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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Earl Ray Tomblin , Governor  
Randy C. Huffman , Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, August 03, 2016  
WELL WORK PERMIT  
Vertical / Re-Work - 2

EQUITRANS, L. P.  
625 LIBERTY AVENUE SUITE 1700

PITTSBURGH, PA 152220000

Re: Permit approval for LAWLIS 8271  
47-049-01940-00-00

This well work permit 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 any additional specific 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

Operator's Well Number: LAWLIS 8271  
Farm Name: CONSOLIDATION COAL CO  
U.S. WELL NUMBER: 47-049-01940-00-00  
Vertical / Re-Work - 2  
Date Issued: 8/3/2016

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

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1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. 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.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov) within 30 days of commencement of drilling.

4901940W

WW - 2B  
(Rev. 8/10)

CK 16837  
\$650.<sup>00</sup>

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**WELL WORK PERMIT APPLICATION**

1) Well Operator: Equitrans L.P.  
625 Liberty Ave, Pittsburgh, PA 15222      307652      Marion      Mannington      Glovers Gap  
Operator ID      County      District      Quadrangle

2) Operator's Well Number: 608271      3) Elevation: 1021

4) Well Type: (a) Oil \_\_\_\_\_ or Gas X \_\_\_\_\_  
(b) If Gas: Production \_\_\_\_\_ / Underground Storage X \_\_\_\_\_  
Deep \_\_\_\_\_ / Shallow X \_\_\_\_\_

5) Proposed Target Formation(s): Keener Sand      Proposed Target Depth: 2056' TVD

6) Proposed Total Depth: 2056' TVD Feet      Formation at Proposed Total Depth: Keener Sand

7) Approximate fresh water strata depths: 1'-746'

8) Approximate salt water depths: 1220'

9) Approximate coal seam depths: 740'-746'

10) Approximate void depths,(coal, Karst, other): None

11) Does land contain coal seams tributary to active mine? Yes, but already longwall mined

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)

Mill out deformed 7" casing, run 2280' of 4.5" tubing w/ cementing packer shoe at bottom of 4.5" tubing to bottom of 7" casing and cement back to surface.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill-up (Cu. Ft.)
Conductor	16"	N/A	N/A	30' MD		
Fresh Water	13-3/8"	N/A	N/A	80' MD	80' MD	562 Cu. Ft.
Coal	9-5/8"	J-55	40#	808' MD	808' MD	262 Cu. Ft.
Intermediate	7"	J-55	23#	2345' MD/2023' TVD	2345' MD/2023' TVD	393 Cu. Ft.
Production	4-1/2"	J-55	11.6#	2280' MD/1967' TVD	2280' MD/1967' TVD	267 Cu. Ft.
Tubing						
Liners						

RECEIVED  
Office of Oil and Gas

Packers: Kind: Cementing Packer Shoe

Sizes: 4-1/2" X 7"

Depths Set 1967' TVD

JUL 19 2016

WW-2B1  
(5-12)

Well No. 47-049-01940

West Virginia Department of Environmental Protection  
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name \_\_\_\_\_  
Sampling Contractor \_\_\_\_\_

Well Operator Equitrans LP  
Address 625 Liberty Ave.  
Pittsburgh, PA 15222  
Telephone 412-395-5554

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

Received  
Office of Oil & Gas  
JUN 21 2016

## Potential Water Sample Data Sheet

Well: 47-049-00224 (606188) EQT

County: Marion

District: Mannington

Well Location 39.517957 -80.440463

Quad: Glover Gap

5 Potential water wells within 1000'

1. 917' H. Batson, 484 Curtisville Road, Mannington WV 26582
2. 766' Well #1, B. Stull, 493 Curtisville Road, Mannington WV 26582
3. 842' Well #2, B. Stull, 493 Curtisville Road, Mannington WV 26582
4. 630' Well #3, B. Stull, 493 Curtisville Road, Mannington WV 26582
5. 808' Well #4, B. Stull, 493 Curtisville Road, Mannington WV 26582

