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west virginia department of environmental protection

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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

## PERMIT MODIFICATION APPROVAL

November 06, 2015

ASCENT RESOURCES-MARCELLUS, LLC  
3501 NW 63RD STREET  
OKLAHOMA, OK 73116

Re: Permit Modification Approval for API Number 10303104, Well #: WILEY N GRN WZ  
7H

Acquired additional leases/Extending lateral

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

Gene Smith  
Assistant Chief of Permitting  
Office of Oil and Gas

Promoting a healthy environment.

11/06/2015

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

1) Well Operator: Ascent Resources-Marcellus

<u>494514693</u>	<u>Wetzel</u>	<u>Green</u>	<u>Center Point</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: Wiley N GRN WZ 7H Well Pad Name: Wiley GRN WZ

3) Farm Name/Surface Owner: Coastal Lumber Co. Public Road Access: CR 13. CR 13/3 and CR 13/8

4) Elevation, current ground: 1315' Elevation, proposed post-construction: 1286.29'

5) Well Type (a) Gas  Oil  Underground Storage

Other \_\_\_\_\_

(b) If Gas Shallow  Deep \_\_\_\_\_

Horizontal  \_\_\_\_\_

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):  
Marcellus, Approximate TVD 7283', approximate thickness 50', +/- 4600 psi

8) Proposed Total Vertical Depth: 7283'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 12600'

11) Proposed Horizontal Leg Length: 4931'

12) Approximate Fresh Water Strata Depths: 535'

13) Method to Determine Fresh Water Depths: Based on drilling history in nearby wells

14) Approximate Saltwater Depths: 1315'

15) Approximate Coal Seam Depths: 1065'

16) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

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18)

**CASING AND TUBING PROGRAM**

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20"	New	J-55	94#	100'	100'	330, CTS
Fresh Water	13-3/8"	New	J-55	54.5#	1105'	1105'	320, CTS
Coal							
Intermediate	9-5/8"	New	J-55	40#	3400'	3400'	1650, CTS
Production	5-1/2"	New	P-110	20#	12600'	12600'	4375
Tubing	2-7/8"	New	N-80	4.7#			
Liners							

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Max. Associated Surface Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	20"	24"	0.438	2110	50	Class A	1.2
Fresh Water	13-3/8"	17-1/2"	0.38	2740	600	Class A	1.2
Coal							
Intermediate	9-5/8"	12-1/4"	0.395	3520	1500	Premium H50-50 Poz H	Tail 1.27, Lead 1.51
Production	5-1/2"	8-3/4"	0.361	12640	5000	Premium H50-50 Poz H	Tail 1.27, Lead 1.51
Tubing	2-7/8"	4.778"	0.19	11100			
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

The well will be spud using a conductor rig. It will drill down 100' per the casing program. It will set 20" casing and circulate cement back to surface. The conductor rig will move off location, a rig capable of drilling to TD will move on and finish drilling the well. We will drill on air with a tri-cone bit to 1105' and set freshwater casing. We will then continue drilling vertically and setting casing per the attached casing program to TD.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

We plan to hydraulically fracture/stimulate the well utilizing the "slickwater" frac technique. We will plug and perforate through cased hole and frac with an anticipated max pressure that will not exceed 10,000 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 42.3

22) Area to be disturbed for well pad only, less access road (acres): 6.8

23) Describe centralizer placement for each casing string:

Conductor: N/A  
Surface: Centralizer every 3 joints or 120'  
Intermediate: Centralizer every 3 joints or 120'  
Production: Run 1 spiral centralizer every 120' from the first 5.5" long joint to the top of the curve  
Run 1 spiral centralizer every 200' from the top of the curve to surface

24) Describe all cement additives associated with each cement type:

Conductor: Class A Cement (see attachment for complete description)  
Surface: Class A Cement (see attachment for complete description)  
Intermediate: Premium H/50-50 Poz H Cement (see attachment for complete description)  
Productions: Premium H/50-50 Poz H Cement (see attachment for complete description)

25) Proposed borehole conditioning procedures:

The wellbore will be properly circulated at TD of each section until as much of the residual drill cuttings have been removed from the wellbore as possible, residual drilling gas has been circulated out and until the mud and wellbore are both constant and stable. Mud properties will be adjusted if needed. Hole cleaning times may vary from well to well, hole section to hole section.

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\*Note: Attach additional sheets as needed.

**Cement Additives for WW-6B**

**Class A – Neat + 2% BWOC Calcium + Chloride + .25% BWOC Flo-Seal Additives are Polyflake LCM**

**Class H Premium + 0.75% FL 17 + 0.1% C41P + 0.15% C45 + 3pps gilsonite + 0.2% C20 Additives are FL-17, C41-P, C-45, Gilsoite, and C-20**

**50/50 Poz H + 0.5 %FL 17 + 5% Gyp + 0.1% C41P + 0.15% C51 + 0.1% C20 Additives are FL-17, Gypsum, C41-P, C-51, and C-20**

