



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

July 20, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-9700386, issued to SWN PRODUCTION COMPANY, LLC, 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: 2-451
Farm Name: CRITES, STELLA
API Well Number: 47-9700386
Permit Type: Plugging
Date Issued: 07/20/2015

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

9700386P

WW-4B
Rev. 2/01

1) Date April 10, 2015
2) Operator's
Well No. 650451
3) API Well No. 47-097 - 00386

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X
- 5) Location: Elevation 1519' Watershed Glady Fork of Stone Coal
District Buckhannon County Upshur Quadrangle Crawford Adrian
- 6) Well Operator SWN Production Co, LLC 7) Designated Agent Dee Southall
Address P.O. Box 1300 Address P.O. Box 1300
Jane Lew, WV 26378 Jane Lew, WV 26378
- 8) Oil and Gas Inspector to be notified Name Bryan Harris
Address PO Box 157
Volga, WV 26238
- 9) Plugging Contractor Name R & J Well Service
Address P.O. Box 37
Hueysville, KY 41640

10) Work Order: The work order for the manner of plugging this well is as follows:

Contact the WV State Inspector 48 hours prior to operations. Safety is the highest priority. Hold wellsite safety meetings prior to each significant operation. Review critical parameters, plans and objectives as well as emergency act. MIRU construction equipment if necessary to repair road location in order to get workover rig in. Remove any tanks, separators, well lines, meter runs, exc. MIRU service rig & needed equipment. NOTE: Blow down well to pit or tank. Attempt to pull 7" csg. TIH strapping 2 3/8" tbg to 2,298' or TD. Load hole to surface with 6% gelled water or break surface with circulation, +/- 100 BBL. Pump 30 sks of Class A cement for 150' cement plug on top of the CIBP, flush tubing with 10 bbls 6% gelled water. TIH w/ 2 3/8" tubing to 1,650'. Circulate 6% gelled water as needed to load hole to surface. Pump 27 sks of Class A cement for 125' plug, flush tubing with 7 bbls 6% gelled water. (note: if casing is still in place perforate casing between 1,600' and 1,625' prior to this step.) TOOH with 2 3/8" tubing to surface. SD & WOC for 8 hours. RIH w/ sandline tools & tag plug @ 1,525' +/- . Plug must be at 1,550' or higher; Add additional cement if needed. TIH w/ 2 3/8" tubing to 1,240', Circulate 6% gelled water as needed to load hole to surface and Pump 33 sks of Class A cement, flush tubing with 5 bbls 6% gelled water. (note: if casing is still in place perforate casing @ 1,215' and 1,157' prior to this step.) TOOH with 2 3/8" tubing to surface. SD & WOC for 8 hours. RIH w/ sandline tools & tag plug @ 1,090' +/- . Plug must be at 1,105' or higher; Add additional cement if needed. If cuttings are not cleared, continue until successful, cut 7" csg @ 1,015' and pull casing. (Continue working your way up the hole to make a successful cut and pull casing.) TIH w/ 2 3/8" tubing to 50' below where casing cut was made.

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Circulate 6% gelled water as needed to load hole to surface. Pump 28 sks of Class A cement, flush tubing with 5 bbls 6% gelled water. TOOH with 2 3/8" tubing to surface. SD & WOC for 8 hours. Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Bryan O'Hara Date 5-15-15

9700386P

WW-4B
Rev. 2/01

1) Date April 10, 2015
2) Operator's Well No. 650451
3) API Well No. 47-097 - 00386

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ___ / Gas X ___ / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X ___

5) Location: Elevation 1519' Watershed Gladly Fork of Stone Coal
District Buckhannon County Upshur Quadrangle Crawford Adrian

6) Well Operator SWN Production Co, LLC 7) Designated Agent Dee Southall
Address P.O. Box 1300 Address P.O. Box 1300
Jane Lew, WV 26378 Jane Lew, WV 26378

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Bryan Harris Name R & J Well Service
Address PO Box 157 Address P.O. Box 37
Volga, WV 26238 Hueysville, KY 41640

10) Work Order: The work order for the manner of plugging this well is as follows:
RIH w/ sandline tools & tag plug. Plug must be @ 50' higher than where the casing was cut; Add additional cement if needed. Attempt to cut and pull 8 5/8" csg. TIH w/ 2 3/8" tubing to 585'.
Pump 200 sks, of Class A cement, to surface. TOOH w/ tubing. Top off well with required Class A cement as needed. Install a 36 inch casing monument. Install an Aluminum plat
monument with ALL required WV dates and API numbers. RDMO all service equipment providers and reclaim location to WV State requirements.

CIBP IN CASING ABOVE GORDON IF NEEDED.

JWM

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Environmental Protection

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

Work order approved by inspector Duza O'Hara Date 5-15-15

Notes

1. Safety is the top priority.
2. EVERYONE has stop work authority.
3. SWN safety policies and practices will be followed at all times during the job.

