

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

API 47-103-02868 County Wetzel District Grant
Quad Pine Grove Pad Name PNG129 Field/Pool Name _____
Farm name COASTAL LUMBER COMPANY Well Number 514380
Operator (as registered with the OOG) EQT Production Company
Address 625 Liberty Ave. EQT Plaza, Suite 1700 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 4,378,086 Easting 530,869
Landing Point of Curve Northing 4,377,954 Easting 531,098
Bottom Hole Northing 4,377,195 Easting 531,515

Elevation (ft) 1330 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)

Water base Mud 14.3 ppg barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and alkyl phosphates, glutaraldehyde solution, calcium hydroxide,
partially hydrolyzed polyacrylamide/polyacrylate, potassium chloride, sodium carbonate, ground walnut shells, alcohol and modified fatty acid, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 5/22/2013 Date drilling commenced 8/27/2013 Date drilling ceased 12/6/2013
Date completion activities began 10/9/2014 Date completion activities ceased 10/12/2014
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 734' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2016', 2365' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 686', 968', 1038', 1052', 1080' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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WV Department of Environmental Protection 01/23/2015

API 47- 103 - 02868 Farm name COASTAL LUMBER COMPANY Well number 514380

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	28"	26"	40'	New	82.6#/ft	n/a	Y
Surface	17-1/2"	13-3/8"	959'	New	54.5#/ft	243, 484	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	3401'	New	40#/ft	1222, 1728	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	10610'	New	20#	N/A	N
Tubing							
Packer type and depth set							

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	49	15.6	1.18	57.82	0	8
Surface	Class A	845	15.6	1.19	1005	0	8
Coal							
Intermediate 1	Class A	1265	15.6	1.18	1492.7	0	8
Intermediate 2							
Intermediate 3							
Production	Class A/Class H	580/420	15/15.6	1.21/1.83	1470.4	4970	8
Tubing							

Drillers TD (ft) 10612' Loggers TD (ft) N/A
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6419'

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-N/A
Surface-bow spring centralizers set at 918', 637', and 233'
Intermediate-bow spring centralizers set at 3358, 2894, 2388, 1883, 1421, 914, 535
Production-composite centralizer ran on every joint from td up to 4970'

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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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
					See Attachment

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
								See Attachment

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus	7,300.30	TVD 7,619 MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1,150 psi Bottom Hole NA psi DURATION OF TEST 70 hrs

OPEN FLOW Gas 5,342 mcfpd Oil 0 bpd NGL 7.15 bpd Water 449 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		

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Please insert additional pages as applicable.

Drilling Contractor Savanna Drilling
Address 2204 Timberloch Place Suite 230 City Woodlands State TX Zip 77380

Logging Company Hoss Co. Services LLC
Address 614 Trotters Lane City Charleston State WV Zip 25312

Cementing Company Halliburton Energy Services
Address 121 Champion Way City Canonsburg State PA Zip 15317

Stimulating Company FTS International Services, LLC
Address 301 East 18th Street City Cisco State TX Zip 76437

Please insert additional pages as applicable.

Completed by James Abbott Telephone 412-553-5996
Signature [Signature] Title Director - Completions Operations Date 12/31/2014

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

Well Number: 514380
API #: 47-103-02868

Formation Name	Final Top MD (ftGL) (ft)	Final Btm MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm TVD (ft)
Fresh Water Zone	1	734	1	734
Sand / Shale	0	686	0	686
Coal	686	688	686	688
Sand / Shale	688	968	688	968
Coal	968	969	968	969
Sand / Shale	969	1,038.00	969	1,038.00
Coal	1,038.00	1,045.00	1,038.00	1,045.00
Sand / Shale	1,045.00	1,052.00	1,045.00	1,052.00
Coal	1,052.00	1,054.00	1,052.00	1,054.00
Sand / Shale	1,054.00	1,080.00	1,054.00	1,080.00
Coal	1,080.00	1,086.00	1,080.00	1,086.00
Sand / Shale	1,086.00	2,183.00	1,086.00	2,182.90
Maxton	2,183.00	2,419.00	2,182.90	2,418.90
Big Lime	2,419.00	2,658.00	2,418.90	2,657.80
Weir	2,658.00	2,856.00	2,657.80	2,855.80
Gantz	2,856.00	2,972.00	2,855.80	2,971.80
Fifty foot	2,972.00	3,045.00	2,971.80	3,044.80
Thirty foot	3,045.00	3,092.00	3,044.80	3,091.80
Gordon	3,092.00	3,212.00	3,091.80	3,211.80
Forth Sand	3,212.00	3,347.00	3,211.80	3,346.80
Bayard	3,347.00	3,763.00	3,346.80	3,762.80
Warren	3,763.00	3,889.00	3,762.80	3,888.80
Speechley	3,889.00	4,763.00	3,888.80	4,762.80
Riley	4,763.00	5,374.00	4,762.80	5,373.70
Benson	5,374.00	5,742.00	5,373.70	5,741.70
Alexander	5,742.00	7,145.00	5,741.70	7,050.40
Middlesex	7,145.00	7,199.00	7,050.40	7,090.50
Genesee	7,199.00	7,321.00	7,090.50	7,171.00
Geneseo	7,321.00	7,365.00	7,171.00	7,197.10
Tully	7,365.00	7,408.00	7,197.10	7,220.60
Hamilton	7,408.00	7,619.00	7,220.60	7,300.30
Marcellus	7,619.00	10,612.00	7,300.30	7337.75

