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

April 13, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-8101315, issued to CNX GAS 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 penalities being imposed upon the operator.

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

James Martin
Chief

Operator's Well No: 6186 REWORK
Farm Name: CHAMBERS, ARLENE
API Well Number: 47-8101315
Permit Type: Plugging
Date Issued: 04/13/2016

Promoting a healthy environment.

8101315P

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.

81013157P

WW-4B
Rev. 2/01

1) Date _____, 20 _____
2) Operator's
Well No. 6186
3) API Well No. 47- 081 - 01315

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 X or Underground storage ____) Deep ____/ Shallow X

5) Location: Elevation 2210 Watershed Breckenridge Creek
District Trap Hill County Raleigh Quadrangle Arnett

6) Well Operator CNX Gas Company LLC
Address 627 Claypool Hill Mall Road
Cedar Bluff, VA 24609

7) Designated Agent Anthony Kendziora
Address One Dominion Drive
Jane Lew, WV 26378

8) Oil and Gas Inspector to be notified
Name Gary Kennedy
Address PO Box 268
Nimitz, WV 25978

9) Plugging Contractor
Name L&D Well Services
Address PO Box 1192
Vansant, VA 24656

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

see attached plugging procedures

Received
Office of Oil & Gas
MAR 15 2016

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

Work order approved by inspector Gary Kennedy Date 3/9/16

8101315P

API 47-081-01315 Plugging Procedure

Well # 6186

1. Drill out bridge plug that is set at 3830'. Verify total depth 4000'.

2. Run free-point survey on 4-1/2" casing.

3. Run tubing to TD. Set plug of Class A 3% CaCl cement from established TD to approximately 50' below free point or a point at least 100' above the Weir Perforations (3286' – 3296').

4. Cut 4-1/2" casing at free-point.

5. Cement through 4-1/2" csg. while pulling 4-1/2", from top of bottom plug to approximately 100' below the 7" casing shoe. (Approx. 2655') Pull remaining 4-1/2" out of well.

6. Run bond log on 7" casing.

7. Run tubing to previous cement top (1602'). Cement across the 7" shoe to a minimum of 50' above shoe, bringing cement top to approximately 50' below the 7" free-point or to surface, whichever is necessary.

8. If necessary, cut and pull free 7" casing.

9. Repeat free-point and cutting procedures for 9-5/8" if 7" is cut and pulled.

10. Cement from 50' below 9-5/8" shoe to surface.

11. ~~Install 4-1/2" X 4'~~ steel monument with API# and Date.
MINIMUM OF 6" DIAM. PIPE FILLED WITH CONCRETE SHALL BE ERECTED OVER THE WELL, NO LESS THAN 30" ABOVE SURFACE AND 10' BELOW SURFACE.
gNm

NOTE: A 100' gel spacer will be placed at approximately half the well depth. Class A 3% CaCl cement will be utilized throughout the entire cementing process.

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MAR 15 2016

6186 (2004) 47-081-01315

12 3/4" Set @ 20' Sand In
9 5/8" Set @ 528' 145 sks
7" Set @ 2555' 85 sks
4 1/2" Set @ 4000' 80 sks
6 1/2" DTD 4030'

* Bridge Plug Set @ 3830' To isolate Lower Zone.

Weir 3286' - 3296' - 21 Holes
Gordon 3882' - 3892' - 21 Holes

8101315P

6186
47-081-01315

WR-35
Rev (5-01)

DATE: 04/13/2004
API #: 47 081 01315

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Chambers, Arlene Operator Well No.: 6186

LOCATION: Elevation: 2110' Quadrangle: Arnett 7.5'

District: Trap Hill County: Raleigh
Latitude: 8,800 Feet South of 37 Deg. 47 Min. 30 Sec.
Longitude 5,050 Feet West of 81 Deg. 25 Min. 00 Sec.