Scope of Operation

1. TIH with 2 3/8" tubing to PBTD of +/- 2,298' or tag bottom
2. Pump required cement and gel plugs per WV DEP requirements
3. Plant a well monument with API number and date of plugging

Procedure

1. Contact the WV State Inspector 48 hours prior to operations
2. Safety is the highest priority. Hold wellsite safety meetings prior to each significant operation. Review critical parameters and objectives as well as emergency action plans.
3. MIRU construction equipment if necessary to repair road / location in order to get workover rig in. Remove any tanks, separators, well lines, meter runs, exc.
4. MIRU service rig & needed equipment. **NOTE: Blow down well to pit or tank.**
5. Attempt to pull 7" csg.
6. TIH strapping 2 3/8" tbg to 2,298' or TD.
7. Load hole to surface with 6% gelled water or break surface with circulation +/- 100 bbl.
8. Pump 30 sks of Class A cement for 150' cement plug on top of the CIBP, flush tubing with 10 bbls 6% gelled water.
9. TOOH with 2 3/8" tubing to surface. **SD & WOC for 8 hours.**
10. RIH w/ sandline tools & tag plug@ 2,150' +/- . Plug must be at 2,195' or higher; Add additional cement if needed.
11. TIH w/ 2 3/8" tubing to 1,650'. Circulate 6% gelled water as needed to load hole to surface. Pump 27 sks of Class A cement for 125' plug, flush tubing with 7 bbls 6% gelled

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* CIBP WILL BE SET ABOVE GORDON (IN CASING) IF NEEDED.

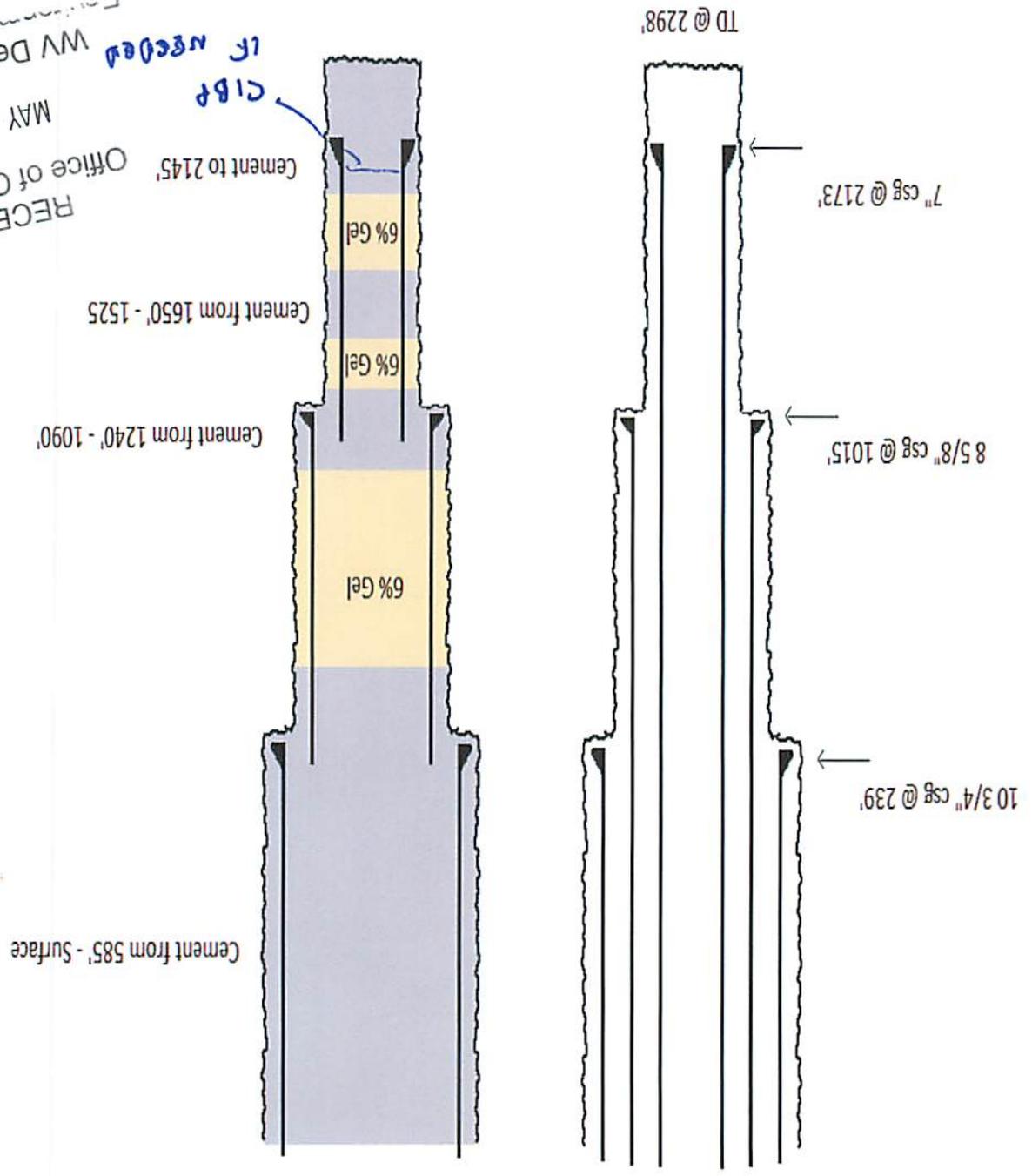
water. (note: if casing is still in place perforate casing between 1,600' and 1,625' prior to this step.)

