

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

API 47-051-02228 County Marshall District Franklin
Quad New Martinsville 7.5' Pad Name Goudy Field/Pool Name _____
Farm name TH Exploration III, LLC Well Number Goudy 1S-8HM
Operator (as registered with the OOG) Tug Hill Operating, LLC
Address 380 Southpointe Boulevard, Plaza II, Suite 200 City Canonsburg State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,398,579.86 Easting 514,677.83
Landing Point of Curve Northing 4,398,168.54 Easting 514,448.41
Bottom Hole Northing 4,394,612.48 Easting 516,501.17

Elevation (ft) 1242.0' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)
SOBM; Base oil, osmotic inhibitor, weighting agent, viscosifier, emulsifier, hardness buffer, fluid loss additive, LCM, Shale inhibitor, de-foamer, soaping agent, coagulant, flocculant; specific additives per WSSP and Permit.

Date permit issued 6/27/2019 Date drilling commenced 9/10/2021 spud:10/23/2020 big rig: 5/3/2021 Date drilling ceased 7/1/2021
Date completion activities began 9/10/2021 Date completion activities ceased 10/14/2021
Verbal plugging (Y/N) N Date permission granted n/a Granted by n/a

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

Freshwater depth(s) ft 889' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1506' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 788-794', 883-889' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) _____

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APPROVED
Reviewed by:
SG
10/21/2022
10-11-22

API 47- 051 - 02228 Farm name TH Exploration III, LLC Well number Goudy 1S-8HM

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	36"	30"	120'	NEW	94.5#	N/A	Y
Surface	17 1/2"	13 3/8"	1,004'	NEW	48#	N/A	Y
Coal	17 1/2"	13 3/8"	1,004'	NEW	48#	N/A	Y
Intermediate 1	12 1/4"	9 5/8"	2,678'	NEW	36#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8 1/2"	5 1/2"	20,441'	NEW	20#	N/A	Y
Tubing		2 3/8"	10,221'	NEW	4.7#	N/A	Y
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	A	547	15.6	1.18	646	0	8
Surface	A	1040	15.6	1.2	1248	0	8
Coal	A	1040	15.6	1.2	1248	0	8
Intermediate 1	A	810	15	1.378	1116.18	0	8
Intermediate 2							
Intermediate 3							
Production	A	4370	14.5	1.3	5681	0	8
Tubing							

Drillers TD (ft) 20,496' Loggers TD (ft) n/a
 Deepest formation penetrated Marcellus Plug back to (ft) n/a
 Plug back procedure n/a

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Kick off depth (ft) 5,977'

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Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING 3 centralizers on surface casing at equal distance.
Intermediate - 1 centralizer every other joint.

Production - one centralizer every other joint in lateral, one centralizer every joint through curve, one centralizer every other joint to surface.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

API 47- 051 - 02228 Farm name TH Exploration III, LLC Well number Goudy 1S-8HM

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>MARCELLUS</u>	<u>6428'-6521'</u> TVD	<u>7001'-20496'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2891 psi Bottom Hole _____ psi DURATION OF TEST 4 hrs

OPEN FLOW Gas 127.00 mcfpd Oil 144 bpd NGL _____ bpd Water 864 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>		<u>BOTTOM</u>		<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	
<u>*see attached</u>	<u>0</u>		<u>0</u>		

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Please insert additional pages as applicable.

Drilling Contractor Nabors Drilling USA
Address 505 West Greens Road, Suite 1000 City Houston State TX Zip 77067

Logging Company n/a
Address _____ City _____ State _____ Zip _____

Cementing Company Halliburton Energy Services, Inc.
Address 121 Champion Way, Suite 200 City Canonsburg State PA Zip 15317

Stimulating Company PRO-FRAC
Address 333 Shops Boulevard City Willow Park State TX Zip 76087

Please insert additional pages as applicable.

