

JK

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

API 47 - 103 - 02971 County Wetzel District Grant
Quad Pine Grove Pad Name PNG129 Field/Pool Name _____
Farm name COASTAL LUMBER COMPANY Well Number 514385
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 4,378,100 Easting 530,868
Landing Point of Curve Northing 4,377,536 Easting 530,283
Bottom Hole Northing 4,376,803 Easting 530,692

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 14.0 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 12/03/2013 Date drilling commenced 12/11/2013 Date drilling ceased 1/10/2013
Date completion activities began 9/25/2014 Date completion activities ceased 9/28/2014
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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01/23/2015

API 47-103 - 02971 Farm name COASTAL LUMBER COMPANY Well number 514385

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"	944'	New	54.5#/ft	142, 340	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	3381'	New	40#/ft	169', 84'	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	11607'	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	790	15.6	1.19	940	0	8
Coal							
Intermediate 1	Class A	1190	15.6	1.19	1416	0	8
Intermediate 2							
Intermediate 3							
Production	Class A/Class H	750/430	15/15.6	1.21/1.83	1694	5000	8
Tubing							

Drillers TD (ft) 11,616' Loggers TD (ft) N/A
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 4,125'

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 901', 616', 301'
Intermediate-bow spring centralizers set at 3337', 2701', 2195', 1688', 1181', 632'
Production-composite centralizer ran on every joint from td up to 2601'

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>	
<u>Marcellus</u>	<u>7,282.20</u> TVD	<u>8,452</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1,850 psi Bottom Hole NA psi DURATION OF TEST 49 hrs

OPEN FLOW Gas 8,053 mcfpd Oil 0 bpd NGL 42.4 bpd Water 496 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	
	<u>0</u>		<u>0</u>		

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 _____ Title Director - Completions Operations Date 12/18/2014

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

103-02971

Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
Fresh Water Zone	1	1	734	734
Sand / Shale	1	1	683	683
Coal	683	683	685	685
Sand / Shale	685	685	965	965
Coal	965	965	966	966
Sand / Shale	966	966	1,035.00	1,035.00
Coal	1,035.00	1,035.00	1,042.00	1,042.00
Sand / Shale	1,042.00	1,042.00	1,049.00	1,049.00
Coal	1,049.00	1,049.00	1,051.00	1,051.00
Sand / Shale	1,051.00	1,051.00	1,077.00	1,077.00
Coal	1,077.00	1,077.00	1,083.00	1,083.00
Sand / Shale	1,083.00	1,083.00	2,183.00	2,183.00
Maxton	2,183.00	2,183.00	2,419.00	2,418.90
Big Lime	2,419.00	2,418.90	2,658.00	2,657.90
Weir	2,658.00	2,657.90	2,856.00	2,855.90
Gantz	2,856.00	2,855.90	2,972.00	2,971.90
Fifty foot	2,972.00	2,971.90	3,045.00	3,044.90
Thirty foot	3,045.00	3,044.90	3,092.00	3,091.90
Gordon	3,092.00	3,091.90	3,212.00	3,211.90
Forth Sand	3,212.00	3,211.90	3,347.00	3,346.90
Bayard	3,347.00	3,346.90	3,763.00	3,762.90
Warren	3,763.00	3,762.90	3,889.00	3,888.90
Speechley	3,889.00	3,888.90	4,883.00	4,765.20
Riley	4,883.00	4,765.20	5,696.00	5,374.90
Benson	5,696.00	5,374.90	6,183.00	5,743.30
Alexander	6,183.00	5,743.30	7,918.00	7,033.30
Middlesex	7,918.00	7,033.30	7,981.00	7,075.30
Genesee	7,981.00	7,075.30	8,113.00	7,155.90
Geneseo	8,113.00	7,155.90	8,159.00	7,180.80
Tully	8,159.00	7,180.80	8,204.00	7,202.90
Hamilton	8,204.00	7,202.90	8,452.00	7,282.20
Marcellus	8,452.00	7,282.20	11,616.00	7,321.60

