



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 14, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-5100476, 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 penalties 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: 4697
Farm Name: CROW, JOHN
API Well Number: 47-5100476
Permit Type: Plugging
Date Issued: 03/14/2016

Promoting a healthy environment.

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.

1.) Date: February 16, 2016
2.) Operator's Well No. SGW-161
3.) API Well No. 47 - 51 - 00476
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: 1193.78' Watershed: Dunkard Fork
District: Webster County: Marshall Quadrangle: Majorsville 7.5'

6.) WELL OPERATOR Consolidation Coal Company

7.) DESIGNATED AGENT Ronnie Harsh

Address 1 Bridge Street
Monongah, WV 26554

Address 1 Bridge Street
Monongah, WV 26554

8.) OIL & GAS INSPECTOR TO BE NOTIFIED

9.) PLUGGING CONTRACTOR

Name Eric Blend
Address PO BOX 2115
Wheeling, WV 26003

Name _____
Address _____

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

OPTION 1. MAY CEMENT FROM TD TO 200' BELOW PITTSBURGH COAL WITH CLASS A CEMENT. THEN FOLLOW MSHA 101C. EXEMPTION DOCUMENT. SEE EXHIBIT NO. 1

ALL CASING APPEARS TO BE CEMENTED TO SURFACE.

OPTION 2

- TRIP IN HOLE & CHECK TD ≈ 1845 1/2.
- SPOT GEL & CEMENT WITH CLASS A CEMENT FROM 1840' TO 1640'
- 5 1/2" CASING APPEARS TO BE CTS.

• GEL HOLE FROM 1640' TO 1540' (

• CEMENT WITH CLASS A CEMENT FROM 1540' TO 856'. (200' BELOW PITTS COAL)

OK JMW

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

Work order approved by inspector _____ Date _____

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MSHA

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U. S. Department of Labor
10-22-1990

Mine Safety and Health Administration
4015 Wilson Boulevard
Arlington, Virginia 22203-1984

W. J. SCHELLER



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:

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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, drilage 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.

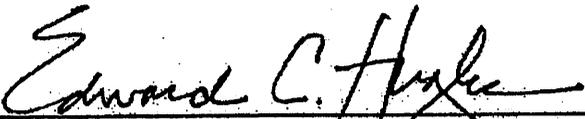
- (l) When using continuous or conventional mining methods, the working place shall be free from accumulations of coal dust and coal spillages, and rock dust shall be placed on the roof, rib, and floor to within 20 feet of the face when mining through the well. On longwall sections, rock dusting shall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

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

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

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


MARY ANN GRIFFIN
Mine Safety Clerk

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".

AC/ENGR/EXHIBIT1.REO

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WELL LOG SUMMARY

| | | | | | | | | | | | | |
|---------------------------------|---|--|---|--|---|-----------------------------------|---------------------------|--------------------------|------------|------------|-------------|---------------|
| LOCATION | COMPANY The Manufacturers Light & Heat Company | | | | DIV. 5 | FIELD Majorville | WELL NO. L-4697 | | | | | |
| | FARM J. & E. Crow | ACRES 330 | LEASE NO. 2900 | DISTRICT - TOWN - TOWNSHIP Webster | COUNTY Marshall | | STATE W.Va. | | | | | |
| | TOPO. MAP Cameron | | Quadrangle | | Ft. of | | / and / | | | | | |
| CONTRACTOR | CONTRACTOR | | | | Drilled from _____ Ft. to _____ Ft. | | | | | | | |
| | ADDRESS | | | | Type of Rig | | | | | | | |
| CONTRACTOR | CONTRACTOR Lohmann & Johnson | | | | Drilled from 0 Ft. to 1845.5 G.L. Ft. | | | | | | | |
| | ADDRESS Pittsburgh, Pa. | | | | Type of Rig Rotary | | | | | | | |
| FIRST RIG COMMENCED (DATE) | | RIG COMPLETED (DATE) | | COMPLETED TOTAL DEPTH | | DATE PURCHASED | | FOR. WELL NO. | | | | |
| Drilling 7/14/62 | | Well 9/20/62 | | 1845.5' G.L. ft. | | | | --- | | | | |
| HOLE SIZE | BIT GAUGE (INCHES) | 17" | 12 3/8" | 7 7/8" | 4 3/4" | | | | | | | |
| | FROM-TO (FEET) | 0 - 61' | 61-721' | 721-1774' | 1774-1845.5' | | | | | | | |
| CASING AND TUBING | SIZE (O.D.) | 13 3/8" | 8 5/8" | 5 7/8" | | | | | | | | |
| | WEIGHT/FOOT | 48# | 24# | 17# | | | | | | | | |
| | STEEL GRADE | H-40 | J-55 | J-55 | | | | | | | | |
| | COUPLING TYPE | Short | Short | Short | | | | | | | | |
| (All Measurements less threads) | SETTING DEPTH | 61.3" | 720'11" | 1773'10" | | | | | | | | |
| | LEFT IN HOLE | 61.3" | 720'11" | 1773'10" | | | | | | | | |
| CEMENT | NO. OF SACKS | 100 | 400 | 400 | | | | | | | | |
| | TYPE | IS | IS | IS | | | | | | | | |
| PACKER | WEIGHT #/GAL. | 14.5 | 14.5 | 14.5 | | | | | | | | |
| | 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 | | | | | | | |
| OPEN FLOW TEST | DATE GAUGED | FORMATION | PAY ZONE | | TYPE GAUGE (SPECIFY) | PRESSURE (SPECIFY UNITS) | SIZE OPENING-IN. | OPEN FLOW M.C.F. / DAY | HRS. BLOWN | | | |
| | 9 17 62 | Big Injun | From 1806 to 1812 | Side | 19 psig | 4" | 20,954 | 25 min. | | | | |
| | | Big Injun | From 1815 to 1819 | Static | | | | | | | | |
| | | Injun | From 1828 to 1832 | | | | | | | | | |
| | | | From 1834 to 1840 | | | | | | | | | |
| WELLHEAD PRESSURE TESTS | DATE TAKEN | FORMATION | MINUTE PRESSURE - PSIG | | | | | WELLHEAD PRESSURE - PSIG | | | | |
| | 9 17 62 | Big Injun | 1 | 3 | 5 | 10 | 30 | 24 HR. | 48 HR. | 72 HR. | MAX. PRESS. | TIME |
| | | | 725 | 835 | 855 | 870 | 875 | 880 | 885 | 885 | 885 | 72 hr. |
| MISC. | DEPTH MEASUREMENT TAKEN FROM: | | | | DIST. TO GROUND | ELEVATION | | | | | | |
| | <input type="checkbox"/> Derrick Floor | <input checked="" type="checkbox"/> Ground | Other (Specify) 12.5' below K.B. | | ft. | 1191.55 G.L. | | | | | | |
| | LOGGED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | LOGGED BY (COMPANY) Schlumberger | | | | DATE LOGGED 9 14 62 | | | | | | |
| REMARKS | * Note: Form PD-17 "Well Fracture Report" to be completed and attached, if applicable | | | | | | | | | | | |
| | Drilling Completed 7/20/62 Well Completed 9/20/62 | | | | | | | | | | | |
| | Budget 2208 | | | | | | | | | | | |
| | | | | | | | | | | | | |