Received  
Office of Oil & Gas  
JUN 21 2016

4901940w

Topo Quad: Glover Gap

Scale: N/A

County: Marion

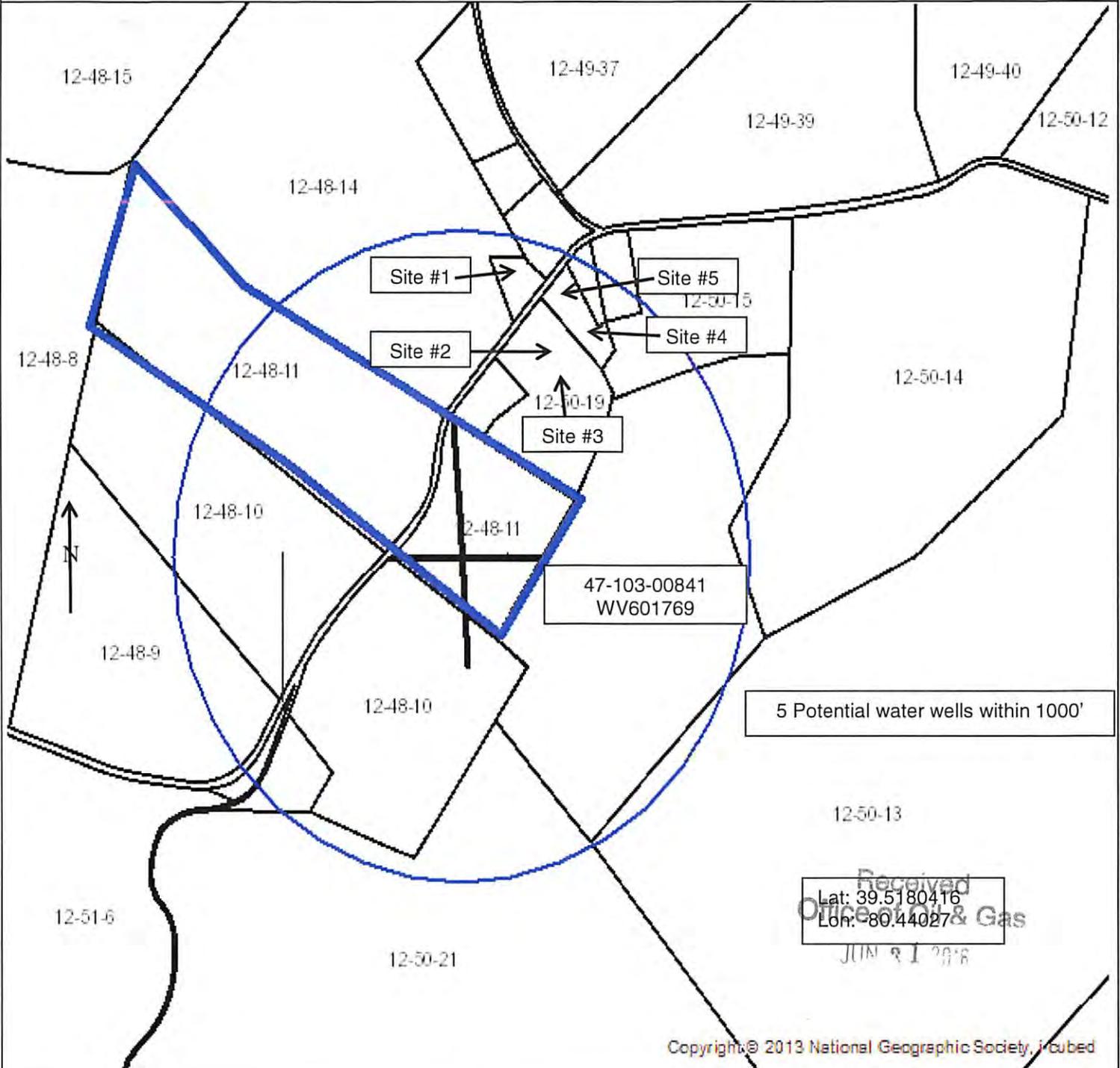
Date: 4/15/2016

District: Mannington

Project No: \_\_\_\_\_

Water

47-049-00224 (WV 606188)



5 Potential water wells within 1000'

Received  
Office of Oil & Gas  
JUN 31 2016  
Lat: 39.5180416  
Lon: -80.44027

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**Equitrans L. P.**

303 Sand Cut Road  
Clarksburg, WV 26301

4901940W

<b>WORKOVER OF GAS STORAGE WELL 608271 IN LOGANSPORT STORAGE</b>
<b>2016</b>
<b>Workover Procedure</b>
<b>SITE PREPARATION</b>
Field reconnaissance
Acquire necessary road bonding and driveway permits
Install all necessary erosion control measures
Upgrade existing well access roads
Upgrade existing well sites to accommodate service rig and ancillary equipment
<b>FIELD WORK</b>
MIRU wireline and run multi-finger caliper
Dig sump around wellhead and install liner
Move in and rig up mud pump and above ground pit for well control
Move in and rig up service rig and ancillary equipment
Install annular BOP on 7" casing
Rig up mill, BHA, collars and work string to mill out deformed production string as close to original ID as possible (7" 20#, J-55, ID 6.456")
MIRU wireline and run multi-finger caliper
Fill pit with weighted killed fluid, load hole with weighted fluid and have pumps on standby <b>ABOVE GROUND STEEL PIT</b>
Drill out cement plug, and fish inflatable bridge plug and lost downhole pressure gauge
Install 4.5" X 7" casing hanger and pump in tee
Run 4.5" casing with packer shoe and centralizers
MIRU cementing unit
Cement 4.5" casing to surface with Class A cement with 10% excess
Pump wiper plug with latch down
Shut in well and wait on cement for 12 hours
Install 4-1/16" 2M gate valve
MIRU coiled tubing and wireline
Convey segmented bond log on coiled tubing - log 4.5" casing
Convey High Resolution MicroVertolog on coiled tubing - log 4.5" casing
RDMO wireline
Drill out wiper plug with coiled tubing and down motor
Rig up cleaning tool on bottom of coiled tubing
Trip in hole with coiled tubing unloading hole while tripping in and clean openhole section to TD
Dry up hole with nitrogen from TD to surface
Flow back well until nitrogen is removed
RDMO coiled tubing
Perform wellhead tie-in to pipeline
Purge well and pipelines and turn well back inline
<b>SITE RECLAMATION</b>
Reclaim access road and well site
Remove culverts and stone aggregate
Reclaim to original grade, seed and mulch
<b>PERMITTING</b>
Submit final completion report to the WVDEP Oil & Gas Division

State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work

API 47-049-01940 County Marion District Mannington  
Quad Glovers Gap 7.5' Pad Name Lawlis Field/Pool Name Logansport  
Farm name John Lawlis Well Number 608271  
Operator (as registered with the OOG) Equitrans, L.P.  
Address 625 Liberty Ave. City Pittsburgh State PA Zip 15222

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4374436.7 Easting 548122.5  
Landing Point of Curve Northing 4374360.7 Easting 547965.1  
Bottom Hole Northing 4374112.0 Easting 547432.0

Elevation (ft) 1021' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
Bentonite with KCl

