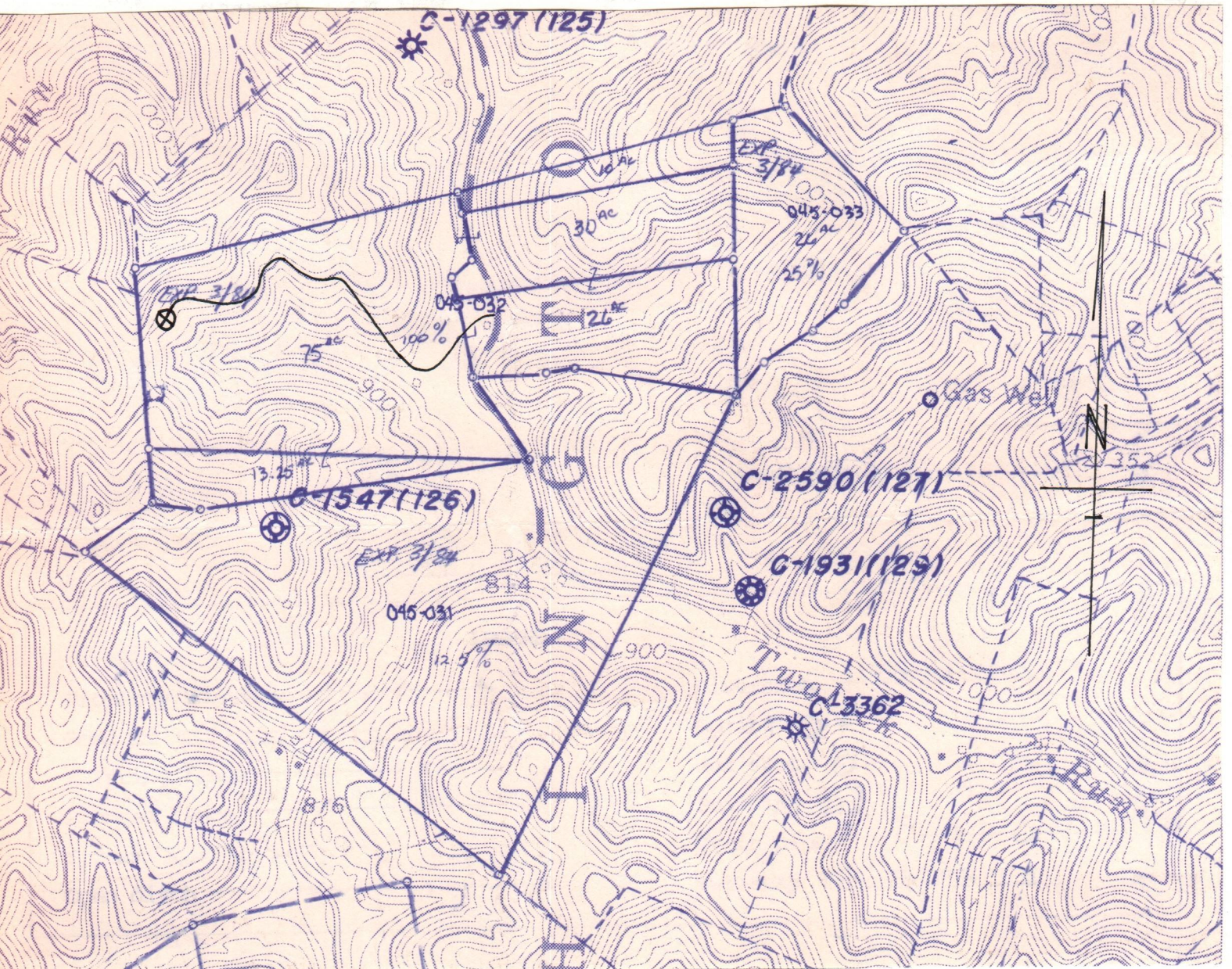
Attach separate sheets as necessary for comments.