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514385 - 47-103-02971-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	9/25/2014	11,580.00	11,582.00	10	MARCELLUS
1	9/25/2014	11,399.00	11,534.00	32	MARCELLUS
2	9/25/2014	11,175.00	11,355.00	40	MARCELLUS
3	9/25/2014	10,950.00	11,130.00	40	MARCELLUS
4	9/26/2014	10,724.00	10,906.00	40	MARCELLUS
5	9/26/2014	10,500.00	10,680.00	40	MARCELLUS
6	9/26/2014	10,275.00	10,455.00	40	MARCELLUS
7	9/26/2014	10,050.00	10,230.00	40	MARCELLUS
8	9/26/2014	9,825.00	10,005.00	40	MARCELLUS
9	9/27/2014	9,600.00	9,780.00	40	MARCELLUS
10	9/27/2014	9,375.00	9,555.00	40	MARCELLUS
11	9/27/2014	9,150.00	9,330.00	40	MARCELLUS
12	9/27/2014	8,922.00	9,105.00	40	MARCELLUS
13	9/28/2014	8,700.00	8,880.00	40	MARCELLUS
14	9/28/2014	8,542.00	8,662.00	40	MARCELLUS

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514385 - 47-103-02971-0000 - 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	9/25/2014	6.10	7,632.00	NA	4,511	0	523	0
1	9/25/2014	100.30	7,958.00	8,198.00	4,603	300,478	7,729	0
2	9/25/2014	100.80	8,338.00	8,599.00	4,883	300,338	7,588	0
3	9/26/2014	100.40	8,509.00	8,794.00	4,373	300,565	7,666	0
4	9/26/2014	101.80	7,952.00	8,453.00	5,176	299,676	7,881	0
5	9/26/2014	93.90	8,092.00	8,430.00	4,939	302,262	8,603	0
6	9/26/2014	100.30	8,029.00	8,623.00	4,827	299,768	7,384	0
7	9/27/2014	100.20	7,818.00	8,164.00	4,623	299,922	7,589	0
8	9/27/2014	100.20	7,828.00	8,209.00	4,412	298,554	7,324	0
9	9/27/2014	100.80	8,062.00	8,439.00	4,749	303,711	7,818	0
10	9/27/2014	99.60	8,297.00	8,469.00	4,527	275,768	7,533	0
11	9/27/2014	101.90	8,181.00	8,419.00	4,887	299,766	7,599	0
12	9/28/2014	100.70	8,164.00	8,717.00	5,017	299,564	7,384	0
13	9/28/2014	99.10	8,056.00	8,659.00	4,737	296,412	7,721	0
14	9/28/2014	100.50	7,889.00	8,440.00	5,463	199,230	5,800	0

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/25/2014
Job End Date:	9/28/2014
State:	West Virginia
County:	Wetzel
API Number:	47-103-02971-00-00
Operator Name:	EQT Production
Well Name and Number:	PNG129 - 514385
Longitude:	-80.64071400
Latitude:	39.55202500
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,322
Total Base Water Volume (gal):	4,549,944
Total Base Non Water Volume:	199,225



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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	89.99477	
Sand	FTSI	Proppant	Crystalline Silica	14808-60-7	100.00000	9.67836	
Hydrochloric Acid 15%	FTSI	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.02925	
FRW-600	FTSI	Friction Reducer	Hydrotreated light distillate	64742-47-8	30.00000	0.02272	
			Ammonium acetate	631-61-8	6.00000	0.00454	
B-10	FTSI	Buffer Agent	Potassium carbonate	584-08-7	48.00000	0.00597	
			Potassium hydroxide	1310-58-3	20.00000	0.00249	
HVG-1	FTSI	Gel	Petroleum Distillate	64742-47-8	55.00000	0.00383	
			Guar Gum	9000-30-0	50.00000	0.00348	
			Clay	14808-60-7	2.00000	0.00014	
			Surfactant	68439-51-0	2.00000	0.00014	
ICI-3240	FTSI	Biocide					