Date permit issued 3/20/2008 Date drilling commenced 10/14/2008 Date drilling ceased 11/8/2008  
Date completion activities began \_\_\_\_\_ Date completion activities ceased \_\_\_\_\_  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 746' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1220' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 740' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) Y

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Office of Oil and Gas  
Reviewed by: \_\_\_\_\_

JUL 19 2016

API 47-049 - 01940 Farm name John Lawlis Well number 608271

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	17.5"	16"	30'	New	N/A		Did not cement
Surface	14.75"	13.375"	80'	New	N/A		Y
Coal	12.375"	9.625"	808'	New	J-55 40#		Y
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	8.75"	7"	2345'	New	J-55 23#	1620', 2315'	Y
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Class A neat	100			562	Surface	8
Coal	Class A	280	14.7	1.41	393	Surface	8
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	Class A	320	14.7	1.41	449	Surface	18
Tubing							

Drillers TD (ft) 4365' MD Loggers TD (ft) 2180' TVD  
 Deepest formation penetrated Big Injun Plug back to (ft) 1223' TVD  
 Plug back procedure Plugged back vertical hole from 2180' to 1223' with 208 sacks (225 Cu. Ft.) Class A at 16.5 ppg with a yield of 1.08

Kick off depth (ft) 1475' MD

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature  sonic

Well cored  Yes  No Conventional Sidewall Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Total of 18 centralizers on production string on joints:  
2, 4, 5, 8, 10, 12, 14, 15, 16, 20, 22, 24, 26, 28, 30, 32, 34, and 36.

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS 2345' MD to 4365' MD in the Keener Sand

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_

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Office of Oil and Gas

JUL 19 2016



WR-35  
Rev. 8/23/13

API 47- 049 - 01940 Farm name John Lawlis Well number 608271

PRODUCING FORMATION(S)	DEPTHS
Keener	2029'-2056' TVD _____ MD
_____	_____
_____	_____
_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump  
 SHUT-IN PRESSURE Surface 1000 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs  
 OPEN FLOW Gas \_\_\_\_\_ mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ bpd GAS MEASURED BY  
 Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	0		0		
Pittsburgh Coal	740	746			
1st Gas Sand	1348	1376			
1st Salt Sand	1434	1515			
2nd Salt Sand	1582	1631			
Maxton	1918	1963			
Big Lime	1976	2026			
Keener	2029	2056			
Big Injun	2063	2154			

Please insert additional pages as applicable.

Drilling Contractor Highland Drilling  
 Address 900 Virginia Street East City Charleston State WV Zip 25301

Logging Company Schlumberger  
 Address 229 Capital Street City Charleston State WV Zip 25301

Cementing Company Halliburton  
 Address New Jackson S Mill Road City Jane Lew State WV Zip 26378

Stimulating Company \_\_\_\_\_  
 Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please insert additional pages as applicable.

Completed by Brian A. Hall Telephone 304-627-6419 **RECEIVED**  
 Signature Brian A. Hall Title Senior Storage Specialist Date 07/19/2016 **Office of Oil and Gas**

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry **JUL 19 2016**

4901940W

49-01940-7

**WEST VIRGINIA GEOLOGICAL PROGNOSIS**

Horizontal Well  
Well #8271 (H2) Lawless Lease

**Drilling Objectives:** Keener Sand (Storage)  
**Quad:** Glover Gap 7.5 min. **County:** Marion  
**Elevation:** 1031 KB **1021 GL**  
**Recommended Azimuth** 245 Degrees **Recommended total wellbore length: 2500'**

**Proposed Logging Suite:** Recommend LWD while drilling lateral, log suite TBBD  
Mudloggers to be on location at kickoff point to run samples and measure gas thru both the curve and lateral sections.

**Recommended Gas Tests:**

**ESTIMATED FORMATION TOPS**

Formation	Top(TVD)	Base(TVD)	Comments	Top(MD)	Base(MD)
Fresh Water Zone	1	748			
Pittsburgh Coal	742	748			
1st Gas Sand	1455	1509			
1st Salt Sand	1539	1632			
- 1st Salt Sand-A	1539	1547			
- 1st Salt Sand-B	1581	1608			
- 1st Salt Sand-C	1613	1632			
2nd Salt Sand	1733	1795			
- 2nd Salt Sand-A	1733	1763			
- 2nd Salt Sand-B	1772	1783			
- 2nd Salt Sand-C	1787	1794			
Maxton Sand	1913	1971			
Big Lime	1993	2036			
Keener	2036	2062	Storage Zone		
- Lateral Target	2049	2095			
Big Injun	2070				

BH  
3-12-08

**Comments:** All measurements taken from estimated KB elevation. Base of fresh water and coal estimated from surrounding data. Intermediate casing point is recommended to be set at the bottom of the curve to shut off any water production from the Salt Sand and Maxton Sand. The well is planned to drill laterally along the middle of the Keener Sand, the storage zone for this area. Structurally, the formations are expected to plunge approximately 45' along the wellbore length, so the wellbore will need to drop angle along the planned path.

