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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Tuesday, April 13, 2021  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

TUG HILL OPERATING, LLC  
380 SOUTHPOINTE BOULEVARD, PLAZA II  
SUITE 200  
CANONSBURG, PA 15317

Re: Permit Modification Approval for HUDSON S-3HM  
47-051-02250-00-00

**Lateral Extension**

TUG HILL OPERATING, LLC

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.

If there are any questions, please feel free to contact me at (304) 926- 0450.

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over a white background.

James A. Martin  
Chief

Operator's Well Number: HUDSON S-3HM  
Farm Name: CNX LAND LLC  
U.S. WELL NUMBER: 47-051-02250-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 4/13/2021

Promoting a healthy environment.

09/29/2023



March 23, 2021

WADE STANSBERRY  
WV DEP OFFICE OF OIL & GAS  
601 57<sup>TH</sup> STREET SE  
CHARLESTON, WV 25304-2345

VIA USPS

**RE: Hudson S-3HM API# 47-051-02250 (H6A Permit Modification)  
Meade District, Marshall County, WV**

Dear Wade:

Tug Hill Operating, LLC is submitting a permit modification for its permitted well, Hudson S-3HM to add 3,743.97' to the lateral length. Therefore, enclosed please find the following:

- Modified WW-6B with changes highlighted in yellow
- Updated well plat
- Updated WW-6A1 information
- Updated Site Safety Plan (The only information that has changed is the contact information for the Inspector at the contact list at the end of the Plan).
- Updated Area of Review

If you have any questions or need any additional information, please do not hesitate to call me on (304) 376-0111. Thank you for attention to this matter, it is greatly appreciated.

Sincerely,

AMY MORRIS  
PERMIT SPECIALIST-APPALACHIA REGION  
TUG HILL OPERATING, LLC

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Enclosures



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

1) Well Operator: Tug Hill Operating, LLC 494510851 Marshall Meade Glen Easton 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: Hudson S-3HM Well Pad Name: Hudson

3) Farm Name/Surface Owner: CNX Land, LLC Public Road Access: Roberts Ridge Road (CR 21)

4) Elevation, current ground: 1,346' Elevation, proposed post-construction: 1,346'

5) Well Type (a) Gas  Oil  Underground Storage

Other \_\_\_\_\_

(b) If Gas Shallow  Deep

Horizontal

6) Existing Pad: Yes or No Yes *Bay Stillp 3-16-21*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus is the target formation at a depth of 6,721' - 6,773', thickness of 52' and anticipated pressure of approx. 3800 psi.

8) Proposed Total Vertical Depth: 6,873'

9) Formation at Total Vertical Depth: Onondaga

10) Proposed Total Measured Depth: 20,607'

11) Proposed Horizontal Leg Length: 12,695.12'

12) Approximate Fresh Water Strata Depths: 70; 980'

13) Method to Determine Fresh Water Depths: Offset well reports or noticeable flow at the flowline or when need to start soaping

14) Approximate Saltwater Depths: 1,444'

15) Approximate Coal Seam Depths: Sewickley Coal - 888' and Pittsburgh Coal - 974'

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: Marshall County Coal Co./Marshall County Mine

Depth: Pittsburgh coal TVD - 974' and subsea level - 372'

Seam: Pittsburgh

Owner: Murray Energy / Consolidated Coal Company

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18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<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	30"	NEW	BW	BW	120'	120'	259^3(CTS)
Fresh Water	13 3/8"	NEW	J55	54.5#	1,080'	1,080'	1,100^3(CTS)
Coal	13 3/8"	NEW	J55	54.5#	1,080'	1,080'	1,100^3(CTS)
Intermediate	9 5/8"	NEW	J55	36#	2,917'	2,917'	967^3(CTS)
Production	5 1/2"	NEW	P110	20#	20,607'	20,607'	5,250^3(CTS)
Tubing	2 3/8"	NEW	N80	4.7#	6,997'		
Liners							

*B.S. 3-16-21*

<b>TYPE</b>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	30"	36"	1.0	2,333	1,866	CLASS A	1.2
Fresh Water	13 3/8"	17 1/2"	.38	2,740	2,192	SEE #24	1.2
Coal	13 3/8"	17 1/2"	.38	2,740	2,192	SEE #24	1.2
Intermediate	9 5/8"	12 1/4"	.352	3,520	2,816	SEE #24	1.19
Production	5 1/2"	8 7/8" _ 8 3/4"	.361	12,640	10,112	SEE #24	1.17/1.19
Tubing	2 3/8"		.19	11,200	8,960		
Liners							

**PACKERS**

Kind:	N/A			RECEIVED Office of Oil and Gas MAR 25 2021 WV Department of Environmental Protection
Sizes:	N/A			
Depths Set:	N/A			



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

Drill through the Marcellus and TD Pilot Hole 100' into the Onondaga. Log vertical section and run a solid cement plug back to proposed KOP. Drill curve and lateral per proposed well plan, run and cement production casing. Perform CBL from 60 deg to surface, make cleanout run, and stimulate.

*B.S. 3-16-21*

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

Well to be completed with approximately 31,735,000 lb proppant and 575,000 bbl of water. Max rate = 80 bpm; max psi = 9,000#.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 22.94 acres

22) Area to be disturbed for well pad only, less access road (acres): 6.18 acres

23) Describe centralizer placement for each casing string:

Will run 3 centralizers on surface casing at equal distance. Intermediate will have 1 centralizer every other joint. Production casing will have one centralizer every other joint in lateral, one centralizer every joint through curve, one centralizer every other joint to surface.

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

Sfc - Premium NE-1 + 2% CaCl; Int1 - Premium NE-1 + 1.5% CaCL + Flake; Int2 - Lead: Premium NE-1 + 1.5% CaCL + 1.5% R-3 + 3% KCl + .75 gals/100sk FP-13L + 1% MPA-170 Tail: Premium NE-1 + .1% R-3 + 5% KCl + 1% CD-32 + .4% FL-52 + .2% ASA-301 + .6% Sodium Metasilicate; Kick Plug - Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L; Prod - Lead: 50:50 (Poz:Class H) + .3% R-3 + .3% MPA-250 + .75 gal/100sk FP-13L Tail: 25:75 (Poz:Class H) + .3% R-3 + .3% MPA-250 + .375 gal/100sk FP-13L

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25) Proposed borehole conditioning procedures:

Will circulate a minimum of 3 hours at TD, short trip to curve, circulate bottoms up, check for flow, POOH

\*Note: Attach additional sheets as needed.

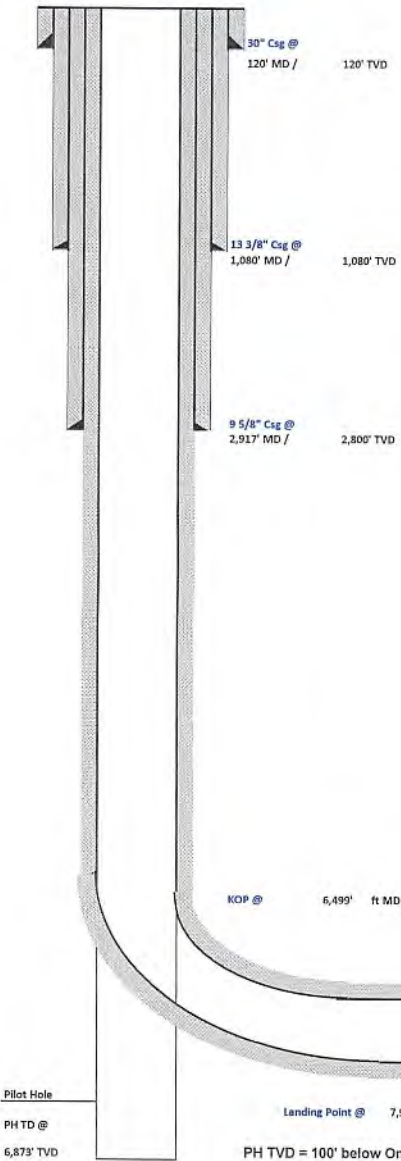


**WELL NAME:** Hudson S-3HM  
**STATE:** WV **COUNTY:** Marshall  
**DISTRICT:** Meade  
**DF Elev:** 1,346' **GL Elev:** 1,346'  
**TD:** 20,607'  
**TH Latitude:** 39.828831  
**TH Longitude:** -80.672702  
**BH Latitude:** 39.80133801  
**BH Longitude:** -80.657399

FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	980
Sewickley Coal	888
Pittsburgh Coal	974
Big Lime	2044
Weir	2465
Berea	2662
Gordon	2915
Rhinestreet	6042
Genesee/Burkett	6575
Tully	6608
Hamilton	6639
Marcellus	6721
Landing Depth	6755
Onondaga	6773
Pilot Hole Depth	6873

CASING SUMMARY							
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement
Conductor	36	30	120'	120'	BW	BW	Surface
Surface	17.5	13 3/8	1,080'	1,080'	54.5	J55	Surface
Intermediate 1	12 1/4	9 5/8	2,917'	2,800'	36	J55	Surface
Production	8 7/8 x 8 3/4	5 1/2	20,607'	6,977'	20	CYHP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
	Sacks	Class	Density	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	1,113	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	972	A	15	Air	1 Centralizer every other jt
Production	4,821	A	14.5	Air / SOBM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to s/c



*B.S. 3-16-21*

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Lateral TD @ 20,607' ft MD  
 6,977' ft TVD

Landing Point @ 7,914' MD / 6,755' TVD  
 PH TVD = 100' below Onondaga Top

Pilot Hole  
 PH TD @ 6,873' TVD



**TUG HILL**  
**OPERATING**

## Tug Hill Operating, LLC Casing and Cement Program

### Hudson S-3HM

### Casing

	String	Grade	Bit Size	Depth (Measured)	Cement Fill Up
Conductor	30"	BW	36"	120'	CTS
Surface	13 3/8"	J55	17 1/2"	1,080'	CTS
Intermediate	9 5/8"	J55	12 1/4"	2,917'	CTS
Production	5 1/2"	CYHP110	8 7/8 x 8 3/4	20,607'	CTS

### Cement

Conductor: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Conductor Cement mixed at 15.6 ppg, Y=1.2

Surface: Premium NE-1 + 2% bwoc CaC12 + 46.5% Fresh Water – Surface Cement mixed at 15.6 ppg, Y=1.2

Intermediate: Premium NE-1 + 1% bwoc CaC12 + 46.5% Fresh Water – Intermediate Cement mixed at 15.6 ppg, Y=1.19

Kick Off Plug: Class H Cement + 1% CD-32 + .7% Sodium Metasilicate + .1% R-3 + .75 gal/100sk FP-13L - KOP Plug

Production: 50:50 Poz: Premium NE-1 + .1% bwoc ASA-301 + 60lb/sk ASCA-1 + .35% bwoc BA-10A + .25% bwoc MPA-170, 44 lb sack + .5% bwoc R-3 + .75 gals/100sk FP-13L – Production Cement mixed at 15.2ppg, Y = 1.19

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Well: Hudson S-03 HM (slot F)  
 Site: Hudson Alt North  
 Project: Marshall County, West Virginia  
 Design: rev7  
 Rig:

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSEct	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
2	1501.75	0.00	0.00	1501.75	0.00	0.00	0.00	0.000	0.00	KOP Begin 3°/100' build
3	2675.79	35.22	307.97	2603.23	215.11	-275.63	3.00	307.969	-307.02	Begin 35.22° tangent
4	6498.71	35.22	307.97	5726.30	1571.60	-2013.77	0.00	0.000	-2243.09	Begin 8°/100' build/turn
5	7507.88	50.00	162.47	6614.99	1342.90	-2150.14	8.00	-153.916	-2087.52	Begin 10°/100' build/turn
6	7913.85	89.00	150.08	6754.92	1004.44	-1995.56	10.00	-19.258	-1715.50	Begin 89.00° lateral
7	20606.66	89.00	150.08	6976.75	-9994.96	4334.65	0.00	0.000	0894.42	PBHL/TD 20606.66 MD 6976.75 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Hudson 03HM LP r5	6754.92	1004.46	-1995.54	39.83160932	-80.67979700
- plan misses target center by 0.03ft at 7913.83ft MD (6754.92 TVD, 1004.45 N, -1995.57 E)					
Hudson 03HM PBHL r6	6976.75	-9994.96	4334.65	39.80133800	-80.65739900
- plan hits target center					

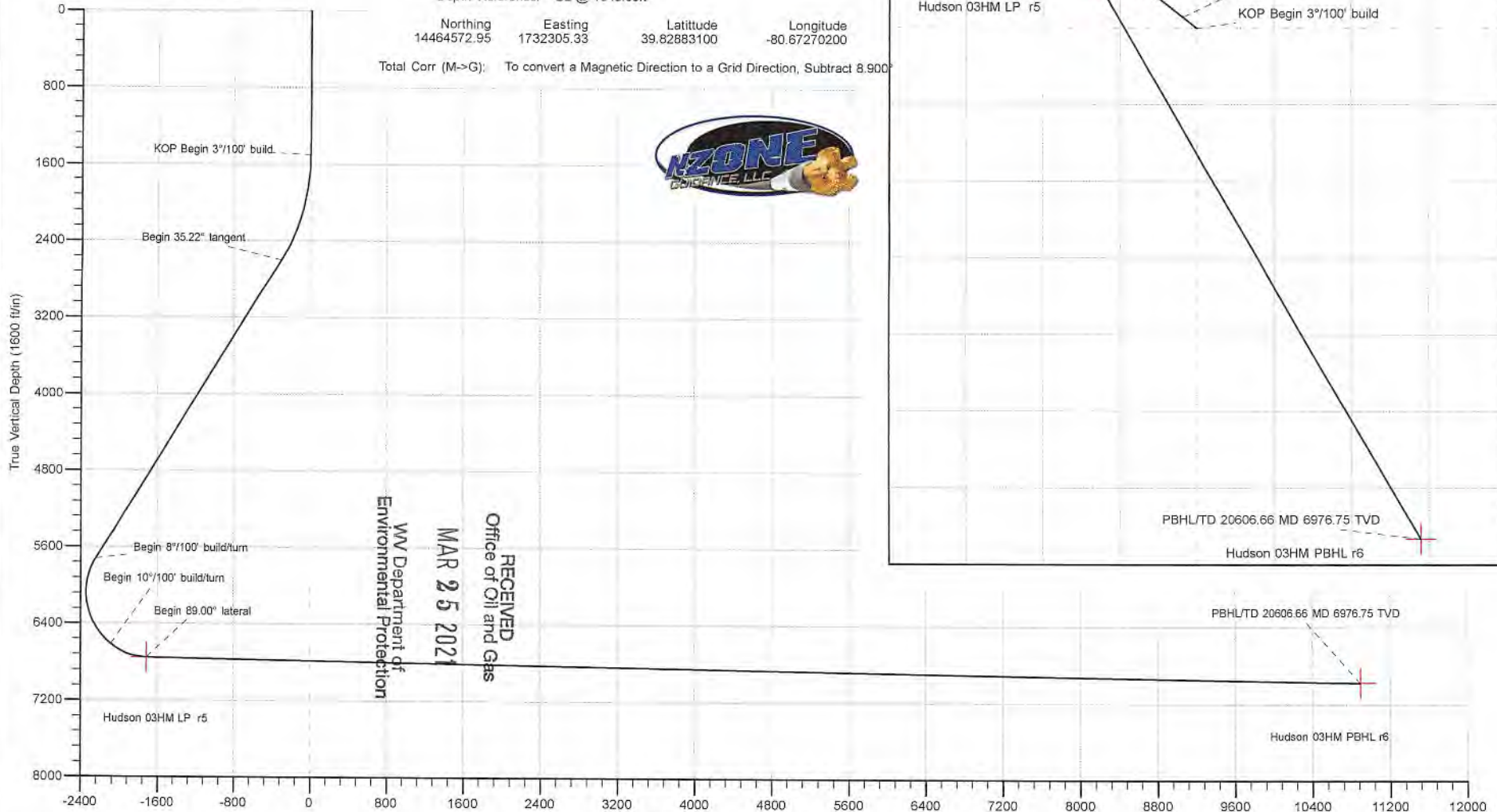


Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD83 West Virginia - HARN  
 Ellipsoid: GRS 1980  
 Zone: Zone 17N (84 W to 78 W)