			Dazomet (Tetrahydro-3, 5-dimethyl-2H-1, 3, 5-thiadiazine-2-thione)	533-74-4	24.00000	0.00239
			Sodium Hydroxide	1310-73-2	4.00000	0.00040
CS-500-SI	FTSI	Scale Inhibitor	Ethylene Glycol	107-21-1	10.00000	0.00246
ClO2	Neptune	Biocide	Chlorine Dioxide	10049-04-4	100.00000	0.00075
FE-100L	FTSI	Iron Control	Citric Acid	77-92-9	55.00000	0.00041
Cl-150	FTSI	Corrosion Inhibitor	Isopropanol	67-63-0	30.00000	0.00010
			Ethylene Glycol	107-21-1	30.00000	0.00010
			Organic amine resin salt	Proprietary	30.00000	0.00010
			Aromatic aldehyde	Proprietary	10.00000	0.00003
			Quaternary ammonium compound	Proprietary	10.00000	0.00003
			Dimethylformamide	68-12-2	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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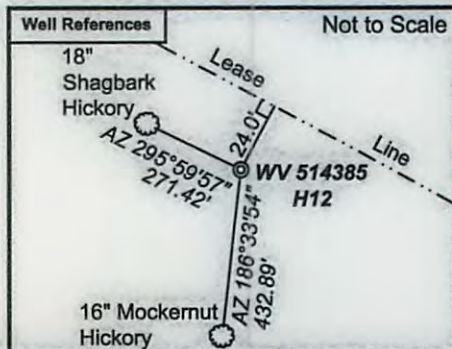
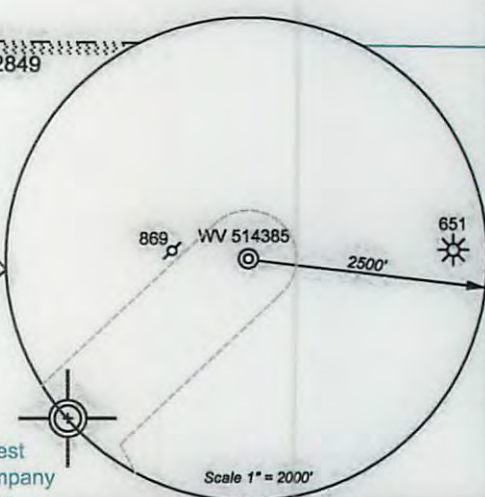
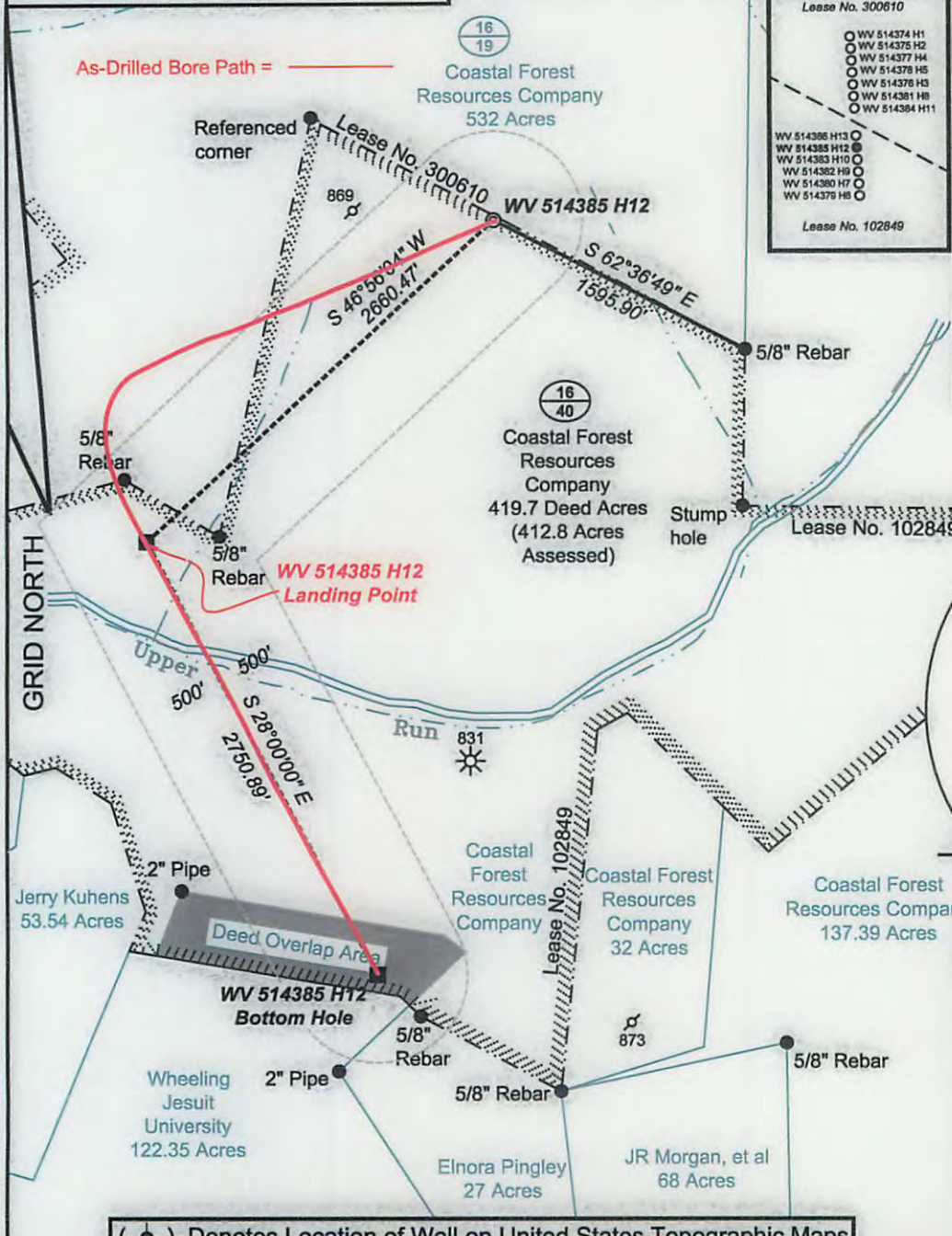
WV 514385
EQT Production Company
47-103-02971