Collection JK



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514380 - 47-103-02868-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	10/9/2014	10,584.00	10,586.00	10	MARCELLUS
1	10/9/2014	10,403.00	10,538.00	32	MARCELLUS
2	10/9/2014	10,179.00	10,359.00	40	MARCELLUS
3	10/9/2014	9,954.00	10,134.00	40	MARCELLUS
4	10/10/2014	9,731.00	9,909.00	40	MARCELLUS
5	10/11/2014	9,504.00	9,680.00	40	MARCELLUS
6	10/11/2014	9,279.00	9,459.00	40	MARCELLUS
7	10/11/2014	9,054.00	9,234.00	40	MARCELLUS
8	10/11/2014	8,829.00	9,009.00	40	MARCELLUS
9	10/11/2014	8,604.00	8,784.00	40	MARCELLUS
10	10/12/2014	8,379.00	8,559.00	40	MARCELLUS
11	10/12/2014	8,154.00	8,334.00	40	MARCELLUS
12	10/12/2014	7,929.00	8,109.00	40	MARCELLUS
13	10/12/2014	7,704.00	7,884.00	40	MARCELLUS

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514380 - 47-103-02868-0000 - Stimulated Stages

Stage Number	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
Initiation Sleeve	10/9/2014	23.30	8,796.00	NA	4,139	0	1,119	0
1	10/9/2014	97.70	7,731.00	8,297.00	4,112	301,321	7,730	0
2	10/9/2014	95.70	8,007.00	8,359.00	4,219	303,734	7,721	0
3	10/10/2014	97.90	8,129.00	8,551.00	4,927	301,542	7,690	0
4	10/11/2014	98.40	7,755.00	8,112.00	4,761	302,286	7,808	0
5	10/11/2014	99.20	7,948.00	8,191.00	4,252	302,235	7,701	0
6	10/11/2014	99.70	7,774.00	7,942.00	4,420	302,497	7,624	0
7	10/11/2014	100.30	7,714.00	7,934.00	4,241	301,405	7,542	0
8	10/11/2014	99.90	7,715.00	8,036.00	4,862	301,102	7,897	0
9	10/11/2014	99.30	7,777.00	8,094.00	7,800	302,863	7,802	0
10	10/12/2014	100.40	7,621.00	8,177.00	5,258	298,422	7,726	0
11	10/12/2014	98.70	7,882.00	8,392.00	4,637	299,599	8,340	0
12	10/12/2014	99.20	7,657.00	8,216.00	4,526	299,314	7,463	0
13	10/12/2014	101.10	7,354.00	7,630.00	4,743	302,021	8,576	0

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/9/2014
Job End Date:	10/12/2014
State:	West Virginia
County:	Wetzel
API Number:	47-103-02868-00-00
Operator Name:	EQT Production
Well Name and Number:	PNG129 - 514380
Longitude:	-80.64070400
Latitude:	39.55189900
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,338
Total Base Water Volume (gal):	4,390,092
Total Base Non Water Volume:	191,246



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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	FTSI	Carrier	Water	7732-18-5	100.00000	90.03344	
Sand	FTSI	Proppant	Crystalline Silica	14808-60-7	100.00000	9.64689	
Hydrochloric Acid 15%	FTSI	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.02854	
FRW-600	FTSI	Friction Reducer	Hydrotreated light distillate	64742-47-8	30.00000	0.02147	
			Ammonium acetate	631-61-8	6.00000	0.00429	
HVG-1	FTSI	Gel	Petroleum Distillate	64742-47-8	55.00000	0.00423	
			Guar Gum	9000-30-0	50.00000	0.00384	
			Surfactant	68439-51-0	2.00000	0.00015	
			Clay	14808-60-7	2.00000	0.00015	
B-10	FTSI	Buffer Agent	Potassium carbonate	584-08-7	48.00000	0.00586	
			Potassium hydroxide	1310-58-3	20.00000	0.00244	
ICI-3240	FTSI	Biocide					

