

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

pm

API 47-017-06410H6A County Doddridge District Southwest
Quad Oxford 7.5' Pad Name OXFD11HS Field/Pool Name Oxford
Farm Name MORRIS, I. L. Well Number OXFD11BHS
Operator (as registered with the OOG) CNX Gas Company LLC
Address P.O. Box 1248 City Jane Lew State WV Zip 26378

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top Hole Northing 4,335,746.00 m Easting 520,420.00 m
Landing Point of Curve Northing 4,335,844.36 m Easting 520,181.86 m
Bottom Hole Northing 4,337,601.79 m Easting 519,507.92 m

Elevation (ft) 1340' 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

Drilled 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)

Mineral Oil Based Mud, Bactericide, Polymers and Weighting Agents.

Date Permit Issued 02/12/2014 Date drilling commenced 07/14/2014 Date drilling ceased 09/21/2014
Date completion activities began 04/01/2015 Date completion activities ceased 04/18/2015
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

RECEIVED
Office of Oil and Gas
AUG 27 2015
WV Department of
Environmental Protection

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

Freshwater depth(s) ft 50', 620' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,620' Void(s) encountered (Y/N) depths N
Coal depth(s) ft None Reported Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

Gorr, Kevin

JK

10/09/2015

API 47-017-06410H6A Farm name MORRIS, I. L. Well number OXFD11BHS

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement Circulate (Y/N) * Provide details to the right *
Conductor	24"	20"	100'	N	J-55 94# / 100'	N/A	Y
Surface	17 1/2"	13 3/8"	1204'	N	J-55 54.5# / 1204'	N/A	Y
Coal	-	-	-	-	-	-	-
Intermediate 1	12 1/4"	9 5/8"	2804'	N	J-55 36# / 2804'	N/A	Y
Intermediate 2	-	-	-	-	-	-	-
Intermediate 3	-	-	-	-	-	-	-
Production	8 3/4"	5 1/2"	13794'	N	P-110 20# / 13794'	N/A	N
Tubing	5 1/2"	2 3/8"	7214'	N	P-110 4.7# / 7214'	N/A	N
Packer Type and Depth Set		None					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft 3/sks)	Volume (ft 3)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	127	15.2	1.18	150	Surface	24
Surface	Class A	955	15.6	1.20	1151	Surface	8
Coal	-	-	-	-	-	-	-
Intermediate 1	Class A	870	15.2	1.28	1112	Surface	8
Intermediate 2	-	-	-	-	-	-	-
Intermediate 3	-	-	-	-	-	-	-
Production	Class A (Lead) / Class A (Tail)	541 / 1992	14.2 / 14.8	1.23 / 1.24	668 / 2465	1356'	8
Tubing	-	-	-	-	-	-	-

Drillers TD (ft) 6920' Loggers TD (ft) 6910'
 Deepest formation penetrated: Marcellus Plug back to (ft) N/A
 Plug back procedure: N/A

Kick Off Depth (ft) 4750'

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 _____ RECEIVED
 Conductor - No centralizers used. Fresh Water - Bow spring centralizers on first joint then every fourth joint to 100 feet from surface. Gas
 Intermediate - Bow spring centralizers one on the first two joints and every fourth joint until inside surface casing. Production - Rigid bow
 spring centralizer on first joint then every 2 casing joints (free floating) through the lateral and the curve. (Note: cementing the 5 1/2" casing
 completely in open hole lateral and curve.) AUG 27 2015

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS Plug and Perforation Shot Hole Department of
 Environmental Protection

WAS WELL COMPLETED OPEN HOLE Yes No DETAILS _____

WERE TRACERS USE Yes No TYPES OF TRACER(S) USED _____

API 47-017-06410H6A

Farm name MORRIS, I. L.

