west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

March 15, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-5100470, issued to CONSOLIDATION COAL COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalities being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: 4698
Farm Name: CROW, JOHN
API Well Number: 47-5100470
Permit Type: Plugging
Date Issued: 03/15/2016

Promoting a healthy environment.

5100470P

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

5100470P

FORM WW-4(B)
Rev. 2/01

1.) Date: February 16, 2016
2.) Operator's Well No. SGW-119
3.) API Well No. 47 - 51 - 00470
State County Permit

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL & GAS
APPLICATION FOR A PERMIT TO PLUG & ABANDON

4.) WELL TYPE: Oil ____ / Gas X / Liquid injection ____ / Waste disposal ____ /
(IF "Gas", Production ____ / Underground storage X / Deep ____ / Shallow X

5.) LOCATION: Elevation: 1149.89' Watershed: Dunkard Fork

District: Webster County: Marshall Quadrangle: Majorsville 7.5'

6.) WELL OPERATOR Consolidation Coal Company
Address 1 Bridge Street
Monongah, WV 26554

7.) DESIGNATED AGENT Ronnie Harsh
Address 1 Bridge Street
Monongah, WV 26554

8.) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Eric Blend
Address PO BOX 2115
Wheeling, WV 26003

9.) PLUGGING CONTRACTOR
Name ____
Address ____
____

10.) WORK ORDER: The work order for the manner of plugging this well is as follows:

SEE MSHA 101C

SEE EXHIBIT NO. 1

- CLEAN HOLE TO TD OF 1794'
- SET CLASS A CEMENT PLUG FROM TD (1794') TO 200' BELOW THE PITTSBURGH COAL ≈ (797').
- FOLLOW MSHA 101 C EXEMPTION FROM 797 TO SURFACE.

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

JWM 3/15/16

Work order approved by inspector ____ Date ____

RECEIVED
Office of Oil and Gas
FEB 18 2016
WV Department of
Environmental Protection

5100470P

RECEIVED
OCT 22 1990
W. J. SCHELLER

U. S. Department of Labor
Mine Safety and Health Administration
4015 Wilson Boulevard
Arlington, Virginia 22203-1984

MSHA 101c

OCT 17 1990

In the matter of
Consolidation Coal Company
Shoemaker Mine
I.D. No. 46-01436
Ireland Mine
I.D. No. 46-01438

Petition for Modification

Docket No. M-90-066-C

PROPOSED DECISION AND ORDER

On April 24, 1990, a petition was filed seeking a modification of the application of 30 CFR 75.1700 to Petitioner's Shoemaker Mine and Ireland Mine, both located in Marshall County, West Virginia. The Petitioner alleges that the alternative method outlined in the petition will at all times guarantee no less than the same measure of protection afforded by the standard.

MSHA personnel conducted an investigation of the petition and filed a report of their findings and recommendations with the Administrator for Coal Mine Safety and Health. After a careful review of the entire record, including the petition, comments, and MSHA's investigative report and recommendation, this Proposed Decision and Order is issued.

Finding of Fact and Conclusion of Law

The alternative method proposed by the Petitioner (as amended by the recommendations of MSHA investigators) will at all times guarantee no less than the same measure of protection afforded the miners under 30 CFR 75.1700.

On the basis of the petition and the findings of MSHA's investigation, Consolidation Coal Company is granted a modification of the application of 30 CFR 75.1700 to its Shoemaker Mine and Ireland Mine.

ORDER

Wherefore, pursuant to the authority delegated by the Secretary of Labor to the Administrator for Coal Mine Safety and Health, and pursuant to Section 101(c) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C., sec. 811(c), it is ordered that Consolidation Coal Company's Petition for Modification of the application of 30 CFR 75.1700 in the Shoemaker Mine and Ireland Mine is hereby:

RECEIVED
Office of Oil and Gas
FEB 17 2016
WV Department of
Environmental Protection

GRANTED, conditioned upon compliance with all provisions of the Petitioner's alternative method and the following terms and conditions:

I. Procedures to be utilized when plugging gas or oil wells.

(a) Cleaning out and preparing oil and gas wells. Prior to plugging an oil or gas well, the following procedure shall be followed:

(1) A diligent effort shall be made to clean the borehole to the original total depth. If this depth cannot be reached, the borehole shall be cleaned out to a depth which would permit the placement of at least 200 feet of expanding cement below the base of the lowest mineable coalbed.

(2) When cleaning the borehole, a diligent effort shall be made to remove all the casing in the borehole. If it is not possible to remove all casing, the casing which remains shall be perforated, or ripped, at intervals spaced close enough to permit expanding cement slurry to infiltrate the annulus between the casing and the borehole wall for a distance of at least 200 feet below the base of the lowest mineable coalbed.

(3) If the cleaned-out borehole produces gas, a mechanical bridge plug shall be placed in the borehole in a competent stratum at least 200 feet below the base of the lowest mineable coalbed, but above the top of the uppermost hydrocarbon-producing stratum. If it is not possible to set a mechanical bridge plug, a substantial brush plug may be used in place of the mechanical bridge plug.

(4) A suite of logs shall be made consisting of a caliper survey directional deviation survey, and log(s) suitable for determining the top and bottom of the lowest mineable coalbed and potential hydrocarbon producing strata and the location for the bridge plug.

(5) If the uppermost hydrocarbon-producing stratum is within 200 feet of the base of the lowest mineable coalbed, properly placed mechanical bridge plugs or a suitable brush

plug described in subparagraph (a)(3) shall be used to isolate the hydrocarbon producing stratum from the expanding cement plug. Nevertheless, a minimum of 200 feet of expanding cement shall be placed below the lowest mineable coalbed.

(6) The wellbore shall be completely filled and circulated with a gel that inhibits any flow of gas, supports the walls of the borehole, and densifies the expanding cement. This gel shall be pumped through open-end tubing run to a point approximately 20 feet above the bottom of the cleaned out area of the borehole or bridge plug.

(b) Plugging oil or gas wells to the surface. The following procedures shall be utilized when plugging gas or oil wells to the surface:

(1) A cement plug shall be set in the wellbore by pumping an expanding cement slurry down the tubing to displace the gel and fill the borehole to the surface. (As an alternative, the cement slurry may be pumped down the tubing so that the borehole is filled with Portland cement or a Portland cement-fly ash mixture from a point approximately 100 feet above the top of the lowest mineable coalbed to the surface with an expanding cement plug extending from at least 200 feet below the lowest mineable coalbed to the bottom of the Portland cement.) There shall be at least 200 feet of expanding cement below the base of the lowest mineable coalbed.

(2) A small quantity of steel turnings, or other small magnetic particles, shall be embedded in the top of the cement near the surface to serve as a permanent magnetic monument of the borehole.

(c) Plugging oil or gas wells using the vent pipe method. The following procedures shall be utilized when using the vent pipe method for plugging oil and gas wells:

(1) A 4 1/2-inch or larger vent pipe shall be run into the wellbore to a depth of 100 feet below the lowest mineable coalbed and swedged to a smaller diameter pipe, if desired, which will extend to a point approximately 20 feet

above the bottom of the cleaned out area of the borehole or bridge plug.

(2) A cement plug shall be set in the wellbore by pumping an expanding cement slurry, Portland cement, or a Portland cement-fly ash mixture down the tubing to displace the gel so that the borehole is filled with cement. The borehole and the vent pipe shall be filled with expanding cement for a minimum of 200 feet below the base of the lowest mineable coalbed. The top of the expanding cement shall extend upward to a point approximately 100 feet above the top of the lowest mineable coalbed.

(3) All fluid shall be evacuated from the vent pipe to facilitate testing for gases. During the evacuation of fluid, the expanding cement shall not be disturbed.

(4) The top of the vent pipe shall be protected to prevent liquids or solids from entering the wellbore, but permit ready access to the full internal diameter of the vent pipe when necessary.

(d) Plugging oil and gas wells for use as degasification boreholes. The following procedures shall be utilized when plugging oil or gas wells for subsequent use as degasification boreholes:

(1) A cement plug shall be set in the wellbore by pumping an expanding cement slurry down the tubing to displace the gel and provide at least 200 feet of expanding cement below the lowest mineable coalbed. The top of the expanding cement shall extend upward to a point above the top of the coalbed being mined. This distance shall be based on the average height of the roof strata breakage for the mine.

(2) To facilitate methane drainage, degasification casing of suitable diameter, slotted or perforated throughout its lower 150 to 200 feet, shall be set in the borehole to a point 10 to 30 feet above the top of the expanding cement.

(3) The annulus between the degasification casing and the borehole wall shall be cemented from

a point immediately above the slots or perforations to the surface.

(4) The degasification casing shall be cleaned out for its total length.

(5) The top of the degasification casing shall be fitted with a wellhead equipped as required by the District Manager. Such equipment may include check valves, shutin valves, sampling ports, flame arrestor equipment, and security fencing.

II. The following procedures shall apply to mining through a plugged oil or gas well:

(a) The operator shall notify the District Manager or designee:

(1) Prior to mining within 300 feet of the well; and

(2) When a specific plan is developed for mining through each well.

(b) The MSHA District Manager or designee shall conduct a conference prior to mining through any plugged well to review and approve the specific procedures for mining through the well. Representatives of the operator, the representative of the miners, and the appropriate State agency shall be informed, within a reasonable time prior to the conference, and be given an opportunity to attend and participate. This meeting may be called by the operator.

(c) Mining through a plugged well shall be done on a shift approved by the District Manager or designee.

(d) The District Manager or designee, representative of the miners, and the appropriate State agency shall be notified by the operator in sufficient time prior to the mining through operation in order to have an opportunity to have representatives present.