12. TOOH with 2 3/8" tubing to surface. SD & WOC for 8 hours.
13. RIH w/ sandline tools & tag plug@ 1,525' +/- . Plug must be at 1,550' or higher; Add additional cement if needed.
14. TIH w/ 2 3/8" tubing to 1,240', Circulate 6% gelled water as needed to load hole to surface. and Pump 33 sks of Class A cement, flush tubing with 5 bbls 6% gelled water. (note: if casing is still in place perforate casing @ 1,215' and 1,157' prior to this step.)
15. TOOH with 2 3/8" tubing to surface. SD & WOC for 8 hours.
16. RIH w/ sandline tools & tag plug@ 1,090' +/- . Plug must be at 1,105' or higher; Add additional cement if needed.
17. If 1st attempt to pull casing was unsuccessful, cut 7" csg @ 1,015' and pull casing. (Continue working your way up the hole to make a successful cut and pull casing.)
18. TIH w/ 2 3/8" tubing to 50' below where casing cut was made. Circulate 6% gelled water as needed to load hole to surface. Pump 28 sks of Class A cement, flush tubing with 5 bbls 6% gelled water.
19. TOOH with 2 3/8" tubing to surface. SD & WOC for 8 hours.
20. RIH w/ sandline tools & tag plug. Plug must be @ 50' higher than where the casing was cut; Add additional cement if needed.
21. Attempt to cut and pull 8 5/8" csg.
22. TIH w/ 2 3/8" tubing to 585'. Pump 200 sks, of Class A cement, to surface. TOOH w/ tubing.
23. Top off well with required Class A cement as needed.
24. Install a 36 inch casing monument. Install an Aluminum plat monument with ALL required WV dates and API numbers
25. RDMO all service equipment providers and reclaim location to WV State requirements.

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9700386P

Well Bore Schematic Stella Crites 2



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Well Data

| | |
|------------------|--------------------------------------|
| Surface Location | Lat. 38.94860046, Long. -80.30113060 |
| TD | 2,298' |

Casing and Tubular Data

| String | Size | Weight | Depth |
|--------------|---------|-------------|--------|
| Surface | 10 3/4" | 32.75 lb/ft | 239' |
| Intermediate | 8 5/8" | 24 lb/ft | 1,015' |
| Production | 7" | 17 lb/ft | 2,173' |

Dimensions & Capacities

| Size | Weight lb/ft | ID | Capacity (cuft/ft) | Capacity (bbl/ft) |
|---------|-----------------|---------|-----------------------|----------------------|
| 10 3/4" | 32.75 | 10.192" | 0.5665 | 0.1009 |
| 8 5/8" | 24 | 8.097" | 0.3576 | 0.0637 |
| 7" | 17 | 6.538" | 0.2331 | 0.0415 |
| 2 3/8" | 4.7 | 1.995" | 0.0214 | 0.0038 |

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Personnel/Phone List

| | | |
|----------------------------|----------------|---|
| Completions Superintendent | Shawn Jackson | Office : 304 884-1618 Cell: 304 641-3204 |
| Completions Foremen | Aaron Casto | Office : 304 884-1619 Cell: 724 886-2079 |
| Completions Foremen | Alex Worley | Office: 304 884-1620 Cell: 304 406-4292 |
| Production Manager | Chris Flanagan | Office: 304 884-1626 Cell: 304 203-4985 |
| Area Manager | Dave Sweely | Office: 304 884-1663 |
| Land Man | Randy Orsburn | Office: 304 884-1645 |
| WV State Inspector | Bill Hatfield | Cell: 304 767-1828 |

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Division 4
Record of well No. 4451 on Rosetta L. Crites Farm 110 Acres
Weston, W. Va. Field Buckhannon Township District Upshur County W. Va. State
Rig Commenced Nov. 6 1950 Completed Nov. 10 19 50
Drilling Commenced Nov. 16 1950 Completed Jan. 12 19 51
Contractor Guy L. Warner Address Gassaway, W. Va.
Driller's Name G.H. Crites and H.C. Cawthon
Tool Dresser Warren McClain & Wayne B. Smith

CASING AND TUBING RECORD

| | Conductor | 13" | 10" | 8 1/4" | 7" | 6 5/8" | 5 3/16" | 4" | 3" | | |
|--------------|-----------|-----|---------|----------|----|----------|---------|----|----|---|----------|
| Used in Drig | - | - | 239' 8" | 1015' 1" | - | 2173' 2" | - | - | - | - | Thds. On |
| Left in well | - | - | 239' 8" | 1015' 1" | - | 2173' 2" | - | - | - | - | " " |

PACKER RECORD

SHOOTING RECORD

| Size | Depth Set | Type Packer | Date | Type Explosive | Amount | DEPTH | | Volume Before Co. Ft. | Volume After Co. Ft. |
|------|-----------|-------------|------|----------------|--------|-------|--------|-----------------------|----------------------|
| | | | | | | Top | Bottom | | |
| | | | | | | | | | |