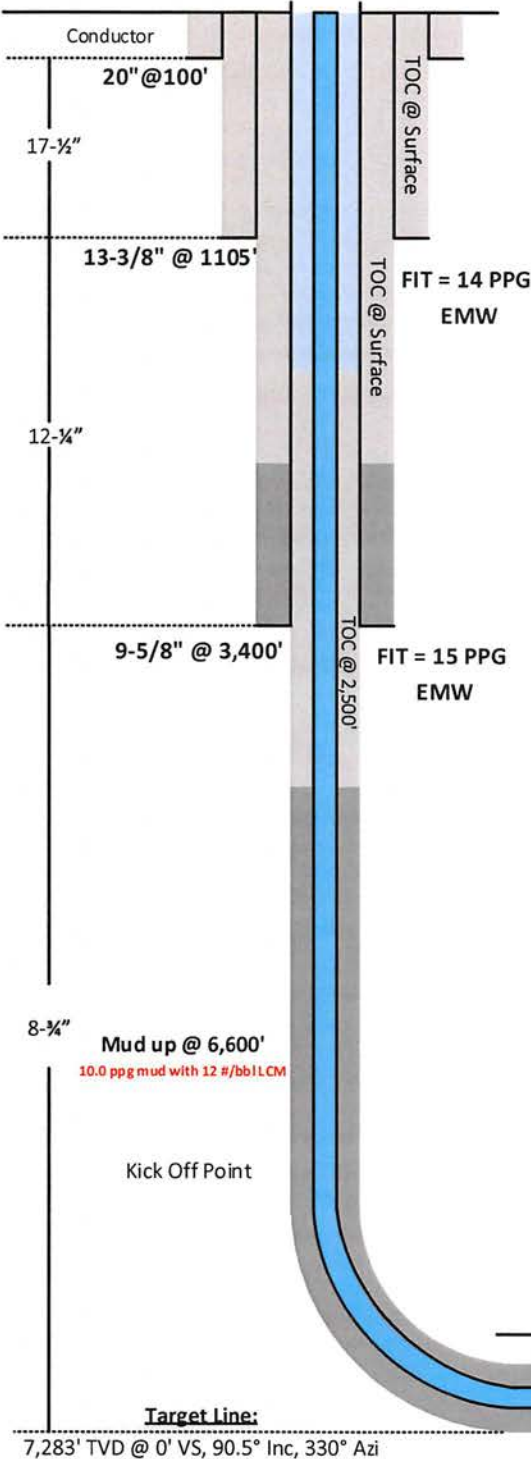


103-63104 MOD

# Wiley N GRN WZ 7H



County, State:	Township:	Location:	Formation:
Wetzel, West Virginia	Grant		Marcellus
Coord inates:	SHL Lat/Long:	RKB / Elevation:	AFE DC/CWC:
NAD 27	39.509325 N, 80.691922 W		USDW:
	BHL Lat/Long:		Property #:
Rig:	Target Line:	7,283' TVD @ 0° VS, 90.5 Inc, 330 Azi	535'
			AFE #:



Interval	Hole size (in)	Size (in)	Weight #/ft	Grade	Conn.	Collapse (PSI)	Burst (PSI)	Depth (ft)	Cost \$/ft
Conductor	25"	20"	-	-	-	-	-	100	-
Surface	17-1/2"	13-3/8"	54.5	J-55	BTC	1,130	2,740	1,105	36
Intermediate	12-1/4"	9-5/8"	36	J-55	LTC	2,020	3,520	3,400	22
Production	8-3/4"	5-1/2"	20	P-110	ULT-DQX	11,110	12,640	12,600	22

Interval	Slurry	Weight	Ft <sup>3</sup>	Yield	Excess	Cement Top
Conductor					50%	Surface
	Tail	15.6 ppg	330	1.20 cuft/sk		
Surface					50%	Surface
	Tail	15.6 ppg	320	1.20 cuft/sk		
Intermediate	Lead	13.5 ppg	250	1.51 cuft/sk	30%	Surface
	Tail	15.3 ppg	1150	1.27 cuft/sk		700
Production	Lead	13.5 ppg	1000	1.51 cuft/sk	10%	2500
	Tail	15.3 ppg	1790	1.27 cuft/sk		6300

Formation	TVD	Sub Sea
Freshwater	535'	780'
Pittsburgh Coal	1,065'	250'
Saltwater	1,315'	'
Big Injun	2,355'	-1,040'
Big Injun Base	2,555'	-1,240'
Berea	2,915'	-1,600'
Gordon	3,135'	-1,820'
Gordon Base	3,220'	-1,905'
Middlesex	6,958'	-5,643'
Geneseo	7,101'	-5,786'
Tully	7,129'	-5,814'
Hamilton	7,153'	-5,838'
Marcellus	7,241'	-5,926'
Purcell	7,248'	-5,933'
Lower Marcellus	7,250'	-5,935'
Basal Marcellus	7,273'	-5,958'
Target	7,283'	-5,968'
Onondaga	7,291'	-5,976'
Oriskany		

8-3/4" Curve and Lateral | 5-1/2" Casing @ 12,600'

Target Line:  
7,283' TVD @ 0° VS, 90.5° Inc, 330° Azi

AIR INTERVALS					SYNTHETIC OIL BASED MUD INTERVAL									
Interval	Depth (MD)	Rate (cfpm)	Water (bbl/hr)	Foamer (gal/hr)	Interval	Depth (MD)	Weight (#/gal)	Viscosity (sec/qt)	HTHP (ml/30min)	PV (cp)	YP (lb/100 ft <sup>3</sup> )	6 RPM	WPS	OWR
													ppm	% by vol
Surface	0' - 1105'	>5000	30-50	1/2 - 3/4	Vertical	6,600' - 6,865'	10.0 - 10.5	50 - 60	4 - 6	18 - 24	10 - 12	6-9		
Intermediate	1105' - 3,400'	>5000	30-50	1/2 - 3/4	Curve	6,865' - 7,765'	10.5 - 13.5	50 - 60	4 - 6	18 - 24	10 - 12	6-9		
Vert/Nudge	3,400' - 6,600'	>5000	40-60	3/4 - 1	Lateral	7,765' - 12,600'	13.5 - 13.7	50 - 60	4 - 6	18 - 24	10 - 12	6-9		

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Environmental Protection

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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Please see attached.