System Datum: Mean Sea Level  
 Depth Reference: GL @ 1346.00ft

Northing	Easting	Latitude	Longitude
14464572.95	1732305.33	39.82883100	-80.67270200

Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Subtract 8.900



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Vertical Section at 156.55° (1600 ft/in)



Planning Report - Geographic

Database: Win10Lt\_Dec2820\_v16  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia  
 Site: Hudson Alt North  
 Well: Hudson S-03 HM (slot F)  
 Wellbore: Original Hole  
 Design: rev7

Local Co-ordinate Reference: Well Hudson S-03 HM (slot F)  
 TVD Reference: GL @ 1346.00ft  
 MD Reference: GL @ 1346.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

<b>Project</b>	Marshall County, West Virginia		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD83 West Virginia - HARN		
<b>Map Zone:</b>	Zone 17N (84 W to 78 W)		

<b>Site</b>	Hudson Alt North				
<b>Site Position:</b>		<b>Northing:</b>	14,464,552.10 usft	<b>Latitude:</b>	39.82877400
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,732,278.45 usft	<b>Longitude:</b>	-80.67279800
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	Hudson S-03 HM (slot F)					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,464,572.95 usft	<b>Latitude:</b>	39.82883100
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	1,732,305.33 usft	<b>Longitude:</b>	-80.67270200
<b>Position Uncertainty</b>	0.00 ft		<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	1,346.00 ft
<b>Grid Convergence:</b>	0.210 °					

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF2020	2/9/2021	(°)	(°)	(nT)
			-8.690	66.601	51,800.72198985

<b>Design</b>	rev7				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	156.55	

<b>Plan Survey Tool Program</b>	<b>Date</b>	2/19/2021			
<b>Depth From</b>	<b>Depth To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	RECEIVED Office of Oil and Gas  <b>MAR 25 2021</b>  WV Department of Environmental Protection
(ft)	(ft)				
1	0.00	20,606.66 rev7 (Original Hole)	MWD	MWD - Standard	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
1,501.75	0.00	0.00	1,501.75	0.00	0.00	0.00	0.00	0.00	0.00	0.000
2,675.79	35.22	307.97	2,603.23	215.11	-275.63	3.00	3.00	0.00	307.969	
6,498.71	35.22	307.97	5,726.30	1,571.60	-2,013.77	0.00	0.00	0.00	0.000	
7,507.88	50.00	162.48	6,614.99	1,342.90	-2,150.14	8.00	1.46	-14.42	-153.916	
7,913.85	89.00	150.08	6,754.92	1,004.44	-1,995.56	10.00	9.61	-3.05	-19.258	
20,606.66	89.00	150.08	6,976.75	-9,994.96	4,334.65	0.00	0.00	0.00	0.000	Hudson 03HM PBHL

Planning Report - Geographic

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 MD Reference: GL @ 1346.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
100.00	0.00	0.00	100.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
200.00	0.00	0.00	200.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
300.00	0.00	0.00	300.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
400.00	0.00	0.00	400.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
500.00	0.00	0.00	500.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
600.00	0.00	0.00	600.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
700.00	0.00	0.00	700.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
800.00	0.00	0.00	800.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
900.00	0.00	0.00	900.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
1,501.75	0.00	0.00	1,501.75	0.00	0.00	14,464,572.95	1,732,305.33	39.82883100	-80.67270200	
<b>KOP Begin 3°/100' build</b>										
1,600.00	2.95	307.97	1,599.96	1.55	-1.99	14,464,574.51	1,732,303.33	39.82883529	-80.67270907	
1,700.00	5.95	307.97	1,699.64	6.32	-8.10	14,464,579.28	1,732,297.22	39.82884845	-80.67273078	
1,800.00	8.95	307.97	1,798.79	14.30	-18.32	14,464,587.25	1,732,287.01	39.82887045	-80.67276707	
1,900.00	11.95	307.97	1,897.12	25.45	-32.62	14,464,598.41	1,732,272.71	39.82890123	-80.67281784	
2,000.00	14.95	307.97	1,994.37	39.76	-50.95	14,464,612.71	1,732,254.38	39.82894070	-80.67288294	
2,100.00	17.95	307.97	2,090.26	57.18	-73.26	14,464,630.13	1,732,232.06	39.82898876	-80.67296221	
2,200.00	20.95	307.97	2,184.55	77.66	-99.51	14,464,650.61	1,732,205.82	39.82904527	-80.67305542	
2,300.00	23.95	307.97	2,276.96	101.15	-129.61	14,464,674.10	1,732,175.72	39.82911008	-80.67316232	
2,400.00	26.95	307.97	2,367.25	127.58	-163.48	14,464,700.53	1,732,141.85	39.82918301	-80.67328262	
2,500.00	29.95	307.97	2,455.16	156.89	-201.03	14,464,729.84	1,732,104.30	39.82926386	-80.67341598	
2,600.00	32.95	307.97	2,540.47	188.98	-242.15	14,464,761.93	1,732,063.18	39.82935241	-80.67356204	
2,675.79	35.22	307.97	2,603.23	215.11	-275.63	14,464,788.06	1,732,029.70	39.82942451	-80.67368096	
<b>Begin 35.22° tangent</b>										
2,700.00	35.22	307.97	2,623.01	223.70	-286.64	14,464,796.65	1,732,018.69	39.82944821	-80.67372005	
2,800.00	35.22	307.97	2,704.70	259.18	-332.10	14,464,832.14	1,731,973.22	39.82954611	-80.67388154	
2,900.00	35.22	307.97	2,786.40	294.67	-377.57	14,464,867.62	1,731,927.76	39.82964401	-80.67404302	
3,000.00	35.22	307.97	2,868.09	330.15	-423.04	14,464,903.10	1,731,882.29	39.82974191	-80.67420451	
3,100.00	35.22	307.97	2,949.78	365.63	-468.50	14,464,938.59	1,731,836.82	39.82983981	-80.67436599	
3,200.00	35.22	307.97	3,031.48	401.12	-513.97	14,464,974.07	1,731,791.36	39.82993771	-80.67452748	
3,300.00	35.22	307.97	3,113.17	436.60	-559.44	14,465,009.55	1,731,745.89	39.83003561	-80.67468896	
3,400.00	35.22	307.97	3,194.86	472.08	-604.90	14,465,045.03	1,731,700.43	39.83013350	-80.67485045	
3,500.00	35.22	307.97	3,276.55	507.57	-650.37	14,465,080.52	1,731,654.96	39.83023140	-80.67501194	
3,600.00	35.22	307.97	3,358.25	543.05	-695.83	14,465,116.00	1,731,609.49	39.83032930	-80.67517343	
3,700.00	35.22	307.97	3,439.94	578.53	-741.30	14,465,151.48	1,731,564.03	39.83042720	-80.67533491	
3,800.00	35.22	307.97	3,521.63	614.02	-786.77	14,465,186.97	1,731,518.56	39.83052510	-80.67549640	
3,900.00	35.22	307.97	3,603.33	649.50	-832.23	14,465,222.45	1,731,473.09	39.83062299	-80.67565789	
4,000.00	35.22	307.97	3,685.02	684.98	-877.70	14,465,257.93	1,731,427.63	39.83072089	-80.67581938	
4,100.00	35.22	307.97	3,766.71	720.46	-923.17	14,465,293.42	1,731,382.16	39.83081879	-80.67598087	
4,200.00	35.22	307.97	3,848.41	755.95	-968.63	14,465,328.90	1,731,336.70	39.83091669	-80.67614236	
4,300.00	35.22	307.97	3,930.10	791.43	-1,014.10	14,465,364.38	1,731,291.23	39.83101458	-80.67630385	
4,400.00	35.22	307.97	4,011.79	826.91	-1,059.56	14,465,399.87	1,731,245.76	39.83111248	-80.67646534	
4,500.00	35.22	307.97	4,093.49	862.40	-1,105.03	14,465,435.35	1,731,200.30	39.83121038	-80.67662684	
4,600.00	35.22	307.97	4,175.18	897.88	-1,150.50	14,465,470.83	1,731,154.83	39.83130827	-80.67678833	
4,700.00	35.22	307.97	4,256.87	933.36	-1,195.96	14,465,506.31	1,731,109.37	39.83140617	-80.67694982	
4,800.00	35.22	307.97	4,338.57	968.85	-1,241.43	14,465,541.80	1,731,063.90	39.83150406	-80.67711132	
4,900.00	35.22	307.97	4,420.26	1,004.33	-1,286.90	14,465,577.28	1,731,018.43	39.83160196	-80.67727281	



Planning Report - Geographic

Database: Win10Lt\_Dec2820\_v16  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia  
 Site: Hudson Alt North  
 Well: Hudson S-03 HM (slot F)  
 Wellbore: Original Hole  
 Design: rev7

Local Co-ordinate Reference: Well Hudson S-03 HM (slot F)  
 TVD Reference: GL @ 1346.00ft  
 MD Reference: GL @ 1346.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,000.00	35.22	307.97	4,501.95	1,039.81	-1,332.36	14,465,612.76	1,730,972.97	39.83169985	-80.67743430	
5,100.00	35.22	307.97	4,583.64	1,075.30	-1,377.83	14,465,648.25	1,730,927.50	39.83179775	-80.67759580	
5,200.00	35.22	307.97	4,665.34	1,110.78	-1,423.30	14,465,683.73	1,730,882.03	39.83189564	-80.67775729	
5,300.00	35.22	307.97	4,747.03	1,146.26	-1,468.76	14,465,719.21	1,730,836.57	39.83199354	-80.67791879	
5,400.00	35.22	307.97	4,828.72	1,181.75	-1,514.23	14,465,754.70	1,730,791.10	39.83209143	-80.67808028	
5,500.00	35.22	307.97	4,910.42	1,217.23	-1,559.69	14,465,790.18	1,730,745.64	39.83218932	-80.67824178	
5,600.00	35.22	307.97	4,992.11	1,252.71	-1,605.16	14,465,825.66	1,730,700.17	39.83228722	-80.67840328	
5,700.00	35.22	307.97	5,073.80	1,288.20	-1,650.63	14,465,861.15	1,730,654.70	39.83238511	-80.67856478	
5,800.00	35.22	307.97	5,155.50	1,323.68	-1,696.09	14,465,896.63	1,730,609.24	39.83248301	-80.67872627	
5,900.00	35.22	307.97	5,237.19	1,359.16	-1,741.56	14,465,932.11	1,730,563.77	39.83258090	-80.67888777	
6,000.00	35.22	307.97	5,318.88	1,394.64	-1,787.03	14,465,967.59	1,730,518.30	39.83267879	-80.67904927	
6,100.00	35.22	307.97	5,400.58	1,430.13	-1,832.49	14,466,003.08	1,730,472.84	39.83277668	-80.67921077	
6,200.00	35.22	307.97	5,482.27	1,465.61	-1,877.96	14,466,038.56	1,730,427.37	39.83287458	-80.67937227	
6,300.00	35.22	307.97	5,563.96	1,501.09	-1,923.42	14,466,074.04	1,730,381.91	39.83297247	-80.67953377	
6,400.00	35.22	307.97	5,645.65	1,536.58	-1,968.89	14,466,109.53	1,730,336.44	39.83307036	-80.67969527	
6,498.71	35.22	307.97	5,726.29	1,571.60	-2,013.77	14,466,144.55	1,730,291.56	39.83316699	-80.67985469	
<b>Begin 8°/100' build/turn</b>										
6,500.00	35.13	307.89	5,727.35	1,572.06	-2,014.36	14,466,145.01	1,730,290.97	39.83316825	-80.67985677	
6,600.00	28.14	300.42	5,812.47	1,601.72	-2,057.47	14,466,174.67	1,730,247.86	39.83325012	-80.68000996	
6,700.00	21.79	288.79	5,903.13	1,619.67	-2,095.44	14,466,192.61	1,730,209.89	39.83329978	-80.68014498	
6,800.00	16.82	269.60	5,997.58	1,625.55	-2,127.52	14,466,198.50	1,730,177.81	39.83331627	-80.68025920	
6,900.00	14.69	240.85	6,093.96	1,619.27	-2,153.11	14,466,192.21	1,730,152.23	39.83329925	-80.68035040	
7,000.00	16.56	211.62	6,190.41	1,600.93	-2,171.68	14,466,173.88	1,730,133.65	39.83324907	-80.68041681	
7,100.00	21.39	191.78	6,285.04	1,570.89	-2,182.89	14,466,143.84	1,730,122.44	39.83316669	-80.68045712	
7,200.00	27.68	179.75	6,376.03	1,529.74	-2,186.52	14,466,102.69	1,730,118.81	39.83305373	-80.68047057	
7,300.00	34.64	172.07	6,461.58	1,478.29	-2,182.49	14,466,051.24	1,730,122.84	39.83291238	-80.68045688	
7,400.00	41.93	166.74	6,540.05	1,417.52	-2,170.89	14,465,990.47	1,730,134.44	39.83274540	-80.68041632	
7,500.00	49.41	162.75	6,609.90	1,348.63	-2,151.94	14,465,921.58	1,730,153.40	39.83255602	-80.68034968	
7,507.88	50.00	162.48	6,614.99	1,342.90	-2,150.14	14,465,915.85	1,730,155.19	39.83254026	-80.68034336	
<b>Begin 10°/100' build/turn</b>										
7,600.00	58.75	158.93	6,668.61	1,272.35	-2,125.31	14,465,845.30	1,730,180.02	39.83234628	-80.68025580	
7,700.00	68.35	155.77	6,713.11	1,189.88	-2,090.78	14,465,762.83	1,730,214.55	39.83211944	-80.68013387	
7,800.00	77.99	153.00	6,742.03	1,103.70	-2,049.40	14,465,676.66	1,730,255.93	39.83188239	-80.67998758	
7,900.00	87.66	150.43	6,754.51	1,016.46	-2,002.43	14,465,589.41	1,730,302.90	39.83164232	-80.67982137	
7,913.85	89.00	150.08	6,754.92	1,004.44	-1,995.56	14,465,577.39	1,730,309.77	39.83160924	-80.67979706	
<b>Begin 89.00° lateral</b>										
8,000.00	89.00	150.08	6,756.42	929.78	-1,952.60	14,465,502.73	1,730,352.74	39.83140380	-80.67964497	
8,100.00	89.00	150.08	6,758.17	843.12	-1,902.72	14,465,416.07	1,730,402.61	39.83116532	-80.67946843	
8,200.00	89.00	150.08	6,759.92	756.46	-1,852.85	14,465,329.41	1,730,452.48	39.83092685	-80.67929189	
8,300.00	89.00	150.08	6,761.67	669.80	-1,802.98	14,465,242.76	1,730,502.35	39.83068838	-80.67911536	
8,400.00	89.00	150.08	6,763.41	583.15	-1,753.11	14,465,156.10	1,730,552.22	39.83044990	-80.67893882	
8,500.00	89.00	150.08	6,765.16	496.49	-1,703.23	14,465,069.44	1,730,602.10	39.83021142	-80.67876229	
8,600.00	89.00	150.08	6,766.91	409.83	-1,653.36	14,464,982.78	1,730,651.97	39.82997295	-80.67858576	
8,700.00	89.00	150.08	6,768.66	323.17	-1,603.49	14,464,896.12	1,730,701.84	39.82973447	-80.67840923	
8,800.00	89.00	150.08	6,770.40	236.51	-1,553.62	14,464,809.46	1,730,751.71	39.82949600	-80.67823270	
8,900.00	89.00	150.08	6,772.15	149.85	-1,503.74	14,464,722.81	1,730,801.59	39.82925752	-80.67805617	
9,000.00	89.00	150.08	6,773.90	63.20	-1,453.87	14,464,636.15	1,730,851.46	39.82901904	-80.67787964	
9,100.00	89.00	150.08	6,775.65	-23.46	-1,404.00	14,464,549.49	1,730,901.33	39.82878057	-80.67770312	
9,200.00	89.00	150.08	6,777.40	-110.12	-1,354.13	14,464,462.83	1,730,951.20	39.82854209	-80.67752659	
9,300.00	89.00	150.08	6,779.14	-196.78	-1,304.25	14,464,376.17	1,731,001.08	39.82830361	-80.67735007	
9,400.00	89.00	150.08	6,780.89	-283.44	-1,254.38	14,464,289.52	1,731,050.95	39.82806513	-80.67717355	
9,500.00	89.00	150.08	6,782.64	-370.10	-1,204.51	14,464,202.86	1,731,100.82	39.82782666	-80.67699702	
9,600.00	89.00	150.08	6,784.39	-456.76	-1,154.64	14,464,116.20	1,731,150.69	39.82758818	-80.67682050	
9,700.00	89.00	150.08	6,786.13	-543.41	-1,104.76	14,464,029.54	1,731,200.56	39.82734970	-80.67664399	