VOLUME AND PRESSURE

| Date | Reading in Inches | Liquid | Size Orifice | Volume | Sand | PRESSURE IN MIN | | | | | 24 Hour R. P. | Max. H. P. | Hours |
|---------|-------------------|--------|--------------|---------|--------|-----------------|----|----|----|-----|---------------|------------|-------|
| | | | | | | 1 | 5 | 10 | 30 | 60 | | | |
| 1-24-51 | 74 | Water | 1-1/2 | 151,713 | Gordon | 1 | 13 | 25 | 76 | 145 | 600# | | |

TOTAL INITIAL OPEN FLOW when turned into line 127,172 CUBIC FEET PER 24 HOURS

| FORMATION | TOP | BOTTOM | THICKNESS | REMARKS |
|----------------|-----|--------|-----------|---|
| Soil | 0 | 5 | 5 | |
| Red Rock | 5 | 30 | 25 | |
| Lime | 30 | 47 | 17 | |
| Red Rock | 47 | 67 | 20 | |
| Sand | 67 | 77 | 10 | |
| Lime | 77 | 101 | 24 | Water at 80', 3blrs. per hour |
| Slate | 101 | 130 | 29 | |
| Red Rock | 130 | 150 | 20 | |
| Sand | 150 | 213 | 63 | |
| Slate | 213 | 215 | 2 | |
| Coal | 215 | 220 | 5 | |
| Slate | 220 | 256 | 36 | |
| Lime | 256 | 260 | 4 | |
| Slate | 260 | 280 | 20 | |
| Lime | 280 | 300 | 20 | |
| Slate | 300 | 325 | 25 | |
| Coal | 325 | 329 | 4 | |
| Lime | 329 | 495 | 166 | Water at 349, 2blrs. per hour, show of gas at 449 |
| Slate | 495 | 500 | 5 | |
| Lime | 500 | 527 | 27 | |
| Coal | 527 | 532 | 5 | Show of gas at 530' |
| Lime | 532 | 548 | 16 | |
| Slate | 548 | 553 | 5 | |
| Sand(Dunkard) | 553 | 567 | 14 | |
| Lime | 567 | 577 | 10 | |
| Sand Salt | 577 | 615 | 38 | |
| Slate & Shells | 615 | 675 | 60 | |
| Sand Salt | 675 | 737 | 62 | |

Examined above information and measurements and found to be correct by *Guy L. Warner* Contractor
Examined and Approved by *Walter J. ...* Field Superintendent

NOTE-The above blank must be filled out carefully by the contractor, with a complete and accurate record of the well, and accompany, when presented for payment of the bill for drilling. All formations and known sands must be given by their proper name, with steel line measurements, and under the head of "Remarks" must be recorded in what sand and at what depth oil, gas or water was found, the quantity of same, the quality of the sand, and thickness of pay.

Division 4
 Record of well No. 451 on Rosetta L. Crites Farm 110 Acres
 Weston, W. Va. Field Buckhannon Township District Upshur County W. Va. State
 Rig Commenced Nov. 6 1950, Completed Nov. 10 1950
 Drilling Commenced Nov. 16 1950, Completed Jan. 12 1951
 Contractor Guy L. Warner Address Gassaway, W. Va.
 Driller's Name G.H. Crites and H.O. Cawthon

CASING AND TUBING RECORD

| | Conductor | 13" | 10" | 8 1/4" | 7" | 6 5/8" | 5 3/16" | 4" | 3" | |
|------------------|-----------|-----|---------|----------|----|----------|---------|----|----|----------|
| Used in Drilling | - | - | 239' 8" | 1015' 1" | - | 2173' 2" | - | - | - | Thds. On |
| Left in well | - | - | 239' 8" | 1015' 1" | - | 2173' 2" | - | - | - | " " |

PACKER RECORD

SHOOTING RECORD

| Size | Depth Set | Type Packer | Date | Type Explosive | Amount | DEPTH | | Volume Before Cu. Ft. | Volume After Cu. Ft. |
|------|-----------|-------------|------|----------------|--------|-------|--------|-----------------------|----------------------|
| | | | | | | Top | Bottom | | |
| | | | | | | | | | |

VOLUME AND PRESSURE

| Date | Reading in Inches | Liquid | Size Orifice | Volume | Sand | PRESSURE IN MIN. | | | | | 24 Hour R. P. | Max. R. P. | Hours |
|---------|-------------------|--------|--------------|---------|--------|------------------|----|----|----|-----|---------------|------------|-------|
| | | | | | | 1 | 5 | 10 | 30 | 60 | | | |
| 1-12-51 | 74 | Water | 1-1/2 | 151,713 | Gordon | 1 | 13 | 25 | 76 | 145 | 600# | - | - |