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			Dazomet (Tetrahydro-3, 5-dimethyl-2H-1, 3, 5-thiadiazine-2-thione	533-74-4	24.00000	0.00245
			Sodium Hydroxide	1310-73-2	4.00000	0.00041
CS-500-SI	FTSI	Scale Inhibitor				
			Ethylene Glycol	107-21-1	10.00000	0.00257
ClO2	Neptune	Biocide				
			Chlorine Dioxide	10049-04-4	100.00000	0.00056
FE-100L	FTSI	Iron Control				
			Citric Acid	77-92-9	55.00000	0.00041
CI-150	FTSI	Corrosion Inhibitor				
			Organic amine resin salt	Proprietary	30.00000	0.00010
			Isopropanol	67-63-0	30.00000	0.00010
			Ethylene Glycol	107-21-1	30.00000	0.00010
			Dimethylformamide	68-12-2	10.00000	0.00003
			Aromatic aldehyde	Proprietary	10.00000	0.00003
			Quaternary ammonium compound	Proprietary	10.00000	0.00003
APB-1	FTSI	Gel Breaker				
			Ammonium Persulfate	7727-54-0	95.00000	0.00009
NE-100	FTSI	Non-Emulsifier				
			2-Propanol	67-63-0	10.00000	0.00003
			2-Butoxyethanol	111-76-2	10.00000	0.00003
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00001

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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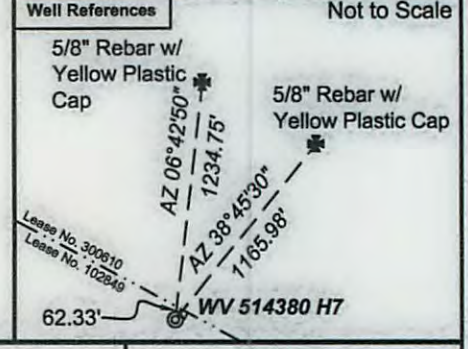
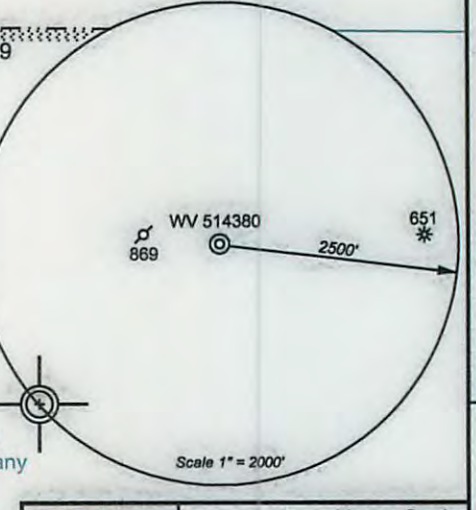
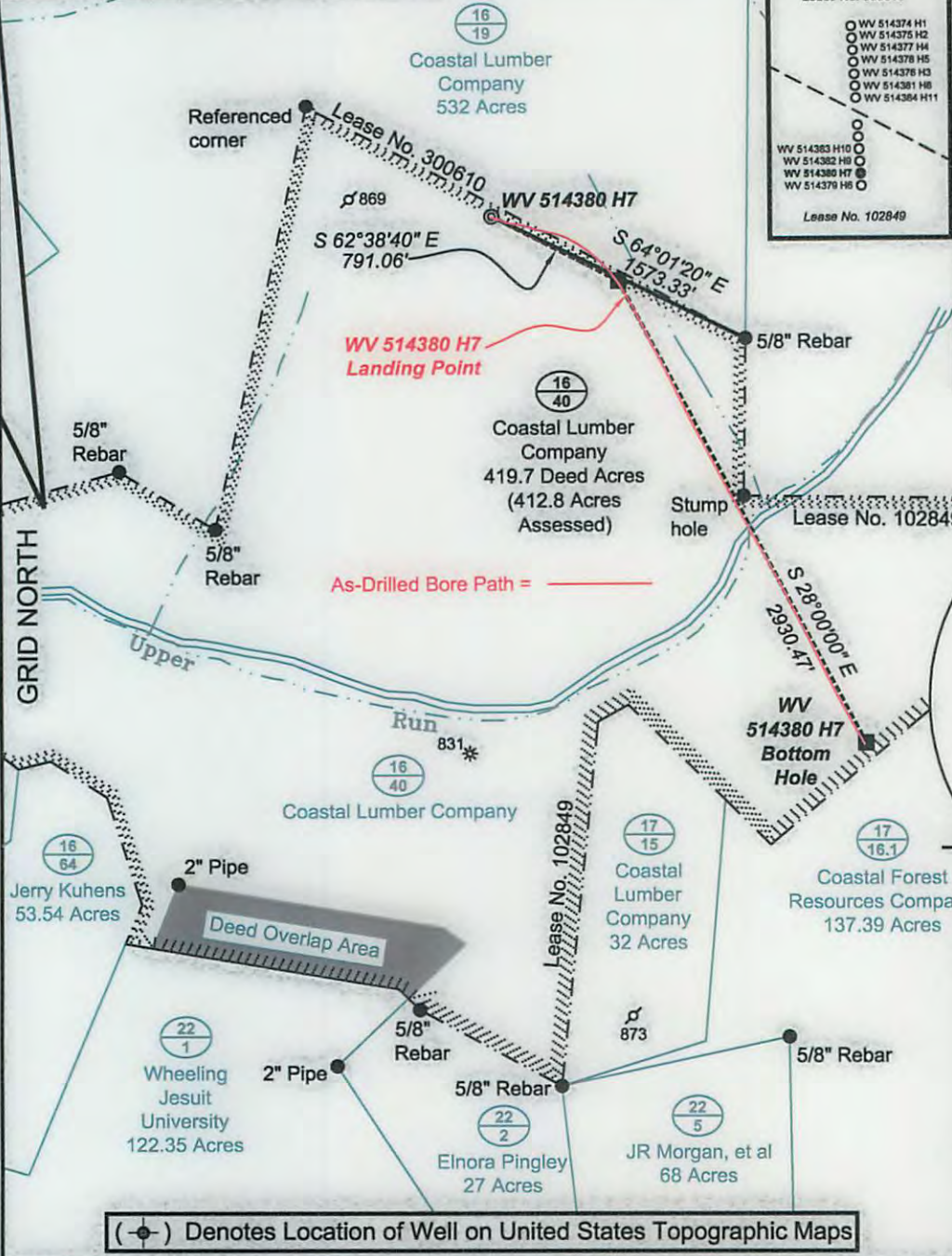
WV 514380
EQT Production Company
412.8 Acre Lease
47-103-02868