Planning Report - Geographic

Database: Win10Lt\_Dec2820\_v16  
 Company: Tug Hill Operating LLC  
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 TVD Reference: GL @ 1346.00ft  
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 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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 MAR 25 2021

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Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,800.00	89.00	150.08	6,787.88	-630.07	-1,054.89	14,463,942.88	1,731,250.44	39.82711122	-80.67646747
9,900.00	89.00	150.08	6,789.63	-716.73	-1,005.02	14,463,856.22	1,731,300.31	39.82687274	-80.67629095
10,000.00	89.00	150.08	6,791.38	-803.39	-955.15	14,463,769.57	1,731,350.18	39.82663426	-80.67611444
10,100.00	89.00	150.08	6,793.12	-890.05	-905.27	14,463,682.91	1,731,400.05	39.82639578	-80.67593792
10,200.00	89.00	150.08	6,794.87	-976.71	-855.40	14,463,596.25	1,731,449.93	39.82615730	-80.67576141
10,300.00	89.00	150.08	6,796.62	-1,063.36	-805.53	14,463,509.59	1,731,499.80	39.82591882	-80.67558490
10,400.00	89.00	150.08	6,798.37	-1,150.02	-755.66	14,463,422.93	1,731,549.67	39.82568034	-80.67540839
10,500.00	89.00	150.08	6,800.12	-1,236.68	-705.78	14,463,336.27	1,731,599.54	39.82544186	-80.67523188
10,600.00	89.00	150.08	6,801.86	-1,323.34	-655.91	14,463,249.62	1,731,649.42	39.82520338	-80.67505537
10,700.00	89.00	150.08	6,803.61	-1,410.00	-606.04	14,463,162.96	1,731,699.29	39.82496490	-80.67487887
10,800.00	89.00	150.08	6,805.36	-1,496.66	-556.17	14,463,076.30	1,731,749.16	39.82472642	-80.67470236
10,900.00	89.00	150.08	6,807.11	-1,583.32	-506.29	14,462,989.64	1,731,799.03	39.82448793	-80.67452586
11,000.00	89.00	150.08	6,808.85	-1,669.97	-456.42	14,462,902.98	1,731,848.90	39.82424945	-80.67434935
11,100.00	89.00	150.08	6,810.60	-1,756.63	-406.55	14,462,816.32	1,731,898.78	39.82401097	-80.67417285
11,200.00	89.00	150.08	6,812.35	-1,843.29	-356.68	14,462,729.67	1,731,948.65	39.82377249	-80.67399635
11,300.00	89.00	150.08	6,814.10	-1,929.95	-306.81	14,462,643.01	1,731,998.52	39.82353400	-80.67381985
11,400.00	89.00	150.08	6,815.84	-2,016.61	-256.93	14,462,556.35	1,732,048.39	39.82329552	-80.67364336
11,500.00	89.00	150.08	6,817.59	-2,103.27	-207.06	14,462,469.69	1,732,098.27	39.82305704	-80.67346686
11,600.00	89.00	150.08	6,819.34	-2,189.92	-157.19	14,462,383.03	1,732,148.14	39.82281855	-80.67329036
11,700.00	89.00	150.08	6,821.09	-2,276.58	-107.32	14,462,296.37	1,732,198.01	39.82258007	-80.67311387
11,800.00	89.00	150.08	6,822.84	-2,363.24	-57.44	14,462,209.72	1,732,247.88	39.82234159	-80.67293738
11,900.00	89.00	150.08	6,824.58	-2,449.90	-7.57	14,462,123.06	1,732,297.76	39.82210310	-80.67276088
12,000.00	89.00	150.08	6,826.33	-2,536.56	42.30	14,462,036.40	1,732,347.63	39.82186462	-80.67258439
12,100.00	89.00	150.08	6,828.08	-2,623.22	92.17	14,461,949.74	1,732,397.50	39.82162613	-80.67240790
12,200.00	89.00	150.08	6,829.83	-2,709.87	142.05	14,461,863.08	1,732,447.37	39.82138765	-80.67223142
12,300.00	89.00	150.08	6,831.57	-2,796.53	191.92	14,461,776.43	1,732,497.25	39.82114916	-80.67205493
12,400.00	89.00	150.08	6,833.32	-2,883.19	241.79	14,461,689.77	1,732,547.12	39.82091067	-80.67187844
12,500.00	89.00	150.08	6,835.07	-2,969.85	291.66	14,461,603.11	1,732,596.99	39.82067219	-80.67170196
12,600.00	89.00	150.08	6,836.82	-3,056.51	341.54	14,461,516.45	1,732,646.86	39.82043370	-80.67152548
12,700.00	89.00	150.08	6,838.57	-3,143.17	391.41	14,461,429.79	1,732,696.73	39.82019521	-80.67134899
12,800.00	89.00	150.08	6,840.31	-3,229.83	441.28	14,461,343.13	1,732,746.61	39.81995673	-80.67117251
12,900.00	89.00	150.08	6,842.06	-3,316.48	491.15	14,461,256.48	1,732,796.48	39.81971824	-80.67099603
13,000.00	89.00	150.08	6,843.81	-3,403.14	541.03	14,461,169.82	1,732,846.35	39.81947975	-80.67081956
13,100.00	89.00	150.08	6,845.56	-3,489.80	590.90	14,461,083.16	1,732,896.22	39.81924126	-80.67064308
13,200.00	89.00	150.08	6,847.30	-3,576.46	640.77	14,460,996.50	1,732,946.10	39.81900278	-80.67046660
13,300.00	89.00	150.08	6,849.05	-3,663.12	690.64	14,460,909.84	1,732,995.97	39.81876429	-80.67029013
13,400.00	89.00	150.08	6,850.80	-3,749.78	740.52	14,460,823.18	1,733,045.84	39.81852580	-80.67011365
13,500.00	89.00	150.08	6,852.55	-3,836.43	790.39	14,460,736.53	1,733,095.71	39.81828731	-80.66993718
13,600.00	89.00	150.08	6,854.29	-3,923.09	840.26	14,460,649.87	1,733,145.59	39.81804882	-80.66976071
13,700.00	89.00	150.08	6,856.04	-4,009.75	890.13	14,460,563.21	1,733,195.46	39.81781033	-80.66958424
13,800.00	89.00	150.08	6,857.79	-4,096.41	940.01	14,460,476.55	1,733,245.33	39.81757184	-80.66940777
13,900.00	89.00	150.08	6,859.54	-4,183.07	989.88	14,460,389.89	1,733,295.20	39.81733335	-80.66923130
14,000.00	89.00	150.08	6,861.29	-4,269.73	1,039.75	14,460,303.23	1,733,345.07	39.81709486	-80.66905484
14,100.00	89.00	150.08	6,863.03	-4,356.39	1,089.62	14,460,216.58	1,733,394.95	39.81685637	-80.66887837
14,200.00	89.00	150.08	6,864.78	-4,443.04	1,139.50	14,460,129.92	1,733,444.82	39.81661788	-80.66870191
14,300.00	89.00	150.08	6,866.53	-4,529.70	1,189.37	14,460,043.26	1,733,494.69	39.81637939	-80.66852545
14,400.00	89.00	150.08	6,868.28	-4,616.36	1,239.24	14,459,956.60	1,733,544.56	39.81614090	-80.66834898
14,500.00	89.00	150.08	6,870.02	-4,703.02	1,289.11	14,459,869.94	1,733,594.44	39.81590240	-80.66817252
14,600.00	89.00	150.08	6,871.77	-4,789.68	1,338.99	14,459,783.28	1,733,644.31	39.81566391	-80.66799607
14,700.00	89.00	150.08	6,873.52	-4,876.34	1,388.86	14,459,696.63	1,733,694.18	39.81542542	-80.66781961
14,800.00	89.00	150.08	6,875.27	-4,962.99	1,438.73	14,459,609.97	1,733,744.05	39.81518693	-80.66764315
14,900.00	89.00	150.08	6,877.01	-5,049.65	1,488.60	14,459,523.31	1,733,793.93	39.81494843	-80.66746670
15,000.00	89.00	150.08	6,878.76	-5,136.31	1,538.47	14,459,436.65	1,733,843.80	39.81470994	-80.66729024
15,100.00	89.00	150.08	6,880.51	-5,222.97	1,588.35	14,459,349.99	1,733,893.67	39.81447145	-80.66711379
15,200.00	89.00	150.08	6,882.26	-5,309.63	1,638.22	14,459,263.34	1,733,943.54	39.81423295	-80.66693734



Planning Report - Geographic

Database: Win10Lt\_Dec2820\_v16  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia  
 Site: Hudson Alt North  
 Well: Hudson S-03 HM (slot F)  
 Wellbore: Original Hole  
 Design: rev7

Local Co-ordinate Reference: Well Hudson S-03 HM (slot F)  
 TVD Reference: GL @ 1346.00ft  
 MD Reference: GL @ 1346.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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 MAR 25 2021

Planned Survey

WV Department of  
 Environmental Protection

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,300.00	89.00	150.08	6,884.01	-5,396.29	1,688.09	14,459,176.68	1,733,993.42	39.81399446	-80.66676089
15,400.00	89.00	150.08	6,885.75	-5,482.95	1,737.96	14,459,090.02	1,734,043.29	39.81375597	-80.66658444
15,500.00	89.00	150.08	6,887.50	-5,569.60	1,787.84	14,459,003.36	1,734,093.16	39.81351747	-80.66640799
15,600.00	89.00	150.08	6,889.25	-5,656.26	1,837.71	14,458,916.70	1,734,143.03	39.81327898	-80.66623154
15,700.00	89.00	150.08	6,891.00	-5,742.92	1,887.58	14,458,830.04	1,734,192.90	39.81304048	-80.66605510
15,800.00	89.00	150.08	6,892.74	-5,829.58	1,937.45	14,458,743.39	1,734,242.78	39.81280199	-80.66587865
15,900.00	89.00	150.08	6,894.49	-5,916.24	1,987.33	14,458,656.73	1,734,292.65	39.81256349	-80.66570221
16,000.00	89.00	150.08	6,896.24	-6,002.90	2,037.20	14,458,570.07	1,734,342.52	39.81232500	-80.66552577
16,100.00	89.00	150.08	6,897.99	-6,089.55	2,087.07	14,458,483.41	1,734,392.39	39.81208650	-80.66534933
16,200.00	89.00	150.08	6,899.73	-6,176.21	2,136.94	14,458,396.75	1,734,442.27	39.81184800	-80.66517289
16,300.00	89.00	150.08	6,901.48	-6,262.87	2,186.82	14,458,310.09	1,734,492.14	39.81160951	-80.66499645
16,400.00	89.00	150.08	6,903.23	-6,349.53	2,236.69	14,458,223.44	1,734,542.01	39.81137101	-80.66482001
16,500.00	89.00	150.08	6,904.98	-6,436.19	2,286.56	14,458,136.78	1,734,591.88	39.81113251	-80.66464358
16,600.00	89.00	150.08	6,906.73	-6,522.85	2,336.43	14,458,050.12	1,734,641.76	39.81089401	-80.66446714
16,700.00	89.00	150.08	6,908.47	-6,609.51	2,386.31	14,457,963.46	1,734,691.63	39.81065552	-80.66429071
16,800.00	89.00	150.08	6,910.22	-6,696.16	2,436.18	14,457,876.80	1,734,741.50	39.81041702	-80.66411428
16,900.00	89.00	150.08	6,911.97	-6,782.82	2,486.05	14,457,790.14	1,734,791.37	39.81017852	-80.66393784
17,000.00	89.00	150.08	6,913.72	-6,869.48	2,535.92	14,457,703.49	1,734,841.24	39.80994002	-80.66376141
17,100.00	89.00	150.08	6,915.46	-6,956.14	2,585.80	14,457,616.83	1,734,891.12	39.80970152	-80.66358499
17,200.00	89.00	150.08	6,917.21	-7,042.80	2,635.67	14,457,530.17	1,734,940.99	39.80946302	-80.66340856
17,300.00	89.00	150.08	6,918.96	-7,129.46	2,685.54	14,457,443.51	1,734,990.86	39.80922452	-80.66323213
17,400.00	89.00	150.08	6,920.71	-7,216.11	2,735.41	14,457,356.85	1,735,040.73	39.80898603	-80.66305571
17,500.00	89.00	150.08	6,922.45	-7,302.77	2,785.29	14,457,270.19	1,735,090.61	39.80874753	-80.66287928
17,600.00	89.00	150.08	6,924.20	-7,389.43	2,835.16	14,457,183.54	1,735,140.48	39.80850902	-80.66270286
17,700.00	89.00	150.08	6,925.95	-7,476.09	2,885.03	14,457,096.88	1,735,190.35	39.80827052	-80.66252644
17,800.00	89.00	150.08	6,927.70	-7,562.75	2,934.90	14,457,010.22	1,735,240.22	39.80803202	-80.66235002
17,900.00	89.00	150.08	6,929.45	-7,649.41	2,984.78	14,456,923.56	1,735,290.10	39.80779352	-80.66217360
18,000.00	89.00	150.08	6,931.19	-7,736.06	3,034.65	14,456,836.90	1,735,339.97	39.80755502	-80.66199718
18,100.00	89.00	150.08	6,932.94	-7,822.72	3,084.52	14,456,750.25	1,735,389.84	39.80731652	-80.66182077
18,200.00	89.00	150.08	6,934.69	-7,909.38	3,134.39	14,456,663.59	1,735,439.71	39.80707802	-80.66164435
18,300.00	89.00	150.08	6,936.44	-7,996.04	3,184.27	14,456,576.93	1,735,489.59	39.80683952	-80.66146794
18,400.00	89.00	150.08	6,938.18	-8,082.70	3,234.14	14,456,490.27	1,735,539.46	39.80660101	-80.66129153
18,500.00	89.00	150.08	6,939.93	-8,169.36	3,284.01	14,456,403.61	1,735,589.33	39.80636251	-80.66111511
18,600.00	89.00	150.08	6,941.68	-8,256.02	3,333.88	14,456,316.95	1,735,639.20	39.80612401	-80.66093870
18,700.00	89.00	150.08	6,943.43	-8,342.67	3,383.75	14,456,230.30	1,735,689.07	39.80588550	-80.66076229
18,800.00	89.00	150.08	6,945.18	-8,429.33	3,433.63	14,456,143.64	1,735,738.95	39.80564700	-80.66058589
18,900.00	89.00	150.08	6,946.92	-8,515.99	3,483.50	14,456,056.98	1,735,788.82	39.80540850	-80.66040948
19,000.00	89.00	150.08	6,948.67	-8,602.65	3,533.37	14,455,970.32	1,735,838.69	39.80516999	-80.66023307
19,100.00	89.00	150.08	6,950.42	-8,689.31	3,583.24	14,455,883.66	1,735,888.56	39.80493149	-80.66005667
19,200.00	89.00	150.08	6,952.17	-8,775.97	3,633.12	14,455,797.00	1,735,938.44	39.80469298	-80.65988027
19,300.00	89.00	150.08	6,953.91	-8,862.62	3,682.99	14,455,710.35	1,735,988.31	39.80445448	-80.65970386
19,400.00	89.00	150.08	6,955.66	-8,949.28	3,732.86	14,455,623.69	1,736,038.18	39.80421597	-80.65952746
19,500.00	89.00	150.08	6,957.41	-9,035.94	3,782.73	14,455,537.03	1,736,088.05	39.80397747	-80.65935106
19,600.00	89.00	150.08	6,959.16	-9,122.60	3,832.61	14,455,450.37	1,736,137.93	39.80373896	-80.65917467
19,700.00	89.00	150.08	6,960.90	-9,209.26	3,882.48	14,455,363.71	1,736,187.80	39.80350046	-80.65899827
19,800.00	89.00	150.08	6,962.65	-9,295.92	3,932.35	14,455,277.05	1,736,237.67	39.80326195	-80.65882187
19,900.00	89.00	150.08	6,964.40	-9,382.58	3,982.22	14,455,190.40	1,736,287.54	39.80302344	-80.65864548
20,000.00	89.00	150.08	6,966.15	-9,469.23	4,032.10	14,455,103.74	1,736,337.41	39.80278494	-80.65846909
20,100.00	89.00	150.08	6,967.90	-9,555.89	4,081.97	14,455,017.08	1,736,387.29	39.80254643	-80.65829269
20,200.00	89.00	150.08	6,969.64	-9,642.55	4,131.84	14,454,930.42	1,736,437.16	39.80230792	-80.65811630
20,300.00	89.00	150.08	6,971.39	-9,729.21	4,181.71	14,454,843.76	1,736,487.03	39.80206942	-80.65793991
20,400.00	89.00	150.08	6,973.14	-9,815.87	4,231.59	14,454,757.10	1,736,536.90	39.80183091	-80.65776352
20,500.00	89.00	150.08	6,974.89	-9,902.53	4,281.46	14,454,670.45	1,736,586.78	39.80159240	-80.65758714
20,600.00	89.00	150.08	6,976.63	-9,989.18	4,331.33	14,454,583.79	1,736,636.65	39.80135389	-80.65741075