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

Verified by *David G. Lambert*
DIVISION ENGINEER

Approved by _____
DIVISION SUPERINTENDENT

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WELL LOG SUMMARY

| DIV. | FIELD | FARM | COUNTY | WELL NO. |
|--|----------------------|---|--------------------|--|
| 5 | Majorsville | John & Emma Crow | Marshall | L-4697 |
| ORIGIN OF FORMATION DEPTHS | | | | |
| <input type="checkbox"/> Driller's Log | | <input checked="" type="checkbox"/> Service Company Log | | <input type="checkbox"/> Combination |
| FORMATION | TOP | BOTTOM | THICKNESS | REMARKS (Water, Gas, Oil encountered-Open Flows-Rock Pressure-etc.) |
| Depth Datum - Ground Level | | | | Water - 92' |
| Pittsburgh Coal | 651 | 656 | 5 | Slight show of gas - 1307' |
| Gas Sand | 1320 | 1351 | 31 | Gas - 1402' Est. 2 1/2 MCF/day |
| 1st. Salt Sand | 1397 | 1437 | 40 | Water - 1597' |
| 3rd. Salt Sand | 1584 | 1625 | 41 | Drilled from 1402' to 1777' with gas |
| break | 1625 | 1640 | 15 | Pay Zones- |
| 3rd. Salt Sand | 1640 | 1694 | 54 | 1806-1812 G.R.N. & Driller |
| Big Injun | 1739 | | | 1815-1819 G.R.N. & Driller |
| Drilled 7 7/8" hole to | | | | 1828-1832 Driller |
| 1777' and cemented 5 1/2" | | | | 1834-1840 Driller |
| Casing at 1773' 10" | | | | |
| Drilled 4 3/4" hole to | | | | |
| 1845 1/2' | | | | |
| Total Depth | | 1845 1/2' | | |
| Started to drill with gas at 3:10 A.M. 7/20/68 | | | | |
| Pay Zone | Time | Stand Pipe Back Pressure | Flow Line Pressure | Capacity of Well minus Drilling-in gas |
| 1806-1812 | 8:00 A.M.-8:32 A.M. | 170-200 psig | 12 psig | 8150 MCF/day |
| 1815-1819 | 9:07 A.M.-9:52 A.M. | 275-275 " | 13 " | 8700 MCF/day |
| 1828-1832 | 12:42 P.M.-1:09 P.M. | 280-325 " | 14-20 " | 12500 MCF/day |
| 1834-1840 | 2:15 P.M.-2:44 P.M. | 340-368 " | 20-23 " | 14000 MCF/day |
| 1845 1/2' | 4:07 P.M. | Blew down to | 20 " | 12500 M.C.F./day |

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NOTICE OF WELL STATUS CHANGE

COMPANY The Manufacturers Light & Heat Company FIELD Majorville DIV. 5 FOREIGN WELL NO. (IF ANY) --- COMPANY WELL NO. 1-1697

FARM NAME J. & E. Crow TOWNSHIP-TOWN-DISTRICT COUNTY STATE LEASE-DEED NO. ACRES DATE COMP. Webster Marshall W.Va. 2900 330 9 20 62

LAST ACTIVE WELL ON FARM (THIS BLOCK FOR GENERAL OFFICE USE ONLY)
 YES NO SURRENDER LEASE RENEW LEASE OTHER

STATUS PRIOR TO THIS REPORT
 DRILLING WELL Production Storage
 ACTIVE WELL Production Storage
 ABANDONED WELL

Remarks Drilling Completed 7/20/62
Well Completed 9/20/62

WELL STATUS CHANGE OR WORK PERFORMED
 COMPLETED Gas Dry Retained
 REDRILLED FOR STORAGE Abandoned Retained
 RECONDITIONED Abandoned
 RECONDITIONED & TRANSF. TO STORAGE
 TRANSFERRED TO Production Storage
 PURCHASED FOR Production Storage
 DRILLED DEEPER
 PLUGGED AND ABANDONED
 SOLD

DRILLED TO 124 1/2 feet into Big Injan 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 (If applicable) | BEFORE TREATMENT | TYPE OF GAUGE <input type="checkbox"/> Orifice Well Tester <input type="checkbox"/> Pitot Tube <input type="checkbox"/> Other (Specify) _____ |
| | FLOW | GAUGE READING _____ inches <input type="checkbox"/> Mercury <input type="checkbox"/> Water or _____ psig through _____ inch opening after blowing _____ hours _____ cubic feet per day ROCK PRESSURE _____ psig in _____ hours |
| TEST READING | FINAL | TYPE OF GAUGE <input type="checkbox"/> Orifice Well Tester <input type="checkbox"/> Pitot Tube <input checked="" type="checkbox"/> Other (Specify) <u>Side Static Tester</u> |
| | READING | GAUGE READING _____ inches <input type="checkbox"/> Mercury <input type="checkbox"/> Water or <u>19</u> psig through <u>1/4</u> inch opening after blowing <u>95</u> <u>HR.</u> _____ cubic feet per day ROCK PRESSURE _____ psig in <u>72</u> hours |

AUTHORIZATION FOR WORK PERFORMED
 Well Order Number 1-1697 Budget No. 2253
 Work Order Number _____
 Abandonment Order Number _____

WORK PERFORMED BY Lohman & Johnson

| For General Office Use | | | |
|------------------------|------------------|----------|------|
| DEPARTMENT | SECTION | NOTED BY | DATE |
| PRODUCTION | Geology | | |
| | Storage | | |
| | Clerical | | |
| | Map | | |
| LAND OPERATING | | | |
| TREASURY | Land Accounting | | |
| | Plant Accounting | | |
| CIVIL ENGINEERING | | | |

Compiled By A.M. Schafer Date 9/20/62
D.G. Gumbert
 Approved By _____ Date _____
 DIVISION SUPERINTENDENT

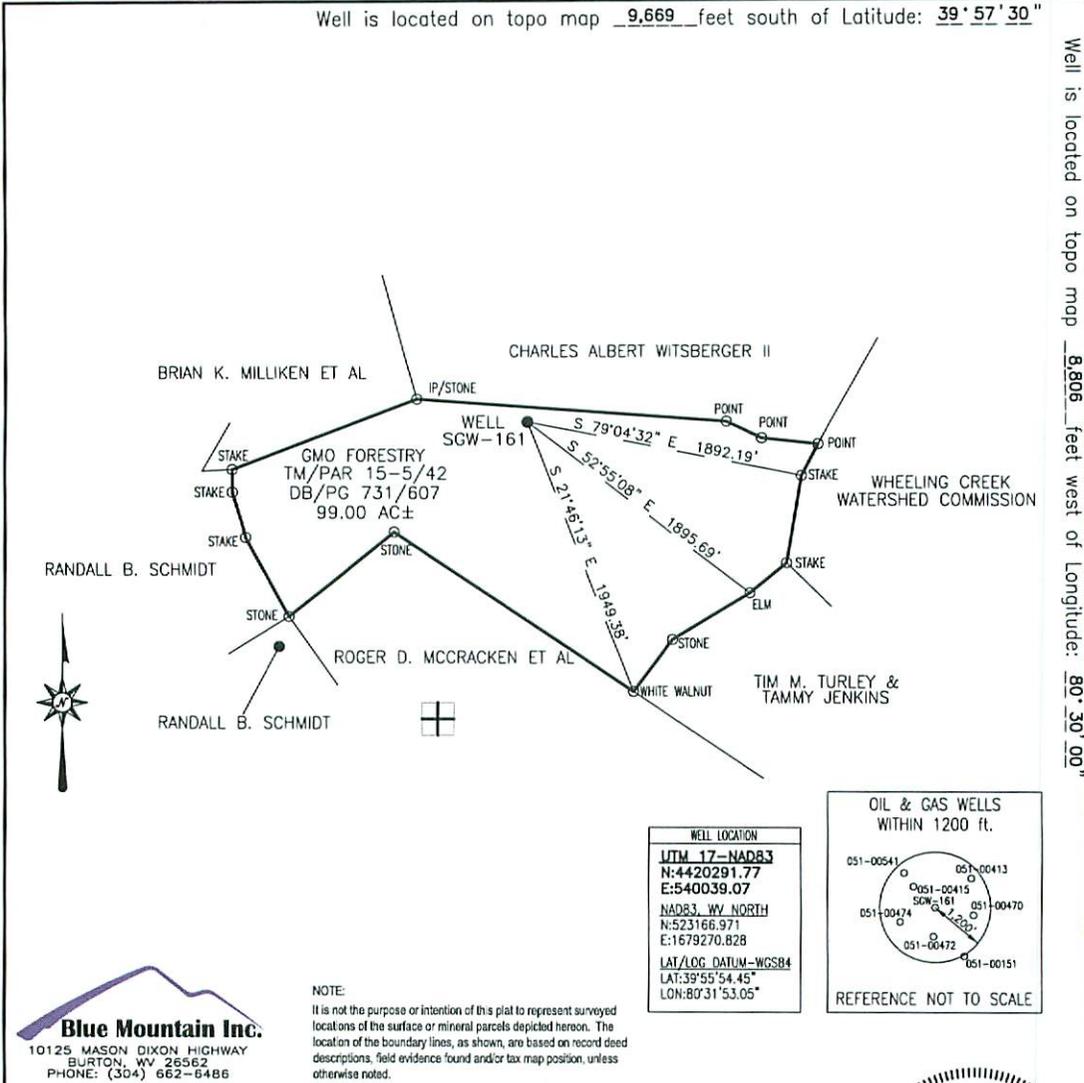
RECEIVED
 Office of Oil and Gas
 FEB 18 2015
 V&V Department of
 Environmental Protection