(e) When using continuous or conventional mining methods, drivage sights shall be installed at the last open crosscut near the place to be mined to ensure intersection of the well, and again if

necessary to ensure that the sight line is not more than 50 feet from the well.

(f) Firefighting equipment, including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the mining through shall be available when either the conventional or continuous mining method is used. The fire hose shall be located in the last open crosscut of the entry or room. When the longwall mining method is implemented, the fire hose shall be extended to the face area of the mine through. All fire hoses shall be ready for operation during the mining through.

(g) Sufficient supplies of roof support and ventilation materials shall be available and located at the last open crosscut. In addition, an emergency plug and/or plugs, shall be available within the immediate area of the mine through.

(h) The quantity of air required by the approved ventilation system and methane and dust control plan, but not less than 9,000 cubic feet of air per minute shall be used to ventilate the working face during the mining through operation. On longwall sections, a minimum of 20,000 cfm shall be used to ventilate the working face during the mining through operation.

(i) Equipment shall be checked for permissibility and serviced on the shift prior to mining through the well.

(j) The methane monitor on the longwall, continuous mining machine, or cutting machine and loading machine shall be calibrated on the shift prior to mining through the well.

(k) When mining is in progress, tests for methane shall be made with a hand-held methane detector at least every 10 minutes from the time that mining with the continuous mining machine, cutting machine, or loading machine is within 30 feet of the well until the well is intersected and immediately prior to mining through. When mining with longwall mining equipment, the tests for methane shall be made at least every 10 minutes when the longwall face is within 10 feet of the well. During the actual cutting through process, no individual shall be allowed on the return side

until mining through has been completed and the area has been examined and declared safe.

(l) When using continuous or conventional mining methods, the working place shall be free from accumulations of coal dust and coal spillages, and rock dust shall be placed on the roof, rib, and floor to within 20 feet of the face when mining through the well. On longwall sections, rock dusting shall be conducted and placed on the roof, rib, and floor up to both the headgate and tailgate gob.

(m) When the wellbore is intersected, all equipment shall be deenergized and the place thoroughly examined and determined safe before mining is resumed. Any well casing shall be removed and no open flame shall be permitted in the area until adequate ventilation has been established around the wellbore.

(n) After a well has been intersected and the working place determined safe, mining shall continue inby the well a sufficient distance to permit adequate ventilation around the area of the wellbore.

(o) No person shall be permitted in the area of the mining through operation except those actually engaged in the operation, company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.

(p) The mining through operation shall be under the direct supervision of a certified official. Instructions concerning the mining through operation shall be issued only by the certified official in charge.

(q) MSHA personnel may interrupt or halt the mining through operation when it is necessary for the safety of the miners.

(r) A copy of the petition shall be maintained at the mine and be available to the miners.

(s) The Petitioner shall file a plugging affidavit setting forth the persons who participated in the work, a description of the plugging work, and a certification by the Petitioner that the well has been plugged as described.

(t) Within 60 days after this Proposed Decision and Order becomes final, the Petitioner shall submit proposed revisions for their approved 30 CFR Part 48 training plan to the Coal Mine Safety and Health District Manager. These proposed revisions shall include initial and refresher training regarding compliance with the alternative method stated in the petition and the special terms and conditions stated in the Proposed Decision and Order.

The terms and conditions of this Proposed Decision and Order shall supersede conflicting provisions in the Petitioner's proposed alternative method.

Any party to this action desiring a hearing on this matter must file in accordance with 30 CFR 44.14, within 30 days, a request with the Administrator for Coal Mine Safety and Health, 4015 Wilson Boulevard, Arlington, Virginia 22203.

If a hearing is requested, the request shall contain a concise summary of position on the issues of fact or law desired to be raised by the party requesting the hearing, including specific objections to the proposed decision. A party other than Petitioner who has requested a hearing shall also comment upon all issues of fact or law presented in the petition, and any party to this action requesting a hearing may indicate a desired hearing site. If no request for a hearing is filed within 30 days after service thereof, the Decision and Order will become final and must be posted by the operator on the mine bulletin board at the mine.

Edward C. Hugler
Deputy Administrator
for Coal Mine Safety and Health

Certificate of Service

I hereby certify that a copy of this proposed decision was served personally or mailed, postage prepaid, this 17th day of October, 1990, to:

Walter J. Scheller III, Esq.
Consolidation Coal Company
Consol Plaza
Pittsburgh, Pennsylvania 15241

Robert Stropp, Esq.
United Mine Workers of America
900 Fifteenth Street, NW.
Washington, DC 20005

Ms. Linda Raisovich-Parsons
Special Assistant
United Mine Workers of America
900 Fifteenth Street, NW.

Mr. David Shreve
International Safety
Representative
District 6
United Mine Workers of America
56000 Dilles Bottom
Shadyside, Ohio 43947

Mary Ann Griffin

MARY ANN GRIFFIN
Mine Safety Clerk

5100470P

EXHIBIT NO. 1

From the experience and technology developed since 1970 in plugging oil and gas wells for mining through, Consolidation Coal's Northern West Virginia Operations will utilize one of the following two methods to plug all future wells.

4½ VENT PIPE METHOD

(a) If active well: clean out to total depth and plug back according to state regulations to a minimum of 200 feet below lowest minable coal seam.

(b) If abandoned well: clean out to first plug 200 feet below lowest minable seam.

(c) Run 4½ casing from surface to minimum 200 feet below lowest minable seam and circulate 50/50 poz mix cement followed by expanding cement to surface. The expanding cement shall extend from minimum 200 feet below minable coal seam to a point 100 feet above.

The 4½ will remain open from surface to a minimum of 80 feet below that minable coal seam.

SOLID PLUG METHOD

(a) If active well: clean out to total depth and plug back according to state regulations to a minimum of 200 feet below lowest minable coal seam.

(b) If an abandoned well: clean out to first plug 200 feet below lowest minable coal seam.

(c) Circulate through tubing or drill steel an expanding cement plug from a minimum of 200 feet below minable coal seam to a point 100 feet above minable coal.

Circulate through tubing or drill steel 50/50 poz mix from 100 feet above coal seam to surface.

A monument will be installed with API No. and stating "solid plug".

AG/ENGR/EXHIBIT1.REO

RECEIVED
Office of Oil and Gas
FEB 18 2016
WV Department of
Environmental Protection

Form P.D.-44a

COLUMBIA GAS SYSTEM – PITTSBURGH GROUP COMPANIES

5100470P

1 of 2 Sheets

WELL LOG SUMMARY

LOCATION

COMPANY	DIV.	FIELD	WELL NO.
The Manufacturers Light & Heat Company	5	Majorsville	L-1698

FARM	ACRES	LEASE NO.	DISTRICT - TOWN - TOWNSHIP	COUNTY	STATE
John & Emma Crow	330	L-2960	Webster	Marshall	W.Va.

TOPO. MAP: Cameron Quadrangle ____ Ft. ____ of ____ ° ____ / and ____ Ft. ____ of ____ ° ____ /

CONTRACTOR

TOP HOLE CONTRACTOR — CONTRACTOR: ____ ADDRESS: ____ Drilled from ____ Ft. to ____ Ft. Type of Rig ____

DRILLING CONTRACTOR — CONTRACTOR: Lohmann & Johnson ADDRESS: Pittsburgh, Pa. Drilled from 0 Ft. to 179½ Ft. Type of Rig Rotary

FIRST BIG COMMENCED (DATE)	DRILLING COMPLETED (DATE)	COMPLETED TOTAL DEPTH	DATE PURCHASED	FOR. WELL NO.
Drilling 7/22/62	Well 12/8/62	1794' G.L. ft.	—/—/—	—

HOLE SIZE	BIT GAUGE (INCHES)	17"	12½"	7 7/8"	4 3/4"		
	FROM–TO (FEET)	0-58'	58-651'	651-1717'	1717-1794'		
CASING AND TUBING (All Measurements less threads)	SIZE (O.D.)	13 3/8"	8 5/8"	5½"			
	WEIGHT/FOOT	48#	24#	17#			
	STEEL GRADE	H-40	J-55	J-55			
	COUPLING TYPE	Short	Short	Short			
	SETTING DEPTH	58'6"	650'8"	1706'11"			
	LEFT IN HOLE	58'6"	650'8"	1706'11"			
CEMENT	NO. OF SACKS	100	375	375			
	TYPE	IS	IS	IS			
	WEIGHT #/GAL.	14.5	14.5	14.5			
PACKER	MANUFACTURER						
	TYPE						
	SIZE						
	SETTING DEPTH						

WELL STIMULATION

TREATMENT	TYPE *	SIZE AND/OR AMOUNT	ZONE TREATED	OPEN FLOW MCF/DAY	PERFORMED BY	DATE
			From / to	Before / After		
			From / to	Before / After		
			From / to	Before / After		
			From / to	Before / After		

OPEN FLOW TEST

DATE GAUGED	FORMATION	PAY ZONE	TYPE GAUGE (SPECIFY)	PRESSURE (SPECIFY UNITS)	SIZE OPENING-IN.	OPEN FLOW M.C.F./DAY	OPEN FLOW HRS. FLOWN
12 5 62	Big Injun	From 1768 to 1776 From 1781 to 1785	Side Static	45 Psig	4"	36,665	10 min.
		From 1787 to 1792 From to					

WELLHEAD PRESSURE TESTS

DATE TAKEN	FORMATION	MINUTE PRESSURE – PSIG 1	3	5	10	20	30	WELLHEAD PRESSURE – PSIG 24 HR.	48 HR.	72 HR.	MAX.PRESS.	TIME
12 5 62	Big Injun	696	705	705	705	705	705	713	713	713	713	72 hr.
		¼	½									
		635	680									

MISC.