**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:

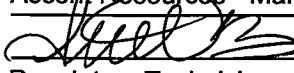
- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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: Ascent Resources - Marcellus, LLC

By:

Its:



Regulatory Technician

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WV Department of Environmental Protection  
11/06/2015



103-03164 MOD

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE

Chapter 22, Article 6A, Section 5(a)(5)

IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

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(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:

Ascent Resources - Marcellus, LLC is the record title owner of the leases identified herein. Listed below each lease is the applicable chain of title by which Ascent Resources - Marcellus, LLC was vested with title thereto. Please note, throughout

Tract	Parcel No.	Fee/Lease No.	Lessor/Assignor	Lessee/Assignee	Royalty/Instrument	Book/Page			
1	5-23-4	25040-50	John R. McCoy etal	J.F. Guffey	1/8	48/445			
			J.F. Guffey	W.M. Graham	Assignment	56/286			
			W.M. Graham	W.H. Nimick	Assignment	56/288			
			W.H. Nimick	South Penn Oil Company	Assignment	49/268			
			South Penn Oil Company	South Penn Natural Gas Company	Assignment	33A/455			
			South Penn Natural Gas Company	South Penn Oil Company	Assignment	215/478			
			South Penn Oil Company	Pennzoil Company	Cert. of Name Change	WV Sec. of State records			
			Pennzoil Company	Pennzoil United, Inc.	Assignment	246/491			
			Pennzoil United, Inc.	Pennzoil Company	Cert. of Name Change	WV Sec. of State records			
			Pennzoil Company	Pennzoil Products Company	Assn. & Supp. Assn.	319/397 & 322/577			
			Pennzoil Products Company	Pennzoil Exploration and Production Company	Assignment	363/384			
			Pennzoil Exploration and Production Company	PennzEnergy Exploration and Production, L.L.C.	Cert. of Merger	12/177			
			PennzEnergy Exploration and Production, L.L.C.	Devon Energy Production Company, L.P.	Cert. of Merger	12/278			
			Devon Energy Production Company, L.P.	East Resources, Inc.	Assignment	370/580			
			East Resources, Inc.	HG Energy, LLC	Assignment	118A/253			
			East Resources, Inc. and HG Energy, LLC	American Energy - Marcellus, LLC	Assignment	153A/238			
			American Energy - Marcellus, LLC	Ascent Resources - Marcellus, LLC	Cert. of Name Change	WV Sec. of State records			
2	5-23-40.1	25942-50	Rachel Wright etal	South Penn Oil Company	1/8	51/460			
			South Penn Oil Company	South Penn Natural Gas Company	Assignment	33A/455			
			South Penn Natural Gas Company	South Penn Oil Company	Assignment	215/478			
			South Penn Oil Company	Pennzoil Company	Cert. of Name Change	WV Sec. of State records			
			Pennzoil Company	Pennzoil United, Inc.	Assignment	246/491			
			Pennzoil United, Inc.	Pennzoil Company	Cert. of Name Change	WV Sec. of State records			
			Pennzoil Company	Pennzoil Products Company	Assn. & Supp. Assn.	319/397 & 322/577			
			Pennzoil Products Company	Pennzoil Exploration and Production Company	Assignment	363/384			
			Pennzoil Exploration and Production Company	PennzEnergy Exploration and Production, L.L.C.	Cert. of Merger	12/177			
			PennzEnergy Exploration and Production, L.L.C.	Devon Energy Production Company, L.P.	Cert. of Merger	12/278			
			Devon Energy Production Company, L.P.	East Resources, Inc.	Assignment	370/580			
			East Resources, Inc.	HG Energy, LLC	Assignment	118A/253			
			East Resources, Inc. and HG Energy, LLC	American Energy - Marcellus, LLC	Assignment	153A/238			
			American Energy - Marcellus, LLC	Ascent Resources - Marcellus, LLC	Cert. of Name Change	WV Sec. of State records			
			3	5-23-40	25942-50	Rachel Wright etal	South Penn Oil Company	1/8	51/460
						South Penn Oil Company	South Penn Natural Gas Company	Assignment	33A/455
						South Penn Natural Gas Company	South Penn Oil Company	Assignment	215/478
South Penn Oil Company	Pennzoil Company	Cert. of Name Change				WV Sec. of State records			
Pennzoil Company	Pennzoil United, Inc.	Assignment				246/491			
Pennzoil United, Inc.	Pennzoil Company	Cert. of Name Change				WV Sec. of State records			
Pennzoil Company	Pennzoil Products Company	Assn. & Supp. Assn.				319/397 & 322/577			
Pennzoil Products Company	Pennzoil Exploration and Production Company	Assignment				363/384			
Pennzoil Exploration and Production Company	PennzEnergy Exploration and Production, L.L.C.	Cert. of Merger				12/177			
PennzEnergy Exploration and Production, L.L.C.	Devon Energy Production Company, L.P.	Cert. of Merger				12/278			
Devon Energy Production Company, L.P.	East Resources, Inc.	Assignment				370/580			
East Resources, Inc.	HG Energy, LLC	Assignment				118A/253			
East Resources, Inc. and HG Energy, LLC	American Energy - Marcellus, LLC	Assignment				153A/238			
American Energy - Marcellus, LLC	Ascent Resources - Marcellus, LLC	Cert. of Name Change				WV Sec. of State records			
4	5-21-21	25942-50				Rachel Wright etal	South Penn Oil Company	1/8	51/460
						South Penn Oil Company	South Penn Natural Gas Company	Assignment	33A/455
						South Penn Natural Gas Company	South Penn Oil Company	Assignment	215/478
			South Penn Oil Company	Pennzoil Company	Cert. of Name Change	WV Sec. of State records			
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			Pennzoil Products Company	Pennzoil Exploration and Production Company	Assignment	363/384			
			Pennzoil Exploration and Production Company	PennzEnergy Exploration and Production, L.L.C.	Cert. of Merger	12/177			
			PennzEnergy Exploration and Production, L.L.C.	Devon Energy Production Company, L.P.	Cert. of Merger	12/278			
			Devon Energy Production Company, L.P.	East Resources, Inc.	Assignment	370/580			
			East Resources, Inc.	HG Energy, LLC	Assignment	118A/253			
			East Resources, Inc. and HG Energy, LLC	American Energy - Marcellus, LLC	Assignment	153A/238			
			American Energy - Marcellus, LLC	Ascent Resources - Marcellus, LLC	Cert. of Name Change	WV Sec. of State records			
			5	5-21-16	16103-50	Louisa J. Fluharty	South Penn Oil Company	1/8	49/44
						South Penn Oil Company	South Penn Natural Gas Company	Assignment	33A/455
						South Penn Natural Gas Company	South Penn Oil Company	Assignment	215/478
South Penn Oil Company	Pennzoil Company	Cert. of Name Change				WV Sec. of State records			
Pennzoil Company	Pennzoil United, Inc.	Assignment				246/491			
Pennzoil United, Inc.	Pennzoil Company	Cert. of Name Change				WV Sec. of State records			
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East Resources, Inc.	HG Energy, LLC	Assignment				118A/253			
East Resources, Inc. and HG Energy, LLC	American Energy - Marcellus, LLC	Assignment				153A/238			
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103-03104 May