Return to Land Operating Department for filing

Well is located on topo map 9,669 feet south of Latitude: 39° 57' 30"

5100476P

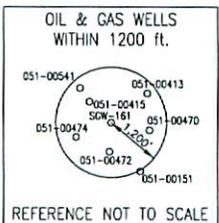
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Blue Mountain Inc.
 10125 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

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 NAD83, WV NORTH
 N:523166.971
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 LAT/LOG DATUM-WGS84
 LAT:39°55'54.45"
 LON:80°31'53.05"



FILE #: SGW-161
 DRAWING #: SGW-161
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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Signed: George D. Six
 R.P.E.: _____ L.L.S.: P.S. No. 2000



(+) 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-161
 API WELL #: 47 51 00476
 STATE COUNTY PERMIT

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

WATERSHED: DUNKARD FORK ELEVATION: 1193.78'
 COUNTY/DISTRICT: MARSHALL/WEBSTER QUADRANGLE: MAJORSVILLE, WV-PA 7.5'
 SURFACE OWNER: GMO FORESTRY ACREAGE: 99.00±
 OIL & GAS ROYALTY OWNER: _____ ACREAGE: _____

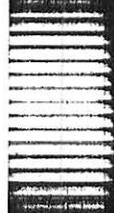
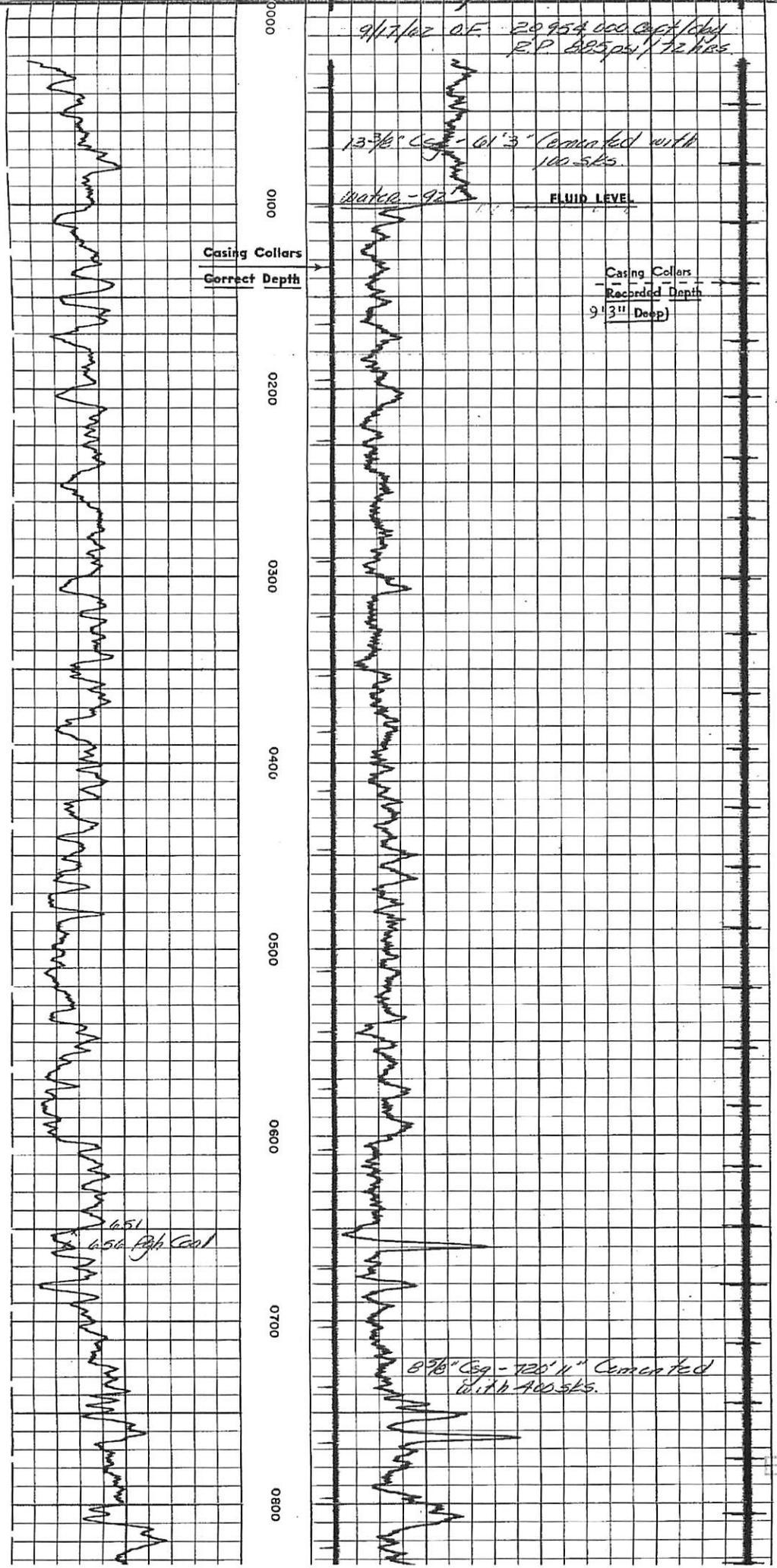
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 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: _____ ESTIMATED DEPTH: _____