Planning Report - Geographic

Database: Win10Lt\_Dec2820\_v16  
 Company: Tug Hill Operating LLC  
 Project: Marshall County, West Virginia  
 Site: Hudson Alt North  
 Well: Hudson S-03 HM (slot F)  
 Wellbore: Original Hole  
 Design: rev7

Local Co-ordinate Reference: Well Hudson S-03 HM (slot F)  
 TVD Reference: GL @ 1346.00ft  
 MD Reference: GL @ 1346.00ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

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 Environmental Protection

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,606.66	89.00	150.08	6,976.75	-9,994.96	4,334.65	14,454,578.02	1,736,639.97	39.80133801	-80.65739900
PBHL/TD 20606.66 MD 6976.75 TVD									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Hudson 03HM LP r5 - hit/miss target - Shape	0.00	0.00	6,754.92	1,004.46	-1,995.55	14,465,577.42	1,730,309.79	39.83160932	-80.67979700
- plan misses target center by 0.03ft at 7913.83ft MD (6754.92 TVD, 1004.45 N, -1995.57 E) - Point									
Hudson 03HM PBHL r6 - plan hits target center - Point	0.00	0.01	6,976.75	-9,994.96	4,334.65	14,454,578.01	1,736,639.97	39.80133800	-80.65739900

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
1,501.75	1,501.75	0.00	0.00	KOP Begin 3°/100' build
2,675.79	2,603.23	215.11	-275.63	Begin 35.22° tangent
6,498.71	5,726.29	1,571.60	-2,013.77	Begin 8°/100' build/turn
7,507.88	6,614.99	1,342.90	-2,150.14	Begin 10°/100' build/turn
7,913.85	6,754.92	1,004.44	-1,995.56	Begin 89.00° lateral
20,606.66	6,976.75	-9,994.96	4,334.65	PBHL/TD 20606.66 MD 6976.75 TVD



Operator's Well No. Hudson S-3HM

### Area of Review

#### Sources of information to Support 35CSR8 - 5.11: 9.3 et seq.

Description of process to identify potential pathways for well communication during hydraulic fracturing activities.

#### Data Sources Reviewed:

1. Enverus and RS Energy Group Well Data service: Public nationwide data service that pulls directly from State agency Oil and Gas databases
2. Farm Maps
3. Topo Maps: Recent and older (contact WVGES)
4. Check with DPS

Contacted Adam Picard 724-485-9331, [apicard@dpslandservices.com](mailto:apicard@dpslandservices.com), DPS GIS (02/16/2021) to have him make maps of the wellbores with his information. DPS utilizes WVGES maps for their mapping seems it is the best publicly available. See attached map he provided.

#### Request maps for:

1. Wellbore with IHS All Wells Layer
2. Map with Farm lines overlain and any well spots identified on Farm Maps
3. More recent (1970s vintage) topos and older topos

#### Discussion with Phil Dinterman WVGES GIS Department (7/15/2016)

- WVGES has plotted every well spot they have access to and are aware of with that contains a coordinate. 30000, 70000, and 90000 series wells are available via the WVGES online map. Some locations aren't great due to vintage and manipulation of maps through time
- 30000 series – any well drilled prior to 1929 – APIs were not assigned to original wells
- 70000 series – Well spots pulled from old Farm line maps that the WVGES has access to
- 90000 series – Any sources that the WVGES has access that shows a well spot but has no additional supporting information. DEP does not have 90000 series on their maps.
- There can be duplication between wells in the 3 series
- Phil indicated that other Operators are providing a screenshot of the WVGES map with their planned well and using that for permits

**Wells within 500' Buffer**

Note: Well spots depicted on Area of Review map are derived from State held coordinates. The spots may differ from those depicted on the Well Plat because the Plat locations represent actual field surveyed locations. Please refer to the Plat for surveyed well spots.

API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705102248	Tug Hill Operating, LLC	6848' TVD, proposed	none	none	Yes, this is a proposed well in the Marcellus. Once completed proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore.	A permitted well on the pad that is not drilled or perforated.
4705102249	Tug Hill Operating, LLC	6862' TVD, proposed	none	none	Yes, this is a proposed well in the Marcellus. Once completed proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore.	A permitted well on the pad that is not drilled or perforated.
4705102251	Tug Hill Operating, LLC	6886' TVD, proposed	none	none	Yes, this is a proposed well in the Marcellus. Once completed proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore.	A permitted well on the pad that is not drilled or perforated.
4705102291	Tug Hill Operating, LLC	6914' TVD, proposed	none	none	Yes, this is a proposed well in the Marcellus. Once completed proper casing and cement should prevent migration of fluids from new wellbore to existing wellbore.	A permitted well on the pad that is not drilled or perforated.



API Number	Operator Name	Total Depth	Perforated Fms	Producing zones not perforated	Is this well "known or reasonably expected to penetrate a depth that could be within the range of Fracture propagation"? 1000' is max limit I would assign to wells that might be within in range of fracture propagation	Comments
4705102292	Tug Hill Operating, LLC	11923' TVD, proposed	none	none	No, this is a proposed well in the Point Pleasant. Once completed the well will not be deep enough to be within the expected fracture propagation from a Marcellus stimulation.	A permitted well on the pad that is not drilled or perforated.
4705102293	Tug Hill Operating, LLC	11961' TVD, proposed	none	none	No, this is a proposed well in the Point Pleasant. Once completed the well will not be deep enough to be within the expected fracture propagation from a Marcellus stimulation.	A permitted well on the pad that is not drilled or perforated.
4705102296	Tug Hill Operating, LLC	11901' TVD, proposed	none	none	No, this is a proposed well in the Point Pleasant. Once completed the well will not be deep enough to be within the expected fracture propagation from a Marcellus stimulation.	A permitted well on the pad that is not drilled or perforated.

WV Geological &amp; Economic Survey

Well: County = 51 Permit = 02248

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102248	Marshall	2248	Meade	Glen Easton	Cameron	39.828765	-80.672708	528007.2	4408803.3

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102248	1 As Proposed	528915	4405569.9	-80.662243	39.799602

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM
4705102248	-/-	Dvtd Orgnl Loc	Permitted	CNX Land LLC		S-1HM	Hudson		Charlene L Barker et al	Tug Hill Operating, LLC	6848	Marcellus Fm

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O
4705102248	-/-	-/-	1370	Ground Level															

WV Geological &amp; Economic Survey

Well: County = 51 Permit = 02249

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102249	Marshall	2249	Meade	Glen Easton	Cameron	39.828798	-80.672705	528007.5	4408807

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102249	1 As Proposed	529095.5	4405714.6	-80.660128	39.800899

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	T
4705102249	-/-	Dvtd Orgnl Loc	Permitted	CNX Land LLC		S-2HM	Hudson		Charlene L Baker et al	Tug Hill Operating, LLC	6862	Marcellus Fm	

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O
4705102249	-/-	-/-	1370	Ground Level															



WV Geological &amp; Economic Survey:

Well: County = 51 Permit = 02251

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102251	Marshall	2251	Meade	Glen Easton	Cameron	39.828864	-80.672698	528008.1	4408814.3

## Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102251	1 As Proposed	528811.5	4407120.8	-80.663384	39.813579

## Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	T
4705102251	-/-	Dvtd Orgnl Loc	Permitted	CNX Land LLC		S-4HM	Hudson		Charlene L Baker et al	Tug Hill Operating, LLC	6886	Marcellus Fm	

## Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEf	G_AFT	O
4705102251	-/-	-/-	1370	Ground Level															

WV Geological &amp; Economic Survey

Well: County = 51 Permit = 02291

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102291	Marshall	2291	Meade	Glen Easton	Cameron	39.828761	-80.672633	528013.7	4408802.9

## Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102291	1 As Proposed	528013.7	4408802.9	-80.672633	39.828761

## Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	T
4705102291	-/-	Dvtd Orgnl Loc	Permitted	CNX Land LLC		S-5HM	Hudson		Charlene L Baker et al	Tug Hill Operating, LLC	6914	Marcellus Fm	

## Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEf	G_AFT	O
4705102291	-/-	-/-	1366	Ground Level															

WV Geological &amp; Economic Survey

Well: County = 51 Permit = 02292

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102292	Marshall	2292	Meade	Glen Easton	Cameron	39.828733	-80.672711	528007	4408799.8

## Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102292	1 As Proposed	528726.7	4406996.2	-80.66438	39.812459

## Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TI
4705102292	-/-	Dvtd Wrkd Ovr	Permitted	CNX Land LLC		S-12HU	Hudson		Charlene L Baker et al	Tug Hill Operating, LLC	11923	Pt Pleasant Fm	
4705102292	-/-	Dvtd Orgnl Loc	Permitted	CNX Land LLC		S-12HU	Hudson		C L Baker et al	Tug Hill Operating, LLC	11923	Pt Pleasant Fm	

## Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_
4705102292	-/-	-/-	1370	Ground Level															
4705102292	-/-	-/-	1370	Ground Level															

WV Geological &amp; Economic Survey

Well: County = 51 Permit = 02293

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102293	Marshall	2293	Meade	Gen Easton	Cameron	39.828667	-80.672718	528006.4	4408792.5

## Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102293	1 As Proposed	528974.7	4407331.6	-80.661468	39.815472

## Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TI
4705102293	-/-	Dvtd Wrkd Ovr	Permitted	CNX Land LLC		S-13HU	Hudson		Charlene L Baker et al	Tug Hill Operating, LLC	11957	Pt Pleasant Fm	
4705102293	-/-	Dvtd Orgnl Loc	Permitted	CNX Land LLC		S-13HU	Hudson		C L Baker et al	Tug Hill Operating, LLC	11961	Pt Pleasant Fm	

## Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_
4705102293	-/-	-/-	1370	Ground Level															
4705102293	-/-	-/-	1370	Ground Level															

WV Geological &amp; Economic Survey

**Well: County = 51 Permit = 02296**Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4705102296	Marshall	2296	Meade	Glen Easton	Cameron	39.8287	-80.672714	528006.8	4408796.1

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4705102296	1 As Proposed	529023.4	4405715.4	-80.66097	39.800909

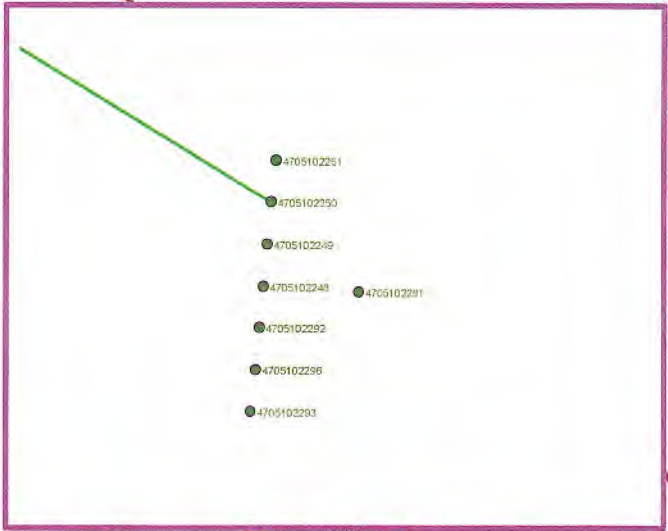
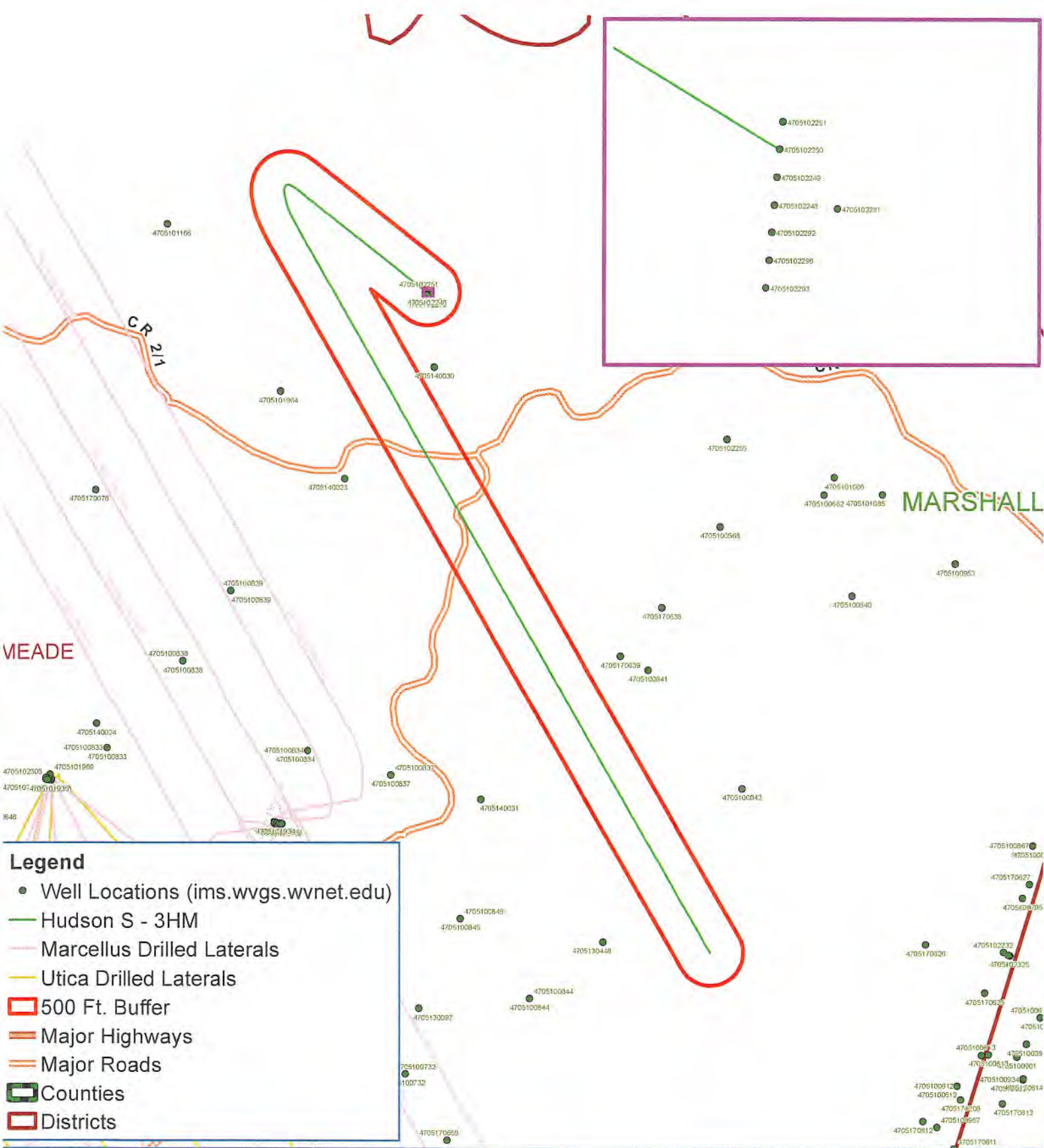
Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM
4705102296	-/-	Dvtd Orgnl Loc	Permitted	CNX Land LLC		S-11HU	Hudson		C L Baker et al	Tug Hill Operating, LLC	11901	Pt Pleasant Fm
4705102296	-/-	Dvtd Wrkd Ovr	Permitted	CNX Land LLC		S-11HU	Hudson		Charlene L Baker et al	Tug Hill Operating, LLC	11901	Pt Pleasant Fm

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT
4705102296	-/-	-/-	1370	Ground Level														
4705102296	-/-	-/-	1370	Ground Level														





**Legend**

- Well Locations (ims.wvgs.wvnet.edu)
- Hudson S - 3HM
- Marcellus Drilled Laterals
- Utica Drilled Laterals
- 500 Ft. Buffer
- Major Highways
- Major Roads
- Counties
- Districts



# Hudson S - 3HM Meade District Marshall County, WV



Notes:  
All locations are approximate and are for visualization purposes only.