Completed by Amy L. Morris Telephone 304-376-0111
Signature *Amy L. Morris* Title Permitting Specialist - Appalachia Date 10-3-2022

**GOUDY 1S-8HM
STIMULATION INFORMATION PER STAGE**

Stage No.	Ave. Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	78.00	8486	7874	3716	253520	6,752	0
2	88.00	8072	5478	3871	522200	10,084	0
3	89.00	7879	5095	4549	526080	11,949	0
4	89.00	7896	5235	4766	527580	9,894	0
5	88.00	7746	5096	5062	529320	9,936	0
6	88.00	7584	5166	4689	531380	11,156	0
7	89.00	7597	5410	4742	523000	10,027	0
8	90.00	7491	5438	5047	523240	9,808	0
9	89.00	7604	5444	4422	528840	9,796	0
10	88.00	7523	5205	4163	523360	10,555	0
11	89.00	7662	5154	4677	523980	9,768	0
12	88.00	7365	5011	4660	524480	9,779	0
13	88.00	7411	5354	4271	528840	9,817	0
14	89.00	7375	4899	4573	527100	9,722	0
15	89.00	7791	5164	4301	525320	9,823	0
16	89.00	7401	5418	4814	525580	9,777	0
17	89.00	7424	5060	4886	526220	9,750	0
18	90.00	7544	5633	4293	529900	9,812	0
19	88.00	7351	5232	4475	527880	9,845	0
20	89.00	7475	5385	4655	528410	9,728	0
21	88.00	7318	4903	4866	528520	10,084	0
22	88.00	7193	5040	4990	527000	9,625	0
23	90.00	7486	4781	4943	520700	9,632	0
24	88.00	7354	5408	4177	521660	9,603	0
25	90.00	7538	5123	4358	522580	9,450	0
26	89.00	7613	5463	4186	529520	9,774	0
27	90.00	7473	5756	3873	521940	9,697	0
28	89.00	7606	5330	3937	526300	9,665	0
29	90.00	7549	5123	4092	524660	9,584	0
30	89.00	7443	5532	4251	529680	9,751	0
31	90.00	7430	5534	4369	527880	9,721	0
32	89.00	7220	5572	3962	519380	9,554	0

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Stage No.	Ave. Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
33	88.00	7454	5089	4333	528980	10,610	0
34	89.00	7140	5531	3680	528220	9,614	0
35	89.00	7233	5264	3328	521360	9,683	0
36	89.00	7234	5521	4228	530620	10,710	0
37	89.00	7242	5653	3959	531660	9,763	0
38	89.00	7145	5398	4542	527460	9,578	0
39	89.00	7076	5207	4069	519180	9,596	0
40	90.00	7090	5546	3624	519960	9,540	0
41	88.00	7071	5385	4774	520140	9,522	0
42	89.00	6998	4924	5027	517180	9,471	0
43	88.00	6948	5109	4495	524900	9,590	0
44	90.00	6978	4904	4267	520200	9,491	0
45	89.00	6950	5344	3968	528300	9,579	0
46	89.00	7256	5172	4433	504140	10,255	0
47	89.00	7074	5496	4900	526380	9,396	0
48	90.00	7186	5723	4559	522960	9,625	0
49	88.00	7339	6026	3922	514340	9,495	0
50	87.00	7377	5958	3834	540880	9,658	0
51	89.00	7122	5604	3540	518729	9,400	0
52	89.00	7279	5665	3726	526220	9,506	0
53	90.00	7427	5561	3858	520380	9,551	0
54	89.00	7050	5414	3292	522380	9,372	0
55	89.00	6850	5638	3369	531640	9,408	0
56	88.00	6868	5338	4022	522780	9,359	0
57	89.00	7014	5487	4592	458440	8,639	0
58	88.00	7135	5316	3354	528340	9,439	0