PHONE NO. (304) 364-5780

IV-9 REVERSE
(REV 8-81)

INVOLVED TOPOGRAPHIC MAP
QUADRANGLE 7 1/2' Tariff
Otter NW

Well Site 
Access Road 



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

RECEIVED
MAR 20 1984

OIL & GAS DIVISION

INSPECTOR'S WELL REPORT DEPT. OF MINES

Permit No. 13-3666

Oil or Gas Well _____
(KIND)

Company Sterling

CASING AND TUBING

USED IN DRILLING

LEFT IN WELL

PACKERS

Address _____

Size

Farm BRANNON/TOMPSON

16

Kind of Packer _____

Well No. 851

13

District Wash County Cal

10

Size of DOWELL

Drilling commenced 3-8-84

~~8 3/4~~ 8 5/8 301 301

Cemented 3-9-84

Drilling completed _____ Total depth _____

6 5/8

Depth set _____

Date shot _____ Depth of shot _____

~~5 3/16~~ 7" 2297 200 SK CEMENT 3-11-84

Perf. top _____

Initial open flow _____ /10ths Water in _____ Inch

3

Perf. bottom _____

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

2

Perf. top _____

Volume _____ Cu. Ft.

Liners Used

Perf. bottom _____

Rock pressure _____ lbs. _____ hrs.

CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____

Oil _____ bbla., 1st 24 hrs.

NAME OF SERVICE COMPANY _____

Fresh water _____ feet _____ feet

COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

Salt water _____ feet _____ feet

_____ FEET _____ INCHES FEET _____ INCHES

_____ FEET _____ INCHES FEET _____ INCHES

Drillers' Names Hurt 8

Remarks:

Drilling cement out of casing.

3-12-84

DATE

Des Moore 05/17/2024

REPORTING TIME

IV-35
(Rev 8-81)



RECEIVED
MAY 17 1984

OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

Date May 14, 1984
Operator's
Well No. 851
Farm Brannon
API No. 47 - 013 - 3666

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

LOCATION: Elevation: 1070.31 Watershed Beech Fork
District: Washington County Calhoun Quadrangle Tariff 7 1/2'

COMPANY Sterling Drilling & Production Co., Inc.

ADDRESS 710 Virginia St., E, Charleston, WV

DESIGNATED AGENT Harry L. Berger, Jr. ²⁵³⁰¹

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

SURFACE OWNER Sam O. Thompson

ADDRESS Milo Rt, Box 17, Linden, WV 25276

MINERAL RIGHTS OWNER Ottice Brannon, etal

ADDRESS Arnoldsburg Rd., Spencer, WV 25276

OIL AND GAS INSPECTOR FOR THIS WORK Deo

Mace ADDRESS Rt. 1, Box 5, Sundridge,

PERMIT ISSUED November 21, 1983 ^{WV 25274}

DRILLING COMMENCED March 8, 1984

DRILLING COMPLETED March 14, 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	301'	301'	110 sks
8 5/8			
7	2297'	2297'	200 sks
5 1/2			
4 1/2		5424	320 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Brown Shale Depth 5450 feet

Depth of completed well 5440 feet Rotary S / Cable Tools

Water strata depth: Fresh 240 feet; Salt 1050 feet

Coal seam depths: NONE Is coal being mined in the area? NO

OPEN FLOW DATA

Producing formation Devonian Brown Shale Pay zone depth 3298'-5294' feet

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

Final open flow 246 Mcf/d Final open flow Show Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 850 psig (surface measurement) after 405/17/2024 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