			American Energy - Marcellus, LLC	Ascent Resources - Marcellus, LLC	Cert. of Name Change	WV Sec. of State records
6	5-21-17	57110-00	Archie West etux Pennzoll Company	Pennzoll Company Pennzoll Products Company	1/8 Assn. & Supp. Assn.	65A/676 319/397 & 322/577
			Pennzoll Products Company	Pennzoll Exploration and Production Company	Assignment	363/384
			Pennzoll Exploration and Production Company	PennzEnergy Exploration and Production, L.L.C.	Cert. of Merger	12/177
			PennzEnergy Exploration and Production, L.L.C.	Devon Energy Production Company, L.P.	Cert. of Merger	12/278
			Devon Energy Production Company, L.P.	East Resources, Inc.	Assignment	370/580
			East Resources, Inc.	HG Energy, LLC	Assignment	118A/253
			East Resources, Inc. and HG Energy, LLC	American Energy - Marcellus, LLC	Assignment	153A/238
			American Energy - Marcellus, LLC	Ascent Resources - Marcellus, LLC	Cert. of Name Change	WV Sec. of State records
7	5-21-16.2	16103-50	Louisa J. Fluharty South Penn Oil Company	South Penn Oil Company South Penn Natural Gas Company	1/8 Assignment	49/44 33A/455
			South Penn Natural Gas Company	South Penn Oil Company	Assignment	215/478
			South Penn Oil Company	Pennzoll Company	Cert. of Name Change	WV Sec. of State records
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			Pennzoll United, Inc.	Pennzoll Company	Cert. of Name Change	WV Sec. of State records
			Pennzoll Company	Pennzoll Products Company	Assn. & Supp. Assn.	319/397 & 322/577
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			Devon Energy Production Company, L.P.	East Resources, Inc.	Assignment	370/580
			East Resources, Inc.	HG Energy, LLC	Assignment	118A/253
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8	5-21-15	16103-50	Louisa J. Fluharty South Penn Oil Company	South Penn Oil Company South Penn Natural Gas Company	1/8 Assignment	49/44 33A/455
			South Penn Natural Gas Company	South Penn Oil Company	Assignment	215/478
			South Penn Oil Company	Pennzoll Company	Cert. of Name Change	WV Sec. of State records
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			Pennzoll United, Inc.	Pennzoll Company	Cert. of Name Change	WV Sec. of State records
			Pennzoll Company	Pennzoll Products Company	Assn. & Supp. Assn.	319/397 & 322/577
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			American Energy - Marcellus, LLC	Ascent Resources - Marcellus, LLC	Cert. of Name Change	WV Sec. of State records
9	5-20-22	EQT-001	Josephine Brast; A.E. Brast; William Brast & S. L., his wife; Jacob Brast & Ida, his wife; M.A. Brast & M.E., his wife	South Penn Oil Company	1/8	49/591
			South Penn Oil Company	Hope Natural Gas Company	Assignment	9A/230
			Hope Natural Gas Company	Hope Construction & Refining Company	Assignment	14A/195
			Hope Construction & Refining Company	Hope Natural Gas Company	Consolidation/Merger	175/23
			Hope Natural Gas Company	NY State Natrual Gas Corp merged with Hope Natural Gas Co and changed name to Consolidated Gas Supply Corporation	Merger	243/332
			Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	66A/69
			Consolidated Gas Transmission Corporation	Eastern States Oil and Gas, Inc (now EQT Production Company)	Assignment	76A/232
			EQT Production Compnay	Ascent Resources - Marcellus, LLC	Memo Agreement	166A/38


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SEP 03 2015  
11/06/2015  
WV Department of  
Environmental Protection

1023-03104 M00

# WILEY GRN WZ WELL PAD GREEN & McELROY DISTRICTS, WETZEL & TYLER COUNTIES, WV FEBRUARY 2015


PLANS PREPARED BY:

**BOORD BENCHEK & ASSOCIATES, INC.**  
ENGINEERING, SURVEYING, CONSTRUCTION AND MINING SERVICES  
SOUTHPOINTE, PA 15317 PHONE: 724-746-1055



*Andrew Benchek*  
ANDREW BENCHEK  
P. E.

