

# APPROVED

WR-35  
Rev. 8/23/13

Page \_\_\_ of \_\_\_

NAME: John G. Fisher

DATE: 4/26/16

State of West Virginia

## Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

API 47 - 017 - 06518 County Doddridge District West Union  
 Quad West Union 7.5' Pad Name Cofor Pad Field/Pool Name -----  
 Farm name Coastal Forest Resources Company Well Number Outback Unit 1H  
 Operator (as registered with the OOG) Antero Resources Corporation  
 Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
 Top hole Northing 4350037m Easting 517233m  
 Landing Point of Curve Northing 4349631.27m Easting 516873.03m  
 Bottom Hole Northing 4347842m Easting 517594m

Elevation (ft) 1189' 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)  
Air - Foam & 4% KCL  
Mud - Polymer

Date permit issued 7/30/2014 Date drilling commenced 10/7/2014 Date drilling ceased 1/8/2015  
 Date completion activities began 3/29/2016 Date completion activities ceased 6/23/2016  
 Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 87' Open mine(s) (Y/N) depths No  
 Salt water depth(s) ft 737', 750' Void(s) encountered (Y/N) depths No  
 Coal depth(s) ft 367', 567' Cavern(s) encountered (Y/N) depths No  
 Is coal being mined in area (Y/N) No

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Reviewed by: \_\_\_\_\_

AX 08/28/2017  
 4/27/17

API 47-017 - 06518 Farm name Coastal Forest Resources Company Well number Outback Unit 1H

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	30"	20"	80'	New	94# J-55	N/A	Y
Surface	17-1/2"	13-3/8"	439'	New	48# H-40	N/A	Y*
Coal							
Intermediate 1	12-1/4"	9-5/8"	2510'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	14376'	New	20# P-110	N/A	Y
Tubing		2-3/8"	7191'		4.7# N-80		
Packer type and depth set		N/A					

Comment Details \*First attempt to cement Surface Casing with 513 sacks of Class A cement did not bring returns to surface. We then ran 125' of 1" PVS on the backside of the casing, pumped 150 sacks of Class A cement, and successfully brought returns to surface.

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	Class A	271 sx	15.6	1.18	77	0'	8 Hrs.
Surface	Class A	663 sx*	15.6	1.18	305	0'	8 Hrs.
Coal							
Intermediate 1	Class A	925 sx	15.6	1.18	786	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1074 sx (Lead) 1153 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.3 (Lead), 1.86 (Tail)	2833	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14376' MD, 6817' TVD (BHL); 6877' TVD (Deepest Point Drilled) Loggers TD (ft) 14323' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6713'

\*\* This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Morton Unit 1H API #47-017-06559). Please reference the wireline logs submitted with Form WR-35 for Morton Unit 1H. A Cement Bond Log has been included with this submittal.

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 \_\_\_\_\_

Conductor - 0  
 Surface - 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface  
 Intermediate - 1 above float joint, 1 above float collar, 1 every 4th joint to surface  
 Production - 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

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

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

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

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API 47- 017 - 06518 Farm name Coastal Forest Resources Company Well number Outback Unit 1H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6783' (TOP) TVD	7209' (TOP) MD

Please insert additional pages as applicable.

GAS TEST    Build up    Drawdown    Open Flow      OIL TEST    Flow    Pump

SHUT-IN PRESSURE   Surface 3000 psi   Bottom Hole --- psi   DURATION OF TEST --- hrs

OPEN FLOW      Gas                      Oil                      NGL                      Water                      GAS MEASURED BY

11628 mcfpd   84 bpd   --- bpd   725 bpd       Estimated    Orifice    Pilot

LITHOLOGY/ FORMATION	TOP		BOTTOM		DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

# \*PLEASE SEE ATTACHED EXHIBIT 3


Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling, LLC  
Address 562 Spring Run Rd. City Pennsboro State WV Zip 26415