Well number OXFD11BHS

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number Of Perforations	Formation(s)
1	4/1/2015	13735	13733	12	Marcellus
2	4/2/2015	13669	13527	40	Marcellus
3	4/3/2015	13450	13352	40	Marcellus
4	4/3/2015	13319	13177	40	Marcellus
5	4/3/2015	13144	13002	40	Marcellus
6	4/4/2015	12969	12827	40	Marcellus
7	4/7/2015	12794	12652	40	Marcellus
8	4/8/2015	12619	12477	40	Marcellus
9	4/8/2015	12444	12302	40	Marcellus
10	4/9/2015	12269	12127	40	Marcellus
11	4/10/2015	12094	11952	40	Marcellus
12	4/10/2015	11919	11777	40	Marcellus
13	4/11/2015	11744	11602	40	Marcellus
14	4/11/2015	11569	11427	40	Marcellus
15	4/11/2015	11394	11252	40	Marcellus
16	4/12/2015	11219	11077	40	Marcellus
17	4/12/2015	11044	10902	40	Marcellus
18	4/12/2015	10869	10727	40	Marcellus
19	4/13/2015	10694	10552	40	Marcellus
20	4/13/2015	10519	10377	40	Marcellus
21	4/13/2015	10343	10200	40	Marcellus
22	4/13/2015	10169	10027	40	Marcellus
23	4/14/2015	9994	9852	40	Marcellus
24	4/14/2015	9819	9677	40	Marcellus
25	4/14/2015	9644	9502	40	Marcellus
26	4/15/2015	9469	9327	40	Marcellus
27	4/15/2015	9294	9152	40	Marcellus
28	4/16/2015	9119	8977	40	Marcellus
29	4/16/2015	8944	8802	40	Marcellus
30	4/16/2015	8769	8627	40	Marcellus
31	4/17/2015	8594	8452	40	Marcellus
32	4/17/2015	8419	8277	40	Marcellus
33	4/17/2015	8244	8102	40	Marcellus
34	4/17/2015	8070	7928	40	Marcellus
35	4/18/2015	7896	7754	40	Marcellus
36	4/18/2015	7722	7580	40	Marcellus
37	4/18/2015	7548	7406	40	Marcellus
38	4/18/2015	7374	7232	40	Marcellus

RECEIVED
Office of Oil and Gas
AUG 27 2015
Environmental Protection

10/09/2015

API 47-017-06410H6A Farm name MORRIS, I. L. Well number OXFD11BHS

STIMULATION INFORMATION PER STAGE

Stage No.	Stimulations Date	Avg Pump Rate (BPM)	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen / other (gals)
1	4/1/2015	20.4	8791	8353	5524	1900	3013	3209
2	4/2/2015	74.9	8331	7811	5366	234200	11437	9756
3	4/3/2015	70.4	8185	5773	4918	233900	7172	3394
4	4/3/2015	78.1	8182	6084	5087	234350	6594	3280
5	4/3/2015	79.6	7916	6081	5255	234700	8605	9402
6	4/4/2015	72.1	7956	6223	4833	178150	11833	6585
7	4/7/2015	60.5	7932	6550	4661	233500	14152	3110
8	4/8/2015	79.7	7786	6167	5076	234050	6945	3526
9	4/8/2015	67.9	8219	6206	4987	234200	8093	3726
10	4/9/2015	96	8636	6464	5265	233850	7083	3557
11	4/10/2015	87	8310	6464	5255	234800	6723	3536
12	4/10/2015	76	8137	6607	5221	234600	7792	3689
13	4/11/2015	84	8054	6187	5183	233850	7287	3598
14	4/11/2015	86.5	8122	6371	5243	230950	6543	3499
15	4/11/2015	85	8171	6492	5346	233800	7933	3647
16	4/12/2015	84.4	8246	6150	5327	234200	6800	3551
17	4/12/2015	80	8132	7049	5064	234050	6245	3475
18	4/12/2015	80	8081	6830	6152	234750	6670	3538
19	4/13/2015	86	8016	6675	5381	234200	6333	3525
20	4/13/2015	90.4	8167	6556	5388	234100	6537	3468
21	4/13/2015	89.1	8023	5989	5265	234450	5660	3440
22	4/13/2015	88.7	8097	7009	5215	235100	6307	3489
23	4/14/2015	90.2	8224	6768	5496	234200	6300	3525
24	4/14/2015	92	8200	7414	5078	234050	6199	3505
25	4/14/2015	93	8292	6814	5491	234650	5511	3434
26	4/15/2015	76.7	8394	6567	5592	233900	12730	8842
27	4/15/2015	74.4	7340	7083	5619	233450	5926	3456
28	4/16/2015	85.2	8236	7212	5612	234050	6353	3472
29	4/16/2015	76.1	7863	7630	5454	233850	5772	3446
30	4/16/2015	83.3	7979	7140	5542	234300	5632	3434
31	4/17/2015	91.5	8217	6327	5809	234250	6160	3516
32	4/17/2015	94.5	8158	6401	5818	234050	6057	3515
33	4/17/2015	85.6	7943	0	5580	234200	5376	3385
34	4/17/2015	90	7948	7329	5642	235750	5265	3370
35	4/18/2015	91.1	7832	6853	5482	233750	5055	3324
36	4/18/2015	97.7	8102	7168	5309	234200	5995	3448
37	4/18/2015	76.1	8243	6966	5540	234100	7440	3826
38	4/18/2015	91	8034	7277	4581	233600	6626	3456

RECEIVED
Office of Oil and Gas
27 2015
Department of
Environmental Protection

API 47-017-06410H6A

Farm name MORRIS, I. L.