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**GOUDY 1S-8HM
PEFORATION RECORD**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
1	9/10/2021	20,241	20,291	48	Marcellus
2	9/10/2021	20,040	20,186	48	Marcellus
3	9/11/2021	19,864	20,010	48	Marcellus
4	9/12/2021	19,688	19,834	48	Marcellus
5	9/13/2021	19,512	19,658	48	Marcellus
6	9/13/2021	19,336	19,482	48	Marcellus
7	9/14/2021	19,160	19,306	48	Marcellus
8	9/14/2021	18,948	19,130	48	Marcellus
9	9/15/2021	18,808	18,954	48	Marcellus
10	9/16/2021	18,632	18,778	48	Marcellus
11	9/16/2021	18,456	18,602	48	Marcellus
12	9/17/2021	18,280	18,426	48	Marcellus
13	9/17/2021	18,104	18,250	48	Marcellus
14	9/18/2021	17,928	18,074	48	Marcellus
15	9/19/2021	17,752	17,898	48	Marcellus
16	9/19/2021	17,576	17,722	48	Marcellus
17	9/20/2021	17,400	17,546	48	Marcellus
18	9/20/2021	17,224	17,370	48	Marcellus
19	9/21/2021	17,048	17,194	48	Marcellus
20	9/22/2021	16,872	17,018	48	Marcellus
21	9/22/2021	16,696	16,842	48	Marcellus
22	9/23/2021	16,520	16,666	48	Marcellus
23	9/23/2021	16,344	16,490	48	Marcellus
24	9/24/2021	16,168	16,314	48	Marcellus
25	9/24/2021	15,992	16,138	48	Marcellus
26	9/25/2021	15,816	15,962	48	Marcellus
27	9/25/2021	15,640	15,786	48	Marcellus
28	9/26/2021	15,464	15,610	48	Marcellus
29	9/26/2021	15,288	15,434	48	Marcellus
30	9/27/2021	15,112	15,258	48	Marcellus
31	9/27/2021	14,936	15,082	48	Marcellus
32	9/28/2021	14,760	14,906	48	Marcellus
33	9/28/2021	14,584	14,730	48	Marcellus
34	9/29/2021	14,408	14,554	48	Marcellus
35	9/30/2021	14,232	14,378	48	Marcellus
36	9/30/2021	14,056	14,202	48	Marcellus
37	10/1/2021	13,880	14,026	48	Marcellus
38	10/1/2021	13,704	13,850	48	Marcellus
39	10/2/2021	13,528	13,674	48	Marcellus
40	10/2/2021	13,352	13,498	48	Marcellus
41	10/3/2021	13,176	13,322	48	Marcellus

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Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD. Ft.	Number of Perforations	Formation(s)
42	10/3/2021	13,000	13,146	48	Marcellus
43	10/3/2021	12,824	12,970	48	Marcellus
44	10/4/2021	12,648	12,794	48	Marcellus
45	10/4/2021	12,472	12,618	48	Marcellus
46	10/5/2021	12,296	12,442	48	Marcellus
47	10/5/2021	12,120	12,266	48	Marcellus
48	10/6/2021	11,944	12,090	48	Marcellus
49	10/6/2021	11,768	11,914	48	Marcellus
50	10/6/2021	11,592	11,738	48	Marcellus
51	10/10/2021	11,416	11,562	48	Marcellus
52	10/11/2021	11,240	11,386	48	Marcellus
53	10/11/2021	11,064	11,210	48	Marcellus
54	10/13/2021	10,888	11,034	48	Marcellus
55	10/13/2021	10,712	10,858	48	Marcellus
56	10/13/2021	10,536	10,682	48	Marcellus
57	10/13/2021	10,360	10,506	48	Marcellus
58	10/14/2021	10,184	10,330	48	Marcellus

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Lithology Information

LITHOLOGY/FORMATION	TOP DEPTH IN FT/ Name TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID
Maxton	1895	1995	1897	1997	Sandstone
Big Lime	1995	2076	1997	2078	Limestone
Big Injun	2076	2384	2078	2387	Sandstone
Weir	2384	2574	2387	2577	Sandstone
Berea	2574	2934	2577	2939	Sandstone
Gordon	2934	2996	2939	3002	Sandstone
Fifty Foot	2996	3528	3002	3559	Sandstone
Speechley	3528	4883	3559	5133	Sandstone
Benson	4883	5257	5133	5570	Sandstone
Alexander	5257	5831	5570	6239	Siltstone
Rhinestreet	5831	6253	6239	6748	Black Shale
Middlesex	6253	6336	6748	6881	Black Shale
Geneseo/Burkett	6336	6365	6881	6939	Black Shale
Tully	6365	6389	6939	6992	Limestone
Hamilton	6389	6407	6992	7041	Gray Shale
Marcellus	6407	-	7041	-	Black Shale