Company: Dominion Exploration & Production, Inc

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P O Box 1248				
Jane Lew, WV 26378				
Agent: Rodney J. Biggs				
Inspector: Rick Campbell				
Date Permit Issued: 06/02/2003				
Date Well Work Commenced: 03/18/2004	12 ¾"	20'	20'	Sand In
Date Well Work Completed: 04/05/2004				
Verbal Plugging: N/A	9 5/8"	528'	528'	145 sks
Date Permission granted on: N/A				
Rotary X Cable Rig	7"	2555'	2555'	85 sks
Total Depth (feet): 4030'				
Fresh Water Depth (ft.): N/A	4 ½"	4000'	4000'	80 sks
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 140-141',300-301',420-421'				

OPEN FLOW DATA NOTE: Lower Zone Makes Salt Water. Set Bridge Plug @ 3830'

Producing formation Gordon Weir Pay zone depth (ft) 3882-3892' 3286-3296'
Gas: Initial open flow Trace MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 300 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 12 Hours
Static rock Pressure 300 psig (surface pressure) after 12 Hours

*Commingled
Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: Rod Biggs
By: Rodney J. Biggs
Date: 4/13/04

Received
Office of Oil & Gas
MAR 15 2016

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Office of Oil & Gas
APR 16 2004
WV Department of
Environmental Protectio

RAL 1315

8101315P

04/05/2004 WELL # 6186

TWO STAGE FRAC W/ BJ AND FISHER. GORDON 3882' - 3892' (21 HOLES) - 70Q FOAM
FRAC - 25,800 LB 20/40 SAND, 142 BBL FLUID, 208,000 SCF N2, BDP 1346#, ATP 1568#,
AIR 20 BPM, 500 GAL 15% HCL IN FLUSH FOR 2ND STG. WEIR 3286' - 3296' (21 HOLES) - 70Q
FOAM FRAC - 36,000 LB 20/40 SAND, 121 BBL FLUID, 231,000 SCF N2, BDP 1157#, ATP 1416#,
AIR 20 BPM, ISIP 1210#.

Overburton	0	10
Sandstone	10	140
Coal	140	141
Shale	141	300
Coal	300	301
Sandstone	301	420
Coal	420	421
Shale	421	550
Sandstone	550	975
Shale	975	1225
Sandstone	1225	1465
Shale	1465	1600'

FORMATION TOPS

Ravencliff Sand	1701	1793
Avis Lime	1793	1830
Maxton Sand	2173	2350
Little Lime	2572	2747
Big Lime	2747	3125
Price RM	3125	3710
Weir Sand	3242	3300
Sunbury Shale	3650	3710
Berea Sand	3710	3733
Gordon Sand	3872	3911
LTD		4037'

Received
Office of Oil & Gas
MAR 15 2016

8101315P

WW-4A
Revised 6-07

1) Date: 3/10/2016
2) Operator's Well Number 6186

3) API Well No.: 47 - 081 - 01315

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: Arlene Chambers
Address: PO Box 320
Bolt, WV ~~25832-0320~~ 25817-0320
(b) Name: Raylene & Joshua Caron
Address: PO Box 396
Bolt, WV 25817-0396
(c) Name: Carolyn H. Sheets, Executor
Address: 9259 East Raintree Drive Apt. 2146
Scottsdale, AZ 85260-7532

6) Inspector: Gary Kennedy
Address: PO Box 268
Nimitz, WV 25978
Telephone: 304-382-8402

5) (a) Coal Operator
Name
Address

(b) Coal Owner(s) with Declaration
Name
Address
Name
Address

(c) Coal Lessee with Declaration
Name
Address

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.

Well Operator: CNX Gas Company LLC
By: Matthew Harlan
Its: Permitting Manager
Address: 627 Claypool Hill Mall Road
Cedar Bluff, VA 24609
Telephone: 276-596-5137

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Katherine L. Jursa, Notary Public
Cecil Twp., Washington County
My Commission Expires Oct. 29, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Received
Office of Oil & Gas
MAR 15 2016

Subscribed and sworn before me this 10th day of March, 2016
Katherine L. Jursa Notary Public
My Commission Expires 10-29-2017

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 depprivacyoffier@wv.gov.