Well number OXFD11BHS

LITHOLOGY / FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY TYPE OF FLUID (FRESHWATER,BRINE,GAS,H2S, ETC)
	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	
	TVD	TVD	MD	MD	
FILL	0	107	0	107	
REDROCK/ SHALE	107	176	107	176	
SHALE	176	258	176	258	
SHALE/ REDROCK	258	322	258	322	
REDROCK/ SHALE	322	353	322	353	
SHALE/ REDROCK	353	385	353	385	
GREY SHALE	385	417	385	417	
SHALE/ REDROCK	417	448	417	448	
GREY SHALE	448	480	448	480	
REDROCK	480	543	480	543	
REDROCK/ SHALE	543	606	543	606	
GREY SHALE	606	637	606	637	
GREY SHALE/ REDROCK	637	731	637	731	
GREY SHALE	731	795	731	795	
SS/ SHALE	795	910	795	910	
DARK SHALE	910	1180	910	1180	
SANDY SHALE	1180	1590	1180	1590	
SS	1590	1860	1590	1860	
SS/ SHALE	1860	2055	1860	2055	
BIG LIME	2055	2127	2055	2127	
BIG INJUN	2127	2200	2127	2200	
SS/ SHALE	2200	2867	2200	2867	
SS/ REDROCK	2867	3000	2867	3000	
SS/ LS	3000	3607	3000	3607	
SHALE	3607	4695	3607	4695	
SS/ SHALE	4695	4708	4695	4722	
LIGHT GREY SHALE	4708	4771	4722	4785	
SS/ SHALE	4771	4867	4785	4887	
LIGHT GREY SHALE	4867	4960	4887	4981	
GREY SHALE	4960	5050	4981	5076	
SHALE	5050	5120	5076	5139	
SHALE/ SS	5120	5213	5139	5235	
SS	5213	5358	5235	5389	
SHALE/ SS	5358	5395	5389	5400	
SHALE	5395	5444	5400	5450	
SHALE/ SS	5444	5485	5450	5491	
SS/ SHALE	5485	5497	5491	5511	
SHALE/ SS	5497	5537	5511	5550	

RECEIVED
Office of Oil and Gas

AUG 27 2015

WV Department of
Environmental Protection

10/09/2015

API 47-017-06410H6A Farm name MORRIS, I. L. Well number OXFD11BHS

LITHOLOGY / FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY TYPE OF FLUID (FRESHWATER,BRINE,GAS,H2S, ETC)
	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	
	TVD	TVD	MD	MD	
GREY SHALE	5537	5975	5550	5992	
SHALE	5975	6110	5992	6123	
BURKETT	6786	6828	6992	7086	
TULLY	6828	6847	7086	7137	
HAMILTON	6847	6874	7137	7212	
UPPER MARCELLUS	6874	6880	7212	7231	
MIDDLE MARCELLUS	6880	6904	7231	7342	
CHERRY VALLEY	6904	6910	7342	7394	
LOWER MARCELLUS	6910		7394		
TD	6920				

RECEIVED
 Office of Oil and Gas
 AUG 27 2015
 WV Department of
 Environmental Protection

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/1/2015
Job End Date:	4/18/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06410-00-00
Operator Name:	CONSOL Energy Inc.
Well Name and Number:	OXFD 11 BHS
Longitude:	-80.76377780
Latitude:	39.17061110
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,920
Total Base Water Volume (gal):	11,128,539
Total Base Non Water Volume:	0



RECEIVED
Office of Oil and Gas
AUG 27 2015
WV Department of
Environmental Protection



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Customer & CWS	Base Fluid & Mix Water	Water	7732-18-5	100.00000	90.98283	
Sand (Proppant), DWP-111, DWP-614, DWP-901, DWP-NE1	CWS	Propping Agent, Gel Slurry, Viscosifier, Breaker, Non-Emulsifier	Crystalline silica (Quartz)	14808-60-7	100.00000	8.39611	
			Hydrochloric acid	7647-01-0	35.00000	0.38745	
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.07650	
			Guar gum	9000-30-0	60.00000	0.05911	
			2-Propenoic acid, polymer with 2-propenamide, sodium salt	25987-30-8	40.00000	0.02319	
			Calcite	471-34-1	1.00000	0.01105	
			Illite	12173-60-3	1.00000	0.00857	
			Isopropanol	67-63-0	40.00000	0.00598	
			Dimethylcocoamine, bis(chloroethyl) ether, diquatary ammonium salt	68607-28-3	40.00000	0.00598	
			Methanol	67-56-1	15.00000	0.00556	