1" = 3000'



SHEET INDEX

NO.	TITLE SHEET
2-3	EVACUATION ROUTE/PREVAILING WIND
4	E&S CONTROL LAYOUT OVERVIEW
5-18	E&S CONTROL LAYOUT
19	E&S CONTROL AND SITE PLAN OVERVIEW
20-33	E&S CONTROL AND SITE PLAN
34	WELL PAD CROSS-SECTIONS AND PROFILES C-C, AND D-D'
35-38	ACCESS ROAD #1, #2 AND #3 PROFILES
39-42	ACCESS ROAD #1, #2 AND #3 CROSS-SECTIONS
43-45	DETAIL SHEET
46	RECLAMATION PLAN OVERVIEW
47-60	RECLAMATION PLAN

TOTAL DISTURBED AREA: 42.3 AC.  
ACCESS ROAD #1 DISTURBED AREA: 35.1 AC.  
ACCESS ROAD #2 DISTURBED AREA: 1.9 AC.  
ACCESS ROAD #3 DISTURBED AREA: 0.5 AC.  
WELL PAD DISTURBED AREA: 6.8 AC.

PROPERTY OWNER PROJECT BOUNDARY ACREAGE

NO.	OWNER	ACRES	NO.	DATE	REVISIONS
1	STATE OF WEST VIRGINIA	2.3	1	02/15	ISSUED FOR PERMIT
2	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	2	02/15	ISSUED FOR PERMIT
3	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	3	02/15	ISSUED FOR PERMIT
4	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	4	02/15	ISSUED FOR PERMIT
5	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	5	02/15	ISSUED FOR PERMIT
6	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	6	02/15	ISSUED FOR PERMIT
7	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	7	02/15	ISSUED FOR PERMIT
8	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	8	02/15	ISSUED FOR PERMIT
9	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	9	02/15	ISSUED FOR PERMIT
10	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	10	02/15	ISSUED FOR PERMIT
11	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	11	02/15	ISSUED FOR PERMIT
12	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	12	02/15	ISSUED FOR PERMIT
13	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	13	02/15	ISSUED FOR PERMIT
14	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	14	02/15	ISSUED FOR PERMIT
15	WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES COMMERCIAL DIVISION	5.4	15	02/15	ISSUED FOR PERMIT
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COORDINATES

SITE ENTRANCE  
(NAD 83)  
LAT: 39.509409°  
LONG: 80.651827°

CENTER OF WELLS  
(NAD 83)  
LAT: 39.509327°  
LONG: 80.652005°

SITE ENTRANCE  
(NAD 83)  
LAT: 39.463195°  
LONG: 80.684883°

CENTER OF WELLS  
(NAD 77)  
LAT: 39.463112°  
LONG: 80.685060°

THE FOLLOWING EROSION & SEDIMENT CONTROL PLAN HAS BEEN ESTABLISHED BY THE OWNER AND BEST MANAGEMENT PRACTICES (BMP) WILL BE USED TO PREVENT EROSION AND SEDIMENT CONTROL. FIELD MANUAL, A GENERAL CONSTRUCTION SEQUENCE, DESCRIPTION OF STABILIZATION METHODS, AND DETAILS & SPECIFICATIONS FOR EROSION & SEDIMENT BEST MANAGEMENT PRACTICES HAVE BEEN INCLUDED IN THE PROVIDED DETAIL SHEETS.

TITLE SHEET

WILEY GRN WZ WELL PAD  
GREEN & McELROY DISTRICT, WETZEL & TYLER COUNTIES, WV

SHEET 1 OF 60

**WEST VIRGINIA 811**

TWO WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR MUST CONTACT THE WV ONE CALL SYSTEM, INC. 1-800-245-4848  
TICKET NUMBER: 1503403104