LATITUDE 39 - 35 - 00

- ⊙ Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- ▬▬▬▬▬ Lease Boundary

As-Drilled Well Information
 WV 514379 coordinates are:
 Nad 83, North Zone, feet
 N: 385,175 E: 1,646,864
 Nad 83 UTM, Zone 17 meters
 UTM N: 4,378,086 E: 530,869
 WV 514379 Landing Point coordinates are:
 Nad 83, North Zone, feet
 N: 384,729 E: 1,647,610
 Nad 83 UTM, Zone 17 meters
 UTM N: 4,377,954 E: 531,098
 WV 514379 Bottom Hole coordinates are:
 Nad 83, North Zone, feet
 N: 382,214 E: 1,648,936
 Nad 83 UTM, Zone 17 meters
 UTM N: 4,377,195 E: 531,515

LONGITUDE 80 - 37 - 30



(⊙) Denotes Location of Well on United States Topographic Maps



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.

[Signature]

P.S. 2092



FILE NO: 204-34-G-12
 DRAWING NO: 204-12 PNG 129 H7
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

DATE: June 23 20 14
 OPERATOR'S WELL NO. WV 514380
 API WELL NO
 47 - 103 - 02868
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: ^{Ground 1,358'} Proposed 1,329.5' WATERSHED Upper Run of South Fork of Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Grant COUNTY: Wetzel
 SURFACE OWNER: Coastal Lumber Company ACREAGE: 412.8
 ROYALTY OWNER: Shiben Estates LEASE NO: 102849 ACREAGE: 419.7
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: TVD 7,700' MD 12,400'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
 ADDRESS: 115 Professional Place P.O. Box 280 ADDRESS: 115 Professional Place P.O. Box 280
 Bridgeport, WV 26330 Bridgeport, WV 26330