**RECOMMENDED CASING POINTS**

**9 5/8" casing:** CSG OD 9-5/8" CSG DEPTH: 798 50' below base of coal & fresh water  
**Intermediate (thru curve):** CSG OD 7" CSG DEPTH: set at bottom of curve shut off salt water  
**Production:** CSG OD \_\_\_\_\_ CSG DEPTH: \_\_\_\_\_

L. J. Morris 7/9/2007

**RECEIVED**  
Office of Oil & Gas  
MAR 13 2008  
WV Department of  
Environmental Protection

### Well Schematic Equitable Resources

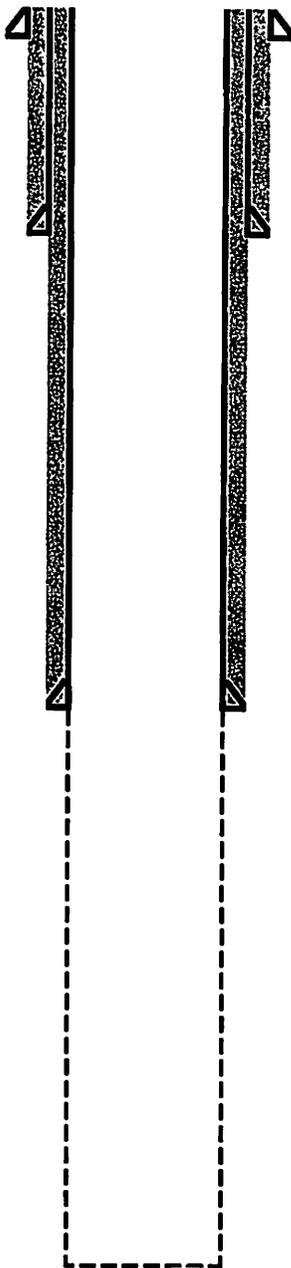
Well Name           # 8271            
 County           Marion            
 State             WV            

Elevation GL:           1021'            
 Target             Keener Sand            
 Prospect           Logansport Storage          

MEASURED DEPTH

0' —  
  
500 —  
  
1,000 —  
  
1,500 —  
  
2,000 —  
  
2,500 —  
  
3,000 —  
  
3,500 —  
  
4,000 —  
  
4,500 —

748' Fresh Water  
 742' Pittsburgh Coal  
  
 1455' 1st Gas Sand  
 1539' 1st Salt Sand A  
 1581' 1st Salt Sand B  
 1613' 1st Salt Sand C  
 1733' 2nd Salt Sand A  
 1772' 2nd Salt Sand B  
 1787' 2nd Salt Sand C  
 1913' Maxton Sand  
 1993' Big Lime  
 2036' Keener  
 2070' Big Injun



Hole Size 17 1/2" - 13 3/8" Conductor @ 40'  
 Bit Size 12 1/4"

TOC @ Surface  
 9 5/8" H-40/32.3# @ 800' MD  
 Bit Size 8 3/4"