DEPTH MEASUREMENT TAKEN FROM: ☐ Derrick Floor ☒ Ground Other (Specify) 13' below K.B. DIST. TO GROUND ft. ELEVATION 1167.75 G.L.

LOGGED ☐ Yes ☒ No LOGGED BY (COMPANY) DATE LOGGED

REMARKS

* *Note: Form PD-17 "Well Fracture Report" to be completed and attached, if applicable*

Drilling Completed 7/28/62 Well Completed 12/8/62

Budget 2208

RECEIVED
Office of Oil and Gas

Attach additional sheets and forward to Production Dept. Pittsburgh General Office

Verified by David C. Lambert DIVISION ENGINEER

Approved by ____ DIVISION SUPERINTENDENT

FEB 18 2016

WV Department of Environmental Protection

5100470P

Form PD-44 b CSD

COLUMBIA GAS SYSTEM – PITTSBURGH GROUP COMPANIES

WELL LOG SUMMARY

2 of 2 Sheets

DIV.	FIELD	FARM	COUNTY	WELL NO.
5	Majorsville	John & Emma Crow	Marshall	L-4698

ORIGIN OF FORMATION DEPTHS [X] Driller's Log [ ] Service Company Log [ ] Combination

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS (Water, Gas, Oil encountered-Open Flows-Rock Pressure-etc.)
Depth Datum – Ground Level				
Pittsburgh Coal	592	597	5	
Big Dunkard	1122	1152	30	
Sand	1177	1192	15	
Sand	1217	1232	15	
Gas Sand	1287	1307	20	Show of gas – 1292'
1st. Salt Sand	1352	1382	30	Gas – 1362' Est. 200 MCF/day
Sand	1457	1472	25	
3rd. Salt Sand	1517	1647	130	Water – 1577'
Big Injun	1687			
Drilled 7 7/8" hole to				Pay Zones – Big Injun
1717' and Gemented 5½"				1768'-1776' Driller
Casing at 1707'				1781'-1785' Driller
Drilled 4 3/4" hole to				1787'-1792' Driller
1794'				
TOTAL DEPTH		1794		
Started to drill with gas at 1747' at 8:35 A.M. 7/28/62				

Pay Zone	Time		Stand Pipe Back Pressure	Flow Line Pressure	Capacity of Well Minus Drilling-in Gas
	8:35 A.M.	to 12:32 P.M.	155 psig	2" Hg	0
1768-1776	12:32 P.M.	to 1:03 P.M.	155-410 psig	5"Hg-14 psig	9,000 MCF/day
1781-1785	3:30 P.M.	to 4:11 P.M.	410-420 psig	14-21 psig	12,500 MCF/day
1787-1792	4:34 P.M.	to 4:53 P.M.	420-565 psig	21-28 psig	16,000 MCF/day
1794	at 5:19 P.M.		595 psig	22 psig	13,000 MCF/day

Killed Well at 5:30 P.M. 7/28/62

Changed to gas to drill at 1377'
and drilled to 1717'
Started 1:21 P.M. 7/26/62
Killed Well 9:45 P.M. 7/26/62

RECEIVED
Office of Oil and Gas
FEB 18 2016
WV Department of
Environmental Protection

Form PD-34 CSD

COLUMBIA GAS SYSTEM – PITTSBURGH GROUP COMPANIES

5100470P

(Rev. 11-61)

NOTICE OF WELL STATUS CHANGE

COMPANY	FIELD	DIV.	FOREIGN WELL NO. (IF ANY)	COMPANY WELL NO.
The Manufacturers Light & Heat Company	Majorsville	5	----	L-4698

FARM NAME	TOWNSHIP-TOWN-DISTRICT	COUNTY	STATE	LEASE-DEED NO.	ACRES	DATE COMP.
John & Emma Cror	Webster	Marshall	W.Va.	L-2900	330	12/28/62

LAST ACTIVE WELL ON FARM ☐ YES ☒ NO

(THIS BLOCK FOR GENERAL OFFICE USE ONLY) ☐ SURRENDER LEASE ☐ RENEW LEASE ☐ OTHER

STATUS PRIOR TO THIS REPORT

☒ DRILLING WELL — ☐ Production ☒ Storage

☐ ACTIVE WELL — ☐ Production ☐ Storage

☐ ABANDONED WELL

WELL STATUS CHANGE OR WORK PERFORMED

☒ COMPLETED — ☒ Gas ☐ Dry

☐ REDRILLED FOR STORAGE — ☐ Retained ☐ Abandoned

☐ RECONDITIONED — ☐ Retained ☐ Abandoned

☐ RECONDITIONED & TRANSF. TO STORAGE

☐ TRANSFERRED TO — ☐ Production ☐ Storage

☐ PURCHASED FOR — ☐ Production ☐ Storage

☐ DRILLED DEEPER

☐ PLUGGED AND ABANDONED

☐ SOLD

Remarks Drilling Completed 7/28/62

Well Completed 12/8/62

DRILLED TO 1794 feet into Big Injun sand

PLUGGED BACK ☒ NO ☐ YES

If Yes, to depth of ____ feet ____ sand

WELL TREATMENT ☒ No ☐ Yes If Yes, Type of Treatment ____

COMPLETION DATA (If applicable)

OPEN FLOW TEST — BEFORE TREATMENT (If applicable)

TYPE OF GAUGE ☐ Orifice Well Tester ☐ Pitot Tube ☐ Other (Specify) ____

GAUGE READING ____ inches ☐ Mercury ☐ Water or ____ psig through ____ inch opening after blowing ____ hours

FLOW ____ cubic feet per day

ROCK PRESSURE ____ psig in ____ hours

OPEN FLOW TEST — FINAL READING

TYPE OF GAUGE ☐ Orifice Well Tester ☐ Pitot Tube ☒ Other (Specify) Side Static

GAUGE READING ____ inches ☐ Mercury ☐ Water or 45 psig through 1/4 inch opening after blowing 10 min. hours

FLOW 36,665,000 cubic feet per day

ROCK PRESSURE 733 psig in 72 hours

AUTHORIZATION FOR WORK PERFORMED

☒ Well Order Number L-4698 Budget No. 2208

☐ Work Order Number ____

☐ Abandonment Order Number ____

WORK PERFORMED BY

MACHINE NUMBER OR CONTRACTORS NAME Lohmann & Johnson

Compiled By A. Schafer D. Gumbert Date 12/11/62

Approved By ____ DIVISION SUPERINTENDENT Date ____

For General Office Use

DEPARTMENT	SECTION	NOTED BY	DATE
PRODUCTION	Geology		
	Storage		
	Clerical		
	Map		
LAND OPERATING			
TREASURY	Land Accounting		
	Plant Accounting		
CIVIL ENGINEERING			

Return to Land Operating Department for filing

RECEIVED
Office of Oil and Gas
FEB 18 2015
WV Department of
Environmental Protection

5100420P

BIRDWELL

Gamma Ray
Differential Temperature

COMPANY COLUMBIA GAS TRANSMISSION CORPORATION

WELL JOHN & EMMA CROW #L-4698

FIELD MAJORSVILLE

COUNTY MARSHALL STATE W. VA.

LOCATION: SEC. N.A. TWP. WEBSTER RGE. N.A.

OTHER SERVICES

PERMANENT DATUM G.L., ELEV. 1147.75'
LOG MEASURED FROM G.L., N.A. Ft. Above Perm. Datum
DRILLING MEASURED FROM G.L.

ELEV. K.B. N.A.
D.F. N.A.
G.L. 1147.75

DATE	6-18-80
RUN NO.	ONE
TYPE LOG	GR/TLD
DEPTH – DRILLER	1794'
DEPTH – LOGGER	1773'
BTM. LOG. INTER.	1773'
TOP LOG. INTER.	50'
TYPE FLUID IN HOLE	GAS
SALINITY PPM CL.	N.A.
DENSITY LB./GAL.	N.A.
LEVEL	FULL
MAX.REC.TEMP. – °F	65.5°
OPER. RIG TIME	1.5 HOURS
RECORDED BY	R. TROUT
WITNESSED BY	MR. PARSON
LOCATION	OLNEY, IL

RUN NO.	BORE HOLE RECORD BIT	FROM	TO	CASING RECORD SIZE	WGT.	FROM	TO
N.A.				13 3/8"	48#	SURFACE	58'6"
				8 5/8"	24#	SURFACE	650'8"
				5 1/2"	17#	SURFACE	1706'11"

SSC 10629

EQUIPMENT DATA

	GAMMA RAY			TEMPERATURE		
RUN NO.				RUN. NO.		
TOOL MODEL NO.				TOOL MODEL NO.		
TOOL SERIAL NO.				TOOL SERIAL NO.		
TOOL DIAMETER				TOOL DIAMETER		
DETECT. MODEL NO.				PANEL MODEL NO.		
DETECT. TYPE				PANEL SERIAL NO.		
DETECT. LENGTH						

GENERAL INFORMATION

PURPOSE OF SURVEY: TO CHECK FOR GAS LEAKS

TRUCK NO. 3222
SERVICE ORDER/INV.NO.

LOGGING DATA

GAMMA RAY

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT./MIN.	T.C. SEC.	SENS. SETTINGS	ZERO DIV L. or R.	API G.R. UNITS PER LOG DIV.
ONE	50'	1773'	50'	1			

TEMPERATURE & DIFFERENTIAL TEMPERATURE

RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED FT./MIN.	TEMP.SCALE °F PER. LOG DIV.	DIFF. TEMP. SCALE °F PER. FT. DEPTH
ONE	50'	1773'	50'	10=2 DIV.	