8101315P

WW-9
(2/15)

API Number 47 - 081 - 01315
Operator's Well No. 6186

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX Gas Company LLC OP Code 494458046

Watershed (HUC 10) 0505000902 Quadrangle Arnett

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 ☑

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes ☐ No ☐ If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- ____ Land Application
- ■ Underground Injection (UIC Permit Number 2D0550319)
- ____ 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: a pumper truck with a flow back tank will be used in lieu of a pit.

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

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

Additives to be used in drilling medium? _____

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

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

-Landfill or offsite name/permit number? _____

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 Matt Hanley

Company Official (Typed Name) Matt Hanley

Company Official Title Manager Gas Permitting

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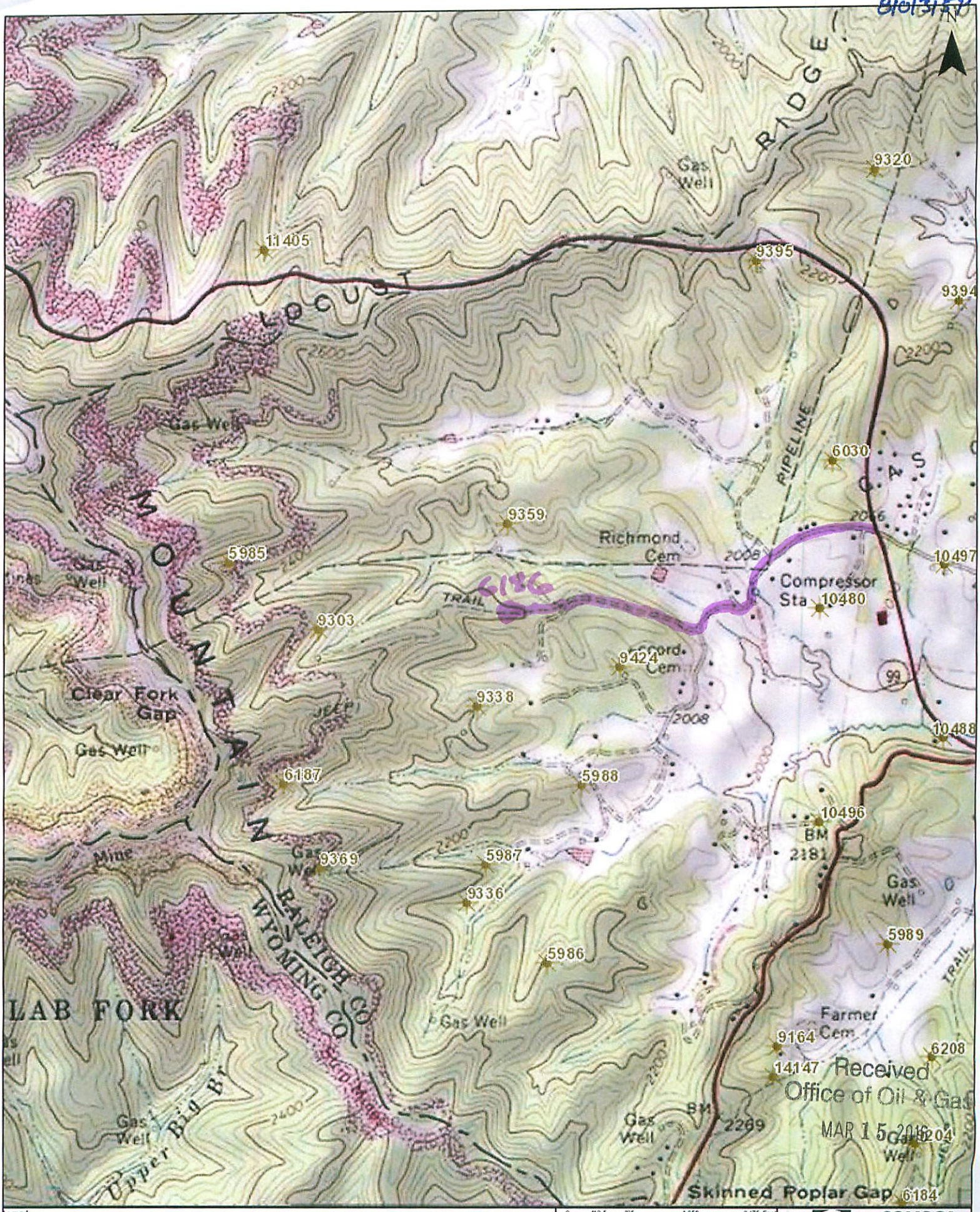
Office of Oil & Gas
MAR 15 2016