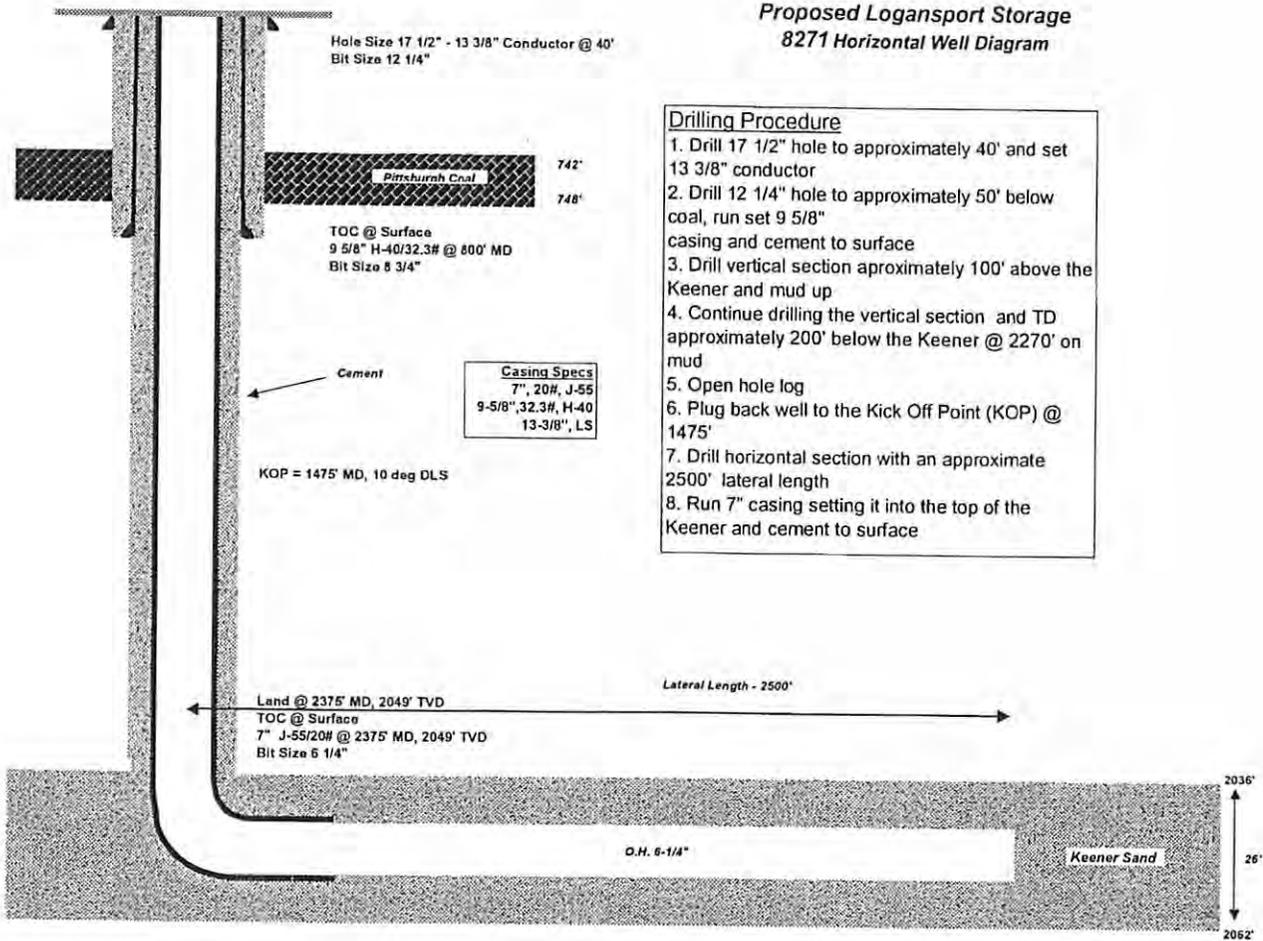
KOP = 1475' MD, 10 deg DLS

Land @ 2375' MD, 2049' TVD  
 TOC @ Surface  
 7" J-55/20# @ 2375' MD, 2049' TVD  
 Bit Size 6 1/4"

TD @ 4375' MD, 2095' TVD

For logging only  
 Plug back over Keener  
 Set whipstock & drill  
 horizontal hole to MD of 4375

**Proposed Logansport Storage  
8271 Horizontal Well Diagram**

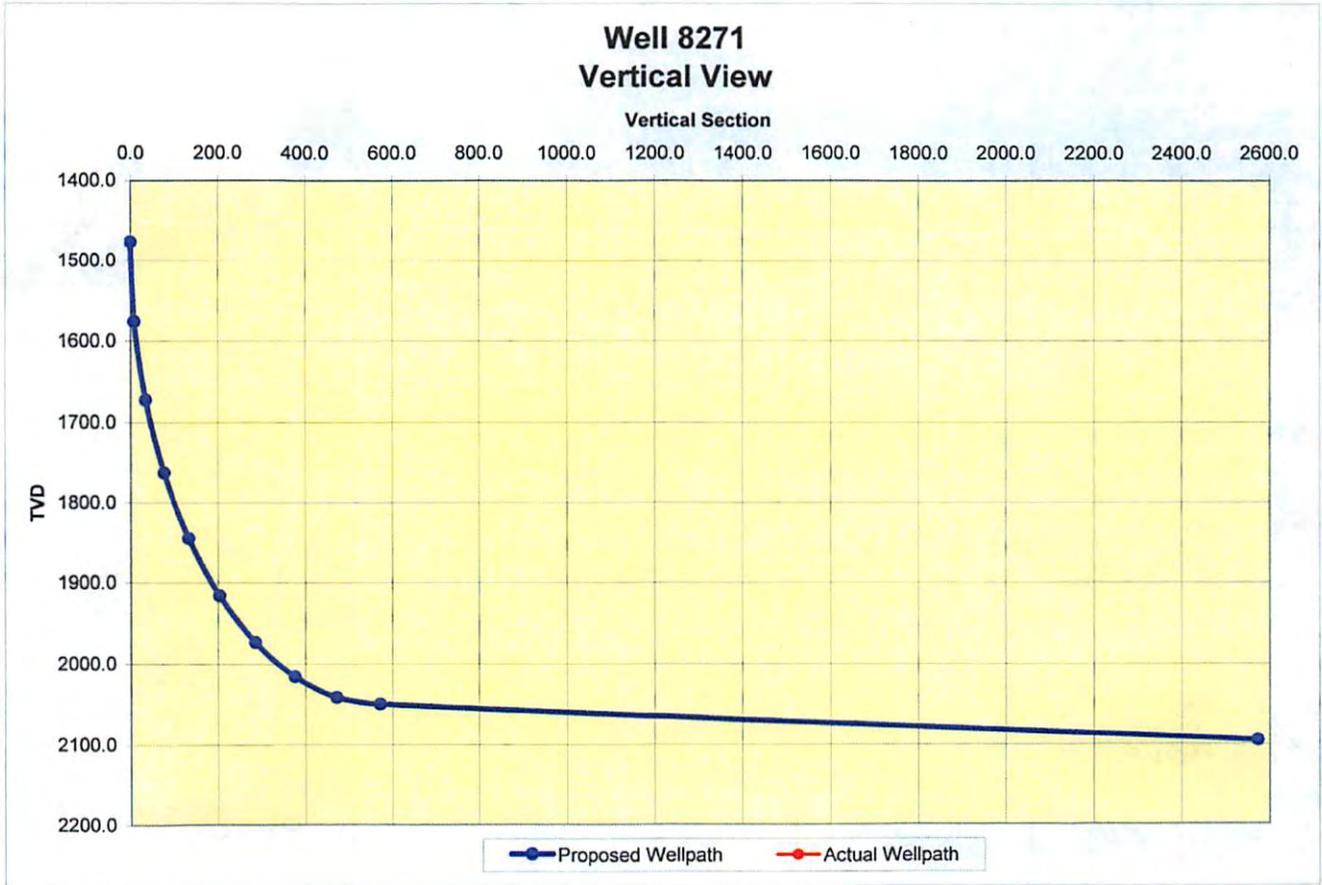


**Drilling Procedure**

1. Drill 17 1/2" hole to approximately 40' and set 13 3/8" conductor
2. Drill 12 1/4" hole to approximately 50' below coal, run set 9 5/8" casing and cement to surface
3. Drill vertical section approximately 100' above the Keener and mud up
4. Continue drilling the vertical section and TD approximately 200' below the Keener @ 2270' on mud
5. Open hole log
6. Plug back well to the Kick Off Point (KOP) @ 1475'
7. Drill horizontal section with an approximate 2500' lateral length
8. Run 7" casing setting it into the top of the Keener and cement to surface