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

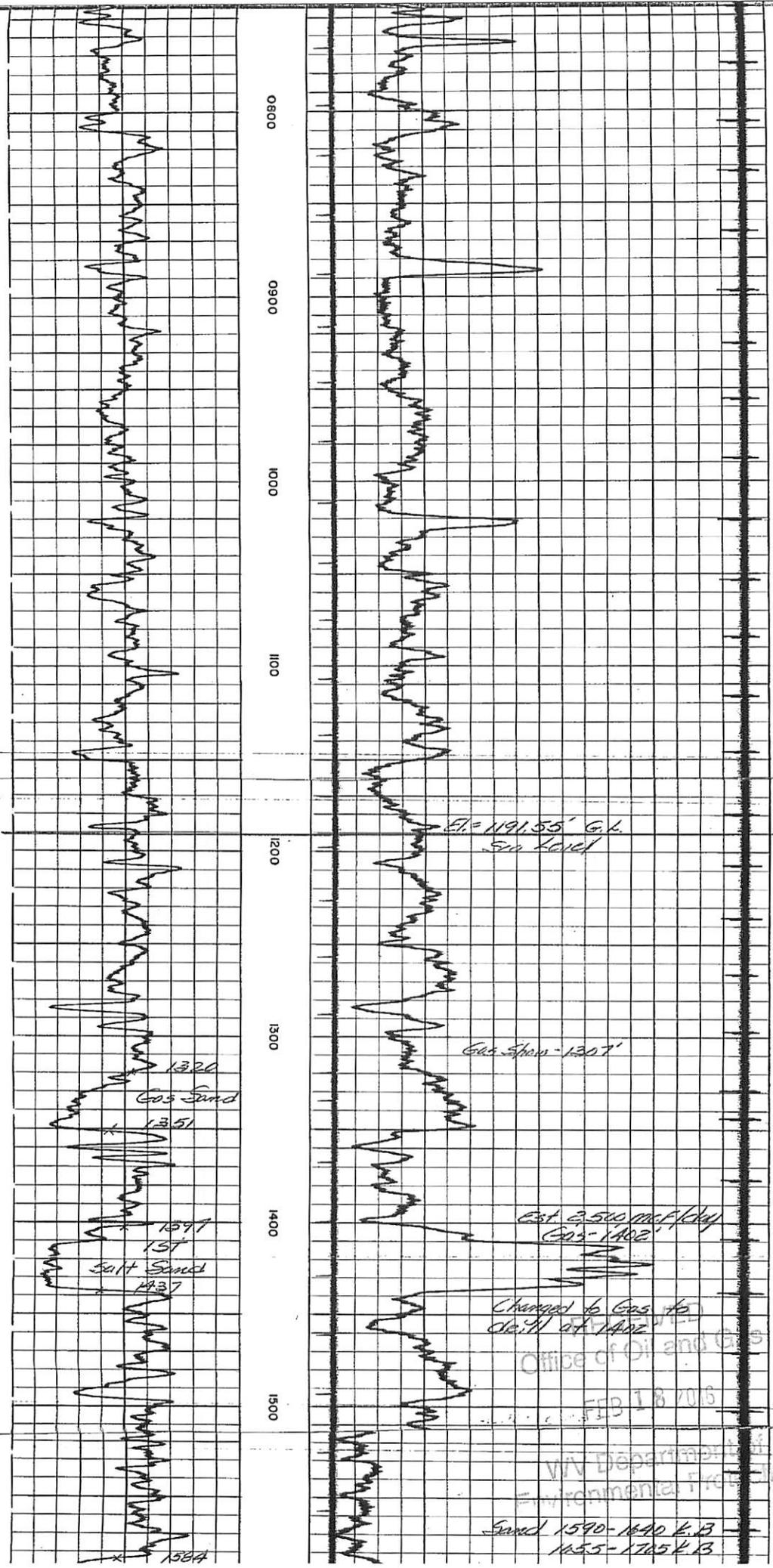
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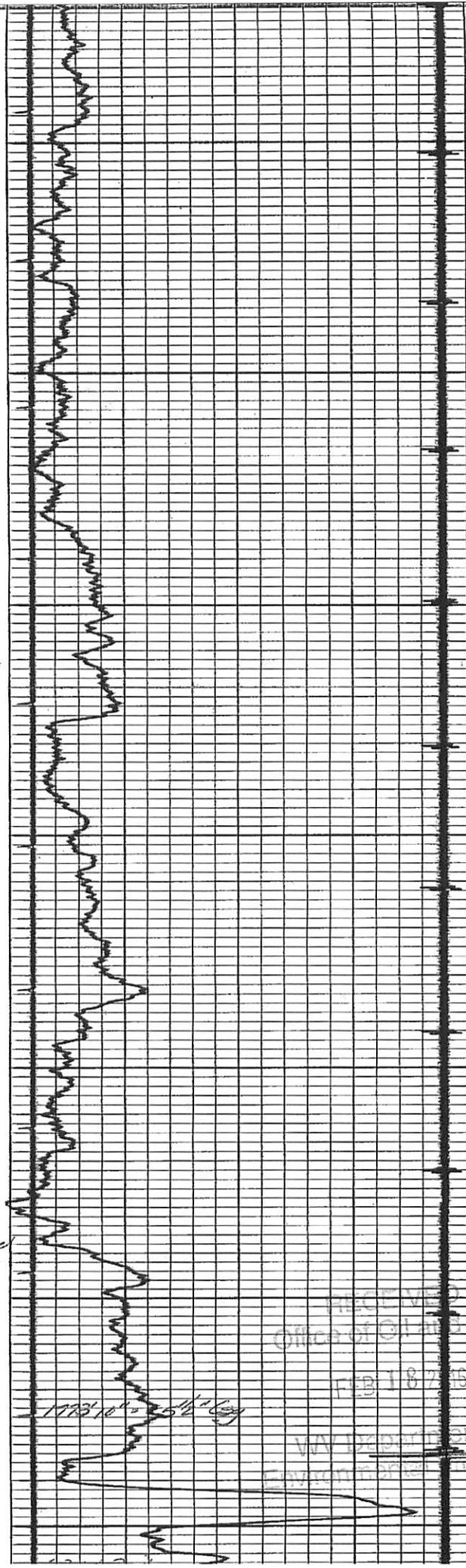
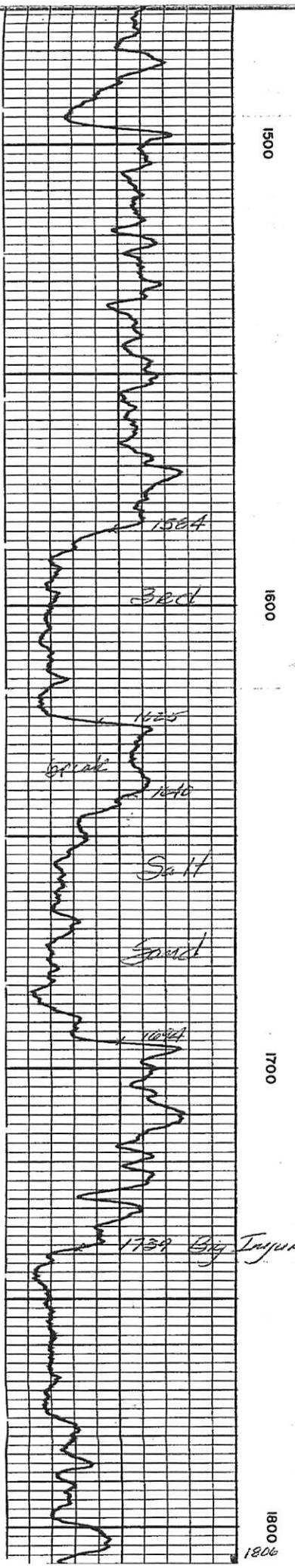


Gas

of section

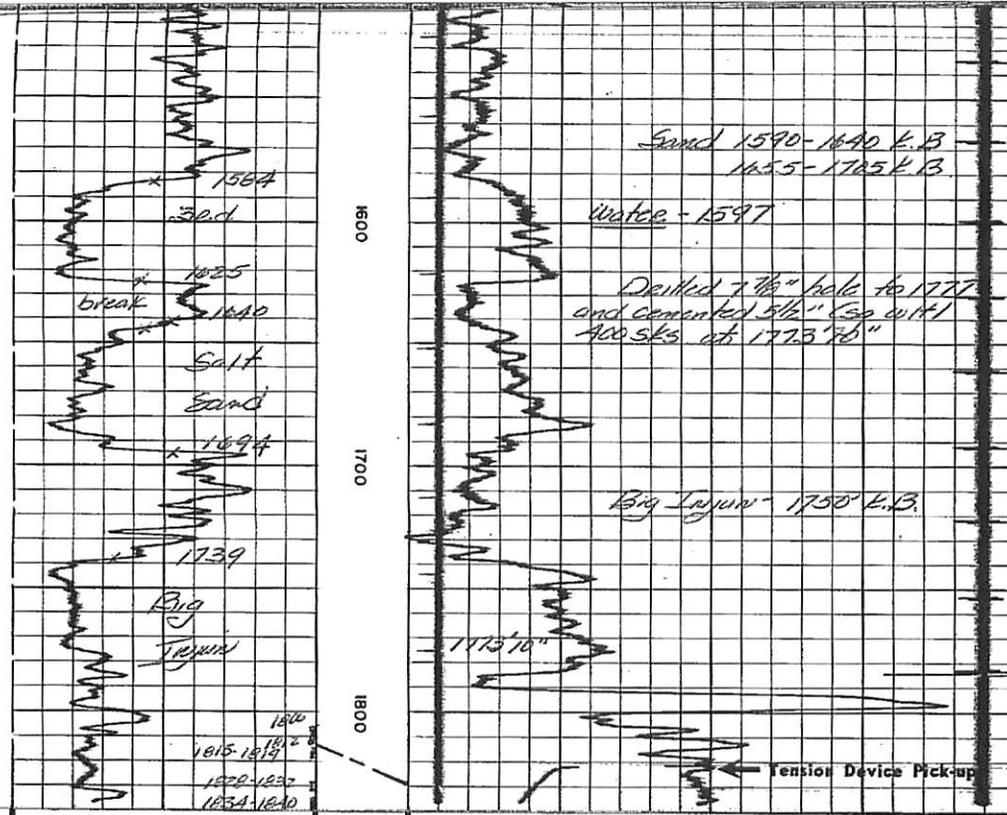


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 FEB 18 2 45
 WV Department of Environmental Protection