17-06410

		Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00493	
		Goethite	1310-14-1	0.10000	0.00475	
		Biotite	1302-27-8	0.10000	0.00370	
		Apatite	64476-38-6	0.10000	0.00370	
		Ilmenite	98072-94-7	0.10000	0.00317	
		Sorbitan monooleate	1338-43-8	5.00000	0.00290	
		Poly(oxyethylene)nonylphenol ether	9016-45-9	5.00000	0.00290	
		Ammonium Persulfate	7727-54-0	100.00000	0.00203	
		Alkenes, C>10 a-	64743-02-8	0.10000	0.00166	
		Modified thiourea polymer	68527-49-1	0.10000	0.00166	
		Fatty acids, tall-oil	61790-12-3	0.10000	0.00166	
		Alcohols, C14-15, ethoxylated	68951-67-7	0.10000	0.00166	
		Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00148	
		Diallyldimethylammonium chloride	7398-69-8	5.00000	0.00075	
		Propargyl Alcohol	107-19-7	0.10000	0.00055	
		Formaldehyde	50-00-0	0.10000	0.00011	
		Sodium chloride	7647-14-5	0.10000	0.00006	

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
 ** Information is based on the maximum potential for concentration and thus the total may be over 100%

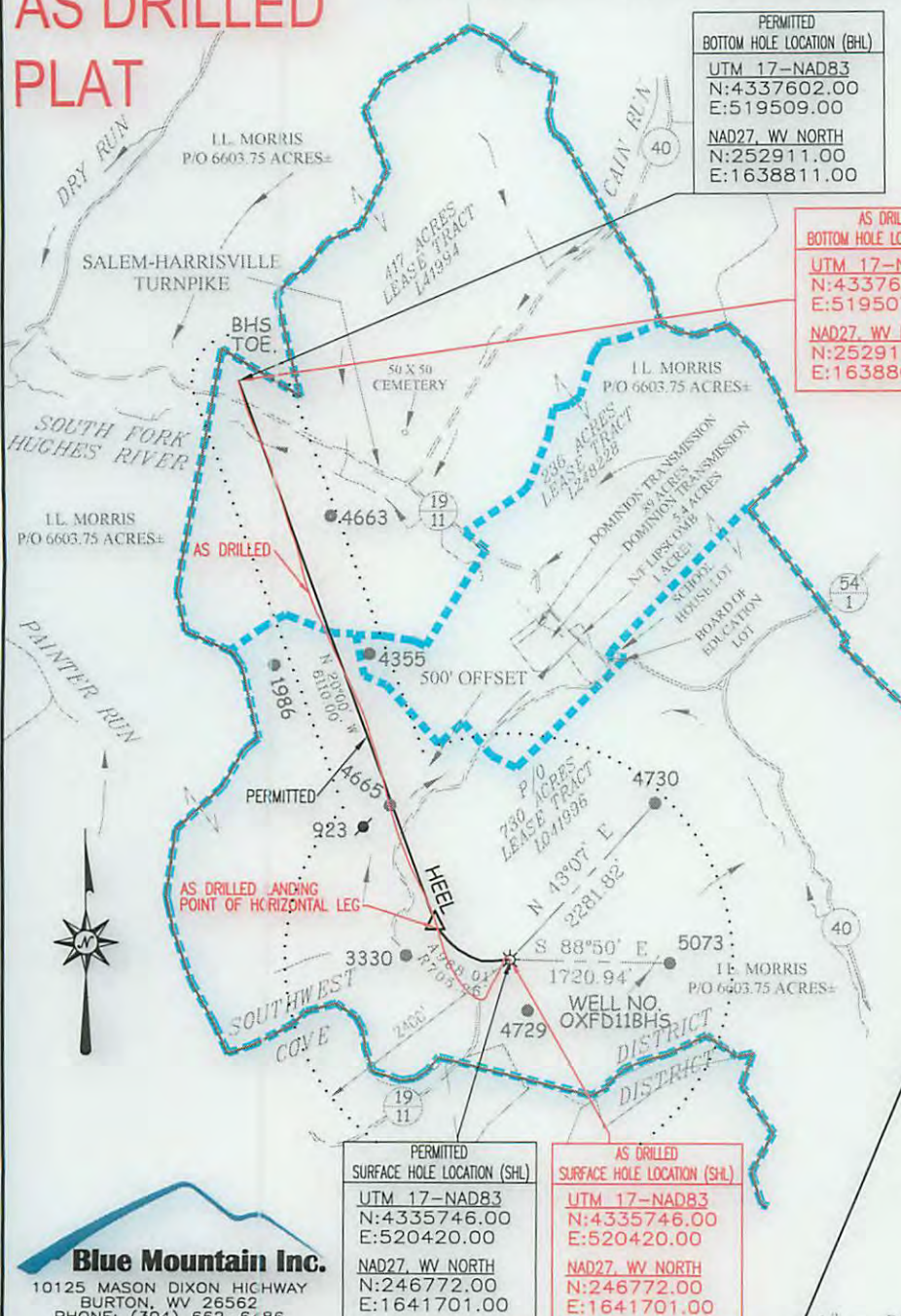
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