Map Prepared by:  
  
 09/29/2023



# Well Site Safety Plan

## Tug Hill Operating, LLC

*B.S. 3-16-21*

Well Name: Hudson S-3HM  
Pad Location: Hudson Pad  
Marshall County, West Virginia

UTM (meters), NAD83, Zone 17:

Northing: 4,408,810.65

Easting: 528,007.72

Updated  
2/2021

09/29/2023

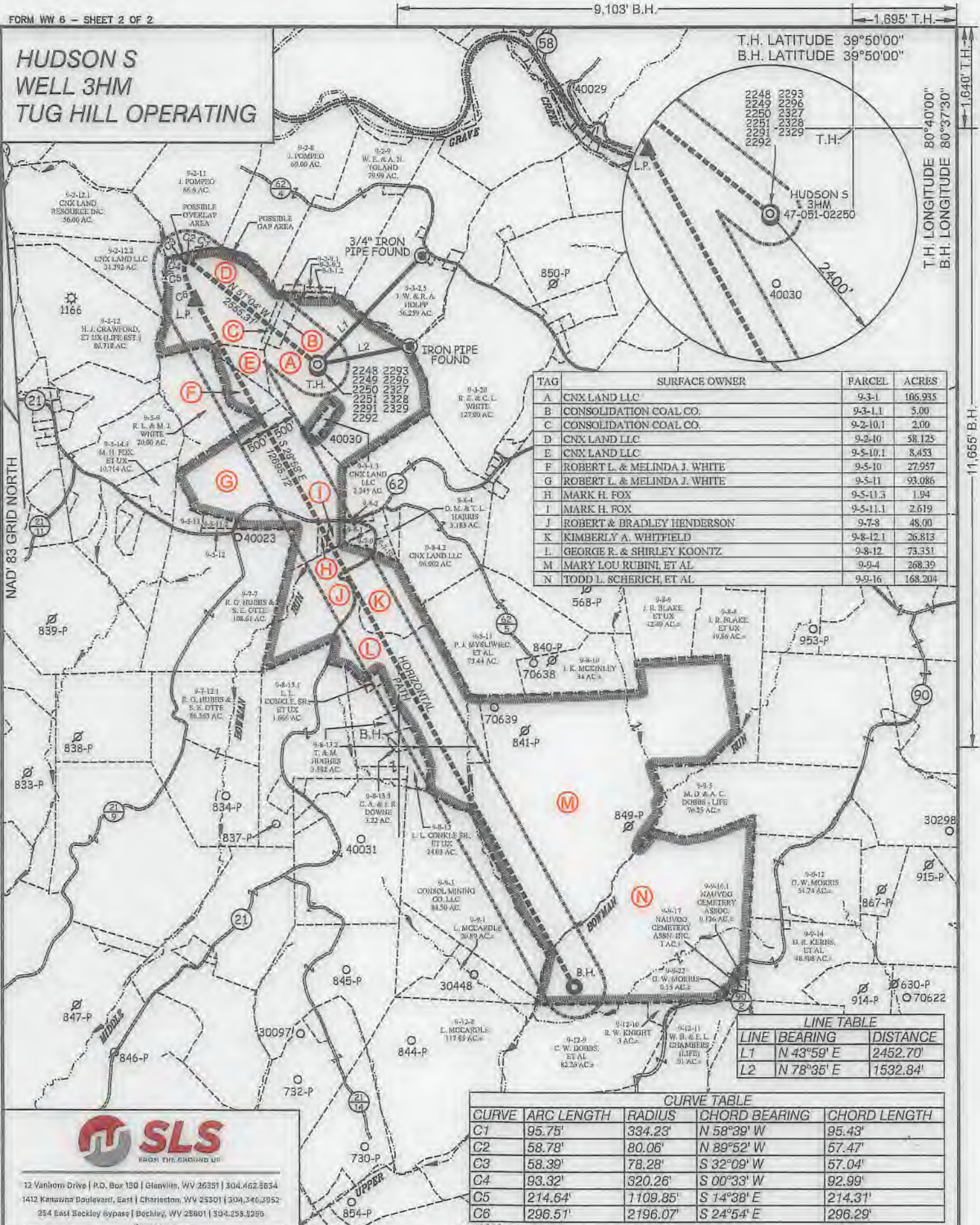


**HUDSON S  
WELL 3HM  
TUG HILL OPERATING**

T.H. LATITUDE 39°50'00"  
B.H. LATITUDE 39°50'00"

T.H. LONGITUDE 80°40'00"  
B.H. LONGITUDE 80°37'30"

NAD'83 GRID NORTH



TAG	SURFACE OWNER	PARCEL	ACRES
A	CNX LAND LLC	9-3-1	106.935
B	CONSOLIDATION COAL CO.	9-3-1.1	5.00
C	CONSOLIDATION COAL CO.	9-2-10.1	2.00
D	CNX LAND LLC	9-2-10	58.125
E	CNX LAND LLC	9-5-10.1	8.453
F	ROBERT L. & MELINDA J. WHITE	9-5-10	27.957
G	ROBERT L. & MELINDA J. WHITE	9-5-11	93.086
H	MARK H. FOX	9-5-11.3	1.94
I	MARK H. FOX	9-5-11.1	2.619
J	ROBERT & BRADLEY HENDERSON	9-7-8	48.00
K	KIMBERLY A. WHITFIELD	9-8-12.1	26.813
L	GEORGE R. & SHIRLEY KOONTZ	9-8-12	73.351
M	MARY LOU RUBINI, ET AL	9-9-4	268.39
N	TODD L. SCHERICH, ET AL	9-9-16	168.204

LINE	BEARING	DISTANCE
L1	N 43°59' E	2452.70'
L2	N 78°35' E	1532.84'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	95.75'	334.23'	N 58°39' W	95.43'
C2	58.78'	80.06'	N 89°52' W	57.47'
C3	58.39'	78.28'	S 32°09' W	57.04'
C4	93.32'	320.26'	S 00°33' W	92.99'
C5	214.64'	1109.85'	S 14°38' E	214.31'
C6	296.51'	2196.07'	S 24°54' E	296.29'



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.8634  
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.2952  
254 East Beckley bypass | Beckley, WV 25801 | 304.255.5296  
slsvw.com

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

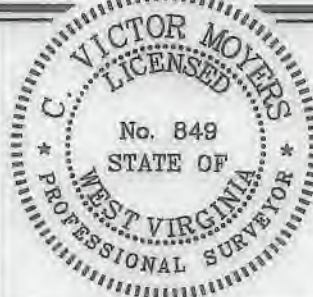
NAD'83 S.P.C.(FT) N. 486,152.16 E. 1,639,160.21  
NAD'83 GEO. LAT-(N) 39.828831 LONG-(W) 80.872702  
NAD'83 UTM (M) N. 4,408,810.65 E. 528,007.72

**LANDING POINT**

NAD'83 S.P.C.(FT) N. 487,190.1 E. 1,637,181.0  
NAD'83 GEO. LAT-(N) 39.831609 LONG-(W) 80.679797  
NAD'83 UTM (M) N. 4,409,116.8 E. 527,399.5

**BOTTOM HOLE**

NAD'83 S.P.C.(FT) N. 476,082.8 E. 1,649,328.6  
NAD'83 GEO. LAT-(N) 39.801338 LONG-(W) 80.657399  
NAD'83 UTM (M) N. 4,405,764.2 E. 529,328.9



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

P.S. 849 *C. Victor Moyers*

**LEGEND**

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- TAX MAP-PARCEL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE WW-6A1)

COUNTY NAME PERMIT

SCALE 1" = 2000' FILE NO. 8911P3HMR.dwg  
HUDSON S-3HM REV6  
DATE JUNE 14 20 19  
REVISED FEBRUARY 18 20 21  
OPERATORS WELL NO. HUDSON S-3HM MOD  
API WELL 47 - 051 - 02250  
NO. STATE COUNTY PERMIT

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



WELL OPERATOR TUG HILL OPERATING, LLC  
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500  
FORT WORTH, TX 76107

DESIGNATED AGENT DIANNA STAMPER  
ADDRESS 5400 D BIG TYLER ROAD  
CHARLESTON, WV 25313

CT CORPORATION SYSTEM



**HUDSON S  
WELL 3HM  
TUG HILL OPERATING**

T.H. LATITUDE 39°50'00"  
B.H. LATITUDE 39°50'00"

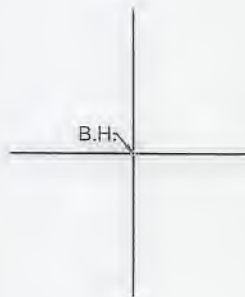
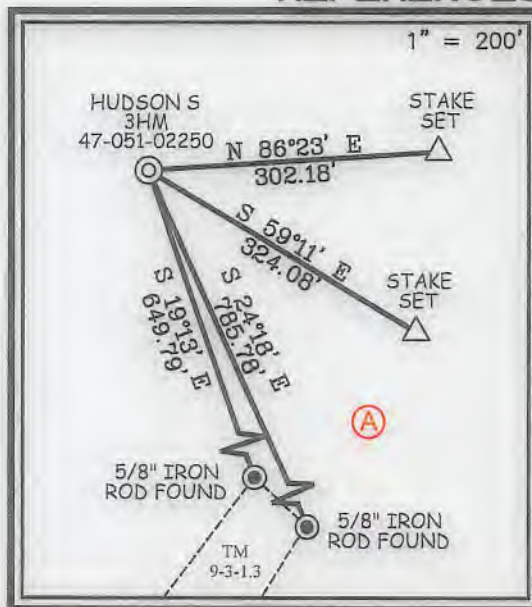
T.H. LONGITUDE 80°40'00"  
B.H. LONGITUDE 80°37'30"

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-2-9.1	CONSOLIDATION COAL CO.	1.00
9-2-9.2	CONSOLIDATION COAL CO.	1.00
9-3-1.2	CONSOLIDATION COAL CO.	1.00
9-5-11.2	LARRY WHETZEL, JR.	2.355
9-5-12	LARRY WHETZEL, JR.	1.00
9-5-13	SHELLY ANN JORDAN	5.51
9-7-9	CNX LAND CO. LLC	2.00
9-7-10	DONALD M. & THERESA L. HARRIS	3.00
9-8-1	CNX LAND CO. LLC	2.908
9-8-2	CNX LAND CO. LLC	6000 SQ. FT.

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

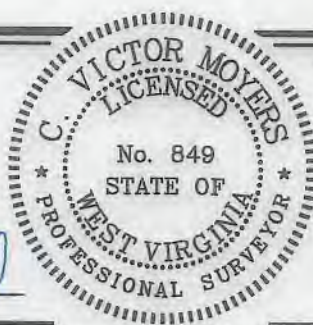
NAD'83 S.P.C.(FT)	N. 486,152.16	E. 1,639,160.21
NAD'83 GEO.	LAT-(N) 39.828831	LONG-(W) 80.672702
NAD'83 UTM (M)	N. 4,408,810.65	E. 528,007.72
<b>LANDING POINT</b>		
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NAD'83 UTM (M)	N. 4,409,116.8	E. 527,399.5
<b>BOTTOM HOLE</b>		
NAD'83 S.P.C.(FT)	N. 476,082.8	E. 1,643,328.6
NAD'83 GEO.	LAT-(N) 39.801338	LONG-(W) 80.657399
NAD'83 UTM (M)	N. 4,405,764.2	E. 529,328.9

**REFERENCES**



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634  
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952  
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296  
slsvv.com

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 DIVISION OF ENVIRONMENTAL PROTECTION.



P.S. 849 *C. Victor Moyers*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
DATE JUNE 14, 20 19  
REVISED FEBRUARY 18, 20 21  
OPERATORS WELL NO. HUDSON S-3HM **MOG**  
API WELL NO. 47 - 051 - 02250  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8911P3HMR.dwg  
HUDSON S-3HM REV6  
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: GROUND = 1,370.10' ELEVATION PROPOSED = 1,344.81' WATERSHED GRAVE CREEK (HUC 10)  
DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'  
SURFACE OWNER CNX LAND LLC ACREAGE 106.935±  
ROYALTY OWNER CHARLENE L. BAKER, ET AL ACREAGE 09/29/2023  
PROPOSED WORK: LEASE NO. SEE WW-6A1  
DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER   
PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION MARCELLUS  
ESTIMATED DEPTH TVD: 6,873' / TMD: 20,607'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER  
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS CT CORPORATION SYSTEM  
FORT WORTH, TX 76107 ADDRESS 5400 D BIG TYLER ROAD  
CHARLESTON, WV 25313

COUNTY NAME  
PERMIT



**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
----------------------	-----------------------	-----------------------	---------	-----------

\*See attached pages

**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: Tug Hill Operating, LLC  
 By: Amy L. Morris *Amy L. Morris*  
 Its: Permitting Specialist - Appalachia Region