WELL DATA

RUN NO.	ONE
TYPE WELL	GAS
PROD. OR INJ. RATE	
WELL HEAD PRESSURE	720#
TYPE & AMT. CEMENT	
LENGTH OF TIME	
PROD. OR INJ.	
SHUT IN	6-5-80
SINCE CEMENTING	

REFERENCE LITERATURE:

REMARKS:

1 MINUTE TIME MARKERS

GAMMA RAY
API UNITS
0 200

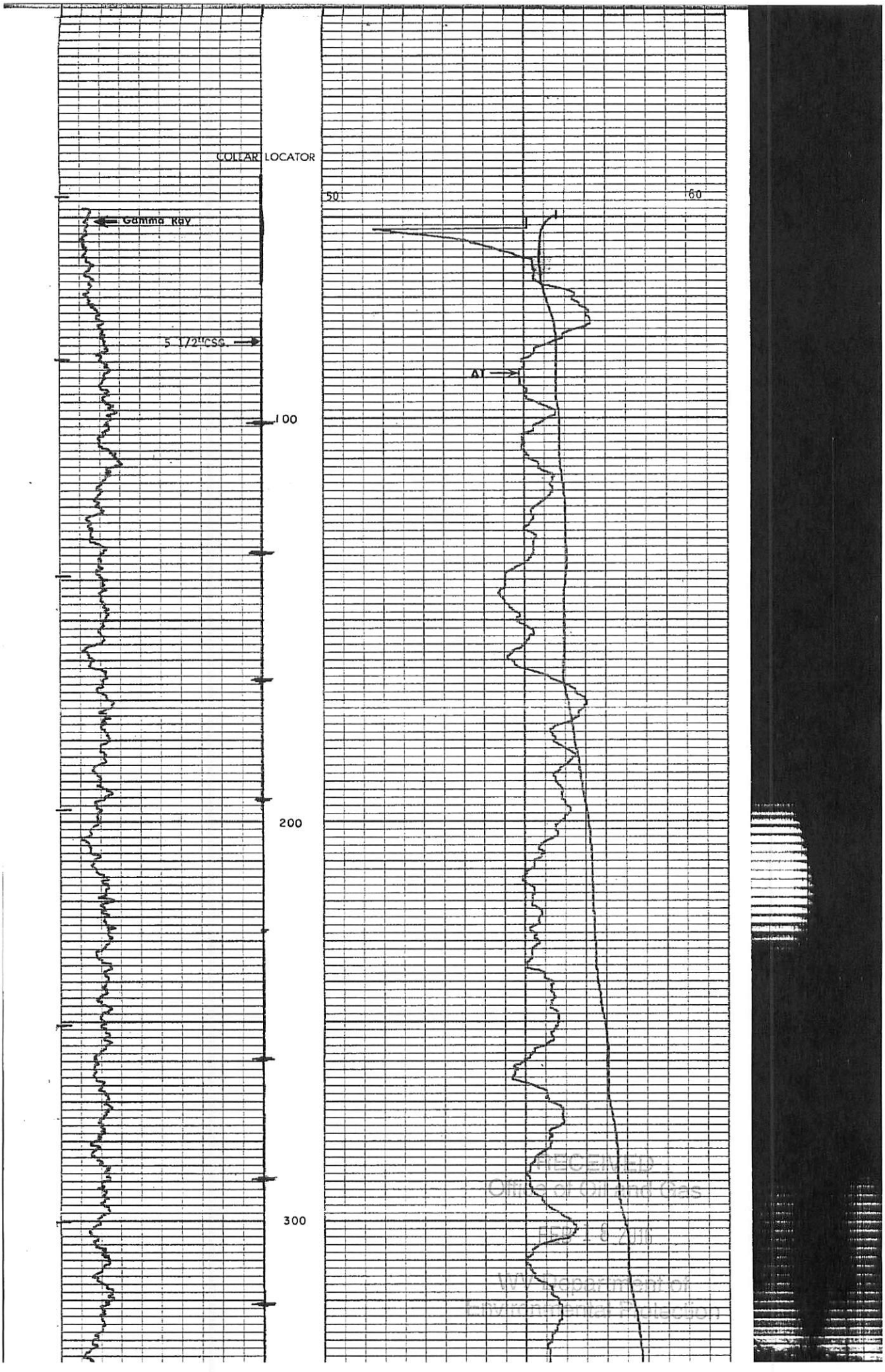
DEPTHS

TEMPERATURE
°F

TEMPERATURE DIFFERENTIAL
– °F PER FOOT +
0 .04 .04

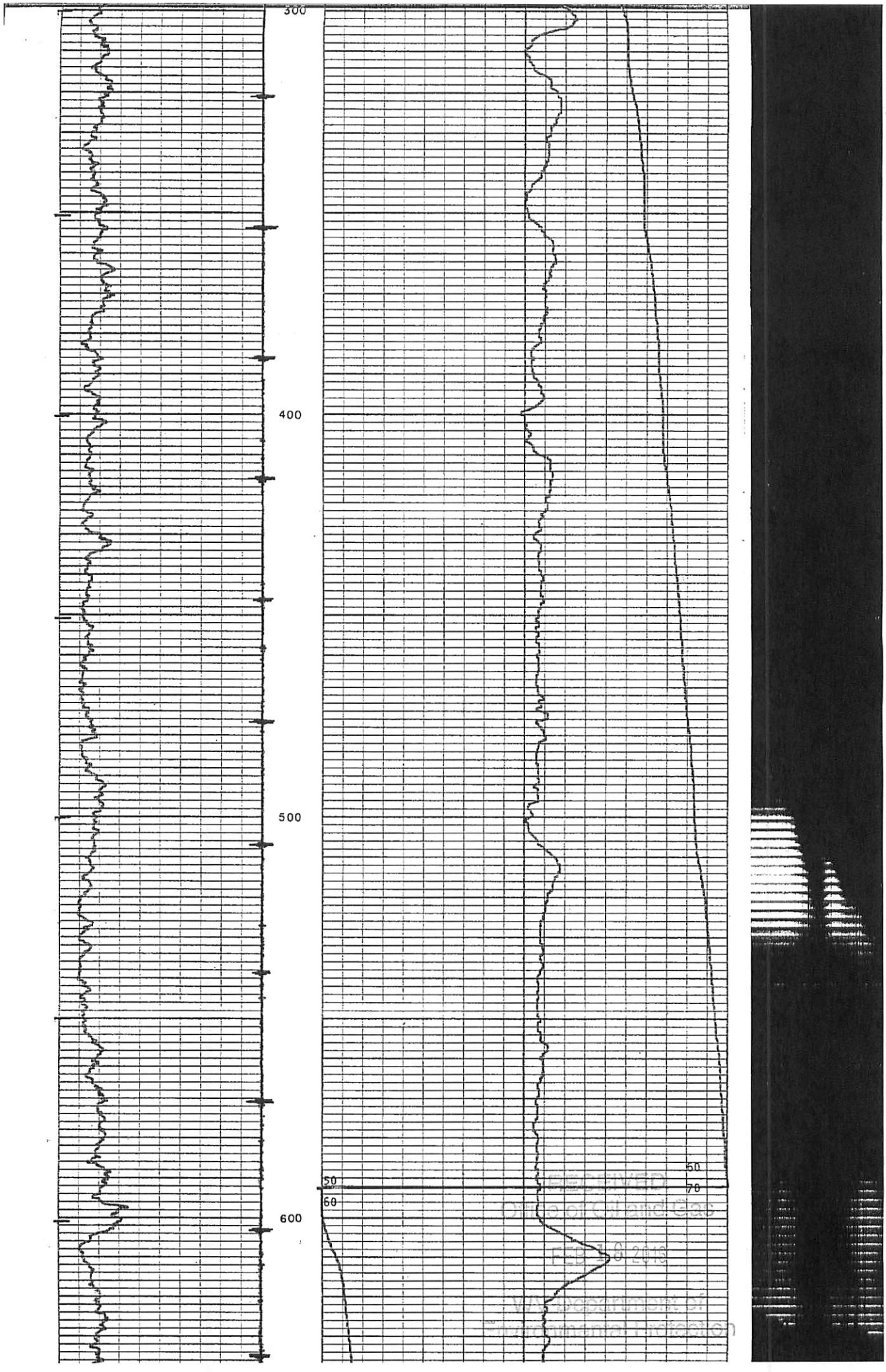
COLLAR LOCATOR

RECEIVED FEB