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/10/2021
Job End Date:	10/14/2021
State:	West Virginia
County:	Marshall
API Number:	47-051-02228-00-00
Operator Name:	Tug Hill Operating, LLC
Well Name and Number:	Goudy 1S-8M
Latitude:	39.73698600
Longitude:	-80.82870200
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,477
Total Base Water Volume (gal):	23,678,256
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Tug Hill Operating	Carrier/Base Fluid	Water	7732-18-5	100.00000	86.47443	None
Sand (40/70 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	8.96888	None
Sand (100 Mesh Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	3.00525	None
Sand (30/50 White Proppant)	ProFrac	Proppant	Silica Substrate	14808-60-7	100.00000	1.20388	None
Hydrochloric Acid (7.5%)	ENVIRONMENTAL PROTECTION AGENCY	Acidizing	Water	7732-18-5	85.00000	0.19668	None
	WV Department of Environmental Protection		Hydrochloric Acid (Hydrogen Chloride)	7647-01-0	37.00000	0.08570	None
SlimStream FR 9800	ENVIRONMENTAL PROTECTION AGENCY	Friction Reducer	Alkanes, C16-20-Iso-	90622-59-6	25.00000	0.01734	None
	Office of Oil & Gas		Butene, homopolymer	9003-29-6	25.00000	0.01734	None
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00208	None

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MC MX 9-4743	Multi-Chem	Biocide	Sodium Nitrate	7631-99-4	60.00000	0.02202	None
LD-7750W	Multi-Chem	Scale Inhibitor	Methanol	67-56-1	60.00000	0.00501	None
ProHib 100	CNR	Acid Inhibitor	Phosphonic Acid Salt	Proprietary	5.00000	0.00042	None
			2-Butoxyethanol	111-76-2	60.00000	0.00043	None
			Proprietary material	68391-11-7	30.00000	0.00021	None
			Proprietary non-ionic surfactant	9043-30-5	20.00000	0.00014	None
			Proprietary corrosion inhibitor	104-55-2	10.00000	0.00007	None
ProFE 105	CNR	Iron Control	Proprietary ethoxylated alcohol	84133-50-6	10.00000	0.00007	None
			Citric Acid	77-92-9	20.00000	0.00017	None
			Acetic Acid	64-19-7	5.00000	0.00004	None
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Water	7732-18-5	85.00000	0.19688	
			Butene, homopolymer	9003-29-6	25.00000	0.01734	
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00208	
			Phosphonic Acid Salt	Proprietary	5.00000	0.00042	
			Proprietary material	68391-11-7	30.00000	0.00021	
			Proprietary non-ionic surfactant	9043-30-5	20.00000	0.00014	
			Proprietary corrosion inhibitor	104-55-2	10.00000	0.00007	
			Proprietary ethoxylated alcohol	84133-50-6	10.00000	0.00007	
			Acetic Acid	64-19-7	5.00000	0.00004	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

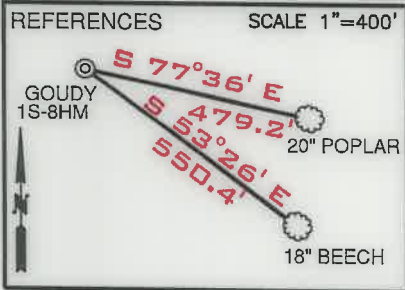
** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

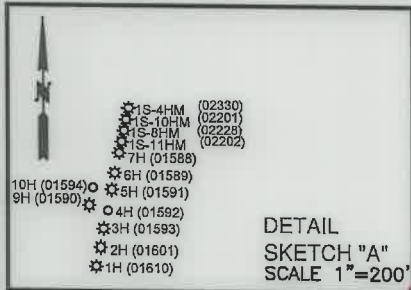
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**GOUDY LEASE
WELL 1S-8HM
766.5487± ACRES**