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

LATITUDE 39 - 35 - 00

As-Drilled Well Information
 WV 514385 coordinates are:
 Nad 83, North Zone, feet
 N: 385,220 E: 1,646,862
 Nad 83 UTM, Zone 17 meters
 UTM N: 4,378,100 E: 530,868
 WV 514385 Landing Point coordinates are:
 Nad 83, North Zone, feet
 N: 383,400 E: 1,644,911
 Nad 83 UTM, Zone 17 meters
 UTM N: 4,377,536 E: 530,283
 WV 514385 Bottom Hole coordinates are:
 Nad 83, North Zone, feet
 N: 380,973 E: 1,646,213
 Nad 83 UTM, Zone 17 meters
 UTM N: 4,376,803 E: 530,692

LONGITUDE 80 - 37 - 30
 11,459'



(⊙) 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.

P.S. 2092



FILE NO: 204-34-G-12
 DRAWING NO: 204-12 PNG 129 H12 As Drilled
 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 514385
 API WELL NO
 47 - 103 - 02971
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1328' WATERSHED Upper Run of South Fork of Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Grant COUNTY: Wetzel
 SURFACE OWNER: Coastal Forest Resources Company F.K.A. 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 14,150'

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

01/23/2015

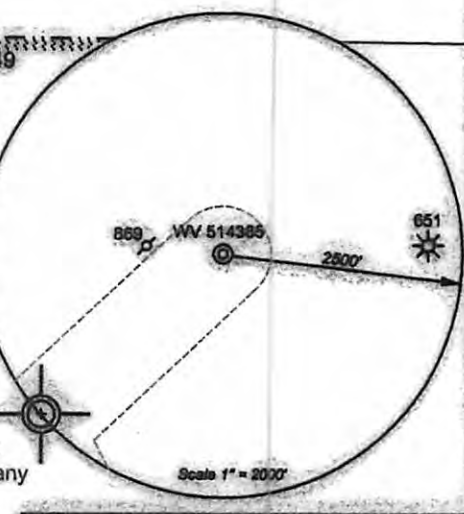
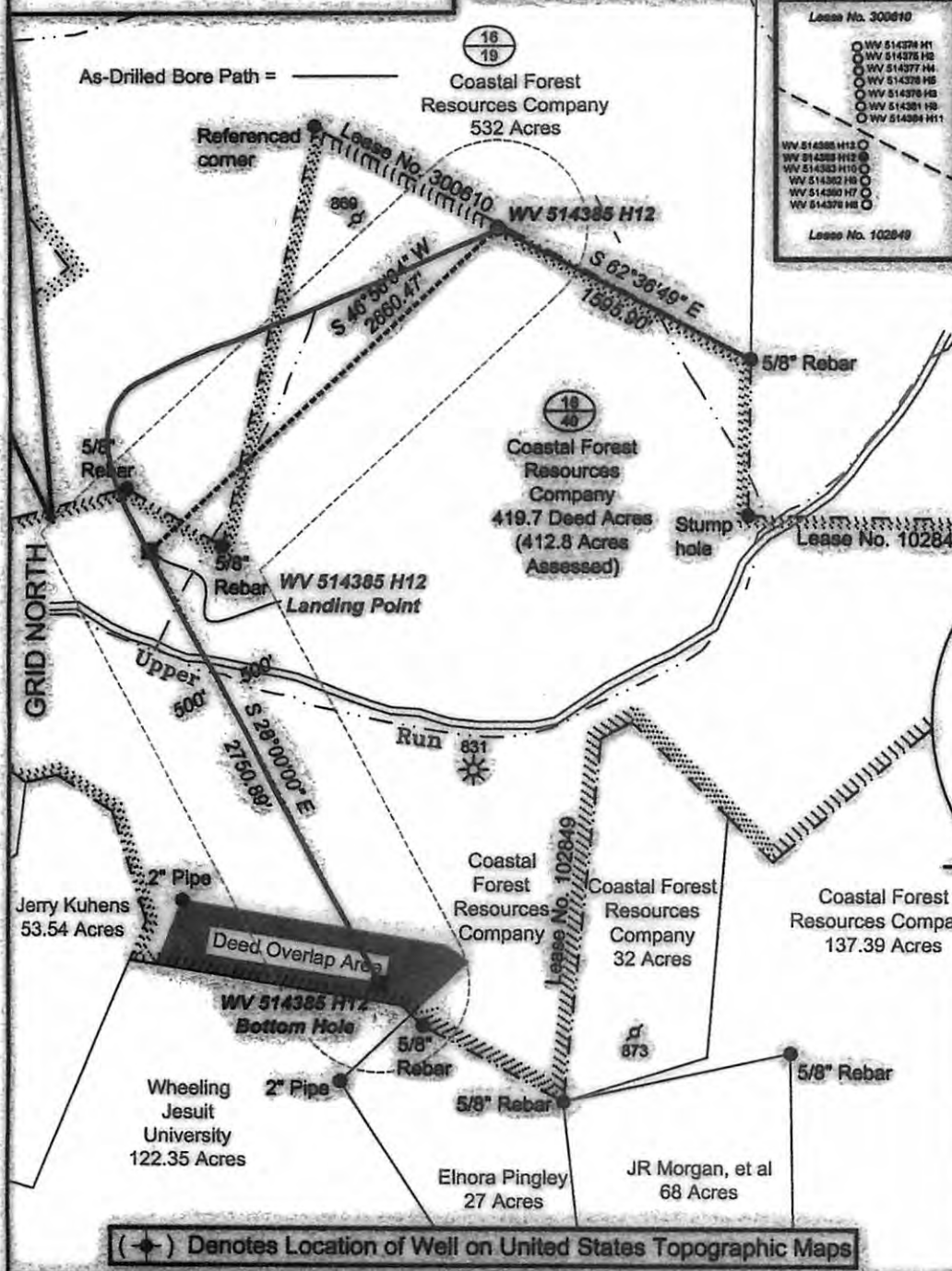
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 Bridgeport, WV 26330 Bridgeport, WV 26330

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Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 514385

API: 47 - 103 - 02971

Submission: Initial Amended

Notes:

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