TOTAL INITIAL OPEN FLOW when turned in line 127,172 Cuft. CUBIC FEET PER 24 HOURS

| FORMATION | TOP | BOTTOM | THICKNESS | REMARKS |
|---------------------------|------|--------|-----------|--|
| Slate | 819 | 860 | 41 | |
| Sand Salt | 860 | 987 | 127 | |
| Lime | 987 | 1055 | 68 | |
| Slate & Shells | 1055 | 1142 | 87 | |
| Sand Salt | 1142 | 1274 | 137 | Water at 1157, 1/2 blr. per hour, show of gas at 1215' |
| Red Rock | 1274 | 1299 | 25 | |
| Lime | 1299 | 1350 | 51 | |
| Sand Gas | 1350 | 1390 | 40 | |
| Red Rock | 1390 | 1395 | 5 | |
| Lime | 1395 | 1417 | 22 | |
| Red Rock | 1417 | 1437 | 20 | |
| Lime | 1437 | 1498 | 61 | |
| Red Rock & Slate | 1498 | 1517 | 19 | |
| Big Lime | 1517 | 1600 | 83 | |
| Big Injun Sand | 1600 | 1626 | 26 | |
| Red Rock | 1626 | 1631 | 5 | |
| Gantz Sand | 1631 | 1720 | 89 | |
| Squaw Sand | 1720 | 1827 | 107 | |
| Slate | 1827 | 1830 | 3 | |
| Sand Byard | 1830 | 1980 | 50 | |
| Slate | 1880 | 1890 | 10 | |
| Sand (Fifty-foot) | 1890 | 1950 | 60 | |
| Red Rock | 1950 | 1953 | 3 | |
| Slate & Shells | 1953 | 1987 | 34 | |
| Red Rock | 1987 | 1990 | 3 | |
| Sand (Thirty-foot) | 1990 | 2020 | 30 | |
| Red Rock & Slate & Shells | 2020 | 2152 | 132 | |
| Lime | 2152 | 2165 | 13 | |

Examined above information and measurements and found to be correct by

Examined and Approved by

Guy L. Warner Contractor

Walter Z. C. Field Superintendent

NOTE - The above blank must be filled out carefully by the contractor, with a complete and accurate record of the well, and accompany, when presented for payment of the bill for drilling. All formations and known sands must be given by their proper name, with steel line measurements, and under the head of "Remarks" must be recorded in what sand and at what depth oil, gas or water was found, the quantity of same, the quality of the sand, and thickness of pay.

Cumberland & Allegheny Gas Company
 Division 4
 Record of well No. 451 on Rosetta L. Crites Farm 110 Acres
 Weston, W. Va. Field Buckhannon Township District Upshur County W. Va. State
 Rig Commenced Nov. 6 19 50 Completed Nov. 10 1950
 Drilling Commenced Nov. 16 19 50 Completed Jan. 12 1951
 Contractor Guy L. Warner Address Gassaway, W. Va.
 Driller's Name G.H. Crites and H.O. Cawthon

| CASING AND TUBING RECORD | | | | | | | | | |
|--------------------------|-----|-----|--------|----|--------|--------|----|----|--|
| Conductor | 11" | 10" | 8 1/2" | 7" | 6 3/8" | 5 1/2" | 4" | 3" | |
| Used in Pipe | | | | | | | | | |
| Set in Well | | | | | | | | | |

| PACKER RECORD | | | | SHOOTING RECORD | | | | | |
|---------------|-----------|-------------|------|-----------------|--------|-------|--------|----------------|---------------|
| Date | Depth Set | Type Packer | Date | Type Explosive | Amount | DEPTH | Volume | | |
| | | | | | | Top | Bottom | Before Co. Ft. | After Co. Ft. |
| | | | | | | | | | |