Subscribed and sworn before me this 10th day of March, 20 16

Katherine L. Jursa Notary Public

My commission expires 10-29-2017

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Katherine L. Jursa, Notary Public
Cecil Twp., Washington County
My Commission Expires Oct. 29, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES



Legend

CNX Upper Devonian Well Pad Centers - Drilled Labels

CNX Upper Devonian Well Pad Centers - Proposed Labels

CNX Upper Devonian Well Laterals - Drilled Labels

0 412.5 825 1,650 2,475 Feet

Date: 2/9/2016 | Prepared By: Web AppBuilder for ArcGIS

This product was generated by CONSOL Energy's WEB Map. Intended for Internal Use Only.

EMPOWER CONSOL ENERGY

ArcGIS Web Map

8101315P

WW-7
8-30-06

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

API: 47-081-01315 WELL NO.: 6186

FARM NAME: Arlene Chambers

RESPONSIBLE PARTY NAME: Consol Gas Company

COUNTY: Raleigh DISTRICT: Trap Hill

QUADRANGLE: Arnett

SURFACE OWNER: Arlene Chambers

ROYALTY OWNER: Enervest Oil & Gas Comp

UTM GPS NORTHING: 4,180,120.3 M

UTM GPS EASTING: 461,776.5 M GPS ELEVATION: 2110 ft.

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 X : Post Processed Differential _____

Real-Time Differential X

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MAR 15 2016

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.