Lease ID	TMP	Tag	Grantor, Lessor, Etc.	Grante, Lessee, Etc.	Royalty	Deed Book/Page		Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	Assignment	
10*26041	9-3-1	A	FREDDIE C WHITE AND VIOLET L WHITE	CHESAPEAKE APPALACHIA LLC	1/8+	728	527	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chesapeake Appalachia LLC to Statoil USA Onshore Properties Inc: 27/386	Statoil USA Onshore Properties Inc to Chevron USA Inc: 30/427	Chesapeake Appalachia LLC to Chevron USA Inc: 30/461	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26044	9-3-1	A	JOYCE A WALLACE	CHEVRON USA INC	1/8+	863	296	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26047	9-3-1	A	ROBERT D BLAKE AND ATHENA LIBERTY BLAKE	CHEVRON USA INC	1/8+	863	138	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26048	9-3-1	A	LOIS J ELIAS AND LOUIS J ELIAS	CHEVRON USA INC	1/8+	861	599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26049	9-3-1	A	MARY H HUBBS	CHEVRON USA INC	1/8+	863	560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26050	9-3-1	A	BERNARD O CROW AND KAREN S CROW	CHEVRON USA INC	1/8+	863	627	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26051	9-3-1	A	ROBERT W KIDNER	CHEVRON USA INC	1/8+	863	644	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26052	9-3-1	A	BETTY J BLAKE	CHEVRON USA INC	1/8+	863	545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26057	9-3-1	A	JOHN PURDY AND BRENDA S PURDY	CHEVRON USA INC	1/8+	854	420	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26058	9-3-1	A	CAROLE J WOOD	CHEVRON USA INC	1/8+	854	415	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26059	9-3-1	A	TERRY L BLAKE	CHEVRON USA INC	1/8+	854	215	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26060	9-3-1	A	ROBERT C BLAKE AND LYN BLAKE	CHEVRON USA INC	1/8+	854	333	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26061	9-3-1	A	RODNEY W AND LINDA L HUBBS	CHEVRON USA INC	1/8+	854	435	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26062	9-3-1	A	SHANNON ROGER AND LORRAINE HUBBS	CHEVRON USA INC	1/8+	854	233	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26063	9-3-1	A	PATTY L RINE AND FLOYD D RINE	CHEVRON USA INC	1/8+	854	238	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26064	9-3-1	A	CATHARINE LEE BLAKE	CHEVRON USA INC	1/8+	863	550	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26066	9-3-1	A	DANNY E AND MARVA L BEYSER	CHEVRON USA INC	1/8+	858	36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26067	9-3-1	A	DONALD DEAN BEYSER	CHEVRON USA INC	1/8+	858	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26068	9-3-1	A	GARY F BLAKE AND DORIS E BLAKE	CHEVRON USA INC	1/8+	858	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26069	9-3-1	A	MARILYN SUE REILLEY	CHEVRON USA INC	1/8+	857	597	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26070	9-3-1	A	MARY W HOLMES	CHEVRON USA INC	1/8+	857	602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26071	9-3-1	A	CHARLENE LORRAINE BAKER	CHEVRON USA INC	1/8+	857	607	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26072	9-3-1	A	JAMES L BLAKE	CHEVRON USA INC	1/8+	857	616	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26073	9-3-1	A	DARLENE L BEYSER	CHEVRON USA INC	1/8+	860	176	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26075	9-3-1	A	BETTY JOANN CECIL	CHEVRON USA INC	1/8+	860	119	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26076	9-3-1	A	DORIS IMOGENE GARRISON	CHEVRON USA INC	1/8+	860	114	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26077	9-3-1	A	DOROTHY J AND ROBERT M BLAKE	CHEVRON USA INC	1/8+	860	104	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26078	9-3-1	A	VELMA RUTH HARRIS	CHEVRON USA INC	1/8+	860	228	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26079	9-3-1	A	MARY O'DESSA HARRIS LOUDEN	CHEVRON USA INC	1/8+	860	109	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26080	9-3-1	A	SHARON DIANE HOLMES JAHN AND WILLILAM HENRY JAHN III	CHEVRON USA INC	1/8+	860	217	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26081	9-3-1	A	CYNTHIA JEAN AND EDDIE W WILSON	CHEVRON USA INC	1/8+	861	545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26082	9-3-1	A	BRIAN C AND SARA M LUTZ	CHEVRON USA INC	1/8+	861	550	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26083	9-3-1	A	WILLIAM S BLAKE JR	CHEVRON USA INC	1/8+	861	535	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26084	9-3-1	A	CYNTHIA A AND JAMES O DAVIDSON	CHEVRON USA INC	1/8+	889	46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26085	9-3-1	A	CLYDE R AND JANA HIGGINS	CHEVRON USA INC	1/8+	861	508	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26086	9-3-1	A	DELMAS W AND ROSE HIGGINS	CHEVRON USA INC	1/8+	861	503	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26087	9-3-1	A	JERRY L AND DENISE HIGGINS	CHEVRON USA INC	1/8+	861	526	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26088	9-3-1	A	SHIRL W AND DORIS HIGGINS	CHEVRON USA INC	1/8+	861	540	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26089	9-3-1	A	ALVA L AND SHIRLEY HIGGINS	CHEVRON USA INC	1/8+	861	521	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26090	9-3-1	A	H DEAN AND KAREN HIGGINS	CHEVRON USA INC	1/8+	861	516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26091	9-3-1	A	JOELENE M MANN	CHEVRON USA INC	1/8+	864	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26092	9-3-1	A	SHAWN J AND SARAH E CREWS	CHEVRON USA INC	1/8+	864	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26093	9-3-1	A	JOYCE HOLMES CONE AND WILLIAM CONE	CHEVRON USA INC	1/8+	861	493	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26094	9-3-1	A	MARK L CURRY	CHEVRON USA INC	1/8+	865	102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26095	9-3-1	A	CHRISTINA C MUNSON	CHEVRON USA INC	1/8+	865	107	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26097	9-3-1	A	DAVID L BEYSER	CHEVRON USA INC	1/8+	865	173	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26098	9-3-1	A	KIMBERLY J HOLDER	CHEVRON USA INC	1/8+	867	87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26099	9-3-1	A	CAROL TROWBRIDGE ET VIR	CHEVRON USA INC	1/8+	866	138	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26100	9-3-1	A	JOSEPH L AND ROSE MARIE MAUPIN	CHEVRON USA INC	1/8+	866	67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26120	9-3-1	A	JAMES D AND LINDA D YOCUM	CHEVRON USA INC	1/8+	884	635	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26121	9-3-1	A	BETTY BRYNER	CHEVRON USA INC	1/8+	871	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26236	9-3-1	A	GERALD W QUIGLEY AND VICKI L QUIGLEY	CHEVRON USA INC	1/8+	884	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26237	9-3-1	A	FREDA L CAMPBELL	CHEVRON USA INC	1/8+	889	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26238	9-3-1	A	MARSHA L MERCER	CHEVRON USA INC	1/8+	883	639	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26287	9-3-1	A	IVAN R AND MARY A BLAKE	CHEVRON USA INC	1/8+	888	542	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26288	9-3-1	A	REBECCA J BLAKE	CHEVRON USA INC	1/8+	888	571	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26289	9-3-1	A	DUANETTA B BLAKE FROMHART	CHEVRON USA INC	1/8+	888	574	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26291	9-3-1	A	BARBARA A BLAKE MASON	CHEVRON USA INC	1/8+	901	125	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26292	9-3-1	A	JUDITH L BLAKE	CHEVRON USA INC	1/8+	882	329	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26293	9-3-1	A	JAY C CURRY	CHEVRON USA INC	1/8+	882	433	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26294	9-3-1	A	JOAN A GIEGER	CHEVRON USA INC	1/8+	880	509	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26295	9-3-1	A	ARTHUR LEE WARYCK	CHEVRON USA INC	1/8+	880	512	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26296	9-3-1	A	CARL G CALDWELL	CHEVRON USA INC	1/8+	883	530	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26297	9-3-1	A	DIANA L MCKINNEY	CHEVRON USA INC	1/8+	885	560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26298	9-3-1	A	JANE HENDRICKSON	CHEVRON USA INC	1/8+	886	429	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26299	9-3-1	A	BETTY WILKINSON DANIEL A MCVANE AIF	CHEVRON USA INC	1/8+	886	432	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26300	9-3-1	A	JILL LORI HENNEN BARNETT	CHEVRON USA INC	1/8+	886	439	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*27180	9-3-1	A	TAMALA SCOLLICK	TH EXPLORATION LLC	1/8+	1053	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27181	9-3-1	A	CRYSTAL THOMAS	TH EXPLORATION LLC	1/8+	1052	648	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27703	9-3-1	A	DOROTHY MAXINE MOORE TRUST	TH EXPLORATION LLC	1/8+	1061	255	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26044	9-3-1.1	B	JOYCE A WALLACE	CHEVRON USA INC	1/8+	863	296	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26047	9-3-1.1	B	ROBERT D BLAKE AND ATHENA LIBERTY BLAKE	CHEVRON USA INC	1/8+	863	138	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26048	9-3-1.1	B	LOIS J ELIAS AND LOUIS J ELIAS	CHEVRON USA INC	1/8+	861	599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26049	9-3-1.1	B	MARY H HUBBS	CHEVRON USA INC	1/8+	863	560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26050	9-3-1.1	B	BERNARD O CROW AND KAREN S CROW	CHEVRON USA INC	1/8+	863	627	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26051	9-3-1.1	B	ROBERT W KIDNER	CHEVRON USA INC	1/8+	863	644	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26052	9-3-1.1	B	BETTY J BLAKE	CHEVRON USA INC	1/8+	863	545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26057	9-3-1.1	B	JOHN PURDY AND BRENDA S PURDY	CHEVRON USA INC	1/8+	854	420	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26058	9-3-1.1	B	CAROLE J WOOD	CHEVRON USA INC	1/8+	854	415	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26059	9-3-1.1	B	TERRY L BLAKE	CHEVRON USA INC	1/8+	854	215	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26060	9-3-1.1	B	ROBERT C BLAKE AND LYN BLAKE	CHEVRON USA INC	1/8+	854	333	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26061	9-3-1.1	B	RODNEY W AND LINDA L HUBBS	CHEVRON USA INC	1/8+	854	435	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26062	9-3-1.1	B	SHANNON ROGER AND LORRAINE HUBBS	CHEVRON USA INC	1/8+	854	233	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26063	9-3-1.1	B	PATTY L RINE AND FLOYD D RINE	CHEVRON USA INC	1/8+	854	238	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26064	9-3-1.1	B	CATHARINE LEE BLAKE	CHEVRON USA INC	1/8+	863	550	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26066	9-3-1.1	B	DANNY E AND MARVA L BEYSER	CHEVRON USA INC	1/8+	858	36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26067	9-3-1.1	B	DONALD DEAN BEYSER	CHEVRON USA INC	1/8+	858	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26068	9-3-1.1	B	GARY F BLAKE AND DORIS E BLAKE	CHEVRON USA INC	1/8+	858	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26069	9-3-1.1	B	MARILYN SUE REILLEY	CHEVRON USA INC	1/8+	857	597	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26070	9-3-1.1	B	MARY W HOLMES	CHEVRON USA INC	1/8+	857	602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26071	9-3-1.1	B	CHARLENE LORRAINE BAKER	CHEVRON USA INC	1/8+	857	607	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26072	9-3-1.1	B	JAMES L BLAKE	CHEVRON USA INC	1/8+	857	616	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26073	9-3-1.1	B	DARLENE L BEYSER	CHEVRON USA INC	1/8+	860	176	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26075	9-3-1.1	B	BETTY JOANN CECIL	CHEVRON USA INC	1/8+	860	119	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26076	9-3-1.1	B	DORIS IMOGENE GARRISON	CHEVRON USA INC	1/8+	860	114	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26077	9-3-1.1	B	DOROTHY J AND ROBERT M BLAKE	CHEVRON USA INC	1/8+	860	104	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26078	9-3-1.1	B	VELMA RUTH HARRIS	CHEVRON USA INC	1/8+	860	228	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26079	9-3-1.1	B	MARY O'DESSA HARRIS LOUDEN	CHEVRON USA INC	1/8+	860	109	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26080	9-3-1.1	B	SHARON DIANE HOLMES JAHN AND WILLIAM HENRY JAHN III	CHEVRON USA INC	1/8+	860	217	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26081	9-3-1.1	B	CYNTHIA JEAN AND EDDIE W WILSON	CHEVRON USA INC	1/8+	861	545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26082	9-3-1.1	B	BRIAN C AND SARA M LUTZ	CHEVRON USA INC	1/8+	861	550	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26083	9-3-1.1	B	WILLIAM S BLAKE JR	CHEVRON USA INC	1/8+	861	535	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26084	9-3-1.1	B	CYNTHIA A AND JAMES O DAVIDSON	CHEVRON USA INC	1/8+	889	46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26085	9-3-1.1	B	CLYDE R AND JANA HIGGINS	CHEVRON USA INC	1/8+	861	508	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26086	9-3-1.1	B	DELMAS W AND ROSE HIGGINS	CHEVRON USA INC	1/8+	861	503	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26087	9-3-1.1	B	JERRY L AND DENISE HIGGINS	CHEVRON USA INC	1/8+	861	526	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26088	9-3-1.1	B	SHIRL W AND DORIS HIGGINS	CHEVRON USA INC	1/8+	861	540	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26089	9-3-1.1	B	ALVA L AND SHIRLEY HIGGINS	CHEVRON USA INC	1/8+	861	521	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26090	9-3-1.1	B	H DEAN AND KAREN HIGGINS	CHEVRON USA INC	1/8+	861	516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26091	9-3-1.1	B	JOELENE M MANN	CHEVRON USA INC	1/8+	864	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26092	9-3-1.1	B	SHAWN J AND SARAH E CREWS	CHEVRON USA INC	1/8+	864	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26093	9-3-1.1	B	JOYCE HOLMES CONE AND WILLIAM CONE	CHEVRON USA INC	1/8+	861	493	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26094	9-3-1.1	B	MARK L CURRY	CHEVRON USA INC	1/8+	865	102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26095	9-3-1.1	B	CHRISTINA C MUNSON	CHEVRON USA INC	1/8+	865	107	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26097	9-3-1.1	B	DAVID L BEYSER	CHEVRON USA INC	1/8+	865	173	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26098	9-3-1.1	B	KIMBERLY J HOLDER	CHEVRON USA INC	1/8+	867	87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26099	9-3-1.1	B	CAROL TROWBRIDGE ET VIR	CHEVRON USA INC	1/8+	866	138	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26100	9-3-1.1	B	JOSEPH L AND ROSE MARIE MAUPIN	CHEVRON USA INC	1/8+	866	67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26120	9-3-1.1	B	JAMES D AND LINDA D YOCUM	CHEVRON USA INC	1/8+	884	635	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26121	9-3-1.1	B	BETTY BRYNER	CHEVRON USA INC	1/8+	871	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26236	9-3-1.1	B	GERALD W QUIGLEY AND VICKI L QUIGLEY	CHEVRON USA INC	1/8+	884	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26237	9-3-1.1	B	FREDA L CAMPBELL	CHEVRON USA INC	1/8+	889	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26238	9-3-1.1	B	MARSHA L MERCER	CHEVRON USA INC	1/8+	883	639	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26287	9-3-1.1	B	IVAN R AND MARY A BLAKE	CHEVRON USA INC	1/8+	888	542	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26288	9-3-1.1	B	REBECCA J BLAKE	CHEVRON USA INC	1/8+	888	571	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26289	9-3-1.1	B	DUANETTA B BLAKE FROMHART	CHEVRON USA INC	1/8+	888	574	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26291	9-3-1.1	B	BARBARA A BLAKE MASON	CHEVRON USA INC	1/8+	901	125	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26292	9-3-1.1	B	JUDITH L BLAKE	CHEVRON USA INC	1/8+	882	329	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26293	9-3-1.1	B	JAY C CURRY	CHEVRON USA INC	1/8+	882	433	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26294	9-3-1.1	B	JOAN A GIEGER	CHEVRON USA INC	1/8+	880	509	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26295	9-3-1.1	B	ARTHUR LEE WARYCK	CHEVRON USA INC	1/8+	880	512	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26296	9-3-1.1	B	CARL G CALDWELL	CHEVRON USA INC	1/8+	883	530	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26297	9-3-1.1	B	DIANA L MCKINNEY	CHEVRON USA INC	1/8+	885	560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26298	9-3-1.1	B	JANE HENDRICKSON	CHEVRON USA INC	1/8+	886	429	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26299	9-3-1.1	B	BETTY WILKINSON DANIEL A MCVANE AIF	CHEVRON USA INC	1/8+	886	432	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26300	9-3-1.1	B	JILL LORI HENNEN BARNETT	CHEVRON USA INC	1/8+	886	439	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26304	9-3-1.1	B	CNX GAS COMPANY LLC AND NOBLE ENERGY INC	CHEVRON USA INC	1/8+	888	521	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*27180	9-3-1.1	B	TAMALA SCOLLICK	TH EXPLORATION LLC	1/8+	1053	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27181	9-3-1.1	B	CRYSTAL THOMAS	TH EXPLORATION LLC	1/8+	1052	648	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27703	9-3-1.1	B	DOROTHY MAXINE MOORE TRUST	TH EXPLORATION LLC	1/8+	1061	255	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*29767	9-3-1.1	B	HG ENERGY II APPALACHIA LLC	TH EXPLORATION LLC	1/8+	1100	79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