Logging Company Allied Horizontal Wireline Services  
Address 380 Bedford Rd. City North Huntingdon State PA Zip 15642

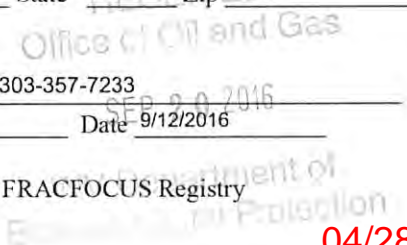
Cementing Company Nabors Completion & Production Services, Co.  
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company US Well Services  
Address 533 Industrial Park Dr. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233  
Signature *Kara Quackenbush* Title Permitting Agent Date 9/12/2016

Submission of Hydraulic Fracturing Chemical Disclosure Information      Attach copy of FRACFOCUS Registry



04/28/2017



**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	29-Mar-16	14,114	14,284	60	Marcellus
2	14-Apr-16	13,912	14,082	60	Marcellus
3	14-Apr-16	13,710	13,880	60	Marcellus
4	14-Apr-16	13,508	13,679	60	Marcellus
5	15-Apr-16	13,307	13,477	60	Marcellus
6	15-Apr-16	13,105	13,275	60	Marcellus
7	15-Apr-16	12,903	13,073	60	Marcellus
8	15-Apr-16	12,701	12,872	60	Marcellus
9	16-Apr-16	12,500	12,670	60	Marcellus
10	16-Apr-16	12,298	12,468	60	Marcellus
11	16-Apr-16	12,096	12,266	60	Marcellus
12	16-Apr-16	11,894	12,065	60	Marcellus
13	17-Apr-16	11,693	11,863	60	Marcellus
14	17-Apr-16	11,491	11,661	60	Marcellus
15	17-Apr-16	11,289	11,459	60	Marcellus
16	17-Apr-16	11,087	11,258	60	Marcellus
17	18-Apr-16	10,886	11,056	60	Marcellus
18	18-Apr-16	10,684	10,854	60	Marcellus
19	18-Apr-16	10,482	10,652	60	Marcellus
20	18-Apr-16	10,280	10,451	60	Marcellus
21	18-Apr-16	10,079	10,249	60	Marcellus
22	19-Apr-16	9,877	10,047	60	Marcellus
23	19-Apr-16	9,675	9,845	60	Marcellus
24	19-Apr-16	9,473	9,644	60	Marcellus
25	19-Apr-16	9,272	9,442	60	Marcellus
26	19-Apr-16	9,070	9,240	60	Marcellus
27	20-Apr-16	8,868	9,038	60	Marcellus
28	20-Apr-16	8,666	8,837	60	Marcellus
29	20-Apr-16	8,465	8,635	60	Marcellus
30	20-Apr-16	8,263	8,433	60	Marcellus
31	20-Apr-16	8,061	8,231	60	Marcellus
32	21-Apr-16	7,859	8,030	60	Marcellus
33	21-Apr-16	7,658	7,828	60	Marcellus
34	21-Apr-16	7,456	7,626	60	Marcellus
35	21-Apr-16	7,254	7,424	60	Marcellus