Office of Oil & Gas
WV Department of Environmental Protection



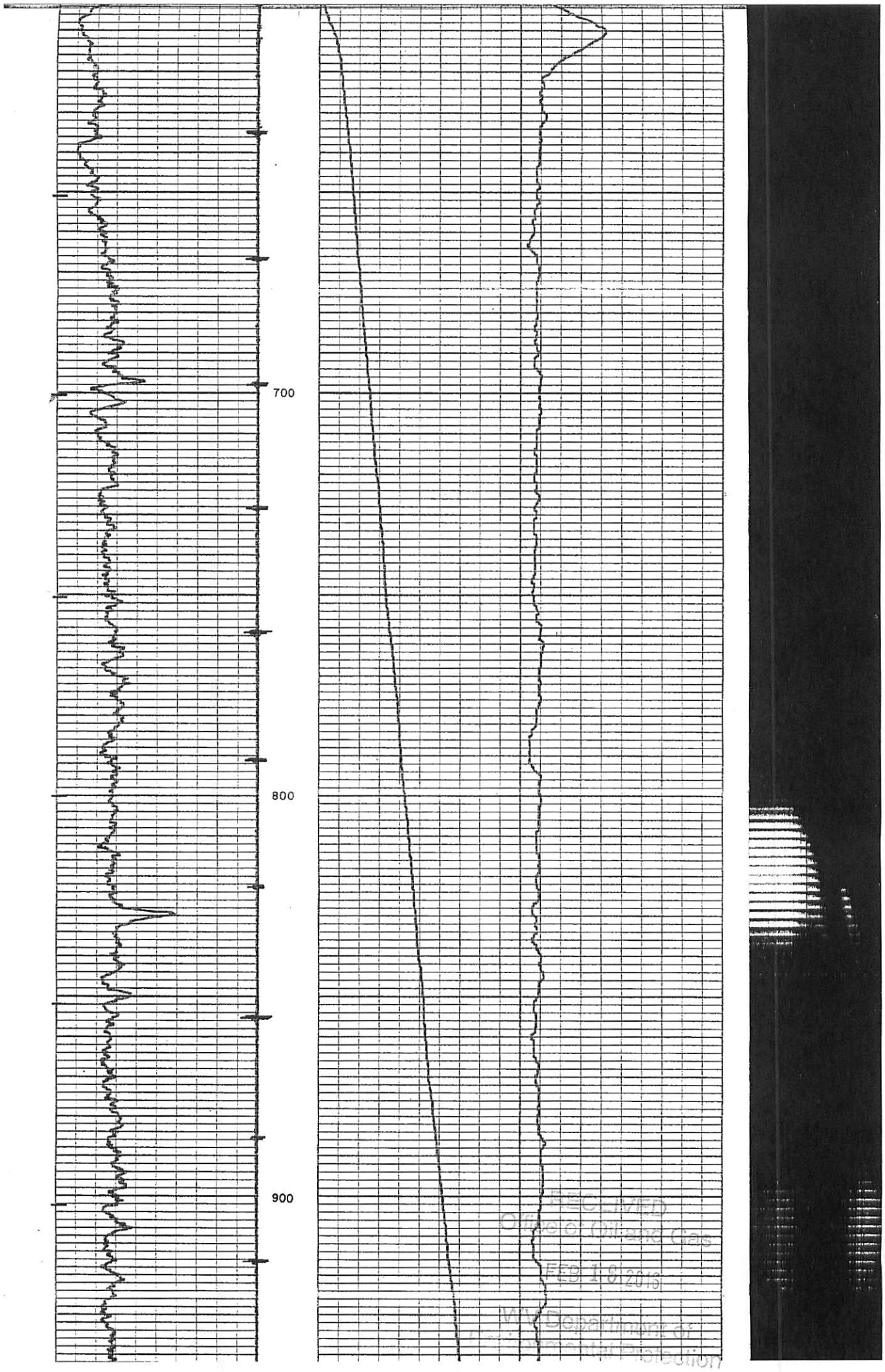
RECEIVED
Office of Oil and Gas
FEB 16 2018
WV Department of
Environmental Protection

9100470P



5100470P

RECEIVED
Dept of Oil and Gas
FEB 10 2015
WV Department of
Environmental Protection

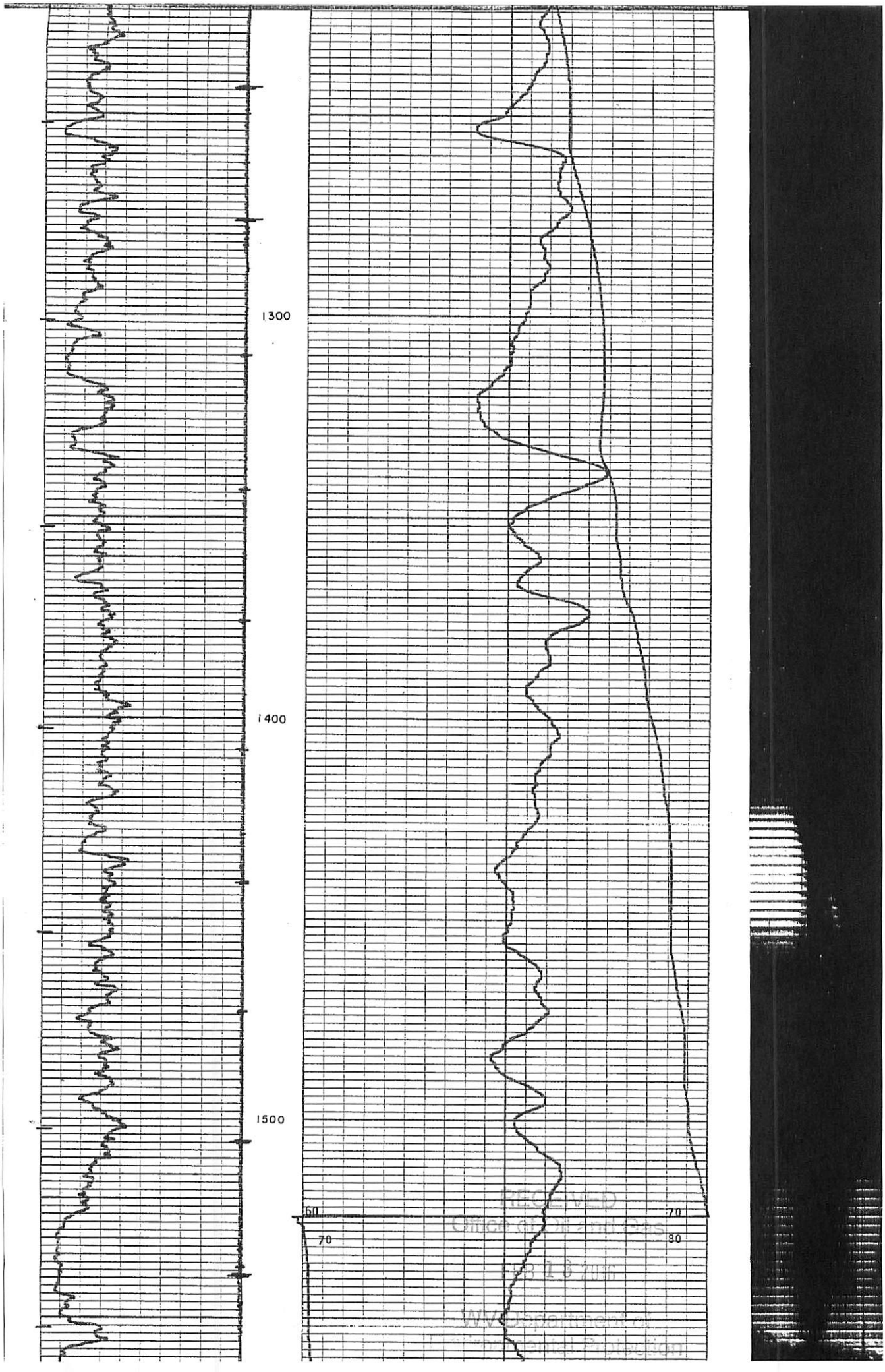


RECEIVED
Office of Oil and Gas
FEB 19 2016
WV Department of
Environmental Protection