10*26304	9-2-10.1	C	CNX GAS COMPANY LLC AND NOBLE ENERGY INC	CHEVRON USA INC	1/8+	888	521	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*29767	9-2-10.1	C	HG ENERGY II APPALACHIA LLC	TH EXPLORATION LLC	1/8+	1100	79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26001	9-2-10	D	FREDDIE C WHITE AND VIOLET L WHITE	TRIENERGY INC	1/8+	655	555	TriEnergy Inc to AB Resources LLC: 19/623	AB Resources LLC to Chief Exploration & Development LLC: 666/40	TriEnergy Inc to TriEnergy Holdings LLC: 21/148	Chief & Radler 2000 LP to Enerplus Resources (USA) Corp: 685/643	Chief & Radler 2000 LP to Enerplus Resources (USA) Corp: 21/520	AB Resources LLC to Chief E&D LLC & Radler : 24/319	Chief E&D LLC, Chief O&G LLC, Radler 2000 LP & Enerlus to Chevron USA Inc: 25/1 & 25/105	AB Resources LLC to Chevron USA Inc: 756/397	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26001	9-5-10.1	E	FREDDIE C WHITE AND VIOLET L WHITE	TRIENERGY INC	1/8+	655	555	TriEnergy Inc to AB Resources LLC: 19/623	AB Resources LLC to Chief Exploration & Development LLC: 666/40	TriEnergy Inc to TriEnergy Holdings LLC: 21/148	Chief & Radler 2000 LP to Enerplus Resources (USA) Corp: 685/643	Chief & Radler 2000 LP to Enerplus Resources (USA) Corp: 21/520	AB Resources LLC to Chief E&D LLC & Radler : 24/319	Chief E&D LLC, Chief O&G LLC, Radler 2000 LP & Enerlus to Chevron USA Inc: 25/1 & 25/105	AB Resources LLC to Chevron USA Inc: 756/397	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26001	9-5-10	F	FREDDIE C WHITE AND VIOLET L WHITE	TRIENERGY INC	1/8+	655	555	TriEnergy Inc to AB Resources LLC: 19/623	AB Resources LLC to Chief Exploration & Development LLC: 666/40	TriEnergy Inc to TriEnergy Holdings LLC: 21/148	Chief & Radler 2000 LP to Enerplus Resources (USA) Corp: 685/643	Chief & Radler 2000 LP to Enerplus Resources (USA) Corp: 21/520	AB Resources LLC to Chief E&D LLC & Radler : 24/319	Chief E&D LLC, Chief O&G LLC, Radler 2000 LP & Enerlus to Chevron USA Inc: 25/1 & 25/105	AB Resources LLC to Chevron USA Inc: 756/397	TriEnergy Holdings LLC & TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*24424	9-5-11	G	THE FAYE A SKOEN REVOCABLE TRUST	TH EXPLORATION LLC	1/8+	1024	291	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24578	9-5-11	G	FRANK E WHITMAN JR AND GAYLE WHITMAN	TH EXPLORATION LLC	1/8+	1026	241	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24973	9-5-11	G	IVA K BONAR	TH EXPLORATION LLC	1/8+	1028	577	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26001	9-5-11	G	FREDDIE C WHITE AND VIOLET L WHITE	TRIENERGY INC	1/8+	655	555	TriEnergy Inc to AB Resources LLC: 19/623	AB Resources LLC to Chief Exploration & Development LLC: 666/40	TriEnergy Inc to TriEnergy Holdings LLC: 21/148	Chief & Radler 2000 LP to Enerplus Resources (USA) Corp: 685/643	Chief & Radler 2000 LP to Enerplus Resources (USA) Corp: 21/520	AB Resources LLC to Chief E&D LLC & Radler : 24/319	Chief E&D LLC, Chief O&G LLC, Radler 2000 LP & Enerlus to Chevron USA Inc: 25/1 & 25/105	AB Resources LLC to Chevron USA Inc: 756/397	TriEnergy Holdings LLC and TriEnergy Inc to Chevron USA Inc: 28/356	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26096	9-5-11	G	GRACE LAURA BONAR	CHEVRON USA INC	1/8+	865	198	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26101	9-5-11	G	BARBARA LOIS HADLEY	CHEVRON USA INC	1/8+	868	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26102	9-5-11	G	AMBER ORTOLL	CHEVRON USA INC	1/8+	871	391	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26103	9-5-11	G	ROBERT GLENN BONAR	CHEVRON USA INC	1/8+	868	92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26104	9-5-11	G	JAMES MCPHERSON SCHILLING	CHEVRON USA INC	1/8+	868	202	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26105	9-5-11	G	LESTER D FAUST	CHEVRON USA INC	1/8+	870	560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26106	9-5-11	G	RICHARD CHRIS BOGATKO	CHEVRON USA INC	1/8+	870	557	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26128	9-5-11	G	WILLIAM A BRUNNER JR AND JOYCE A BRUNNER	CHEVRON USA INC	1/8+	888	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26129	9-5-11	G	MARJORIE JARETTA FAUST	CHEVRON USA INC	1/8+	888	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26167	9-5-11	G	FRANK B DAY	CHEVRON USA INC	1/8+	871	583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26201	9-5-11	G	IDEN SCOTT MCWHORTER	CHEVRON USA INC	1/8+	888	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26202	9-5-11	G	LOTA JO MITCHELL AND DAVID S MITCHELL	CHEVRON USA INC	1/8+	888	27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26306	9-5-11	G	DAVID L BONAR	CHEVRON USA INC	1/8+	890	475	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26308	9-5-11	G	HARRY A SALO AND BETTY A SALO	CHEVRON USA INC	1/8+	894	395	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26309	9-5-11	G	STEVEN ALAN ARMIGER	CHEVRON USA INC	1/8+	891	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26310	9-5-11	G	KATHERINE ANN LUONGO FAIRBROTHER	CHEVRON USA INC	1/8+	901	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26313	9-5-11	G	JOSEPH M DURINSKY	CHEVRON USA INC	1/8+	893	244	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26314	9-5-11	G	ROBIN KACHELE	CHEVRON USA INC	1/8+	893	180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26337	9-5-11	G	KATHLEEN ELAINE ALEXANDRA SHIREY	CHEVRON USA INC	1/8+	901	134	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26345	9-5-11	G	SHARON LOUISE EVANS	CHEVRON USA INC	1/8+	915	597	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26806	9-5-11	G	JASON R FREID	TH EXPLORATION LLC	1/8+	1045	457	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27483	9-5-11	G	SARI FAUST	CHEVRON USA INC	1/8+	876	490	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27496	9-5-11	G	RICHARD SCOTT WILLIAMSON	CHEVRON USA INC	1/8+	888	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27501	9-5-11	G	ELEANOR MARGO MORRIS	CHEVRON USA INC	1/8+	882	472	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27502	9-5-11	G	BARBARA L BYRNE TRUSTEE OF THE JOINT REVOCABLE TRUST AGREEMENT DTD 5/23/2006	CHEVRON USA INC	1/8+	921	610	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357

10*27504	9-5-11	G	INTERNATIONAL WOMENS AIR AND SPACE MUSEUM INC	CHEVRON USA INC	1/8+	907	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27506	9-5-11	G	FREDERICK ALLEN FAUST	CHEVRON USA INC	1/8+	888	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27509	9-5-11	G	SANDRA MARIA PAPPY CYNTHIA CLAIR HOLSTEIN GUARDIAN	CHEVRON USA INC	1/8+	913	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27906	9-5-11	G	JOSIE ZUKOWSKI-FAUST	TH EXPLORATION LLC	1/8+	1067	377	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27914	9-5-11	G	WVSTO UNCLAIMED PROPERTY	TH EXPLORATION LLC	1/8+	1067	383	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27953	9-5-11	G	TROY D BONAR AND KATHLEEN BONAR	TH EXPLORATION LLC	1/8+	1064	600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24424	9-5-11.3	H	THE FAYE A SKOIEIEN REVOCABLE TRUST	TH EXPLORATION LLC	1/8+	1024	291	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24578	9-5-11.3	H	FRANK E WHITMAN JR AND GAYLE WHITMAN	TH EXPLORATION LLC	1/8+	1026	241	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24973	9-5-11.3	H	IVA K BONAR	TH EXPLORATION LLC	1/8+	1028	577	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26045	9-5-11.3	H	ROBERT E TOEPFER AND JANATHE RUTH TOEPFER	CHEVRON USA INC	1/8+	884	631	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26096	9-5-11.3	H	GRACE LAURA BONAR	CHEVRON USA INC	1/8+	865	198	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26101	9-5-11.3	H	BARBARA LOIS HADLEY	CHEVRON USA INC	1/8+	868	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26102	9-5-11.3	H	AMBER ORTOLL	CHEVRON USA INC	1/8+	871	391	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26103	9-5-11.3	H	ROBERT GLENN BONAR	CHEVRON USA INC	1/8+	868	92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26104	9-5-11.3	H	JAMES MCPHERSON SCHILLING	CHEVRON USA INC	1/8+	868	202	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26105	9-5-11.3	H	LESTER D FAUST	CHEVRON USA INC	1/8+	870	560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26106	9-5-11.3	H	RICHARD CHRIS BOGATKO	CHEVRON USA INC	1/8+	870	557	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26128	9-5-11.3	H	WILLIAM A BRUNNER JR AND JOYCE A BRUNNER	CHEVRON USA INC	1/8+	888	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26129	9-5-11.3	H	MARJORIE JARETTA FAUST	CHEVRON USA INC	1/8+	888	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26167	9-5-11.3	H	FRANK B DAY	CHEVRON USA INC	1/8+	871	583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26201	9-5-11.3	H	IDEN SCOTT MCWHORTER	CHEVRON USA INC	1/8+	888	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26202	9-5-11.3	H	LOTA JO MITCHELL AND DAVID S MITCHELL	CHEVRON USA INC	1/8+	888	27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26306	9-5-11.3	H	DAVID L BONAR	CHEVRON USA INC	1/8+	890	475	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26308	9-5-11.3	H	HARRY A SALO AND BETTY A SALO	CHEVRON USA INC	1/8+	894	395	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26309	9-5-11.3	H	STEVEN ALAN ARMIGER	CHEVRON USA INC	1/8+	891	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26310	9-5-11.3	H	KATHERINE ANN LUONGO FAIRBROTHER	CHEVRON USA INC	1/8+	901	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26313	9-5-11.3	H	JOSEPH M DURINSKY	CHEVRON USA INC	1/8+	893	244	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26314	9-5-11.3	H	ROBIN KACHELE	CHEVRON USA INC	1/8+	893	180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26337	9-5-11.3	H	KATHLEEN ELAINE ALEXANDRA SHIREY	CHEVRON USA INC	1/8+	901	134	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26345	9-5-11.3	H	SHARON LOUISE EVANS	CHEVRON USA INC	1/8+	915	597	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26806	9-5-11.3	H	JASON R FREID	TH EXPLORATION LLC	1/8+	1045	457	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27483	9-5-11.3	H	SARI FAUST	CHEVRON USA INC	1/8+	876	490	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27496	9-5-11.3	H	RICHARD SCOTT WILLIAMSON	CHEVRON USA INC	1/8+	888	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27501	9-5-11.3	H	ELEANOR MARGO MORRIS	CHEVRON USA INC	1/8+	882	472	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27502	9-5-11.3	H	BARBARA L BYRNE TRUSTEE OF THE JOINT REVOCABLE TRUST AGREEMENT DTD 5/23/2006	CHEVRON USA INC	1/8+	921	610	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27504	9-5-11.3	H	INTERNATIONAL WOMENS AIR AND SPACE MUSEUM INC	CHEVRON USA INC	1/8+	907	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357

10*27506	9-5-11.3	H	FREDERICK ALLEN FAUST	CHEVRON USA INC	1/8+	888	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27509	9-5-11.3	H	SANDRA MARIA PAPPА CYNTHIA CLAIR HOLSTEIN GUARDIAN	CHEVRON USA INC	1/8+	913	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27906	9-5-11.3	H	JOSIE ZUKOWSKI-FAUST	TH EXPLORATION LLC	1/8+	1067	377	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27914	9-5-11.3	H	WVSTO UNCLAIMED PROPERTY	TH EXPLORATION LLC	1/8+	1067	383	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27953	9-5-11.3	H	TROY D BONAR AND KATHLEEN BONAR	TH EXPLORATION LLC	1/8+	1064	600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24424	9-5-11.1	I	THE FAYE A SKOIEIEN REVOCABLE TRUST	TH EXPLORATION LLC	1/8+	1024	291	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24578	9-5-11.1	I	FRANK E WHITMAN JR AND GAYLE WHITMAN	TH EXPLORATION LLC	1/8+	1026	241	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24973	9-5-11.1	I	IVA K BONAR	TH EXPLORATION LLC	1/8+	1028	577	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*26045	9-5-11.1	I	ROBERT E TOEPFER AND JANATHE RUTH TOEPFER	CHEVRON USA INC	1/8+	884	631	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26096	9-5-11.1	I	GRACE LAURA BONAR	CHEVRON USA INC	1/8+	865	198	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26101	9-5-11.1	I	BARBARA LOIS HADLEY	CHEVRON USA INC	1/8+	868	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26102	9-5-11.1	I	AMBER ORTOLL	CHEVRON USA INC	1/8+	871	391	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26103	9-5-11.1	I	ROBERT GLENN BONAR	CHEVRON USA INC	1/8+	868	92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26104	9-5-11.1	I	JAMES MCPHERSON SCHILLING	CHEVRON USA INC	1/8+	868	202	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26105	9-5-11.1	I	LESTER D FAUST	CHEVRON USA INC	1/8+	870	560	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26106	9-5-11.1	I	RICHARD CHRIS BOGATKO	CHEVRON USA INC	1/8+	870	557	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26128	9-5-11.1	I	WILLIAM A BRUNNER JR AND JOYCE A BRUNNER	CHEVRON USA INC	1/8+	888	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26129	9-5-11.1	I	MARJORIE JARETTA FAUST	CHEVRON USA INC	1/8+	888	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26167	9-5-11.1	I	FRANK B DAY	CHEVRON USA INC	1/8+	871	583	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95



10*26201	9-5-11.1	I	IDEN SCOTT MCWHORTER	CHEVRON USA INC	1/8+	888	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26202	9-5-11.1	I	LOTA JO MITCHELL AND DAVID S MITCHELL	CHEVRON USA INC	1/8+	888	27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26306	9-5-11.1	I	DAVID L BONAR	CHEVRON USA INC	1/8+	890	475	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26308	9-5-11.1	I	HARRY A SALO AND BETTY A SALO	CHEVRON USA INC	1/8+	894	395	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26309	9-5-11.1	I	STEVEN ALAN ARMIGER	CHEVRON USA INC	1/8+	891	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26310	9-5-11.1	I	KATHERINE ANN LUONGO FAIRBROTHER	CHEVRON USA INC	1/8+	901	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26313	9-5-11.1	I	JOSEPH M DURINSKY	CHEVRON USA INC	1/8+	893	244	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26314	9-5-11.1	I	ROBIN KACHELE	CHEVRON USA INC	1/8+	893	180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95

10*26337	9-5-11.1	I	KATHLEEN ELAINE ALEXANDRA SHIREY	CHEVRON USA INC	1/8+	901	134	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26345	9-5-11.1	I	SHARON LOUISE EVANS	CHEVRON USA INC	1/8+	915	597	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95
10*26806	9-5-11.1	I	JASON R FREID	TH EXPLORATION LLC	1/8+	1045	457	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*27483	9-5-11.1	I	SARI FAUST	CHEVRON USA INC	1/8+	876	490	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27496	9-5-11.1	I	RICHARD SCOTT WILLIAMSON	CHEVRON USA INC	1/8+	888	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27501	9-5-11.1	I	ELEANOR MARGO MORRIS	CHEVRON USA INC	1/8+	882	472	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27502	9-5-11.1	I	BARBARA L BYRNE TRUSTEE OF THE JOINT REVOCABLE TRUST AGREEMENT DTD 5/23/2006	CHEVRON USA INC	1/8+	921	610	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27504	9-5-11.1	I	INTERNATIONAL WOMENS AIR AND SPACE MUSEUM INC	CHEVRON USA INC	1/8+	907	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357
10*27506	9-5-11.1	I	FREDERICK ALLEN FAUST	CHEVRON USA INC	1/8+	888	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357