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## EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	13-Apr-16	73.2	7,181	0	4,860	306,500	8,080	N/A
2	14-Apr-16	73.8	7,017	5,493	4,955	307,190	8,011	N/A
3	14-Apr-16	73.4	6,946	5,411	4,873	306,800	7,989	N/A
4	14-Apr-16	72.4	6,840	5,615	5,343	307,000	8,346	N/A
5	15-Apr-16	73.0	6,813	5,643	4,946	307,400	7,975	N/A
6	15-Apr-16	72.6	7,042	5,168	4,796	297,745	8,992	N/A
7	15-Apr-16	72.4	6,595	5,203	4,874	307,495	7,919	N/A
8	15-Apr-16	72.2	6,566	5,636	5,175	308,000	7,932	N/A
9	16-Apr-16	72.9	6,902	5,869	4,960	308,000	9,046	N/A
10	16-Apr-16	72.5	6,638	5,327	4,678	307,600	8,879	N/A
11	16-Apr-16	70.8	6,911	5,318	5,077	309,330	7,991	N/A
12	16-Apr-16	72.7	6,639	5,558	4,985	308,400	7,912	N/A
13	17-Apr-16	72.7	6,742	5,300	5,168	308,400	8,251	N/A
14	17-Apr-16	74.5	6,566	5,193	4,991	307,965	7,826	N/A
15	17-Apr-16	76.3	6,698	5,104	4,972	307,390	7,816	N/A
16	17-Apr-16	76.3	6,644	5,744	5,111	309,500	7,821	N/A
17	18-Apr-16	76.8	6,520	5,500	4,846	309,500	7,848	N/A
18	18-Apr-16	76.6	6,638	5,972	4,778	308,800	7,796	N/A
19	18-Apr-16	75.8	6,539	5,343	5,150	307,800	7,755	N/A
20	18-Apr-16	76.6	6,631	5,264	5,522	307,800	8,922	N/A
21	18-Apr-16	75.3	6,765	5,568	5,071	296,100	7,601	N/A
22	19-Apr-16	74.7	6,543	5,829	4,789	307,300	8,589	N/A
23	19-Apr-16	74.6	6,705	5,279	5,393	308,000	7,712	N/A
24	19-Apr-16	75.0	6,971	5,811	5,232	261,900	8,843	N/A
25	19-Apr-16	73.6	6,414	5,683	5,035	307,700	7,736	N/A
26	19-Apr-16	74.8	6,494	5,676	5,028	307,300	7,787	N/A
27	20-Apr-16	72.9	6,300	5,847	4,853	307,800	7,713	N/A
28	20-Apr-16	74.9	6,426	5,608	5,400	307,900	7,652	N/A
29	20-Apr-16	75.6	6,283	5,332	5,826	307,900	7,630	N/A
30	20-Apr-16	72.8	6,584	5,593	4,828	307,700	7,606	N/A
31	20-Apr-16	76.0	6,129	5,708	5,100	307,600	7,599	N/A
32	21-Apr-16	76.2	6,222	5,972	5,289	307,700	7,632	N/A
33	21-Apr-16	75.3	6,476	5,722	4,889	307,300	7,583	N/A
34	21-Apr-16	73.5	6,562	6,076	5,189	307,400	7,698	N/A
35	21-Apr-16	75.7	6,282	6,434	4,528	311,720	7,581	N/A
<b>AVG=</b>		<b>74.2</b>	<b>6,635</b>	<b>5,423</b>	<b>5,043</b>	<b>10,709,935</b>	<b>8,002</b>	<b>TOTAL</b>