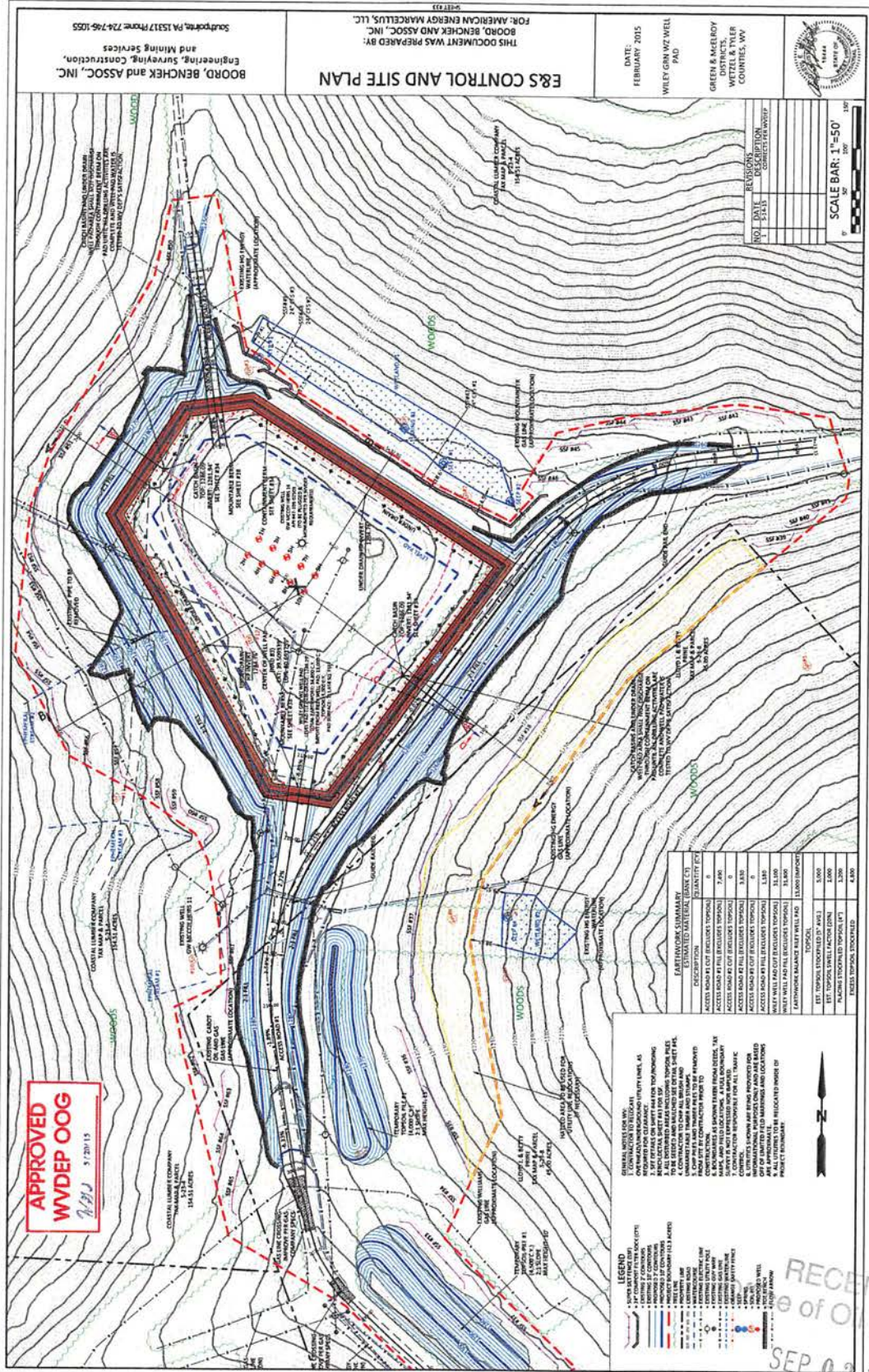


AMERICAN ENERGY MARCELLUS, LLC  
1000 UTICA WAY  
CAMBRIDGE, OH 43725



RECEIVED  
Department of Oil and Gas  
SEP 03 2015  
Department of Environmental Protection  
11/06/2015





BOARD, BENGHEK and ASSOC., INC.  
Engineering, Surveying, Construction,  
and Mining Services  
Sudbury, PA 15117 Phone: 724-746-1055

E&S CONTROL AND SITE PLAN

THIS DOCUMENT WAS PREPARED BY:  
BOON, BENGHEK AND ASSOC., INC.  
FOR: AMERICAN ENERGY MARCELLUS, LLC.

DATE:  
FEBRUARY 2015  
WILEY GRAN WZ WELL  
PAD

GREEN & MCELROY  
WITZEL & TYLER  
COUNTEES, WV



NO.	DATE	REVISION	DESCRIPTION
1			CORRECT PER WDTIP



**APPROVED**  
**WVDEP OOG**  
3/2/15

EARTHWORK SUMMARY		ESTIMATED MATERIAL (Bank C/Y)
ACCESS ROAD	CUT	7,400
ACCESS ROAD	FILL	0
ACCESS ROAD	FILL EXCLUDED TOPSOIL	3,800
ACCESS ROAD	FILL EXCLUDED TOPSOIL	0
ACCESS ROAD	FILL EXCLUDED TOPSOIL	1,500
WELLS	FILL EXCLUDED TOPSOIL	15,800
EARTHWORK BALANCE	NET FILL AND	15,000 IMPORTS
TOTAL		
EST. TOPSOIL EXCLUDED (3\"/>		