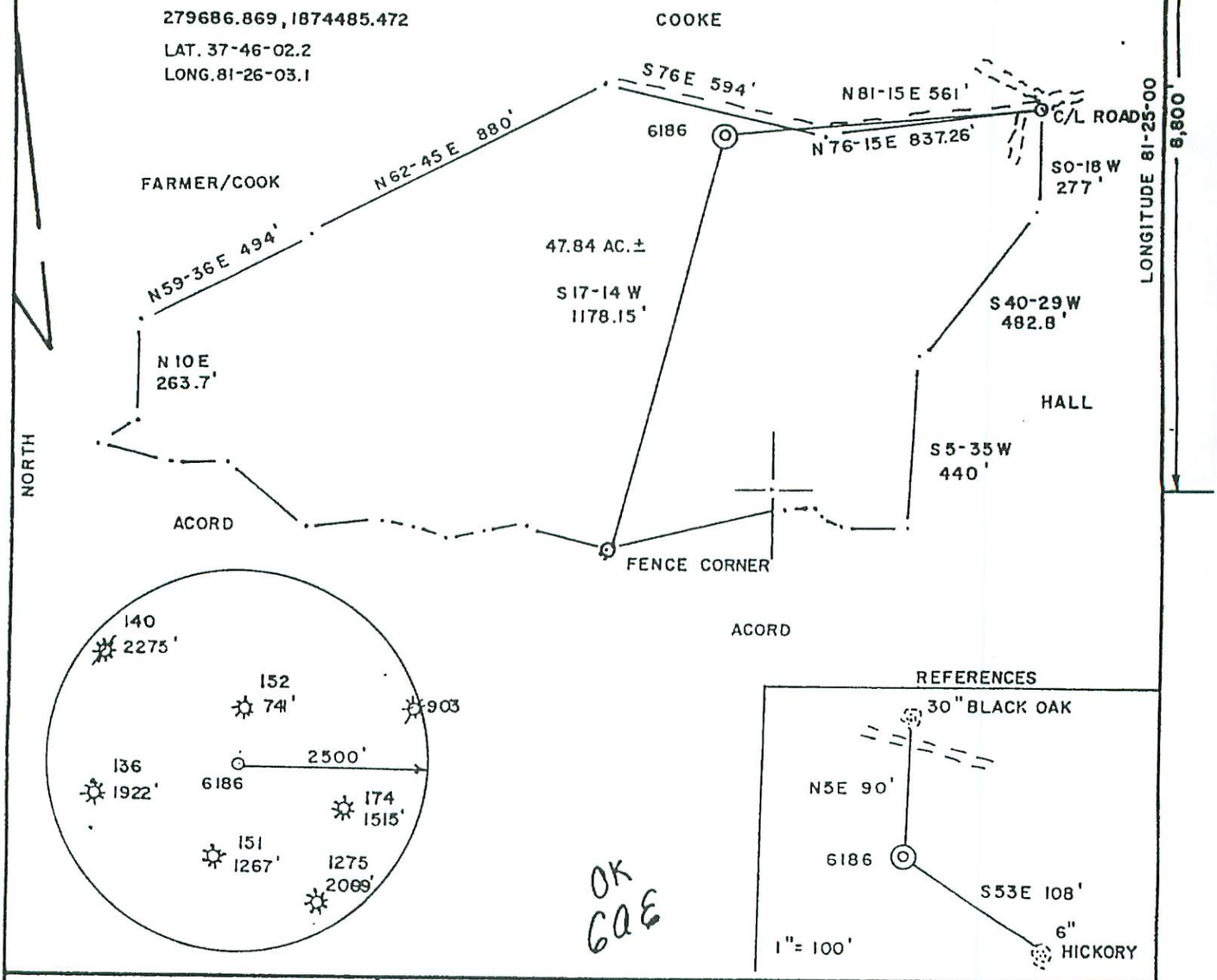
Signature	Production Foreman Title	3/10/16 Date

5,050

LATITUDE 37-47-30 8101 3151P

WELL NO. 6186

NAD 27 WV SOUTH SPC
279686.869, 1874485.472
LAT. 37-46-02.2
LONG. 81-26-03.1



OK GAE

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 400'
MINIMUM DEGREE OF ACCURACY 1/2500
PROVEN SOURCE OF ELEVATION DGPS SUBMITTER

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
(SIGNED) M. Allen John
R.P.E. _____ L.L.S. 959

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Office of Oil & Gas
MAR 15 2016

PLACE SEAL HERE

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

FORM IV-6
(8-78)

DATE DEC. 1, 20 02
OPERATOR'S WELL NO. 6186
API WELL NO.
47 - 81 - 01315
STATE COUNTY PERMIT

Division of Environmental Protection
Office of Oil & Gas

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS", PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X)
LOCATION: ELEVATION 2210' WATER SHED BRANCH OF BRECKENRIDGE CREEK
DISTRICT TRAP HILL COUNTY RALEIGH
QUADRANGLE ARNETT 7.5'
SURFACE OWNER ARLENE F. CHAMBERS ACREAGE 40.7
OIL & GAS ROYALTY OWNER CHRISTINE C. SMITH ESTATE LEASE ACREAGE 47.84
LEASE NO. 54281
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___
PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION GORDON ESTIMATED DEPTH 4810'
WELL OPERATOR DOMINION EXPLORATION & PRODUCTION INC. DESIGNATED AGENT RODNEY BIGGS
ADDRESS ONE DOMINION DRIVE PO BOX 1248 ADDRESS ONE DOMINION DRIVE PO BOX 1248
JANE LEW, WV 26378 JANE LEW, WV 26378

RAL 1315