10*27509	9-5-11.1	I	SANDRA MARIA PAPPA CYNTHIA CLAIR HOLSTEIN GUARDIAN	CHEVRON USA INC	1/8+	913	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 44/357	
10*27906	9-5-11.1	I	JOSIE ZUKOWSKI-FAUST	TH EXPLORATION LLC	1/8+	1067	377	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*27914	9-5-11.1	I	WVSTO UNCLAIMED PROPERTY	TH EXPLORATION LLC	1/8+	1067	383	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*27953	9-5-11.1	I	TROY D BONAR AND KATHLEEN BONAR	TH EXPLORATION LLC	1/8+	1064	600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10*26003	9-7-8	J	ROBERT HENDERSON AND DEBRA HENDERSON, HUSBAND & WIFE, AND BRADLEY HENDERSON	AB RESOURCES LLC	1/8+	697	215	N/A	N/A	N/A	N/A	AB Resources LLC & NPAR LLC to Chief Exploration & Development LLC & Radler 2000 LP: 24/490	Chief E&D LLC, Chief O&G LLC, Radler 2000 LP & Enerplus Resources (USA) Corp to Chevron USA Inc: 25/1 & 25/105	AB Resources LLC to NPAR LLC: 25/484	NPAR LLC to Chevron USA Inc: 756/332	AB Resources LLC to Chevron USA Inc: 756/397	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95	
10*26005	9-8-12.1	K	GEORGE AND SHIRLEY KOONTZ, HIS WIFE	NPAR LLC	1/8+	698	346	N/A	N/A	N/A	N/A	N/A	N/A	AB Resources LLC & NPAR LLC to Chief Exploration & Development LLC & Radler 2000 LP: 24/490	Chief E&D LLC, Chief O&G LLC, Radler 2000 LP & Enerplus Resources (USA) Corp to Chevron: 25/1 & 25/105	NPAR LLC to Chevron USA Inc: 756/332	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95	
10*26005	9-8-12	L	GEORGE AND SHIRLEY KOONTZ, HIS WIFE	NPAR LLC	1/8+	698	346	N/A	N/A	N/A	N/A	N/A	N/A	AB Resources LLC & NPAR LLC to Chief Exploration & Development LLC & Radler 2000 LP: 24/490	Chief E&D LLC, Chief O&G LLC, Radler 2000 LP & Enerplus Resources (USA) Corp to Chevron: 25/1 & 25/105	NPAR LLC to Chevron USA Inc: 756/332	Chevron USA Inc to TH Exploration II LLC & TH Exploration LLC: 43/95	
10*31001	9-9-4	M	ERIC KATZMEYER	CHEVRON USA INC	1/8+	791	226	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC: 45/593

10*31003	9-9-4	M	DAVID KATZMEYER AND SHIRLEY A KATZMEYER	CHEVRON USA INC	1/8+	792	226	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC: 45/593
10*31004	9-9-4	M	MARY LOU RUBINI	CHEVRON USA INC	1/8+	793	287	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Chevron USA Inc to TH Exploration II LLC: 45/593
10*19987	9-9-16	N	LESLEY D BALLA	TH EXPLORATION LLC	1/8+	955	103	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19993	9-9-16	N	DIANA D COSLICK	TH EXPLORATION LLC	1/8+	955	105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*19994	9-9-16	N	ELAINE A FONTES	TH EXPLORATION LLC	1/8+	960	36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21117	9-9-16	N	JOELLYN JOHNSON	TH EXPLORATION LLC	1/8+	952	392	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*21322	9-9-16	N	PHILLIP H WAYT AND BILLIE A WAYT	TH EXPLORATION LLC	1/8+	953	293	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22199	9-9-16	N	DONALD BROOKS WESLEY	BLUE ROAN RESOURCES LLC	1/8+	926	424	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Blue Roan Resources LLC to TH Exploration LLC: 41/405
10*22201	9-9-16	N	FREDERICK MAXWELL YEATER	BLUE ROAN RESOURCES LLC	1/8+	926	422	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Blue Roan Resources LLC to TH Exploration LLC: 41/405
10*22202	9-9-16	N	MARK DAVID HUNT	BLUE ROAN RESOURCES LLC	1/8+	935	109	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Blue Roan Resources LLC to TH Exploration LLC: 41/405
10*22203	9-9-16	N	MELISSA ELAINE SCHROTH	BLUE ROAN RESOURCES LLC	1/8+	934	471	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Blue Roan Resources LLC to TH Exploration LLC: 41/405
10*22526	9-9-16	N	BARBARA FURFARI	TH EXPLORATION LLC	1/8+	964	528	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22528	9-9-16	N	RONALD DAKAN	TH EXPLORATION LLC	1/8+	964	530	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22553	9-9-16	N	DAVID H DAKAN	TH EXPLORATION LLC	1/8+	966	130	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*22783	9-9-16	N	SUZANNE SWIFT	TH EXPLORATION LLC	1/8+	972	85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*23315	9-9-16	N	TIM A WILLIS AND DIANE CLARE WILLIS	TH EXPLORATION LLC	1/8+	988	138	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24047	9-9-16	N	BESSIE CARMICHAEL ET AL SHANE M MALLET, SPECIAL COMMISSIONER	TH EXPLORATION LLC	1/8+	1021	117	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

10*24397	9-9-16	N	MARK D CHAMBERS AND SHERYL CHAMBERS	TH EXPLORATION LLC	1/8+	1023	163	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24398	9-9-16	N	TODD SCHERICH AND WANDA D SCHERICH	TH EXPLORATION LLC	1/8+	1023	160	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10*24413	9-9-16	N	BRADLEY S SCHERICH AND LEIGH SCHERICH	TH EXPLORATION LLC	1/8+	1023	157	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



STATE OF WEST VIRGINIA  
COUNTY OF MARSHALL

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ASSIGNMENT AND BILL OF SALE

This ASSIGNMENT AND BILL OF SALE (this "Assignment") dated as of February 7, 2019 (the "Signing Date"), but effective from and after 7:00 a.m., Eastern Standard Time on February 1, 2019 (the "Effective Date"), is made by Chevron U.S.A. Inc., a Pennsylvania corporation, with an address at 700 Cherrington Parkway, Coraopolis, PA 15108 ("Chevron" or "Assignor" ) to TH Exploration II, LLC and TH Exploration, LLC, Texas limited liability companies, with an address at 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (collectively "Assignee") and is accepted by Assignee upon the following terms and conditions.

RECITALS

- A. Assignor desires to sell, convey, transfer, assign and deliver to Assignee Assignor's Crawford 1 well and certain related assets, including certain leasehold interests, located in Marshall County, West Virginia.
- B. Through an Acreage Trade Agreement to be executed contemporaneously with this Assignment, Assignor desires to transfer, convey and assign to Assignee certain of Assignor's oil and gas leasehold interests located in Marshall County, West Virginia in exchange for the transfer, conveyance and assignment to Assignor by Assignee certain of Assignee's oil and gas leasehold interests located in Marshall County, West Virginia.
- C. In consideration of the mutual promises set out in this Assignment, including execution of the Acreage Trade Agreement, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree to be bound by the terms of this Assignment.

1. DEFINITIONS

1.1 Definitions. As used in this Assignment, these words and expressions have the following meanings:

"Acreage Trade Agreement" means that certain Acreage Trade Agreement by and between Chevron U.S.A. Inc. and TH Exploration, LLC with an Effective Date of February 1, 2019 to be contemporaneously executed with this Assignment.

"Act" has the meaning given to such term in Section 9.1(C).

"Affiliate" means any legal entity which controls, is controlled by, or is under common control with, another legal entity. An entity is deemed to "control" another if it owns directly or indirectly at least fifty percent of either of the following: (A) the shares entitled to vote at a general election of directors of such

STATE OF WEST VIRGINIA §  
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**ASSIGNMENT AND CONVEYANCE**

19 THIS ASSIGNMENT AND CONVEYANCE (the "**Assignment**") is made and entered into this day of August 2019 (the "**Effective Date**"), by and between CHEVRON U.S.A. INC., a Pennsylvania corporation, with an address at 700 Cherrington Parkway, Coraopolis, PA 15108 (hereinafter "**Assignor**") and TH EXPLORATION, LLC, a Texas limited liability company, with an address at 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (hereinafter "**Assignee**").

**WITNESSETH:**

**WHEREAS**, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to those certain oil and gas leases situated in Marshall County, West Virginia, as described in **Exhibit "A"**, attached hereto and made a part hereof (hereinafter the "**Leases**"), less and except certain exclusions; and

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and subject to the limited warranties, restrictions and conditions hereinafter mentioned, the parties hereto, intending to be legally bound, do covenant and agree as follows:

1. **Assignment**. Assignor does hereby grant, bargain, sell, convey, deliver, assign, set over and transfer, as of the Effective Date, to Assignee, its respective successors and assigns, forever, all of Assignor's right, title and interest in and to the Leases, and the lands covered thereby, together with all rights incident thereto and appurtenances thereon, except that Assignor excepts and reserves from this Assignment the following:

- A. Any portion of the Leases set forth in the column entitled "Less and Except" on Exhibit A.

**TO HAVE AND TO HOLD** such right, title and interest in and to the Leases unto Assignee or its designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

2. **No Warranty**. The Assignment is made on an "as is, where is" basis without warranty of any kind. Assignor makes no, and expressly disclaims any, representation or warranty to Assignee regarding the Leases, whether express, statutory or implied, in fact, at law, common law, in equity or otherwise.

3. **Successors and Assigns**. The terms of this Assignment shall be binding upon and inure to the benefit of the parties hereto and each of their respective successors and assigns, and such terms shall be covenants running with the land, and with each subsequent transfer or assignment thereof.

4. **Further Assurances**. Assignor and Assignee hereby agree to take all actions and execute, acknowledge, and deliver all such instruments as are necessary or advisable to effectuate the purposes of this Assignment, except Assignor has no obligation to defend title to the Leases.

STATE OF WEST VIRGINIA     §  
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COUNTY OF MARSHALL       §

**ASSIGNMENT AND CONVEYANCE**

THIS ASSIGNMENT AND CONVEYANCE (the "**Assignment**") is made and entered into this 24<sup>th</sup> day of June 2020 (the "**Effective Date**"), by and between CHEVRON U.S.A. INC., a Pennsylvania corporation, with an address at 700 Cherrington Parkway, Coraopolis, PA 15108 (hereinafter "**Assignor**") and TH EXPLORATION II, LLC, a Texas limited liability company, with an address at 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (hereinafter "**Assignee**").

**WITNESSETH:**

**WHEREAS**, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to those certain oil and gas Leases situated in Marshall County, West Virginia, as described in **Exhibit "A"**, attached hereto and made a part hereof (hereinafter the "**Leases**"), subject to any applicable overriding royalty interests and midstream obligations;

**NOW, THEREFORE**, for good and valuable consideration, and subject to the limited warranties, restrictions and conditions hereinafter mentioned, the parties hereto, intending to be legally bound, do covenant and agree as follows:

1. **Assignment.** Assignor does hereby grant, bargain, sell, convey, deliver, assign, set over and transfer, as of the Effective Date, to Assignee, its respective successors and assigns, forever, all of Assignor's right, title and interest in and to the Leases, and the lands covered thereby, together with all rights incident thereto and appurtenances thereon.

**TO HAVE AND TO HOLD** such right, title and interest in and to the Leases unto Assignee or its designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

2. **Payment.** Within 15 days of execution of this Assignment by both parties, Assignee agrees to tender payment to Assignor in the amount and manner described in **Exhibit "B"**.

3. **No Warranty.** The Assignment is made on an "as is, where is" basis without warranty of any kind and is subject to any existing liens, encumbrances or burdens, including specifically any overriding royalty interests or midstream dedications, attached to or affecting the Leases. Assignor makes no, and expressly disclaims any, representation or warranty to Assignee regarding the Leases or title thereto, whether express, statutory or implied, in fact, at law, common law, in equity or otherwise.

4. **Existing Obligations.** This Assignment is made subject to and Assignee agrees to accept and perform all obligations under any existing agreements that affect the Leases, including Assignor's remaining obligations under any gathering, processing or other midstream contracts as those contracts relate specifically to the Leases.

**ASSIGNMENT OF OIL AND GAS LEASES**

This ASSIGNMENT OF OIL AND GAS LEASES (the "**Assignment**") is made and entered into this 8th day of March, 2018 (the "**Effective Date**"), from **Blue Roan Resources, LLC**, a West Virginia limited liability company, having an address at 3437 University Avenue, Morgantown, WV, 26505 (hereinafter "**Assignor**"), and **TH Exploration, LLC**, a Texas limited liability company, having an address at 1320 S. University Drive, Suite 500, Fort Worth, TX 76107 (hereinafter "**Assignee**").

**WITNESSETH:**

**WHEREAS**, Assignor is the owner of the right, title, and interest in those certain Oil and Gas Leases situated in Marshall County, West Virginia, which are described in Exhibit "A" attached hereto and made a part hereof (hereinafter the "**Leases**"); and

**WHEREAS**, subject to the exceptions and reservations herein contained, Assignor desires to assign, set over, and transfer to Assignee all of Assignor's right, title, and interest in and to the Leases.

**NOW, THEREFORE**, for and in consideration of the sum of Ten Dollars (\$10.00), cash in hand paid, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and subject to the limited warranties, restrictions and conditions hereinafter mentioned, the parties hereto, intending to be legally bound, do covenant and agree as follows:

1. **Assignment**. Assignor does hereby grant, bargain, sell, convey, deliver, assign, set over and transfer, as of the Effective Date, to Assignee, its respective successors and assigns, forever, subject to the terms, reservations, waivers and provisions as hereinafter set forth, an undivided interest of all of Assignor's right, title and interest in and to the Leases and all oil, natural gas, natural gas liquids, condensate, casinghead gas and other liquefied or gaseous hydrocarbons or products ("**Hydrocarbons**") thereby held, in any and all depths and formations ("**Assigned Formations**"), together with any and all other rights that are reasonably necessary or convenient to explore for and produce Hydrocarbons from the Assigned Formations, including, but not limited to, the right of surface access, use and occupancy, the right of ingress and egress, the right to conduct geophysical and other exploratory activities, the right to lay pipeline, the right to drill through, but not perforate or stimulate, all other depths and formations necessary for the purpose of reaching the Assigned Formations and to conduct operations therein.

**TO HAVE AND TO HOLD** such right, title and interest in and to the Leases unto Assignees or their designee, and their respective successors and assigns, forever, in accordance with the provisions of this Assignment.

2. **Representations and Warranties**. Assignor represents and warrants that such Assignor has not conveyed or otherwise encumbered its interest in the Leases since the time that Assignor obtained its interests in the Leases.

Assignor represents and warrants that, as to its interests in the Leases, Assignor has paid all royalties, overriding royalties, and other payments required by the Leases which were due for the period in which Assignor held its interests in the Leases, including, but not limited to, the interests assigned hereunder, and that Assignor has fully performed all conditions necessary to maintain the Leases in full force and effect during such period.

3. **Successors and Assigns**. The terms of this Assignment shall be binding upon and inure to the benefit of the parties hereto and each of their respective successors and assigns, and such terms shall be covenants running with the land, and with each subsequent transfer or assignment thereof.

4. **Further Assurances**. Assignor and Assignee hereby agree to take all actions and execute, acknowledge, and deliver all such instruments as are necessary or advisable to effectuate the purposes of this Assignment.