1806

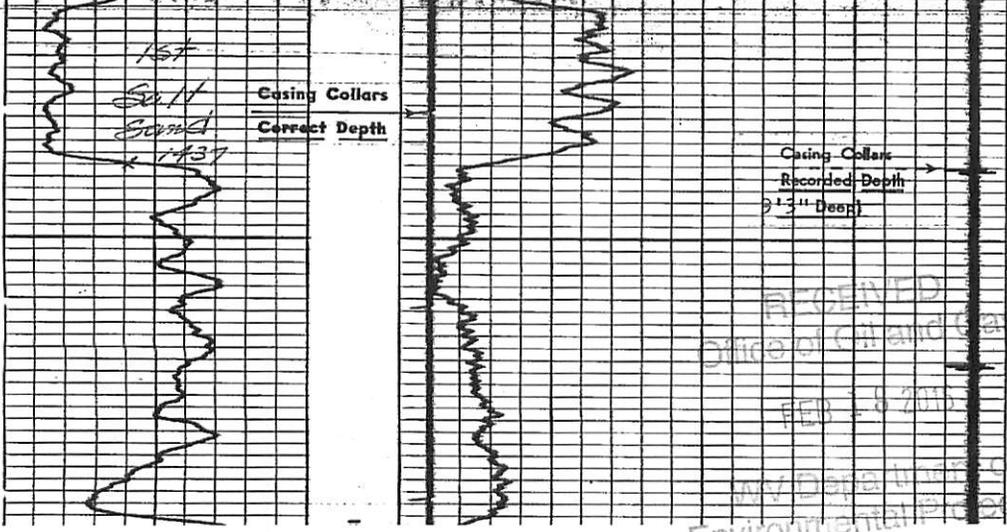


| | | | | | |
|-------------------------------|-----|--------|---------------------------------|-----------------------------------|------|
| GAMMA RAY API UNITS | | DEPTHS | NEUTRON API UNITS | | |
| 0 | 150 | | 532 T.D.-1730 | 3192 | 5852 |
| 150 | 300 | | 0 1730-1500 | 2600 | 5320 |
| | | | 0 1500-SUR. | 1332 | 2664 |
| | | | CASING COLLARS AT CORRECT DEPTH | CASING COLLARS RECORDED 9'3" DEEP | |

COMPANY MANUFACTURER'S LIGHT & HEAT Rm N/A °F SWSC FR 1820
 WELL J. & E. CROW #L-4697 Rmf °F SWSC TD 1821
 FIELD MAJORSVILLE STORAGE Rmc °F DRLR TD 1845
 COUNTY MARSHALL STATE W. VA. BHT °F Elev: KB 1204.55
 DF
 GL 1191.55

DETAIL LOG
5" = 100'

| | | | | | |
|-------------------------------|-----|--------|---------------------------------|-----------------------------------|------|
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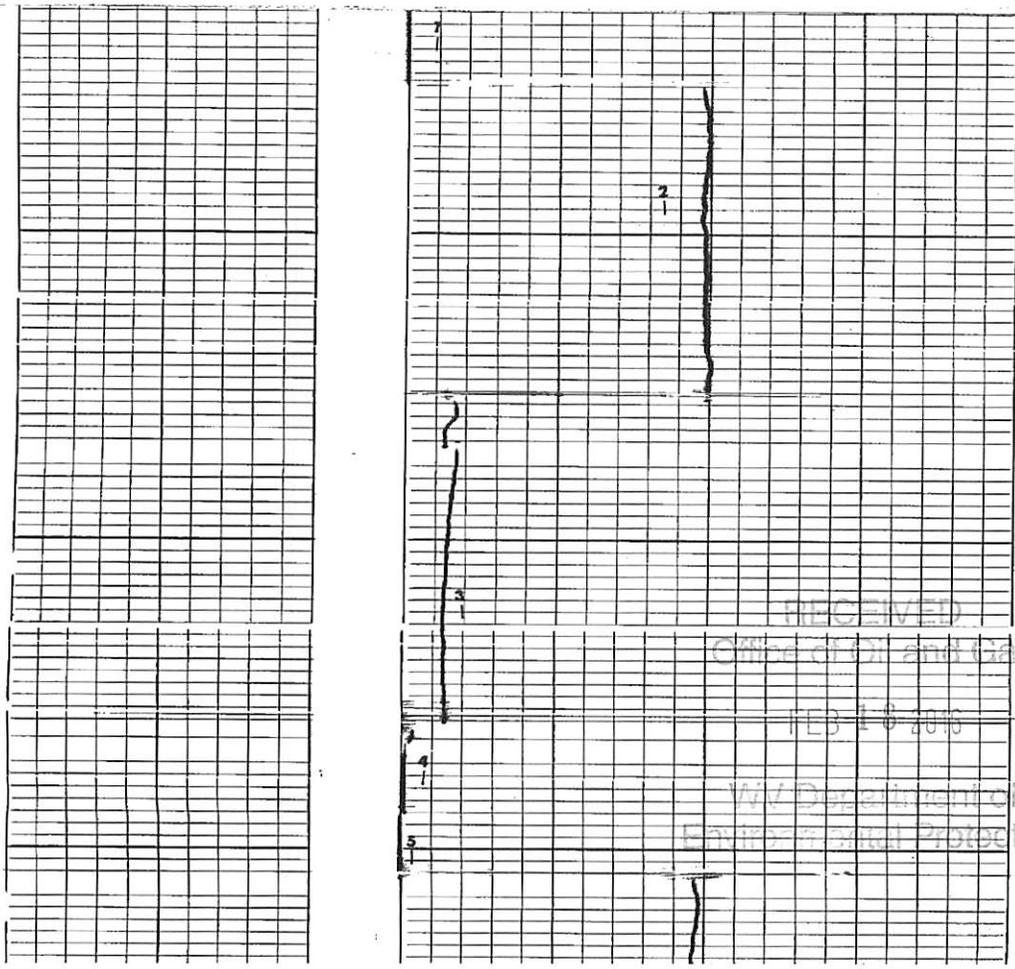
S 100476P

RADIOACTIVITY CALIBRATION DATA

| | | | | | | | |
|---------|-----------------------------|-----|-----|---|----|---------|------------|
| COMPANY | MANUFACTURER'S LIGHT & HEAT | Rm | N/A | @ | °F | SWSC FR | 1820 |
| WELL | J. & E. CROW #L-4697 | Rmf | | @ | °F | SWSC TD | 1821 |
| FIELD | MAJORSVILLE STORAGE | Rmc | | @ | °F | DRLR TD | 1845 |
| COUNTY | MARSHALL STATE W. VA. | BHT | | | °F | Elev: | KB 1204.55 |
| | | | | | | DF | |
| | | | | | | GL | 1191.55 |