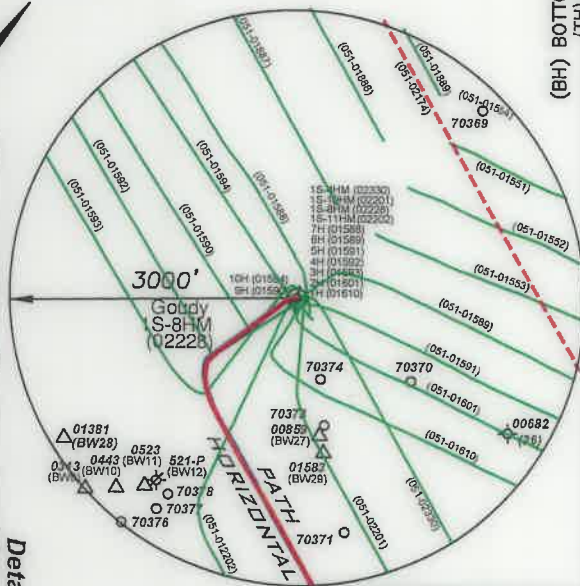
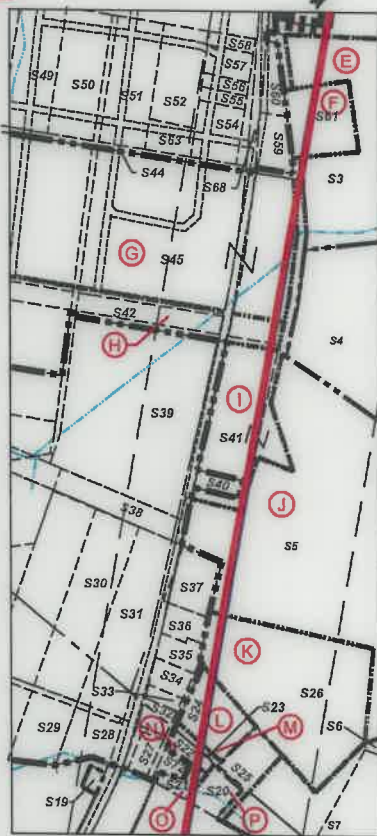
TOP HOLE LATITUDE: 39°45'00"
BOTTOM HOLE LATITUDE: 39°42'30"



DETAIL SKETCH "A"
SCALE 1"=200'

ASDRILLED LEG
PERMITTED LEG

Detail "A"
SCALE 1"=1000'



(BH) BOTTOM HOLE LONGITUDE: 80°47'30"
(TH) TOP HOLE LONGITUDE: 80°47'30"

(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

NOTES

- BORE PATH BASED ON GRID NORTH.
- NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
- OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN AUGUST, 2020. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
- WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
- BOUNDARIES ALONG ROADWAYS ARE BASED UPON MEMORANDUM BY DICKIE, MCCAMEY & CHILCOTE, P.C. FILE 0058304.0401147

LEGEND

- LEASED TRACTS
- SURFACE TRACTS
- WELL LATERAL
- POINT PLEASANT LEGS
- MARCELLUS LEGS
- UNIT BOUNDARY
- LEASE # (SEE 6A1 FORM)

LINE	BEARING	DISTANCE
L1	N 11°47' W	2288.56'
L2	S 52°53' E	1751.27'
L3	S 52°35' W	997.31'

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	S 78°50' W	74.19'	154.70'	74.92'
C2	S 73°29' W	29.89'	89.29'	30.03'
C3	S 67°38' W	28.29'	54.52'	28.62'
C4	S 27°21' W	53.80'	97.87'	54.50'
C5	S 06°49' W	148.49'	577.31'	148.80'
C6	S 11°56' E	222.95'	794.57'	223.68'
C7	S 26°26' E	315.64'	2406.29'	315.87'

SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,398,579.86
E) 514,677.83

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,398,168.54
E) 514,448.41

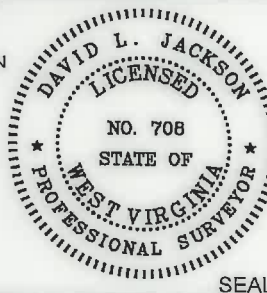
BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,394,612.48
E) 516,501.17

FILE NUMBER _____
DRAWING NUMBER GOUDY_1S-8HM_REVS
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION SUBMETER MAPPING GRADE GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

David L Jackson

JACKSON SURVEYING INC.
P.O. Box 1460
Clarksburg, WV 26302
304-623-5851



WVDEP
OFFICE OF OIL & GAS
601 57TH STREET, SE
CHARLESTON, WV 25304

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

LOCATION ELEVATION 1242.0' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE NEW MARTINSVILLE 7.5' LEASE NUMBER SEE WW-6A1 FORM