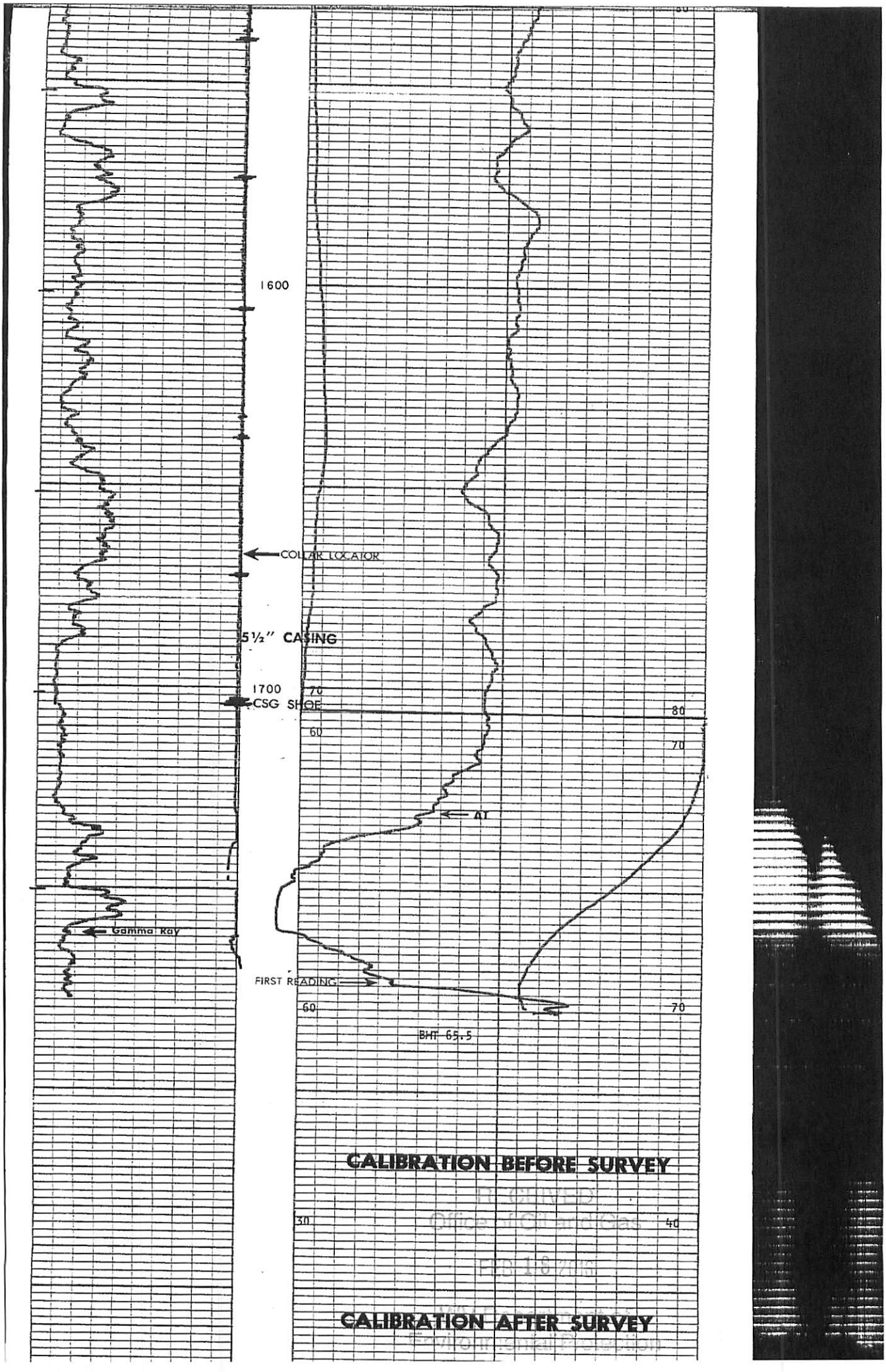
5100470P

5100470P

5100470P

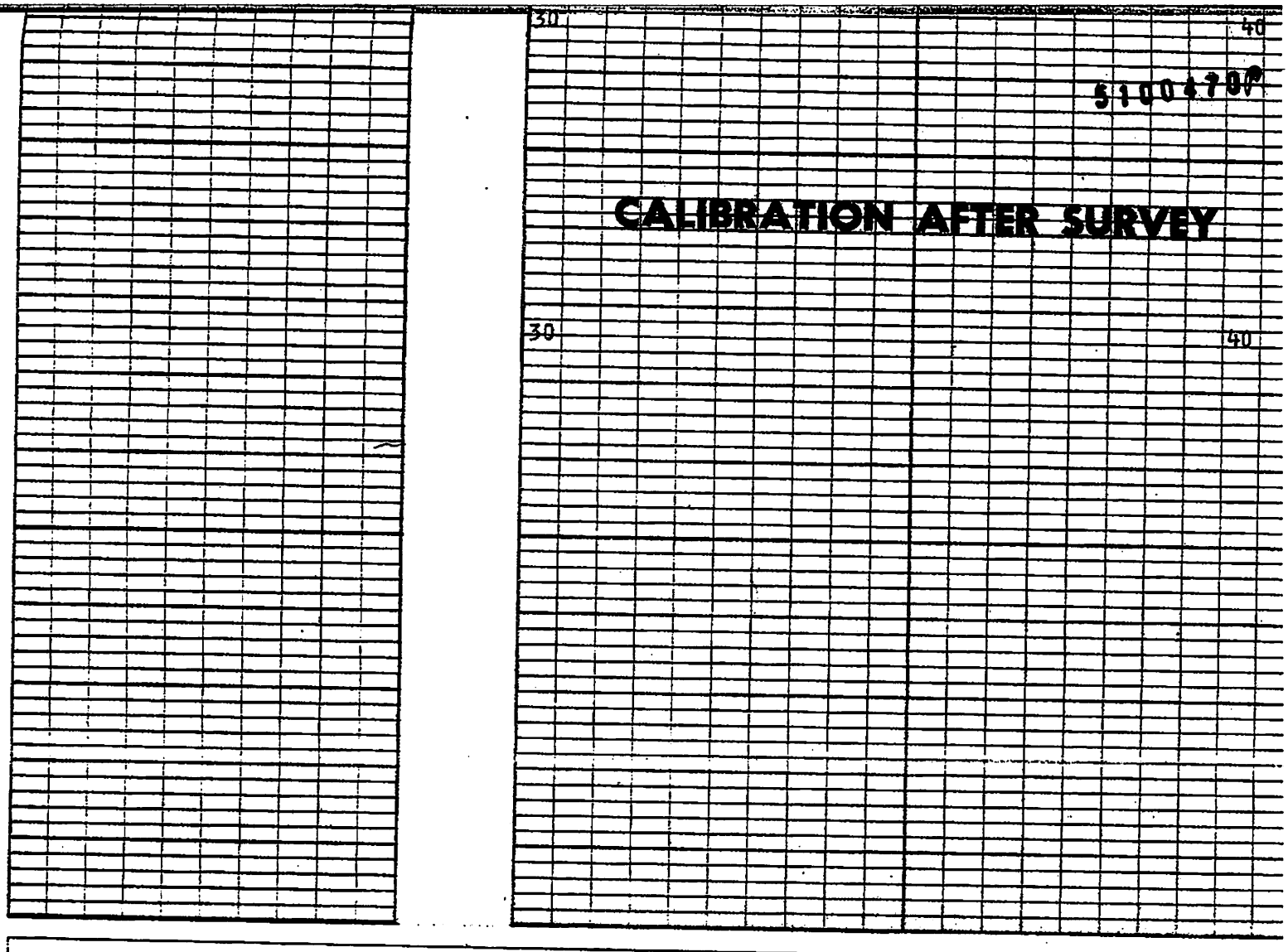


RECEIVED
Office of Oil and Gas
FEB 16 2016
WV Department of
Environmental Protection



RECEIVED
Office of Oil and Gas
FEB 16 2006
WV Department of
Environmental Protection

S1004702



CALIBRATION DATA

COMPANY COLUMBIA GAS TRANSMISSION CORP.

WELL JOHN & EMMA CROW #L-4698

FIELD MAJORSVILLE

LOCATION WEBSTER TWP.

COUNTY MARSHALL

STATE W. VA. DATE 6-18-80

DRILLER T.D. 1794'

BIRDWELL T.D. 1773'

BIRDWELL F.R. 1773'

ELEV.: K.B. N.A.

D.F. N.A.

G.L. 1147.75'

BIRDWELL DIVISION

Seismograph Service Corporation
A SUBSIDIARY OF RAYTHEON COMPANY

SSC-1285

RECEIVED
Office of Oil and Gas
FEB 18 2016
WV Department of
Environmental Protection

5100470P

FORM WW-4(A)
Revised 6-07

1) Date: February 16, 2016 .
2) Operator's Well No. SGW-119
3) API Well No. 47 – 51– 00470 .
State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) SURFACE OWNER(S) TO BE SERVED
(a) Name GMO Forestry
Address PO BOX 25
Pittsfield, NH 03263

(b) Name
Address

(c) Name
Address

(6) INSPECTOR Eric Blend
Address PO BOX 2115
Wheeling, WV 26003
Telephone (304) 552-1179

5)a) COAL OPERATOR
Name CONSOLIDATION COAL CO.
Address 1 Bridge Street
Monongah, WV 26554

(b) COAL OWNER(S) WITH DECLARATION:
Name
Address

(c) COAL LESSEE WITH DECLARATION:
Name
Address

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

(1) The Application to Plug and Abandon a Well on form WW-4B, which sets out the parties involved in the work, and describes the well and its location and the plugging work order; and
(2) The Plat (surveyor's map) showing the well location on Form WW-6.

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 WW-4(B) DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached From WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivery by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery by the Chief.

WELL OPERATOR Consolidation Coal Company
By Mason Smith
Its Project Engineer
Address 6126 Energy Road
Moundsville WV 26041
Telephone (304) 843-3565

Subscribed and sworn before me this 16 day of February, 2016
Christian K. Warfield Christian K. Warfield Notary Public,
Marshall County, State of West Virginia
My commission expires June 10, 2024

RECEIVED
Office of Oil and Gas
FEB 18 2016
WV Department of
Environmental Protection

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

5100470P

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 051 - 00470
Operator's Well No. SGW-119

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name **Consolidation Coal Company** OP Code _____

Watershed **Dunkard Fork** Quadrangle Majorsville, 7.5'

Elevation **1149.89'** County **Marshall** District **Webster**

Description of anticipated Pit Waste: **N/A**

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes_____ No **X**

Will a synthetic liner be used in the pit? **N/A**. If so, what mil.?_____

Proposed Disposal Method For Treated Pit Wastes:

_____ Land Application
_____ Underground Injection (UIC Permit Number_____)
_____ Reuse (at API Number_____)
_____ Off Site Disposal (Supply form WW-9 for disposal location)
X Other (Explain **Tanks, see attached letter**

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. **Freshwater**
If oil based, what type? Synthetic, petroleum, etc.? _____
Additives to be used? **Bentonite, Bicarbonate of Soda**

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. **Reused or Disposed (see attached letter)**
-If left in pit and plan to solidify what medium will be used? Cement, lime, sawdust _____
-Landfill or offsite name/permit number? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature Mason Smith