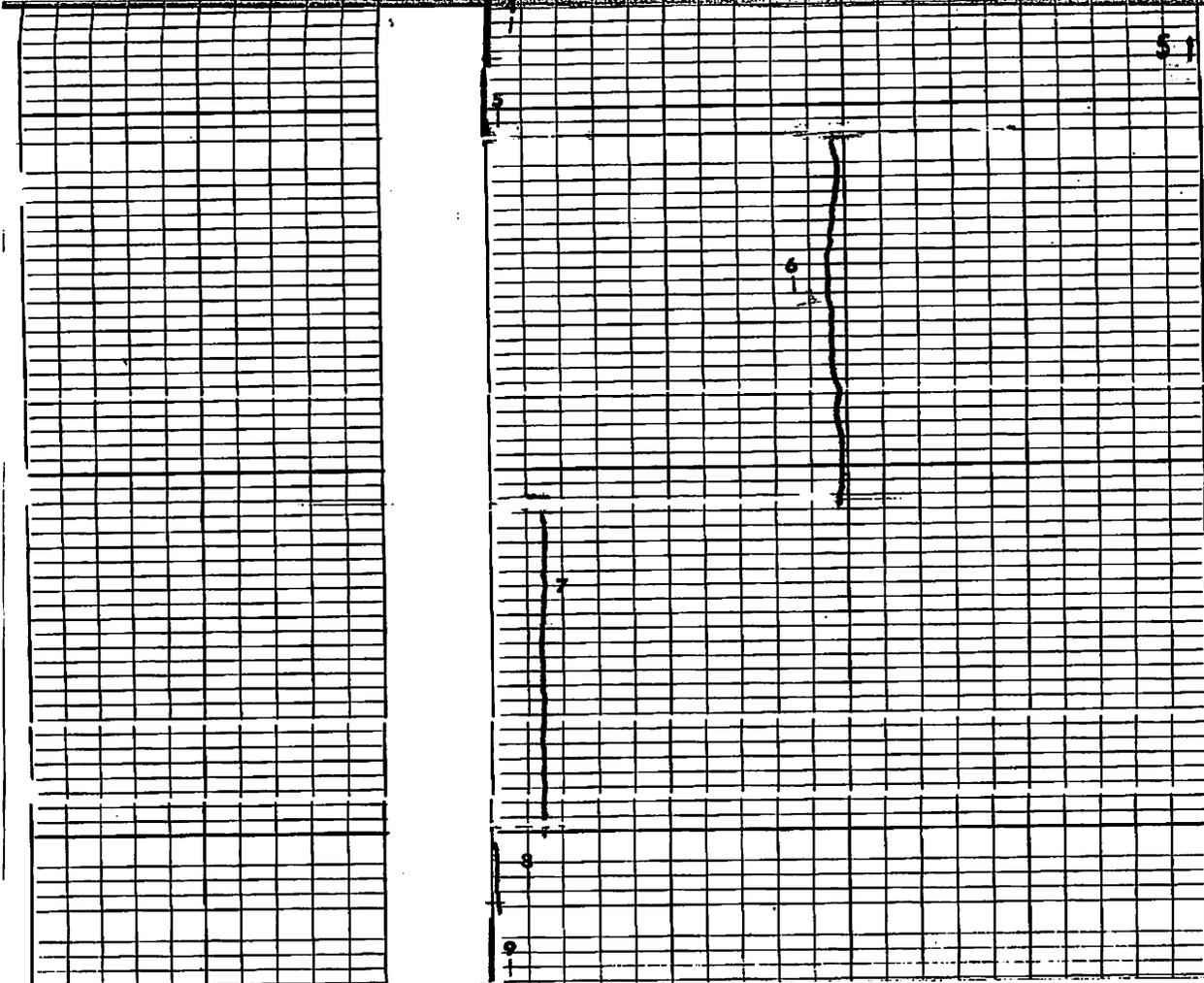
SCHLUMBERGER LOCATION NEUTRON CALIBRATION G TOOL
 SENS = 500 TC = 6 SEC
 DATE SEPT. 4, 1962

- EQUIPT SERIAL NOS: GNC -F- 11. SGD -F- 69.
 NDH -B- X4. NLD -E- X4. NLS -M- 1010 NCT -B- 12. T.S. #
- 1) Mechanical and Electrical Zero
 - 2) NCT-B Calibrating Tank 372 CPS
 - 3) Water Tank 56 CPS
 - 4) Background in Air 7 CPS
 - 5) Mechanical and Electrical Zero
 - 6) Calibration Jig "Close" Position 372 CPS
 - 7) Calibration Jig "Far" Position 56 CPS
 - 8) Background in Air 7 CPS
 - 9) Mechanical and Electrical Zero



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 FEB 16 2016
 WV Department of
 Environmental Protection

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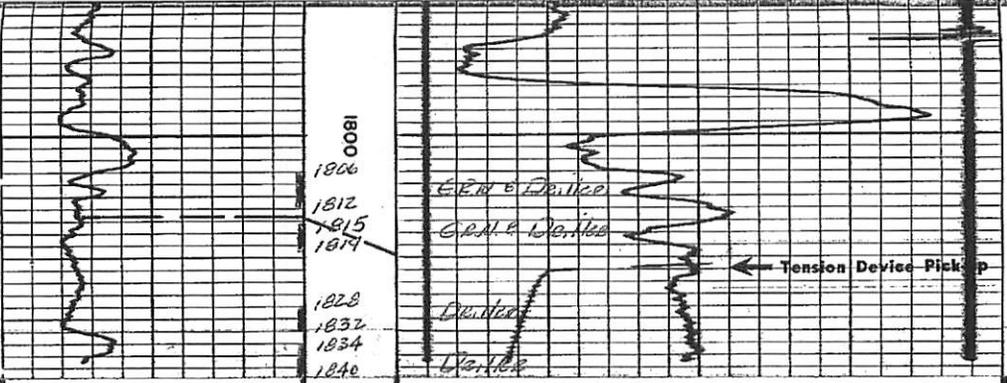


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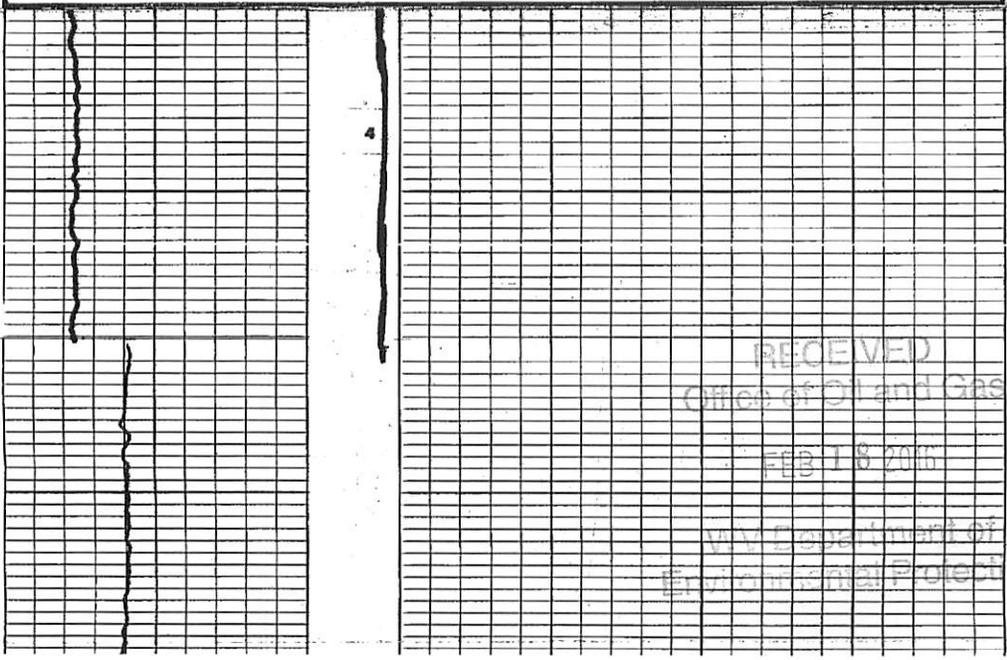
| | | | |
|------------------|---------------|---------------------------------|------------------------------------|
| 0 | 150 | CASING COLLARS AT CORRECT DEPTH | CASING COLLARS RECORDED 9' 3" DEEP |
| 150 | 300 | | |
| | | 532 T.D. -1730 | 3192 5852 |
| | | 0 1730-1500 | 2600 5320 |
| | | 0 1500-SUR | 1332 2664 |
| GAMMA RAY | DEPTHS | NEUTRON | |
| API UNITS | | API UNITS | |

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 WELL J. & E. CROW #L-4697 Rmf _____ @ _____ °F SWSC TD 1821
 FIELD MAJORSVILLE STORAGE Rmc _____ @ _____ °F DRLR TD 1845
 COUNTY MARSHALL STATE W. VA. BHT _____ °F Elev: KB 1204.59
 DF _____ GL 1191.59

RADIOACTIVITY CALIBRATION DATA

FIELD RADIOACTIVITY CALIBRATION

- 1) Gamma Ray and/or Neutron Calibration Zero
- 2) Gamma Ray Background, CPS 272, TC-6, SENS. 400
- 3) Neutron Background, CPS 6, TC-6, SENS.-500
- 4) Gamma Ray Calibration @ 8.25 DIV. — 165 API Units, CPS 800, TC-6, SENS. 400
- 5) Neutron Calibration Jig, "Near" Position CPS 420, TC-6, SENS.-300
- 6) Neutron Calibration Jig, "Far" Position CPS 60, TC-6, SENS.-300
- 7) Gamma Ray and/or Neutron Zero
- 8) Formation Gamma Ray and/or Neutron Reading at Calibration Sensitivity
- 9) Formation Gamma Ray and/or Neutron Reading at Logging Sensitivity



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 FEB 18 2016
 WV Department of
 Environmental Protection

5100476P



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Office of Oil and Gas

FEB 18 1970

WV Department of
Environmental Protection

RADIOACTIVITY CALIBRATION DATA

1) Date: February 16, 2016
2) Operator's Well No. SGW-161
3) API Well No. 47-51-00476
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 Form 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

Murray Smith

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



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.