GENERAL NOTES FOR WZ:  
1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.  
2. SEE DETAILS ON SHEET FOR TOPOGRAPHIC SURVEY DATA.  
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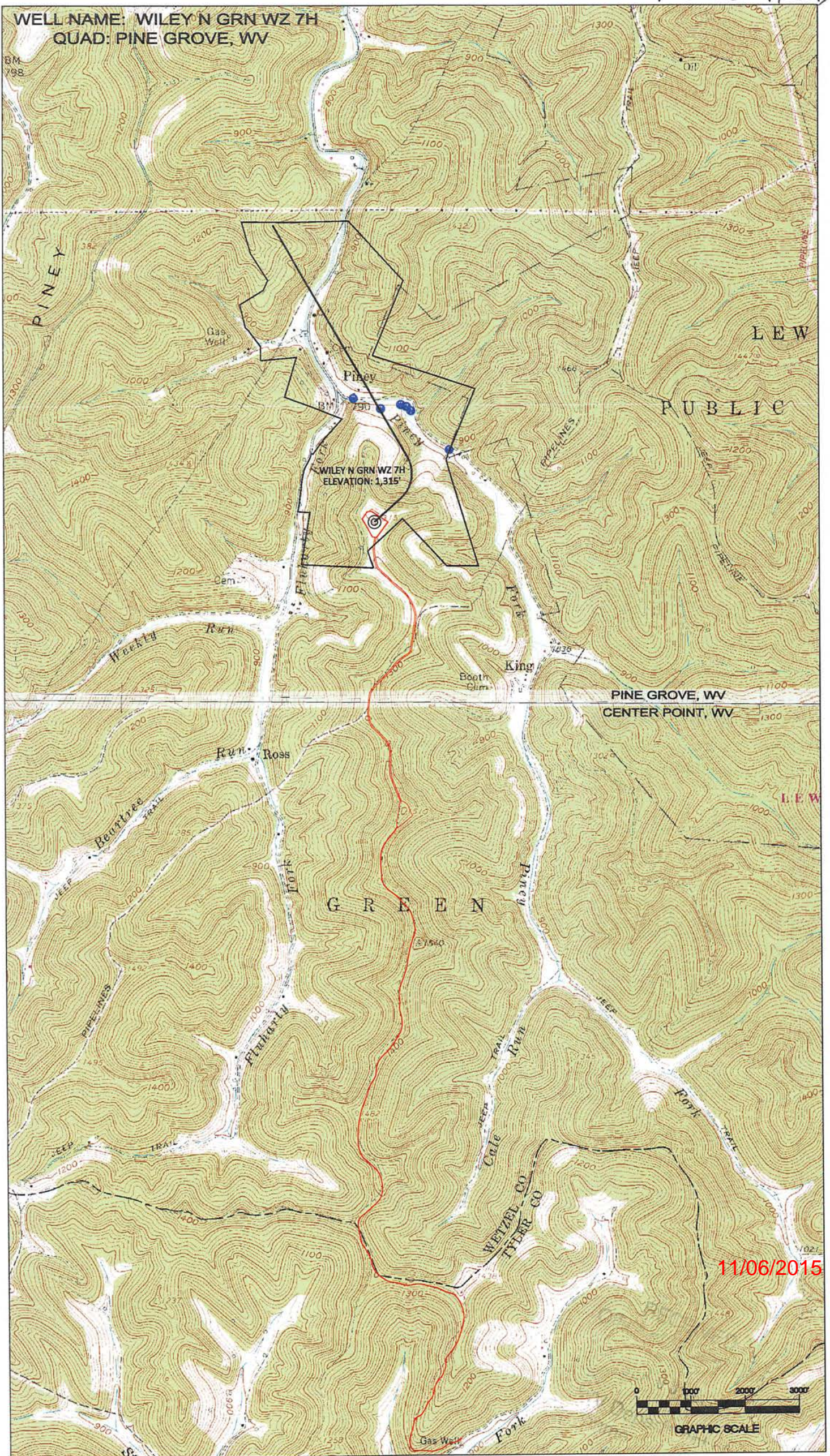
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 SEP 03 2015