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## EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface	BOTTOM DEPTH (MD) From Surface
Fresh Water	87'	N/A	87'	N/A
Sandstone	0	107	0	107
Shale	est. 107	147	est. 107	147
Sandstone	est. 147	205	est. 147	205
Shale	est. 205	367	est. 205	367
Sandstone and Coal	est. 367	447	est. 367	447
Shale	est. 447	485	est. 447	485
Sandstone	est. 485	507	est. 485	507
Shale	est. 507	567	est. 507	567
Coal & Shale	est. 567	587	est. 567	587
Shale	est. 587	687	est. 587	687
Sandstone/Siltstone	est. 687	827	est. 687	827
Shale	est. 827	1007	est. 827	1007
Sandstone	est. 1007	1025	est. 1007	1025
Shale	est. 1025	1107	est. 1025	1107
Sandstone	est. 1107	1147	est. 1107	1147
Shale	est. 1147	1247	est. 1147	1247
Shale and Trace Coal	est. 1247	1267	est. 1247	1267
Shale	est. 1267	1327	est. 1267	1327
Sandstone	est. 1327	1346	est. 1327	1346
Shale	est. 1346	1467	est. 1346	1467
Sandstone/Siltstone	est. 1467	1567	est. 1467	1567
Siltstone/Shale/Trace coal	est. 1567	1666	est. 1567	1666
Sandstone	est. 1666	1727	est. 1666	1727
Shale/Sandstone/Trace Coal	est. 1727	1846	est. 1727	1846
Shale	est. 1846	1988	est. 1846	1988
Siltstone/Shale/Sandstone	est. 1988	2125	est. 1988	2125
Shale/Limestone	est. 2125	2168	est. 2125	2171
Big Lime	2168	2669	2171	2672
Gantz Sand	2669	2787	2672	2790
Fifty Foot Sandstone	2787	2869	2790	2872
Gordon	2869	3205	2872	3214
Fifth Sandstone	3205	4003	3214	4073
Speechley	4003	4307	4073	4406
Baltown	4307	4716	4406	4846
Bradford	4716	5162	4846	5326
Benson	5162	5443	5326	5631
Alexander	5443	5606	5631	5809
Elk	5606	6120	5809	6360
Rhinestreet	6120	6410	6360	6677
Sycamore	6410	6586	6677	6880
Middlesex	6586	6712	6880	7057
Burkett	6712	6741	7057	7110
Tully	6741	6783	7110	7209
Marcellus	6783	NA	7209	NA

\*Please note Antero determines formation tops based on mud logs that are only run on one well on a multi-well pad. The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/13/2016
Job End Date:	4/21/2016
State:	West Virginia
County:	Doddridge
API Number:	47-017-06518-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Outback 1H
Latitude:	39.29954200
Longitude:	-80.80014200
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,877
Total Base Water Volume (gal):	12,113,984
Total Base Non Water Volume:	0



## 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	Antero Resources	Base Fluid	Water	7732-18-5	100.00000	90.04334	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	9.54521	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.14294	
			Hydrogen Chloride	7647-01-0	18.00000	0.03414	
LGC-15	U.S. Well Services	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.05629	
			Petroleum Distillates	64742-47-8	60.00000	0.05331	
			Suspending agent (solid)	14808-60-7	3.00000	0.00861	
			Surfactant	68439-51-0	3.00000	0.00338	
WEBA-406	U.S. Well Services	Friction Reducer	Water	7732-18-5	60.00000	0.04293	
			2-Propenoic acid, polymer with 2 propenamide	9003-06-9	30.00000	0.02146	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01728	

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			Ethoxylated alcohol blend	68002-97-1	4.00000	0.00286
SI-1100	U.S. Well Services	Scale Inhibitor				
			Water	7732-18-5	80.00000	0.01039
			Ethylene Glycol	107-21-1	25.00000	0.00367
			Copolymer of Maleic and Acrylic acid	52255-49-9	10.00000	0.00153
			Potassium salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	7.50000	0.00132
			Phosphino carboxylic acid polymer	71050-62-9	5.00000	0.00084
			Hexamethylene triamine penta (methylene phosphonic acid)	34690-00-1	5.00000	0.00084
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5	2.00000	0.00034
K-BAC 1020	U.S. Well Services	Anti-Bacterial Agent				
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00454
			Deionized Water	7732-18-5	28.00000	0.00259
AP One	U.S. Well Services	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00184
AI-302	U.S. Well Services	Acid Corrosion Inhibitors				
			Water	7732-18-5	95.00000	0.00031
			2-Propyn-1-ol compound with methyloxirane	38172-91-7	15.00000	0.00005
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