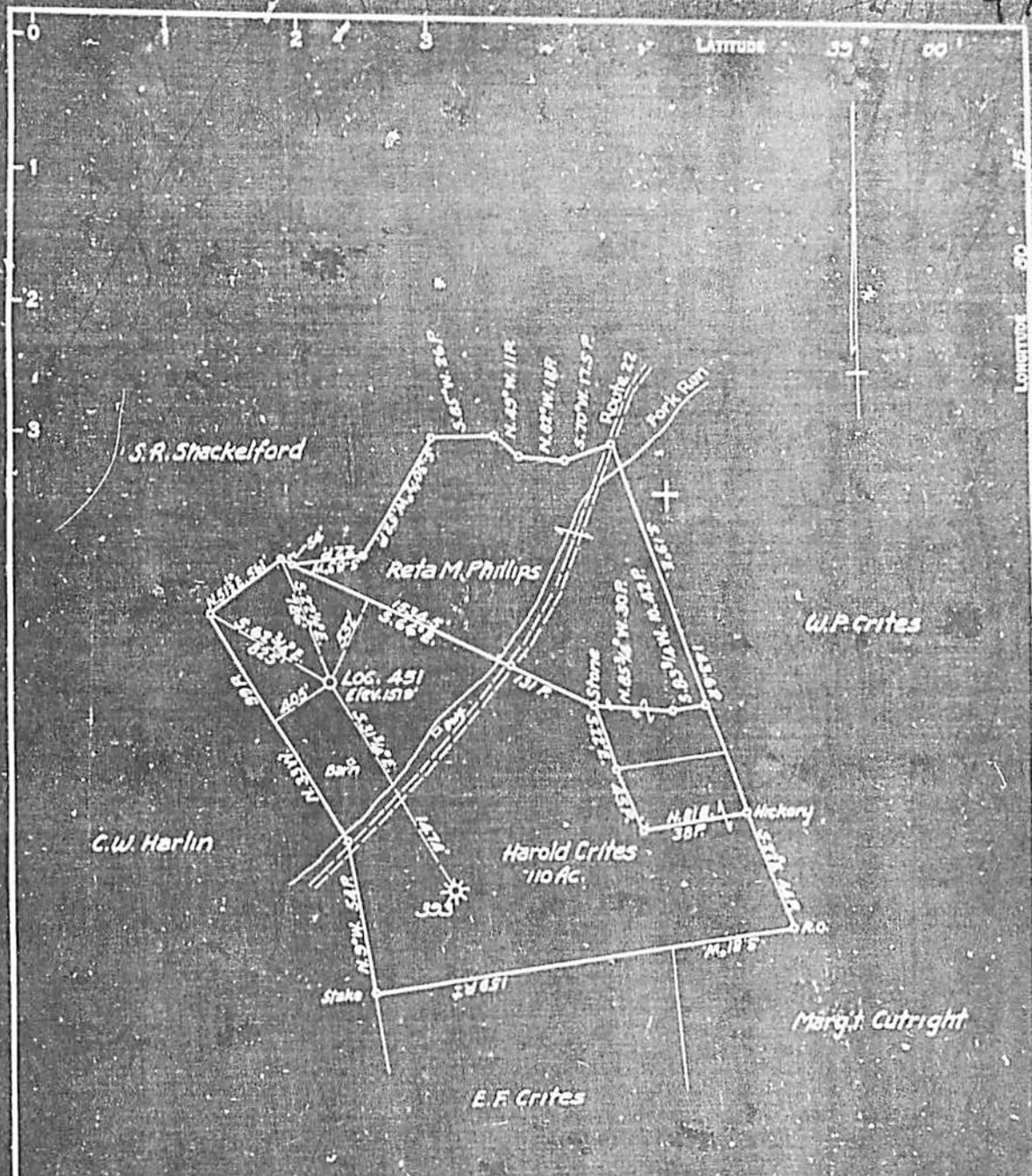
| VOLUME AND PRESSURE | | | | | | | | | | | | | | |
|---------------------|-------------------|--------|--------------|--------|------|-----------------|---|----|----|----|---------------|------------|-------|--|
| Date | Feeding in Inches | Liquid | Size Orifice | Volume | Head | PRESSURE IN MIN | | | | | 24 Hour H. P. | Max. R. P. | Hours | |
| | | | | | | 1 | 5 | 10 | 15 | 20 | | | | |
| | | | | | | | | | | | | | | |

TOTAL INITIAL OPEN FLOW CUBIC FEET PER 24 HOURS

| FORMATION | TOP | BOTTOM | THICKNESS | REMARKS |
|----------------|------|--------|-----------|--|
| Sand (Stray) | 2165 | 2197 | 32 | |
| Line | 2197 | 2220 | 23 | |
| Slate & Shells | 2220 | 2245 | 25 | |
| Sand (Gordon) | 2245 | 2270 | 34 | Gas at 2250-2266'. When drilled in gas |
| Line (Gritty) | 2270 | 2298 | 19 | tested 77/10W-1-1/2". Well tested |
| Total Depth | 2293 | | | 74/10W-1-1/2" when shut in. |

1-18-51
 Well tested 52/10W-1-1/2" after being turned 3 hours. Well turned into line
 Line Pressure 48# Pick Ups
 1Min. 2Min. 3Min. 4Min. 5Min.
 50# 53# 54# 56# 58#
 Pick Ups
 1Min. 2Min. 3Min. 4Min. 5Min. 6Min. 7Min. 8Min. 9Min. 10Min. 11Min. 12Min. 13Min.
 23# 42# 62# 9 11 13 15 17 19# 21# 24# 26# 28#
 14Min. 15Min. 16Min. 17Min. 18Min. 19Min. 20Min. 30Min.
 30# 32# 34# 36# 38# 40# 42#

9700386P



COAL OWNED BY Buckhannon River Coal Co. (99 1/2 Ac.)
State of West Va. (9.37 Ac.)

NEW LOCATION
 DRILL DEEPER
 ABANDONMENT

COMPANY Cumberland & Allegheny Gas
 ADDRESS 400 Union Trust Bldg. Pittsburgh Pa.
 FARM Harold Crites
 TRACT _____ ACRES 110 LEASE No. 5134
 WELL (FARM) No. 2 SERIAL No. 451
 ELEVATION (SPIRIT LEVEL) 1512'
 QUADRANGLE Crawford
 COUNTY Upshur DISTRICT Buckhannon
 ENGINEER Thos. E. Virgin
 ENGINEER'S REGISTRATION No. 1503
 FILE No. _____ DRAWING No. X-13-436
 DATE Aug. 29, 1950 SCALE 1" = 200'

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

WELL LOCATION MAP

FILE No. ups-386

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS, SCALE 1 TO 62,500, LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

— DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

WW-4A
Revised 6-07

1) Date: April 10, 2015
2) Operator's Well Number
650451
3) API Well No.: 47 - 097 - 00386

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: | 5) (a) Coal Operator |
| (a) Name <u>Steven & Cheryl Neely</u> | Name _____ |
| Address <u>27480 Tower Road</u> | Address _____ |
| <u>Richardsville, VA 22736</u> | |
| (b) Name _____ | (b) Coal Owner(s) with Declaration |
| Address _____ | Name <u>Roscco, LLC</u> |
| | Address <u>Rt 5 Box 29</u> |
| | <u>Buckhannon, WV 26201</u> |
| (c) Name _____ | Name _____ |
| Address _____ | Address _____ |
| 6) Inspector <u>Bryan Harris</u> | (c) Coal Lessee with Declaration |
| Address <u>PO Box 157</u> | Name _____ |
| <u>Volga, WV 26238</u> | Address _____ |
| Telephone <u>304-553-6087</u> | |

TO THE PERSONS 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 its 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 reverses side. However, you are not required to take any action at all.

Take notice that 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 delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

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| | |
|---------------|--------------------------------|
| Well Operator | <u>SWN Production Co., LLC</u> |
| By: | <u>Dee Southall</u> |
| Its: | <u>Regulatory Supervisor</u> |
| Address | <u>P.O. Box 1300</u> |
| | <u>Jane Lew, WV 26378</u> |
| Telephone | <u>304-884-1614</u> |

Subscribed and sworn before me this 23rd day of April 2015
Brittany R Woody Notary Public
My Commission Expires 11/27/22

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 SWN Production Co., LLC OP Code 494512924

Watershed Glady Fork of Stone Coal Quadrangle Grawford ~~Adrian~~

Elevation 1519' County Upshur District Buckhannon

Description of anticipated Pit Waste: Water from plugging process

Will a synthetic liner be used in the pit? yes 20 ALL.

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 2D0072539/2D0413175/2D0610306/2D0610317)
- Reuse (at API Number at next anticipated well, API# will be included on the WR34/&or permit addendum)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain flowback will be put in steel tanks and reused or taken to permitted disposal facility)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain _____)
- Swabbing
- Plugging

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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 [Signature]

Company Official (Typed Name) Dee Southall

Company Official Title Regulatory Supervisor

Subscribed and sworn before me this 23rd day of April, 2015

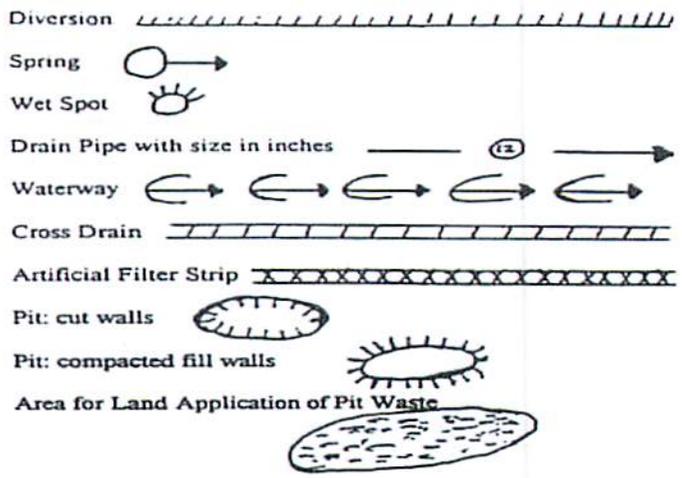
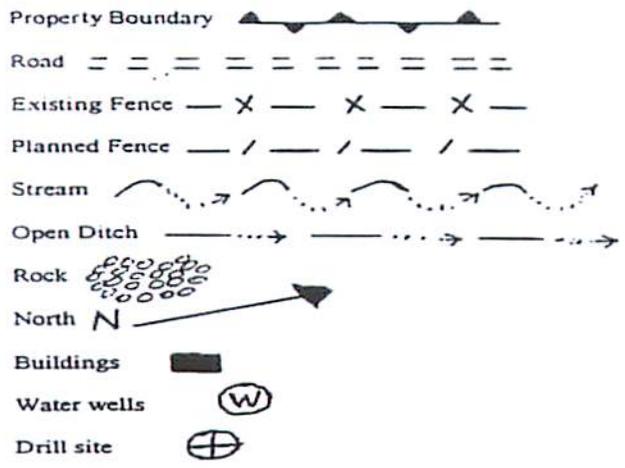
Brittany R Woody

Notary Public

My commission expires 11/27/22



LEGEND



Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH _____

Lime ^{as determined by pH test min. 2} _____ Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) ⁵⁰⁰ _____ lbs/acre (500 lbs minimum)

Mulch ^{Hay/Straw} _____ Tons/acre

Seed Mixtures

| Seed Type | Area I | lbs/acre | Seed Type | Area II | lbs/acre |
|---------------|--------|----------|---------------|---------|----------|
| Orchard Grass | 20 | | Orchard Grass | 20 | |
| Red Top | 15 | | Red Top | 15 | |
| White Clover | 15 | | White Clover | 15 | |

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Attach: Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Buyan O'Hanlon