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4901940-T

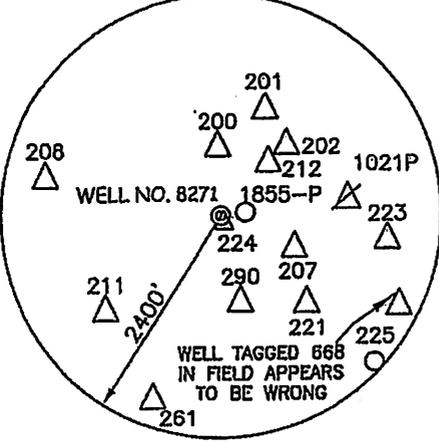
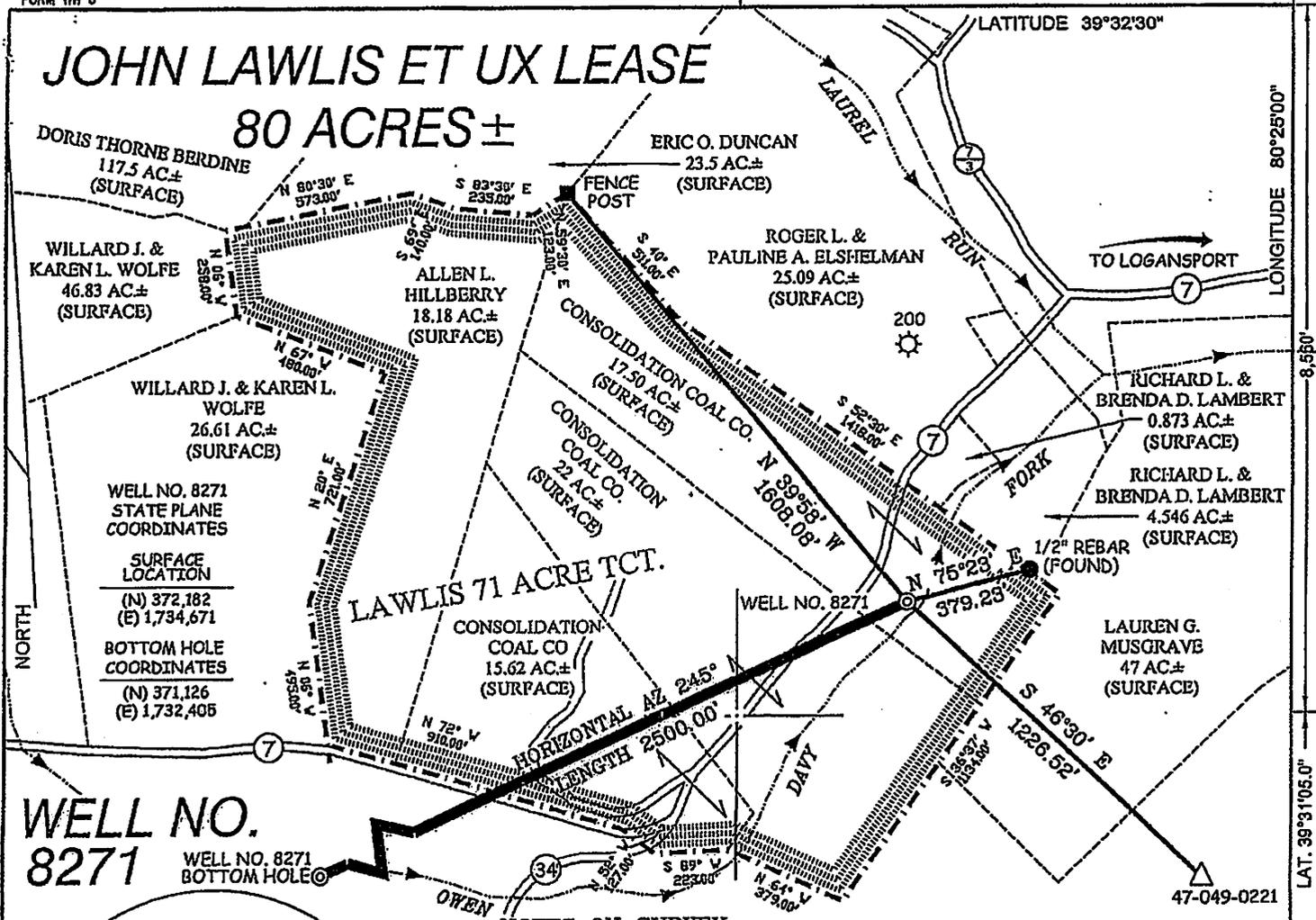
Latitude: 39.51015  
 Longitude: -80.44033  
 Coordinate System: NAD 83

4901940W

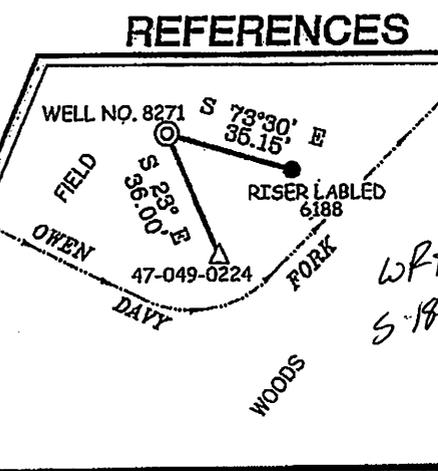
FORM WV 6

LONG. 80°26'25.9"

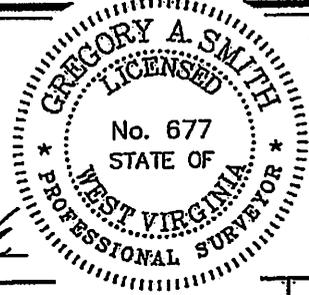
6.680'



- NOTES ON SURVEY**
1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
  2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 04/16/07.
  3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM ORIGINAL PLAT FOR WELL API# 47-049-0224 DATED APRIL 10, 1951 BY KENNETH B. MOORE.
  4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN JULY, 2006.
  5. WELL LAT./LONG. ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).
  6. PER PHONE CONVERSATION WITH EQUITRANS ON 05/15/07 THE BOTTOM HOLE LOCATION OF PROPOSED GAS WELL 8271 IS COMPLETELY WITHIN THE LOGANSPORT STORAGE FIELD.