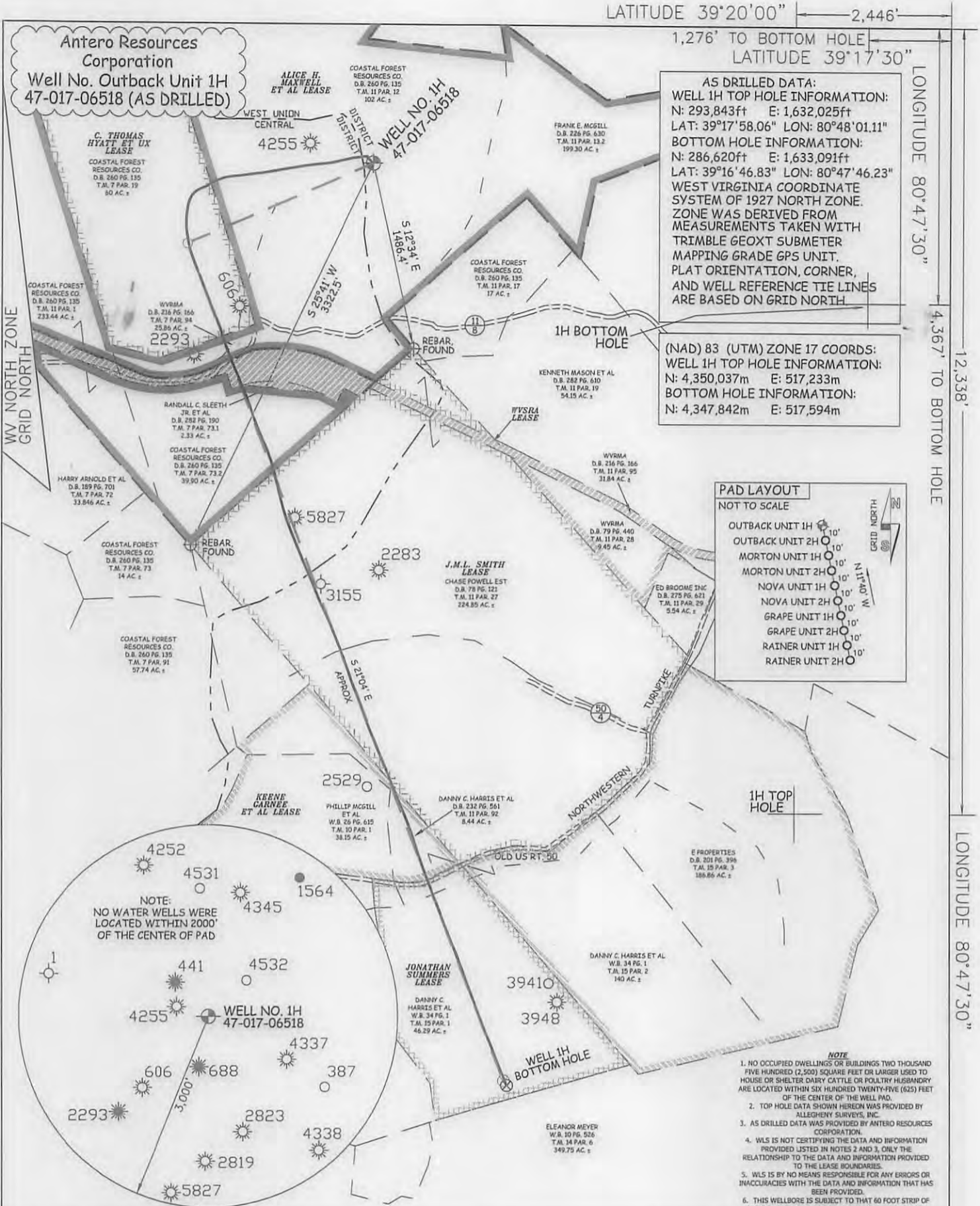
\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

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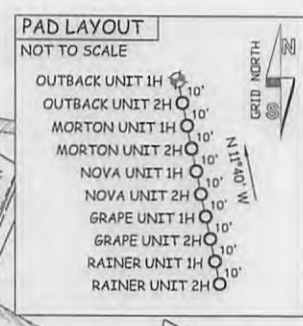