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 1193.78' 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)
- 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 *Murray Smith*

Company Official (Typed Name) Mason Smith

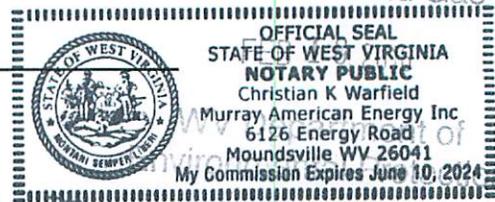
Company Official Title Project Engineer

Subscribed and sworn before me this 16 day of February, 20 16

Christian K. Warfield Christian K. Warfield

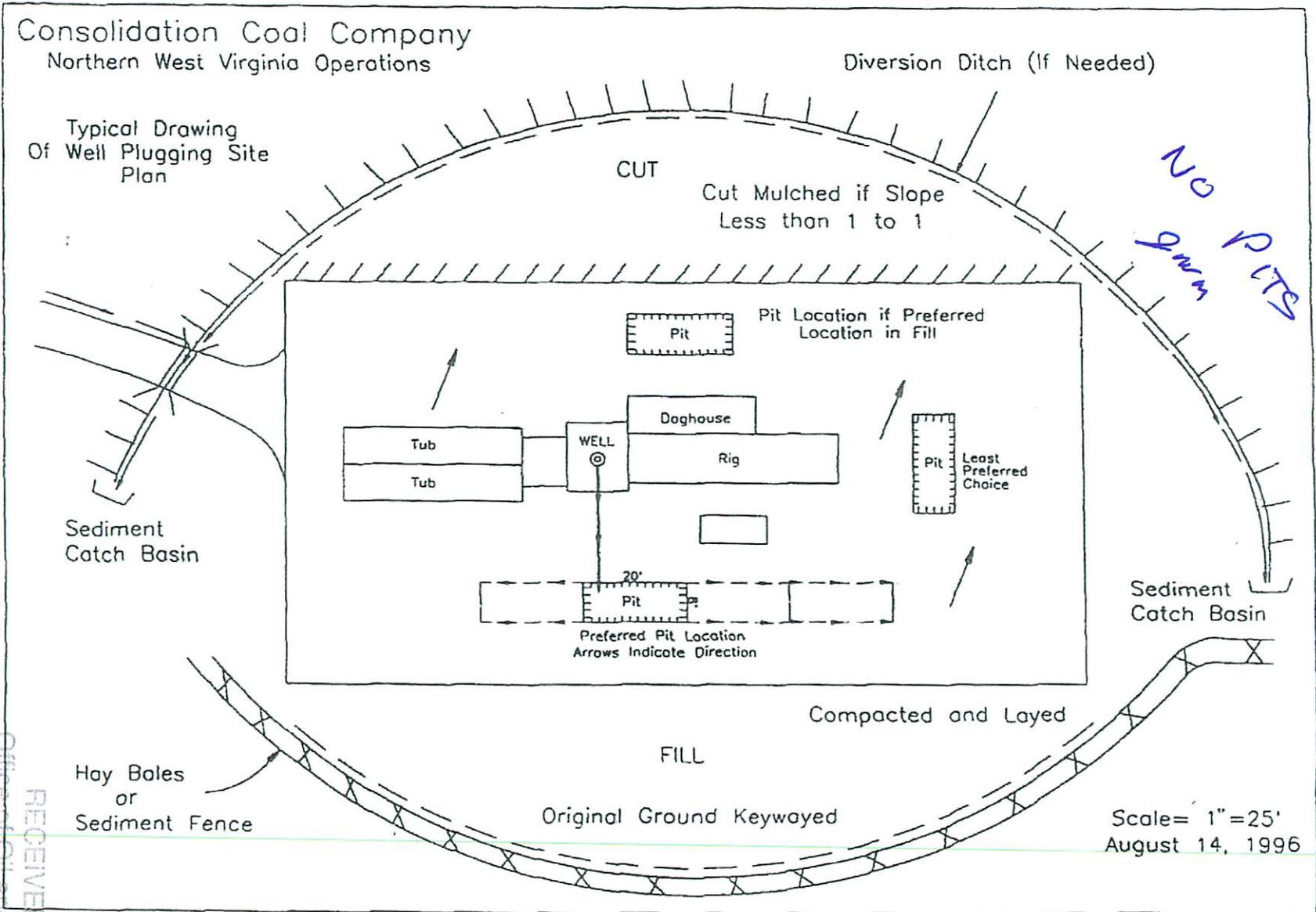
Notary Public **RECEIVED**
Office of Oil and Gas

My commission expires June 10, 2024



Consolidation Coal Company
Northern West Virginia Operations

Typical Drawing
Of Well Plugging Site
Plan



*NO PITS
9mm*

RECEIVED
Office of Oil and Gas

FEB 18 2016

WV Department of
Environmental Protection

5100478P

**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.

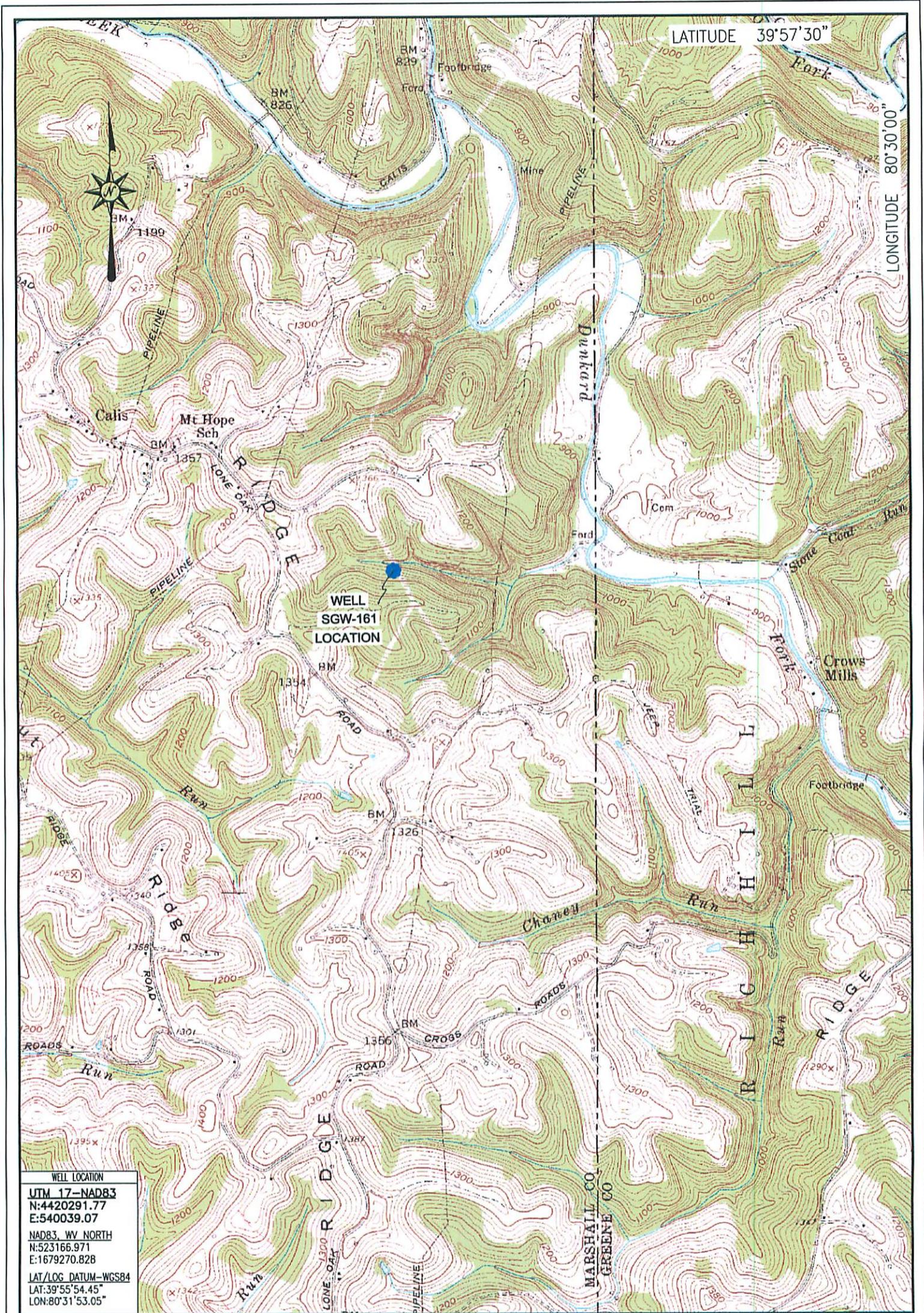
Once the well is completed, that material (minus the cave material) will be trucked to the next well to be plugged or to DEP facilities number U-0033-83, O-1001-00, U-1035-91U-46-84, U-78-83, O-1044-9, or U-100-83.