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 DIVISION OF ENVIRONMENTAL PROTECTION.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

DATE MAY 15, 2007

OPERATORS WELL NO. 21 2016

API WELL NO. 47-049-01940

STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500

FILE NO. 5301P8271 (223-69)

SCALE 1" = 500'

PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE)

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

WELL TYPE: OIL \_\_\_ GAS  LIQUID WASTE IF STORAGE  DEEP \_\_\_ SHALLOW

LOCATION: ELEVATION 1,021' WATERSHED OWEN DAVY FORK OF BUFFALO CREEK

DISTRICT MANNINGTON COUNTY MARION QUADRANGLE GLOVER GAP 7.5'

SURFACE OWNER CONSOLIDATION COAL COMPANY ACREAGE 17.50±

ROYALTY OWNER WILLIAM M. BURNSIDE, ET AL LEASE ACREAGE 80±

PROPOSED WORK: LEASE NO. 24832

DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ PLUG OFF-OLD

FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_ OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) "CLEAN UP THROUGH BIG INJUN" TARGET FORMATION BIG INJUN & KEENER

AND ACIDIZE KEENER" ESTIMATED DEPTH 2,095'

WELL OPERATOR EQUITRANS, L.P. DESIGNATED AGENT WILLIAM HOSTUTLER

ADDRESS 225 NORTHSORE DRIVE ADDRESS P.O. BOX 1550

PITTSBURGH, PA 15212 CLARKSBURG, WV 26302

COUNTY NAME  
 PERMIT

WW-2A1  
(Rev. 1/11)

Operator's Well Number 608271

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that -

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

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
John Lawlis & Arsula Lawlis	South Penn Oil Company	Flat Fee	156/218
South Penn Oil Company	Equitable Gas Company	W.I.	Conveyed by Sales Agreement
Equitable Gas Company	Equitable Resources, Inc.	W.I.	By Articles of Incorporation 7/30/84
Equitable Resources, Inc.	Equitrans, Inc.	W.I.	by Articles of Incorporation 3/2/88

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

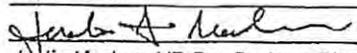
- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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Office of Oil and Gas

JUL 18 2016

WV Department of  
Environmental Protection

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Equitrans LP  
 By: Its:   
 Justin Macken: VP Gas Systems Planning

4901940w

WW-2A  
(Rev. 6-14)

1.) Date: 4/15/2016  
2.) Operator's Well Number 608271  
State County Permit  
3.) API Well No.: 47- 049 - 01940

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

4) Surface Owner(s) to be served:  
(a) Name Consol Minina Co. LLC  
Address 1000 Consol Energy Dr.  
Cannonsburg, PA 15317  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Bill Hendershot  
Address 403 James Street  
Mannington, WV 26582  
Telephone 304-206-7750

5) (a) Coal Operator  
Name Murray Energy Corporation  
Address 46226 National Road  
St. Clairsville, OH 43950  
(b) Coal Owner(s) with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_

**TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:**

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

x Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

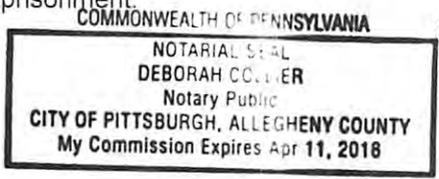
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_ on the above named parties by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

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, 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 and imprisonment.



Well Operator Equitrans LP  
By: Justin Macken *Justin Macken*  
Its: VP Gas Svstems Planning *Office of Oil & Gas*  
Address: 625 Liberty Ave.  
Pittsburgh, PA 15222 *JUL 21 2016*  
Telephone: 412-395-5554  
Email: jmacken@eqt.com

Subscribed and sworn before me this 10th day of May 2016, Equitrans LP

*Deborah Collier* Notary Public

My Commission Expires April 11, 2018

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](mailto:depprivacyofficer@wv.gov)

WW-9  
(4/16)

49 01940 W

API Number 47 - 049 - 01940

Operator's Well No. 608271

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Equitrans LP OP Code 307652

Watershed (HUC 10) Owens Davy Run Quadrangle Glover Gap

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

Will a pit be used? Yes  No  NO EARTHEN PIT

If so, please describe anticipated pit waste: Drilling mud, steel cutting, sand and cement

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? Above ground steel pit

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 \_\_\_\_\_ )

Will closed loop system be used? If so, describe: Yes, above ground steel pits connected to mud pump and well

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Freshwater

-If oil based, what type? Synthetic, petroleum, etc.