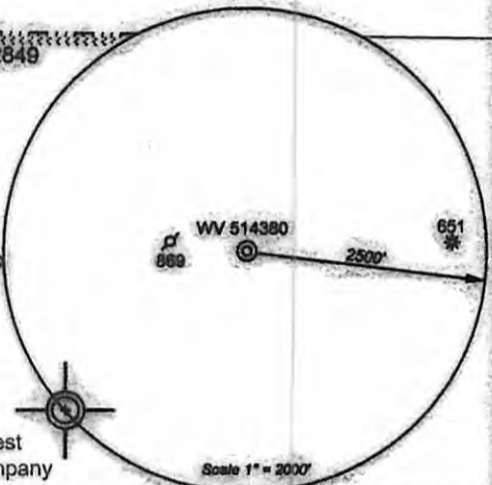
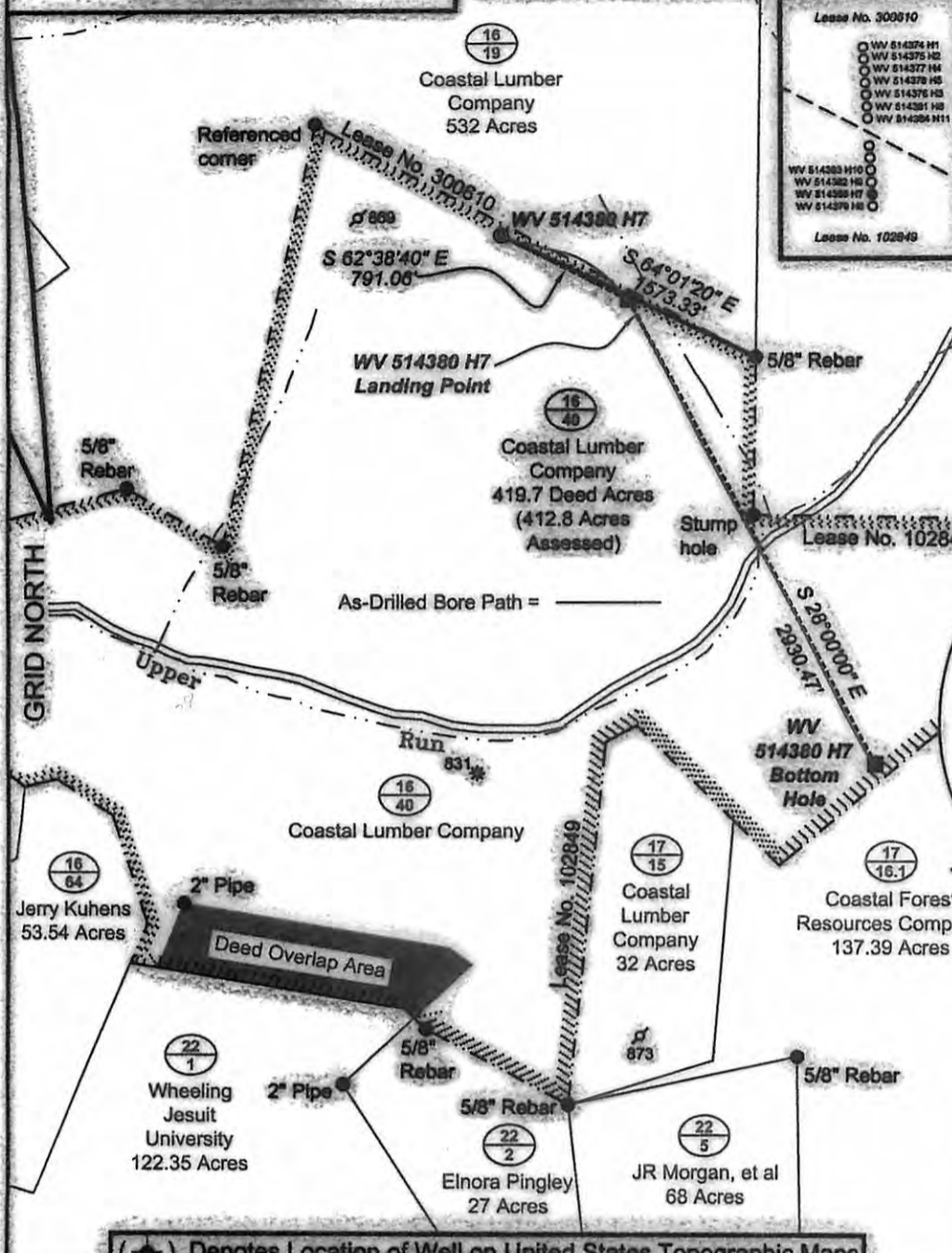
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 ADDRESS: 115 Professional Place P.O. Box 280 ADDRESS: 115 Professional Place P.O. Box 280
 Bridgeport, WV 26330 Bridgeport, WV 26330

01/23/2015

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 514380

API: 47 - 103 - 02868

Submission: Initial Amended

Notes:

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