Company Official (Typed Name) **Mason Smith**

Company Official Title **Project Engineer**

Subscribed and sworn before me this 16 day of February, 2016

Christian K. Warfield Christian K. Warfield Notary Public

My commission expires June 10, 2024

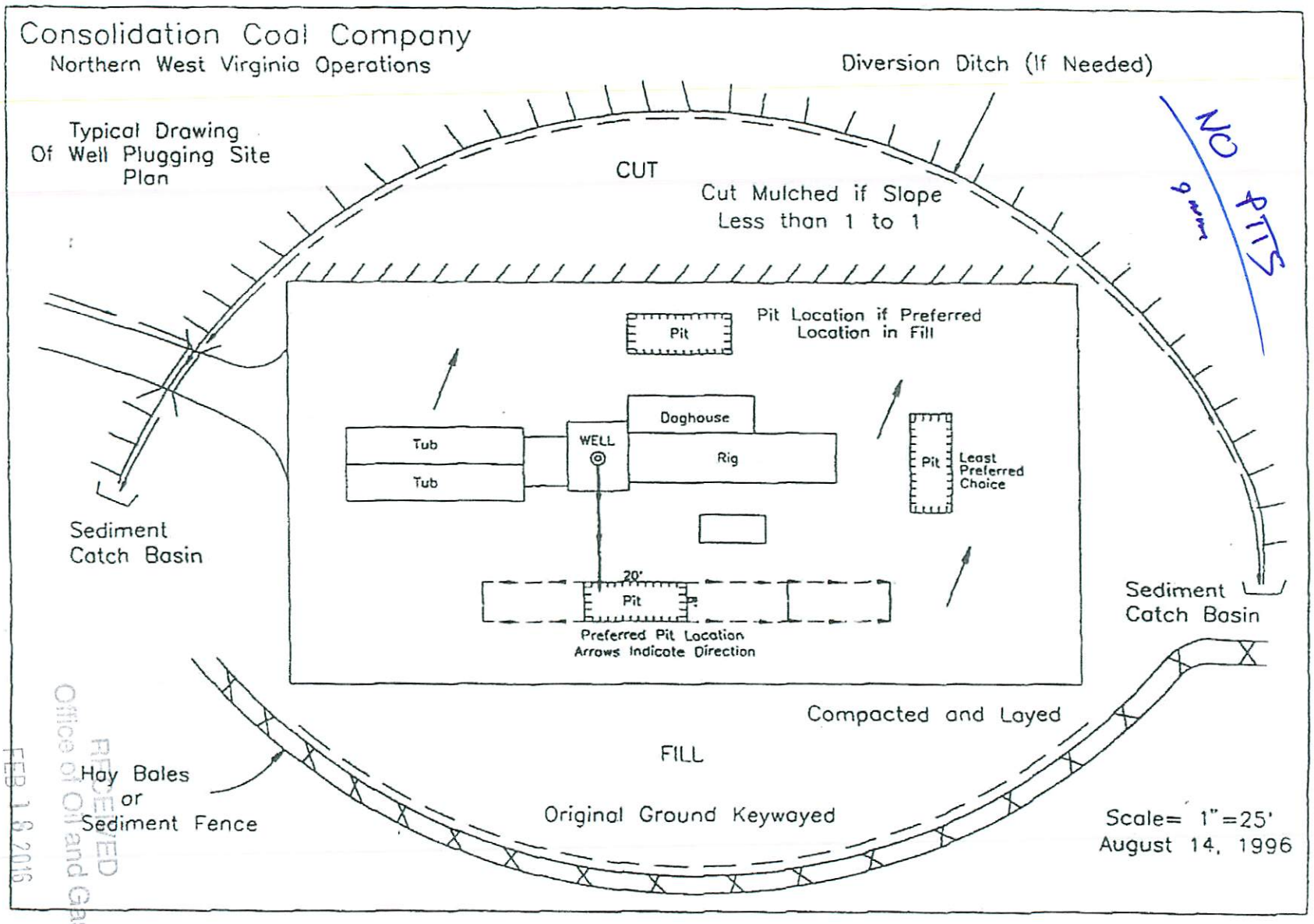
RECEIVED
Office of Oil and Gas
FEB 16 2016
WV Department of Environmental Protection

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Christian K Warfield
Murray American Energy Inc
6126 Energy Road
Moundsville WV 26041
My Commission Expires June 10, 2024

Consolidation Coal Company

Northern West Virginia Operations

Typical Drawing
Of Well Plugging Site
Plan



NO PITS

9 acres

RECEIVED
Office of Oil and Gas
FEB 16 2016

WV Department of
Environmental Protection

5100470P

5100470P

MURRAY AMERICAN ENERGY, INC. & CONSOLIDATION COAL COMPANY

MURRAY AMERICAN ENERGY, INC. & CONSOLIDATION COAL COMPANY
46226 National Road
St. Clairsville, OH 43950

phone: 304.843.3565
fax: 304.843.3546
e-mail: MasonSmith@coalsource.com

MASON SMITH
Project Engineer

February 16, 2016

Department of Environmental Protection
Office of Oil and Gas
601-57th Street
Charleston, WV 25320

To Whom It May Concern,

As per the Division of Environmental Protection, Office of Oil and Gas request, Consolidation Coal Company submits the following procedures utilizing pit waste.

Upon submitting a well work application (without a general permit for Oil & Gas Pit Waste Discharge Application), Consolidation Coal Company will construct no pits, but instead will use mud tanks to contain all drilling muds.

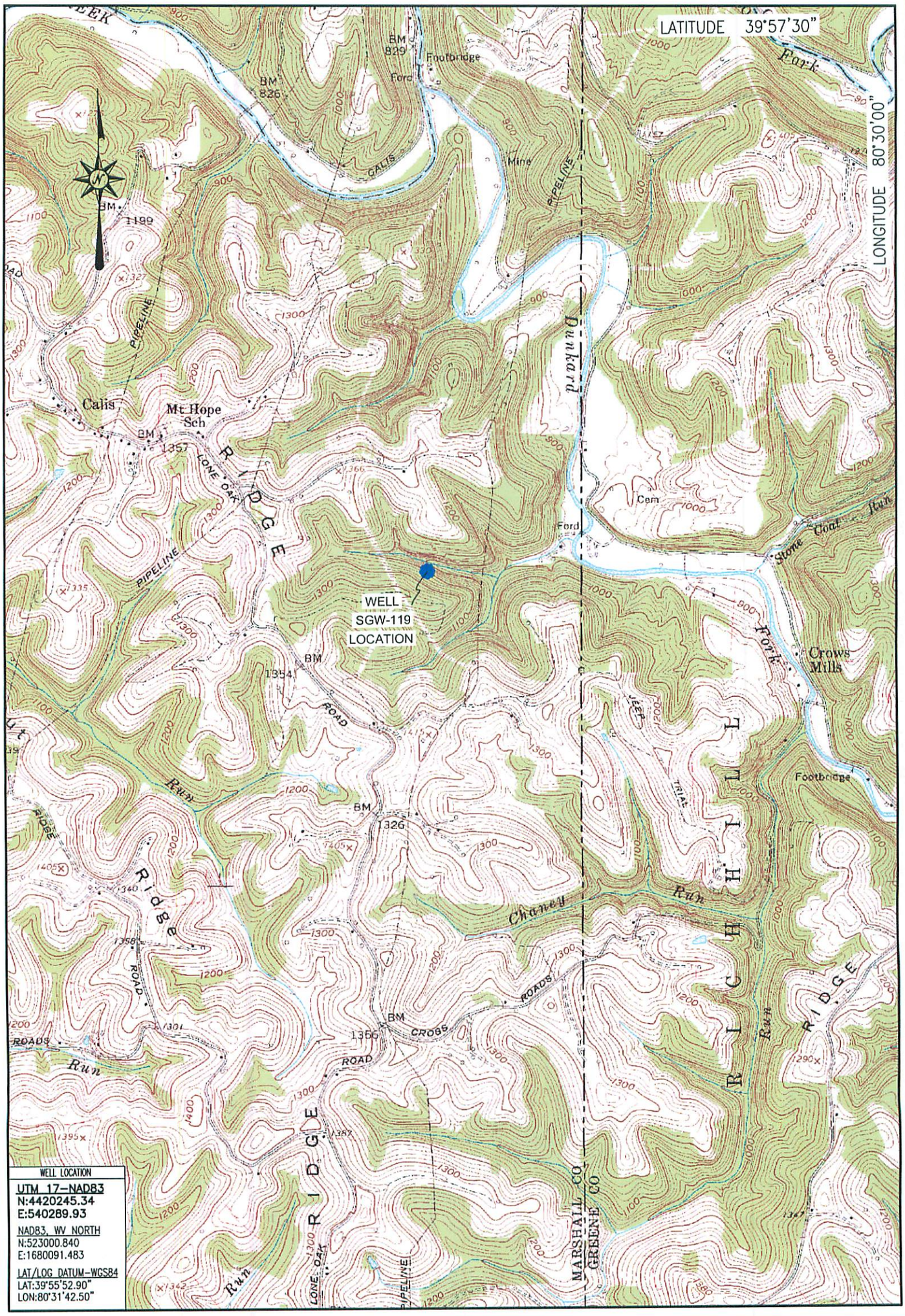
Once the well is completed, that material (minus the cave material) will be trucked to the next well to be plugged or to DEP facilities number U-0033-83, O-1001-00, U-1035-91U-46-84, U-78-83, O-1044-9, or U-100-83.