Additives to be used in drilling medium? Bentonite clay, KCl, clay stabilization, bactericide, and corrosion inhibitor

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) \_\_\_\_\_

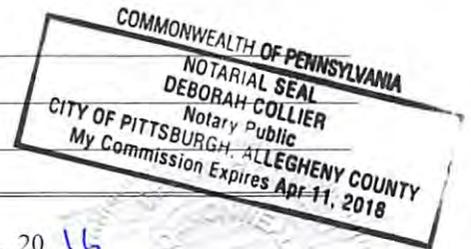
-Landfill or offsite name/permit number? TBD

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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) Justin Macken  
Company Official Title VP Gas Systems Planning



Subscribed and sworn before me this 10th day of May, 20 16  
[Signature] Notary Public

My commission expires 4/11/18

# Equitrans LP

Proposed Revegetation Treatment: Acres Disturbed 0 Prevegetation pH \_\_\_\_\_

Lime \_\_\_\_\_ Tons/acre or to correct to pH \_\_\_\_\_

Fertilizer type \_\_\_\_\_

Fertilizer amount \_\_\_\_\_ lbs/acre

Mulch \_\_\_\_\_ Tons/acre

### Seed Mixtures

#### Temporary

#### Permanent

Seed Type

lbs/acre

Seed Type

lbs/acre

Seed Type	lbs/acre	Seed Type	lbs/acre

**Attach:**

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bill Hendrich

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

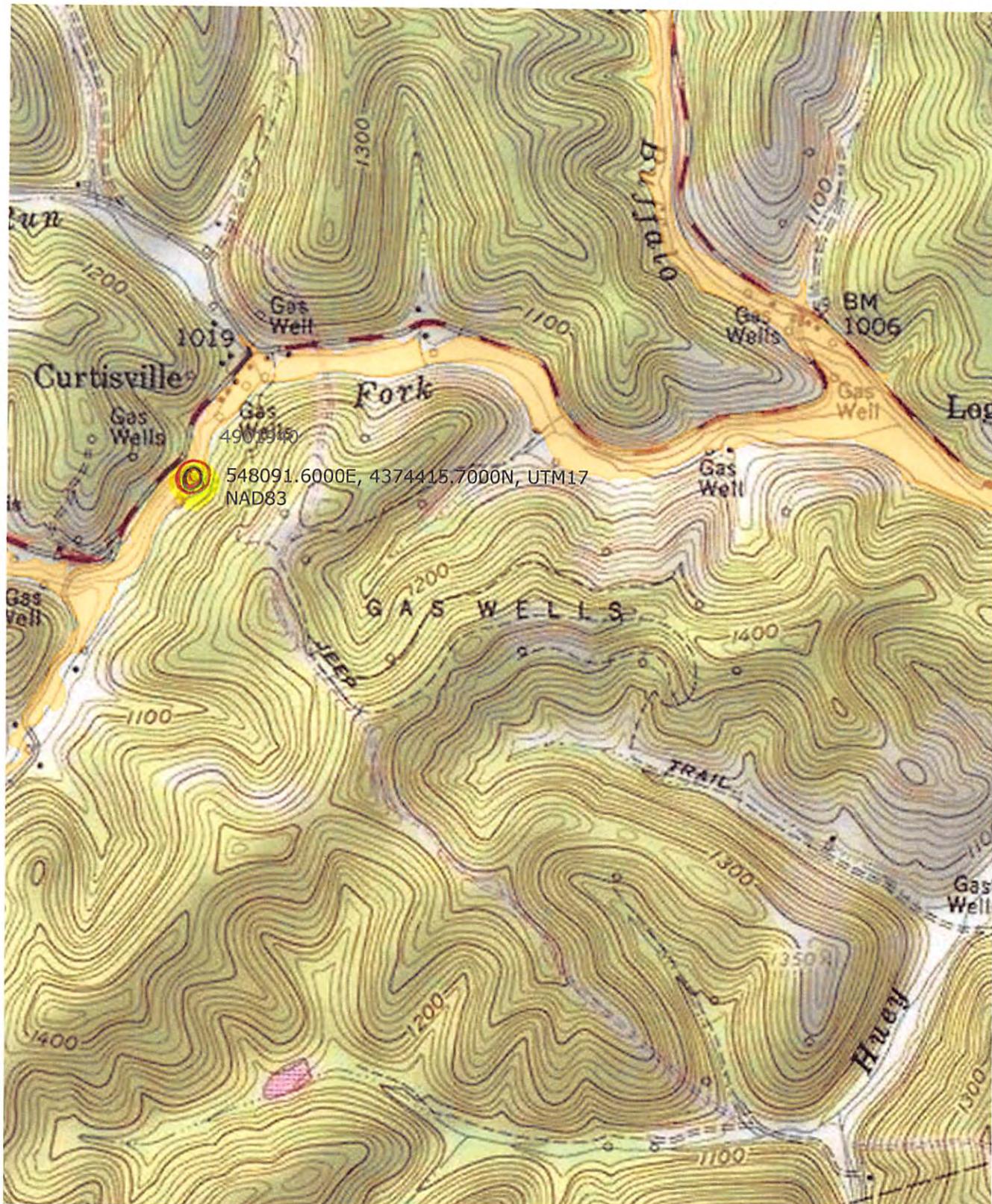
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
JUN 21 2016

Title: ENVIRONMENTAL INSPECTOR Date: 5-18-2016

Field Reviewed?  Yes  No



4901940W

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Office of Oil and Gas

JUN 23 2016

WV Department of  
Environmental Protection

WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-049-01940 WELL NO.: 608271

FARM NAME: J. Lawlis

RESPONSIBLE PARTY NAME: Equitrans L.P.

COUNTY: Marion DISTRICT: Mannington

QUADRANGLE: Glover Gap 7.5

SURFACE OWNER: Consolidation Coal Company

ROYALTY OWNER: William M. Burnside Et Al

UTM GPS NORTHING: 4374415.682

UTM GPS EASTING: 548091.594 GPS ELEVATION: 311.2008 meters (1021')

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.

*Jeffery Lawlis*  
Signature Jeffery Lawlis

Landman III  
Title

6-23-16  
Date