Sincerely,



Mason Smith
Project Engineer

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



LOCATION MAP
FEBRUARY 11, 2016

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

SGW-161
MAJORSVILLE QUADRANGLE
WEST VIRGINIA

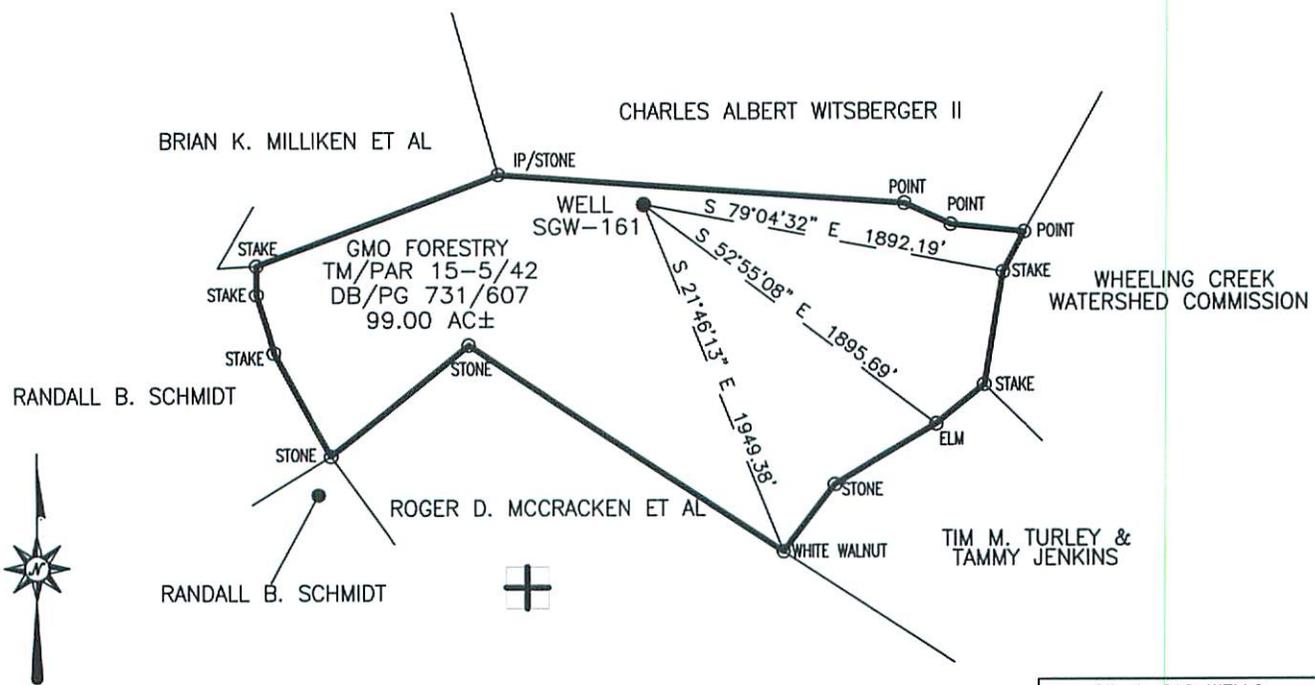
SCALE 1" = 2000'



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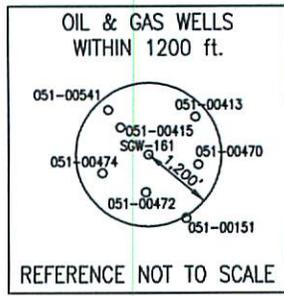
Well is located on topo map 9,669 feet south of Latitude: 39° 57' 30"

Well is located on topo map 8,806 feet west of Longitude: 80° 30' 00"



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 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: FEBRUARY 11, 2016
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 API WELL #: 47 51 00476P
 STATE COUNTY PERMIT

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

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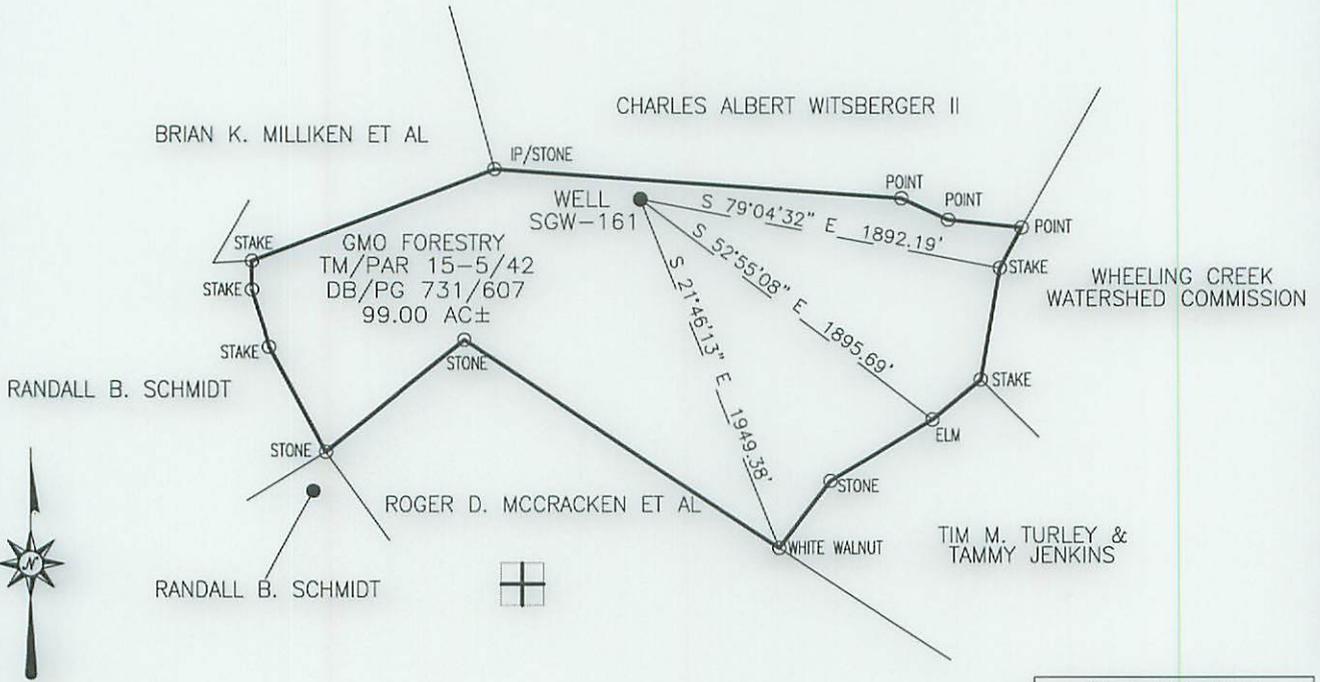
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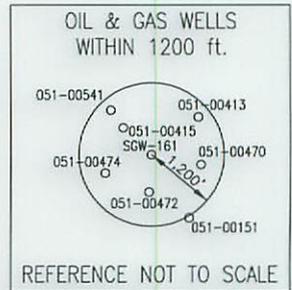
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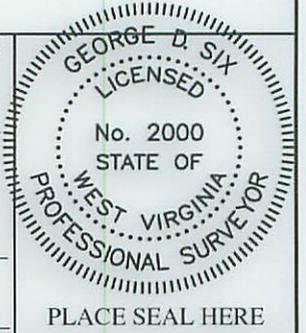
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