LATITUDE 39°20'00" 2,446'  
 1,276' TO BOTTOM HOLE  
 LATITUDE 39°17'30"

LONGITUDE 80°47'30"  
 4,367' TO BOTTOM HOLE  
 12,338'

**AS DRILLED DATA:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 293,843ft E: 1,632,025ft  
 LAT: 39°17'58.06" LON: 80°48'01.11"  
**BOTTOM HOLE INFORMATION:**  
 N: 286,620ft E: 1,633,091ft  
 LAT: 39°16'46.83" LON: 80°47'46.23"  
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH

**(NAD) 83 (UTM) ZONE 17 COORDS:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 4,350,037m E: 517,233m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,347,842m E: 517,594m



- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
  2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
  3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
  4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
  5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.
  6. THIS WELLBORE IS SUBJECT TO THAT 60 FOOT STRIP OF GROUND KNOWN AS THE OLD NORTHWESTERN TURNPIKE.

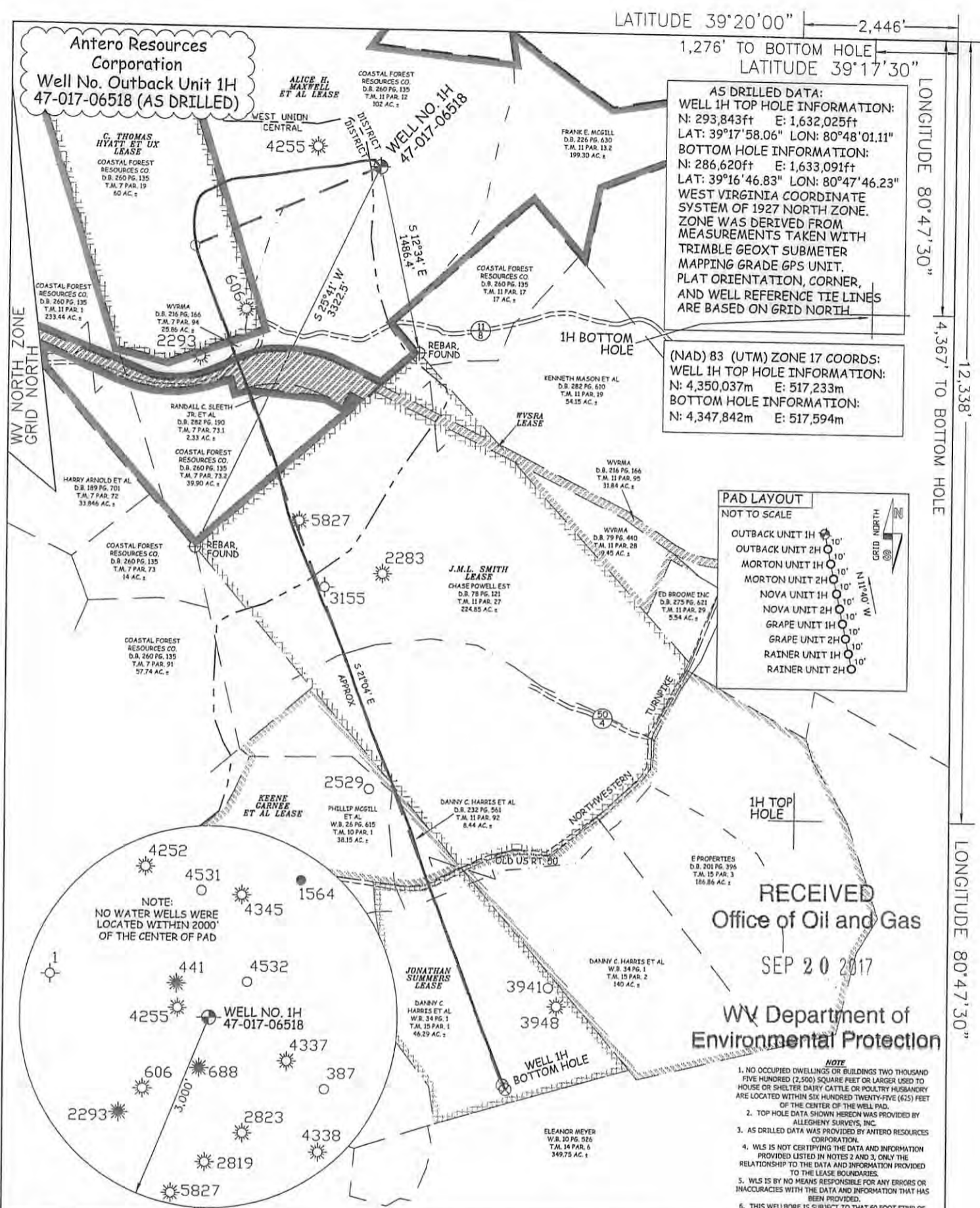
JOB # 14-037WA  
 DRAWING # OUTBACK1HAD  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY SUBMETER  
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS  
 STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS  
 WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1,222' ORIGINAL - 1,189' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK  
 QUADRANGLE WEST UNION 7.5' DISTRICT WEST UNION COUNTY DODDRIDGE  
 SURFACE OWNER COASTAL FOREST RESOURCES COMPANY ACREAGE 102 ACRES +/-  
 OIL & GAS ROYALTY OWNER ALICE H. MAXWELL ET AL.; C. THOMAS HYATT ET UX; WVSRA; LEASE ACREAGE 420 ACRES±; 60 ACRES±; 301.19 ACRES±;  
 J.M.L. SMITH; KEENE GARNEE ET AL.; JONATHAN SUMMERS 404 ACRES±; 404 ACRES±; 55 ACRES±  
 PROPOSED WORK: DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_  
 PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG  
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,817' TVD 14,376' MD  
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD  
 DENVER, CO 80202 CHARLESTON, WV 25313

STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
 WILLOW LAND SURVEYING PLLC  
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

**LEGEND**  
 - - - Surface Owner Boundary Lines +/-  
 - - - Interior Surface Tracts +/-  
 X Existing Fence  
 ⊕ Found monument, as noted  
 ○ Proposed Well Path  
 ⊗ As Drilled Well Path

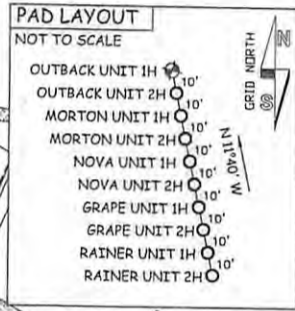
DATE 07/10/15  
 OPERATOR'S WELL# OUTBACK UNIT #1H  
 API WELL # 47 - 017 - 06518  
 STATE COUNTY PERMIT COUNTY NAME PERMIT  
 WEST VIRGINIA MIDDLE ISLAND CREEK 04/28/2017





**AS DRILLED DATA:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 293,843ft E: 1,632,025ft  
 LAT: 39°17'58.06" LON: 80°48'01.11"  
**BOTTOM HOLE INFORMATION:**  
 N: 286,620ft E: 1,633,091ft  
 LAT: 39°16'46.83" LON: 80°47'46.23"  
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH

**(NAD) 83 (UTM) ZONE 17 COORDS:**  
**WELL 1H TOP HOLE INFORMATION:**  
 N: 4,350,037m E: 517,233m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,347,842m E: 517,594m



JOB # 14-037WA  
 DRAWING # OUTBACK1HAD  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY SUBMETER  
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
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STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X

LOCATION: ELEVATION 1,222' ORIGINAL - 1,189' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK QUADRANGLE WEST UNION 7.5' DISTRICT WEST UNION COUNTY DODDRIDGE

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