17-06410

AS DRILLED PLAT

Well is located on topo map 13,738 feet south of Latitude: 39° 12' 30"

Well is located on topo map 3,907 feet west of Longitude: 80° 45' 00"



PERMITTED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4337602.00
 E:519509.00
 NAD27, WV NORTH
 N:252911.00
 E:1638811.00

AS DRILLED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4337601.79
 E:519507.92
 NAD27, WV NORTH
 N:252910.73
 E:1638808.65

LEGEND	
	- TOPO MAP POINT
	- WELL
	- MINERAL TRACT BOUNDARY
	- LEASE BOUNDARY
	- PARCEL LINES
	- WELL REFERENCE
	- PROPOSED HORIZONTAL WELL
	- AS DRILLED
	- ROAD
	- STREAM CENTER LINE
GAS WELLS	
	- EXISTING WELLS
	- PLUGGED WELLS

PERMITTED APPROX. HEEL POINT
 UTM 17-NAD83
 N:4335863.00
 E:520174.00
 NAD27, WV NORTH
 N:247169.00
 E:1640901.00

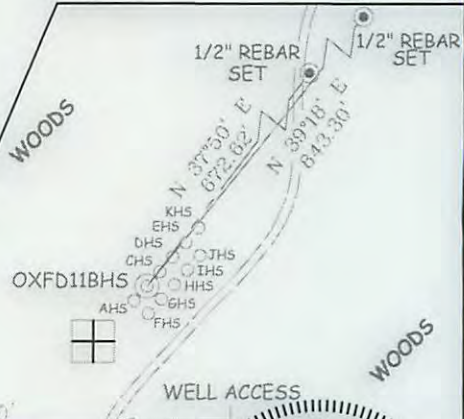
AS DRILLED APPROX. LANDING POINT
 UTM 17-NAD83
 N:4335844.36
 E:520181.86
 NAD27, WV NORTH
 N:247106.63
 E:1640924.02

- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
 - There are no existing buildings within 625' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 - It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

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

PERMITTED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4335746.00
 E:520420.00
 NAD27, WV NORTH
 N:246772.00
 E:1641701.00

AS DRILLED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4335746.00
 E:520420.00
 NAD27, WV NORTH
 N:246772.00
 E:1641701.00

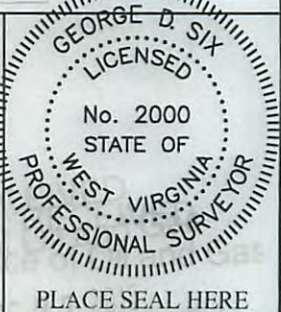


FILE #: OXFD11BHS-AS DRILLED
 DRAWING #: OXFD11BHS-AS DRILLED
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed:

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: MAY 27, 2015
 OPERATOR'S WELL #: OXFD11BHS-AS DRILLED
 API WELL #: 47 017 06410
 STATE COUNTY PERMIT

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

WATERSHED: SOUTH FORK HUGHES RIVER ELEVATION: 1,340'

COUNTY/DISTRICT: DODDRIDGE/SOUTHWEST QUADRANGLE: OXFORD 7.5'

SURFACE OWNER: I.L. MORRIS ACREAGE: 6603.75±

OIL & GAS ROYALTY OWNER: LINDSAY A EDMONDSON, ETAL & STATE OF WEST VIRGINIA (SALEM HARRISVILLE TURNPIKE) ACREAGE: 730 & 417

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,920'± TMD: 13,820'±

WELL OPERATOR CNX GAS COMPANY LLC DESIGNATED AGENT JOE BERRY, JR.

Address P.O. BOX 1248 Address P.O. BOX 1248

City JANE LEW State WV Zip Code 26378 City JANE LEW State WV Zip Code 26378

10/09/2015