Sincerely,

Mason Smith
Project Engineer

RECEIVED
Office of Oil and Gas
FEB 18 2016
WV Department of
Environmental Protection

5100470P



LOCATION MAP
FEBRUARY 11, 2016

SCALE 1" = 2000'
0' 2000' 4000' 6000'

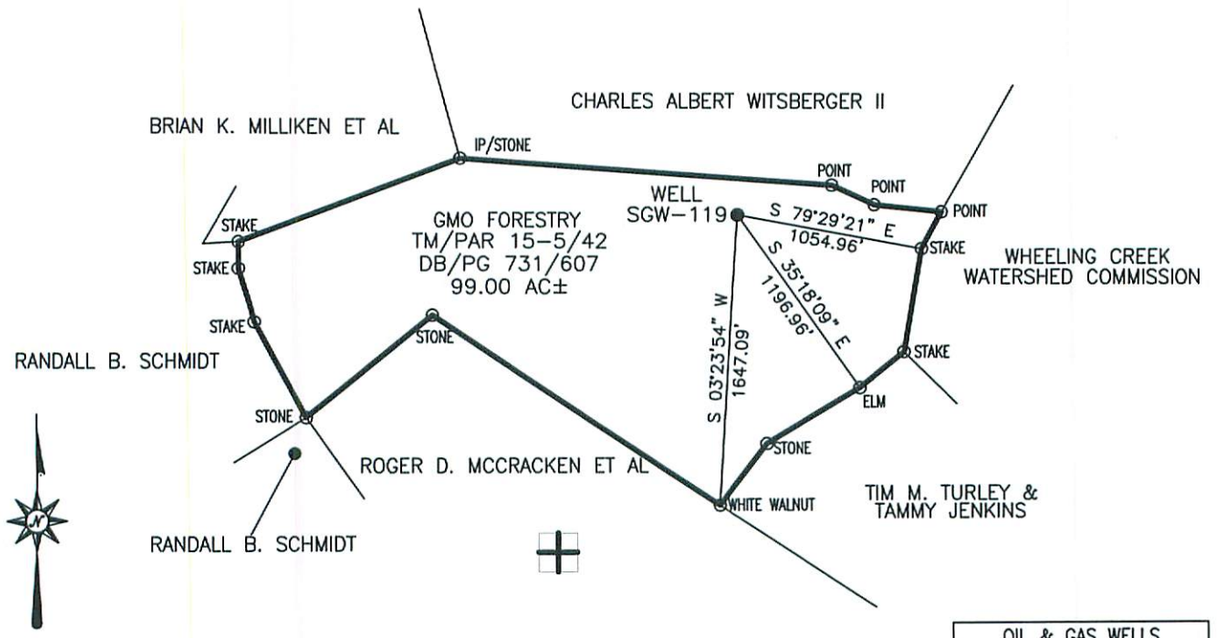
SGW-119
MAJORSVILLE QUADRANGLE
WEST VIRGINIA

Blue Mountain Inc.
10125 MASON DIXON HIGHWAY
BURTON, WV 26562
PHONE: (304) 662-6486

BLUE MOUNTAIN ENGINEERING

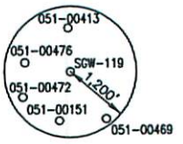
Well is located on topo map 9,826 feet south of Latitude: 39° 57' 30"

Well is located on topo map 7,984 feet west of Longitude: 80° 30' 00"



WELL LOCATION
UTM 17-NAD83
N:4420245.34
E:540289.93
NAD83, WV NORTH
N:523000.840
E:1680091.483
LAT/LOG DATUM-WGS84
LAT:39°55'52.90"
LON:80°31'42.50"

OIL & GAS WELLS WITHIN 1200 ft.



REFERENCE NOT TO SCALE

Blue Mountain Inc.
10125 MASON DIXON HIGHWAY
BURTON, WV 26562
PHONE: (304) 662-6486

NOTE:
It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

FILE #: SGW-119
DRAWING #: SGW-119
SCALE: 1" = 1000'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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 ENVIRONMENTAL PROTECTION.

Signed: C:\Users\tom\Desktop\STAMPS\Boyd Signature Stamp.jpg

R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX LICENSED No. 2000 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: FEBRUARY 11, 2016
OPERATOR'S WELL #: SGW-119
API WELL #: 47 (STATE) 51 (COUNTY) 00470? (PERMIT)

Well Type: ☐ Oil ☐ Waste Disposal ☐ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☒ Storage ☒ Shallow

WATERSHED: DUNKARD FORK ELEVATION: 1149.89'
COUNTY/DISTRICT: MARSHALL/WEBSTER QUADRANGLE: MAJORSVILLE, WV-PA 7.5'
SURFACE OWNER: GMO FORESTRY ACREAGE: 99.00±
OIL & GAS ROYALTY OWNER: _____ ACREAGE: _____

RECEIVED
Office of Oil and Gas
FEB 18 2016
WV Department of Environmental Protection

DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☐
PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☒
CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY): _____

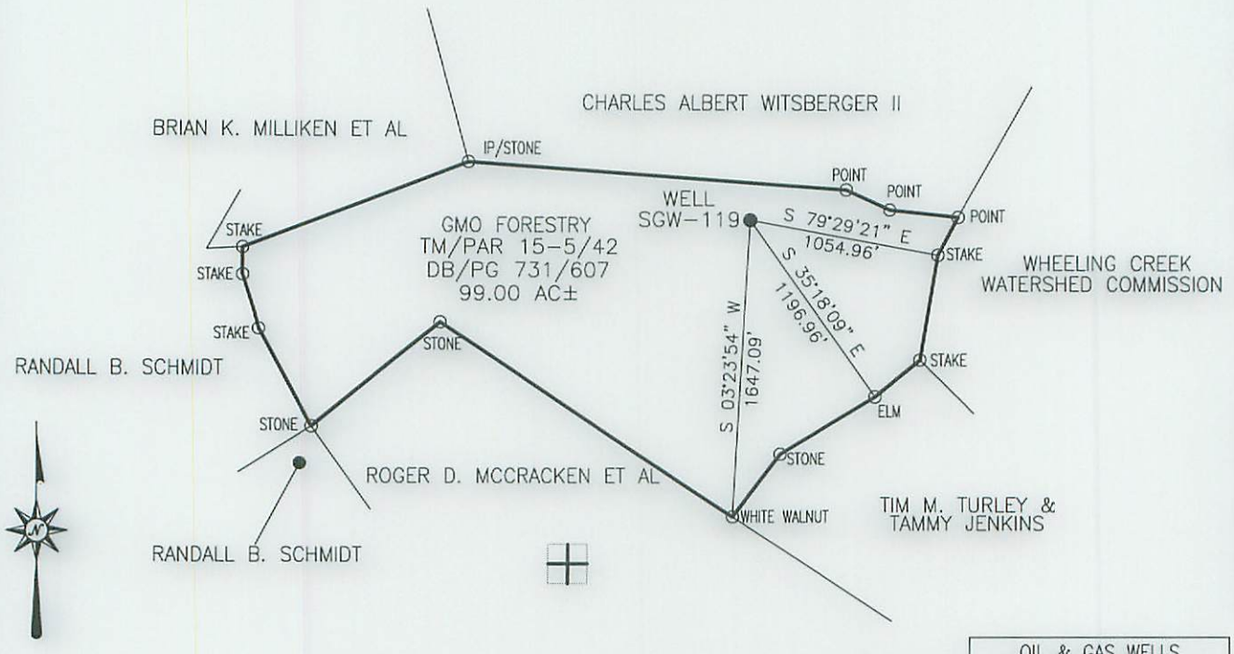
TARGET FORMATION: _____ ESTIMATED DEPTH: _____

WELL OPERATOR: CONSOLIDATION COAL CO., OHIO VALLEY OPERATIONS
Address: 6126 ENERGY DRIVE
City: MOUNDSVILLE State: WV Zip Code: 26041

DESIGNATED AGENT: RONNIE HARSH
Address: 6126 ENERGY DRIVE
City: MOUNDSVILLE State: WV Zip Code: 26041

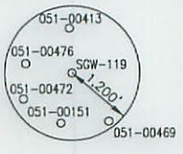
Well is located on topo map 9,826 feet south of Latitude: 39° 57' 30"

Well is located on topo map 7,984 feet west of Longitude: 80° 30' 00"



WELL LOCATION
UTM 17-NAD83
N:4420245.34
E:540289.93
NAD83, WV NORTH
N:523000.840
E:1680091.483
LAT/LOG DATUM-WGS84
LAT:39°55'52.90"
LON:80°31'42.50"

OIL & GAS WELLS WITHIN 1200 ft.



REFERENCE NOT TO SCALE

Blue Mountain Inc.
10125 MASON DIXON HIGHWAY
BURTON, WV 26562
PHONE: (304) 662-6486

NOTE:
It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

FILE #: SGW-119
DRAWING #: SGW-119
SCALE: 1" = 1000'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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 ENVIRONMENTAL PROTECTION.

Signed: [signature]

R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX LICENSED No. 2000 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: FEBRUARY 11, 2016
OPERATOR'S WELL #: SGW-119
API WELL #: 47 (STATE) 51 (COUNTY) 00470 P (PERMIT)

Well Type: ☐ Oil ☐ Waste Disposal ☐ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☒ Storage ☒ Shallow

WATERSHED: DUNKARD FORK ELEVATION: 1149.89'
COUNTY/DISTRICT: MARSHALL/WEBSTER QUADRANGLE: MAJORSVILLE, WV-PA 7.5'
SURFACE OWNER: GMO FORESTRY ACREAGE: 99.00±
OIL & GAS ROYALTY OWNER: _____ ACREAGE: _____

DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☐
PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☒
CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY): _____

TARGET FORMATION: _____ ESTIMATED DEPTH: _____

WELL OPERATOR CONSOLIDATION COAL CO., OHIO VALLEY OPERATIONS
Address 6126 ENERGY DRIVE
City MOUNDSVILLE State WV Zip Code 26041

DESIGNATED AGENT RONNIE HARSH
Address 6126 ENERGY DRIVE
City MOUNDSVILLE State WV Zip Code 26041