Comments: _____

Title: Oil and Gas Inspector _____ Date: 5-15-15

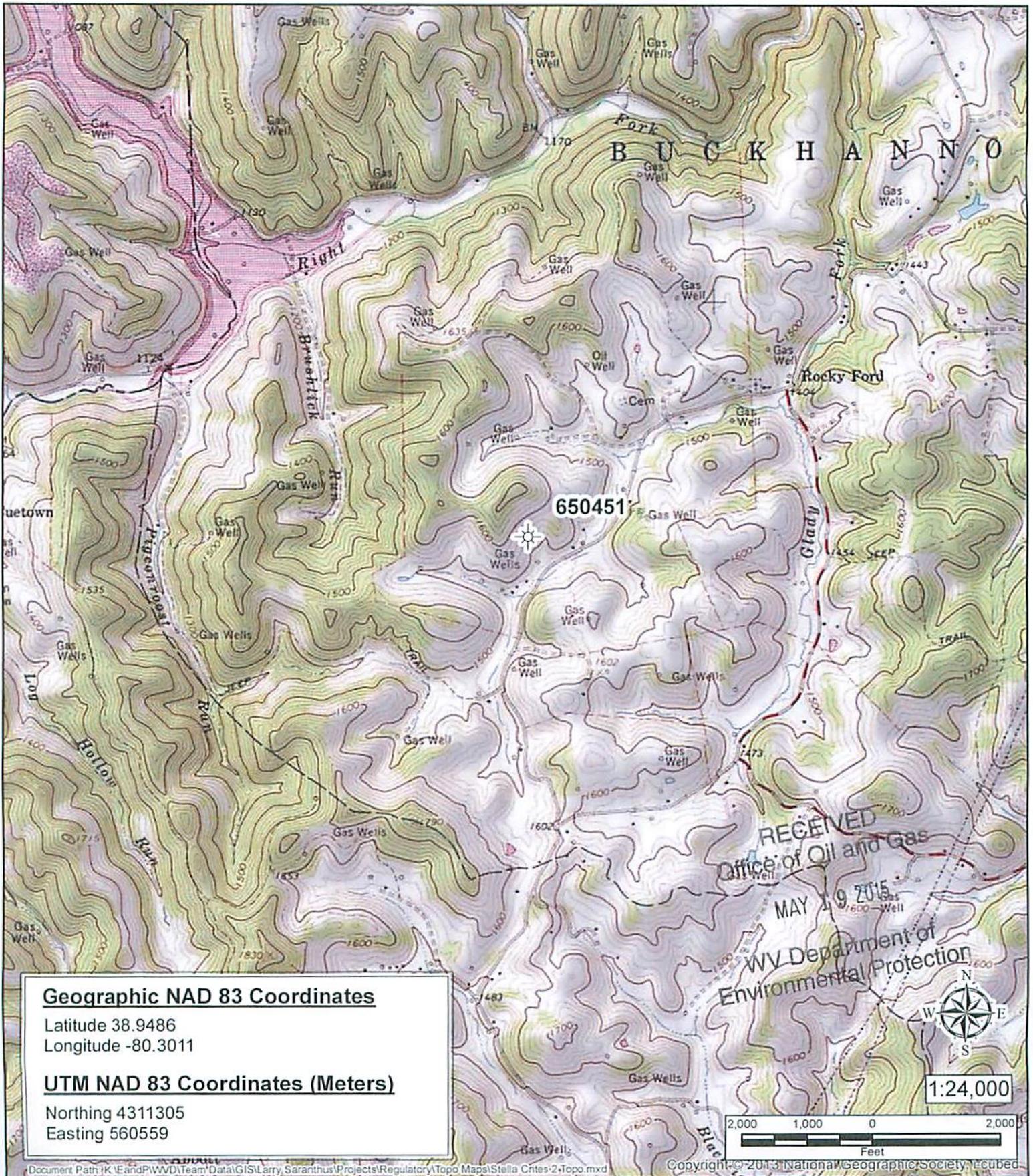
Field Reviewed? (X) Yes () No

Topographical Map of Well 650451 (Stella Crites #2)

API = 47-097-00386

Field Office - Jane Lew

County - Upshur



Geographic NAD 83 Coordinates

Latitude 38.9486
Longitude -80.3011

UTM NAD 83 Coordinates (Meters)

Northing 4311305
Easting 560559

WW-7

8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-097-00386 WELL NO.: 650451

FARM NAME: Crites

RESPONSIBLE PARTY NAME: SWN Production Co., LLC

COUNTY: Upshur DISTRICT: Buckhannon

QUADRANGLE: *Adrian*

SURFACE OWNER: Steven & Cheryl Neely

ROYALTY OWNER: Joanne Lee Crites, Beth Lee, & Jennifer Ann Bennett Herring

UTM GPS NORTHING: 4311305

UTM GPS EASTING: 560559

GPS ELEVATION: 1519'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS ____: Post Processed Differential ____
Real-Time Differential ____

Mapping Grade GPS ____: Post Processed Differential ____
Real-Time Differential ____

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

Signature _____
Date 4/23/15

Regulatory Supervisor
Title _____

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