SURFACE OWNER TH EXPLORATION III, LLC. ACREAGE 107.9/2022

OIL & GAS ROYALTY OWNER PPG INDUSTRIES, INC., ET AL. THEIR SUCCESSORS OR ASSIGNS LEASE ACREAGE 70.0
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___
PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE (SPECIFY) ASDRILLED

TARGET FORMATION MARCELLUS

PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
ESTIMATED DEPTH TVD 6,521' TMD: 20,496'

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

DESIGNATED AGENT DARREN BROWN, CT CORP
ADDRESS 5098 WASHINGTON STREET WEST, SUITE 407 CHARLESTON, WV 25313-1561

COUNTY NAME PERMIT

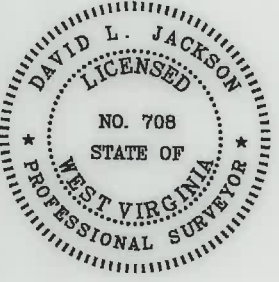
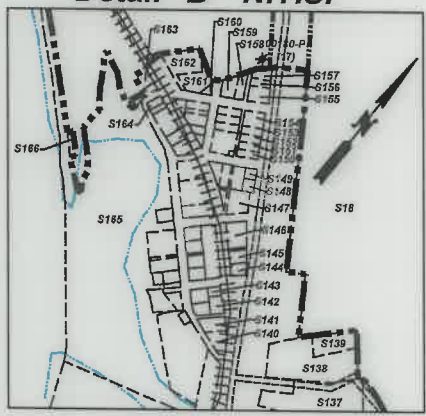
PG 2 OF 4 **GOUDY LEASE**
WELL 1S-8HM
766.5487± ACRES

ASDRILLED LEG
PERMITTED LEG

SURFACE HOLE UTM. NAD83, ZONE 17 IN METERS N) 4,398,579.87 E) 514,677.85
LANDING POINT 1 UTM. NAD83, ZONE 17 IN METERS N) 4,398,189.98 E) 514,436.21
BOTTOM HOLE UTM. NAD83, ZONE 17 IN METERS N) 4,394,612.13 E) 516,503.74



Detail "B" N.T.S.



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Scale
1" = 2000'

10/21/2022



TUG HILL
OPERATING

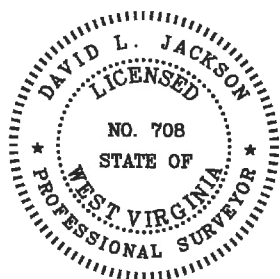
OPERATOR'S
WELL #: Goudy 1S-8HM
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API # 47-051-02228