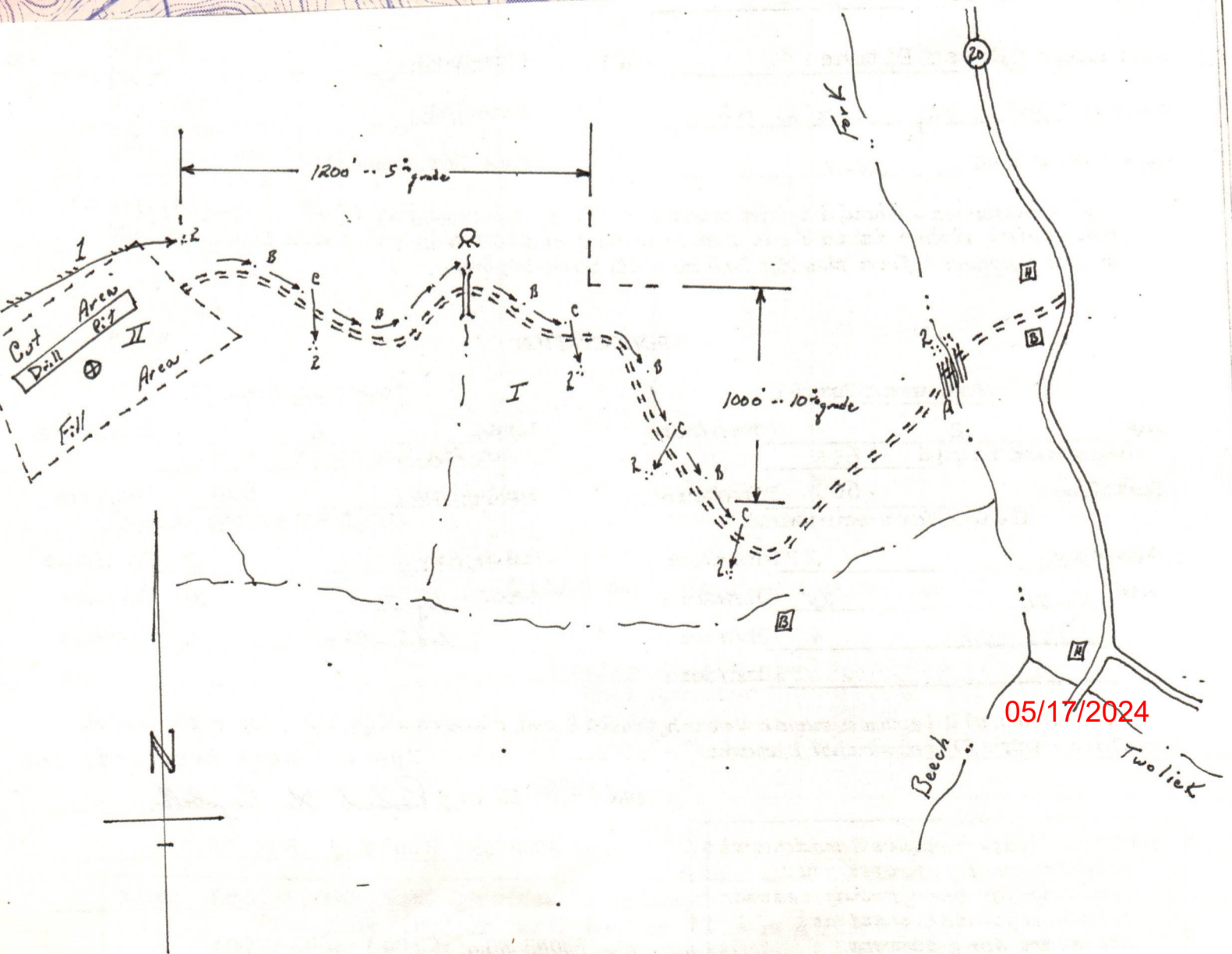
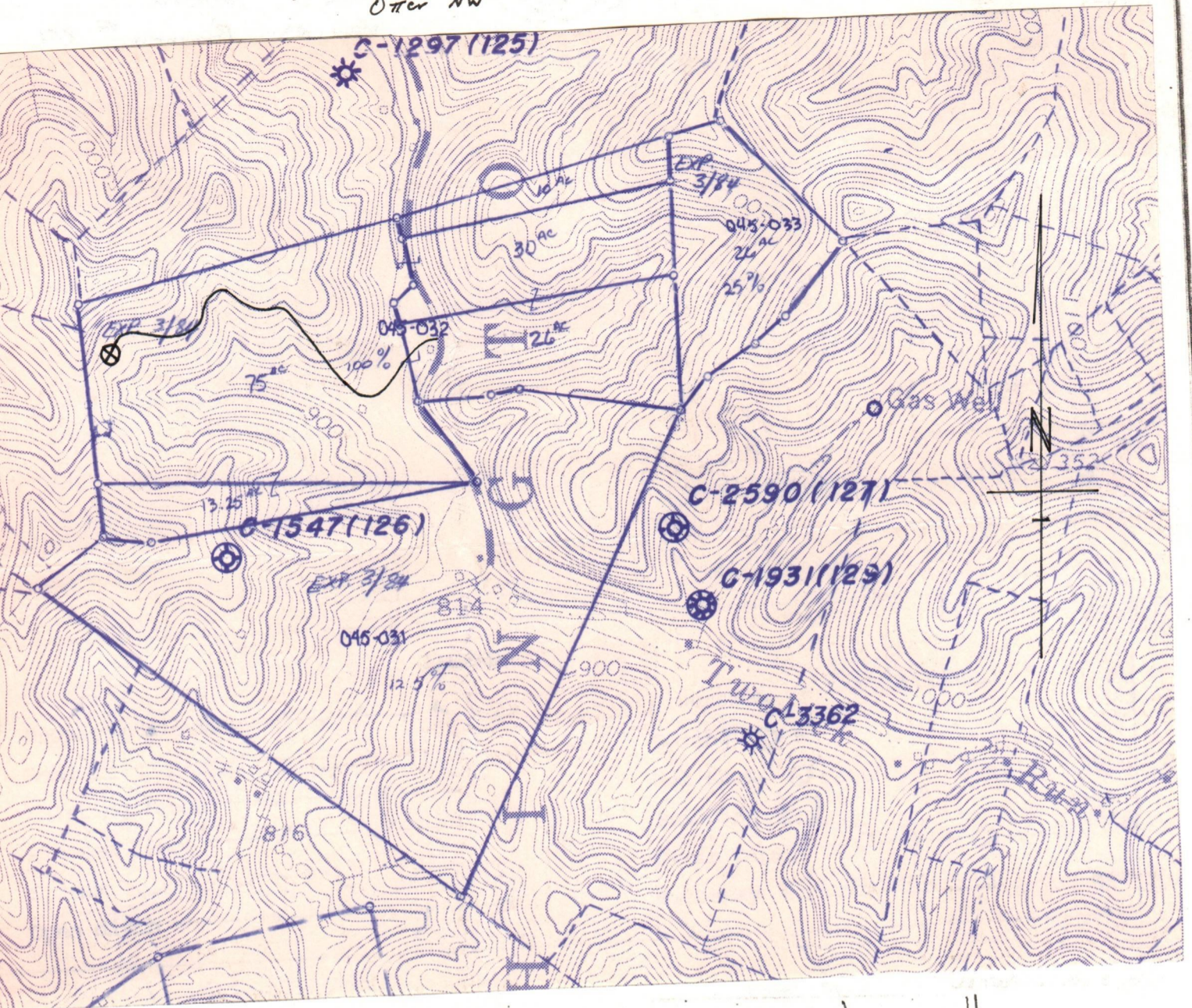
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Static rock pressure psig (surface measurement) after hours shut in

9 REVERSE
EV 8-81)

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QUADRANGLE 7 1/2' Tariff
Otter NW

Well Site
Access Road



IV-
(Rev

IV-35
(Rev 8-81)



RECEIVED
MAY 17 1984
OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date May 14, 1984
Operator's
Well No. 851
Farm Brannon
API No. 47 - 013 - 3666

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: 1070.31 Watershed Beech Fork
District: Washington County Calhoun Quadrangle Tariff 7 1/2'

COMPANY Sterling Drilling & Production Co., Inc.

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DESIGNATED AGENT Harry L. Berger, Jr. 25301

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Final open flow 246 Mcf/d Final open flow Show Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 850 psig (surface measurement) after 48 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

Attach separate sheets if necessary for comments.

PHONE NO.

05/17/2024