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 11/06/2015



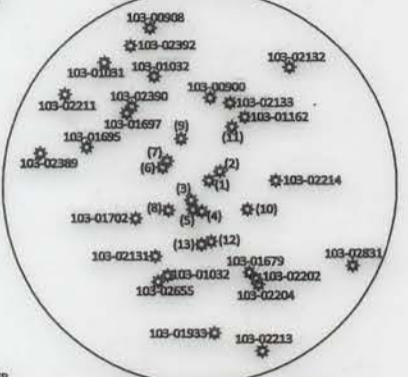
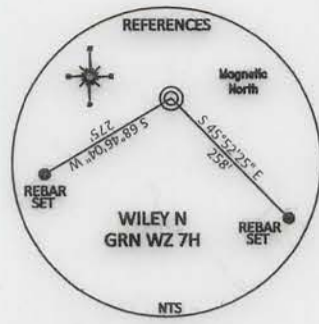
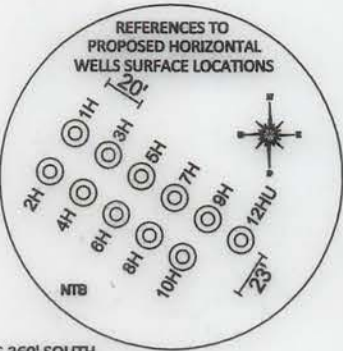
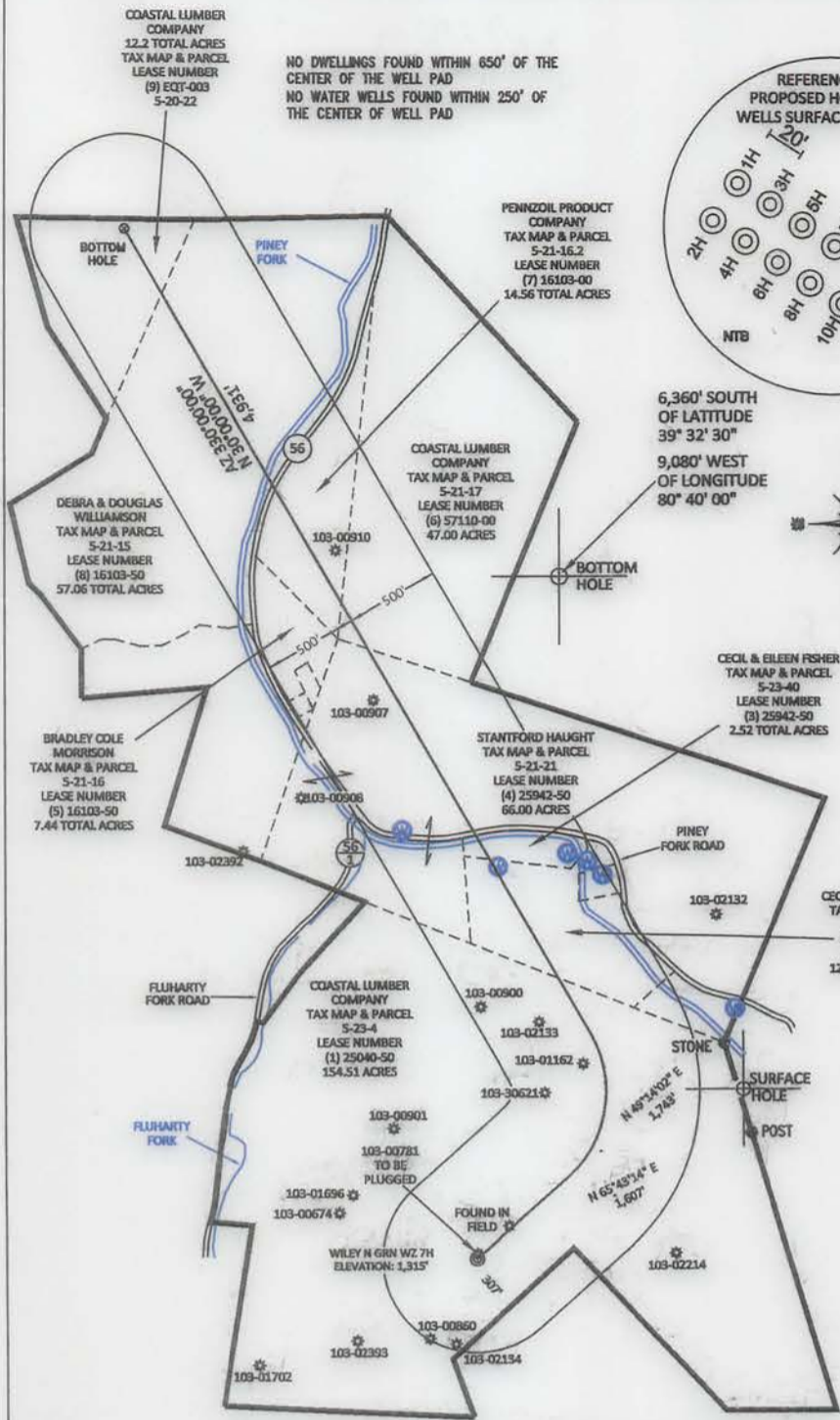
WELL NAME: WILEY N GRN WZ 7H  
QUAD: PINE GROVE, WV



11/06/2015







API NUMBER	BEARING	DISTANCE
(1) 103-00781	N 03°03'46" E	27.51'
(2) Found in Field	N 44°47'26" E	244.41'
(3) Found in Field	S 44°53'19" W	395.72'
(4) 103-02134	S 14°05'59" W	467.87'
(5) 103-00860	S 30°39'50" W	494.41'
(6) 103-00674	N 71°36'23" W	769.28'
(7) 103-01696	N 62°44'47" W	740.83'
(8) 103-02393	S 55°48'36" W	772.37'
(9) 103-00901	N 32°23'25" E	819.21'
(10) 103-02505	S 54°51'46" E	743.63'
(11) 103-30621	N 22°31'35" E	951.33'
(12) 103-02504	S 01°55'48" E	929.30'
(13) 103-72663	S 06°52'37" W	982.62'

TOP HOLE (UTM NAD 83)  
N) 4373353.8  
E) 526499.9

BOTTOM HOLE (UTM NAD 83)  
N) 4375009.0  
E) 525906.2

**REFERENCE NOTES**  
Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records Wetzel County, West Virginia JANUARY 2015  
State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS  
Drafted by: EAJ

FILE #: AE003  
DRAWING #: 2486  
SCALE: PLAT - 1" = 1000'  
TICK MARK - 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: 1/200  
PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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: *[Signature]*  
L.L.S. #2124 : Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP  
**OFFICE OF OIL & GAS**  
601 57TH STREET  
CHARLESTON, WV 25304

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

WATERSHED: FISHING CREEK  
COUNTY/DISTRICT: WETZEL / GREEN  
SURFACE OWNER: COASTAL LUMBER COMPANY  
OIL & GAS ROYALTY OWNER: CHARLES W. McCOY Jr. ET AL  
LEASE NUMBERS: \_\_\_\_\_

DATE: August 26, 2015  
OPERATOR'S WELL #: WILEY N GRN WZ 7H  
API WELL #: 47 103 03104 MOD  
STATE COUNTY PERMIT

ELEVATION: 1315' = Current  
1286.29' = Proposed  
QUADRANGLE: PINE GROVE, WV  
CENTER POINT, WV  
ACREAGE: 154.51 + 11/06/2015  
ACREAGE: 361.09 +/-

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

TARGET FORMATION: MARCELLUS  
ESTIMATED DEPTH: TVD: 7,283' TMD: 12,100'  
WELL OPERATOR: Ascent Resources - Marcellus, LLC  
DESIGNATED AGENT: Eric B. Gillespie  
ADDRESS: 3501 NW 63rd Street  
ADDRESS: 100 Star Ave Suite 120  
CITY: Oklahoma City STATE: OK ZIP CODE: 73116  
CITY: Parkersburg STATE: WV ZIP CODE: 26101