WELL PLAT
PAGE 2 OF 4
DATE: 10/03/2022

PG 3 OF 4 **GOUDY LEASE
WELL 1S-8HM
766.5487± ACRES**

Number	TAX MAP -PARCEL	SURFACE OWNER	ACRES
S1	C 05-28-12	TH Exploration III, LLC	20.226
S2	05-28-11	Carol A. Martin	24.681
S3	E 05-27-19	Covestro, LLC	33.786
S4	05-27-20	Covestro LLC	93.027
S5	J 05-27-20.1	Appalachian Power Co.	43.973
S6	05-27-27	James Andrew & Karen Lynne Richmond	8.9353
S7	05-27-25	James Andrew & Karen Lynne Richmond	41.35
S8	12-01-31	Steven Jack & Susan Louise Hafer	20.0
S9	12-01-29	Baxter Farm, LLC	2.0
S10	12-01-28	Steven J. & Susan L. Hafer	88.39
S11	12-01-7.1	Harry Wayman Estate	2.0
S12	12-01-04	Robert F. Rothlisberger	6.0
S13	12-01-03	Charles D. & Edith Feenerly Harrison	7.8
S14	12-01-02	James Andrew & Karen L. Richmond	2.7
S15	R 12-01-05	Irvin L. Hoyt, Jr. & David L. Hoyt	36.8
S16	S 12-01-06	Mona Parsons, et al	52.75
S17	T 12-01-16	Vivian A. Parsons, et al	5.125
S18	Q 12-01-01	Covestro, LLC	135.0
S19	12-01-1.7	Colombia Gas Transmission, Corp.	0.15
S20	P 12-23-15	Donna Jo Cain	0.70
S21	O 12-23-15.1	Robert F. Rothlisberger	0.47
S22	N 12-23-13	Donna Jo Cain	0.38
S23	M 05-27-27.2	Donna Jo Cain	0.1767
S24	L 05-27-27.1	Donald P. Cain	1.645
S25	05-27-27.3	Donna Jo. Cain	1.018
S26	K 05-27-28	Covestro, LLC	8.0
S27	12-23-12	Donna Jo Cain	0.37
S28	12-23-11	Covestro, LLC	1.25
S29	12-23-10	Covestro, LLC	1.28
S30	12-23-05	Covestro, LLC	3.69
S31	05-27-40	Covestro, LLC	3.36
S32	12-23-06	Covestro, LLC	0.34
S33	12-27-44	Covestro, LLC	0.21
S34	05-27-43	Covestro, LLC	0.63
S35	05-27-42	Covestro, LLC	0.52
S36	05-27-42.1	Covestro, LLC	0.52
S37	05-27-41	Martha Jean Arrick	0.99
S38	05-27-31.2	Appalachian Power Co.	3.33
S39	05-27-31	Covestro, LLC	16.1
S40	05-27-30	Covestro, LLC	0.371
S41	I 05-27-31.1	Covestro, LLC	3.0
S42	H 05-27-32.2	Covestro, LLC	3.95
S43	05-27-29	Covestro, LLC	9.0
S44	05-27-45	Covestro, LLC	0.3627
S45	G 05-27-32	Covestro, LLC	33.53
S46	05-27-03	Covestro, LLC	1.27
S47	05-27-04	Covestro, LLC	2.52
S48	05-27-05	Covestro, LLC	2.52
S49	05-27-06	Covestro, LLC	2.52
S50	05-27-07	Covestro, LLC	2.52
S51	05-27-08	Covestro, LLC	2.52
S52	05-27-09	Covestro, LLC	1.87
S53	05-27-10	Covestro, LLC	0.52
S54	05-27-12	Covestro, LLC	1.0
S55	05-27-13	Covestro, LLC	0.34
S56	05-27-14	Covestro, LLC	0.25
S57	05-27-15	Covestro, LLC	0.47
S58	05-27-16	Covestro, LLC	0.23
S59	05-27-18	Covestro, LLC	0.97
S60	05-27-17	Covestro, LLC	0.88
S61	F 05-27-19.3	Cemetery	2.0
S62	05-27-02	Covestro, LLC	28.099
S63	05-27-19.2	Wheeling Electric Co.	0.75
S64	05-28-12.2	Covestro, LLC	3.1
S65	05-28-12.3	Covestro, LLC	18.784
S66	05-28-13.1	Air Products & Chemicals, Inc	5.522
S67	D 05-27-19.1	Covestro, LLC	21.267
S68	05-27-11	Covestro, LLC	0.03
S69	A 05-28-13	TH Exploration III, LLC	70.0
S70	05-28-13.2	Covestro, LLC	11.02
S71	05-28-1.1	Covestro, LLC	5.2217
S72	12-23-14	Robert E. Rothlisberger	0.27
S73	05-21-3.1	Eagle Natrium, LLC	98.613
S74	12-01-19	Steven J. & Susan L. Hafer	36.5
S75	12-01-27	Steven J. & Susan L. Hafer	83.69
S76	V 12-01-18	Travis Darrell Blake & Angela Dawn Mitchell	48.4

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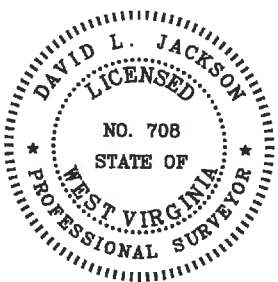
TUG HILL
OPERATING

OPERATOR'S
WELL #: Goudy 1S-8HM
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API # 47-051-02228

WELL PLAT
PAGE 3 OF 4
DATE: 10/03/2022

**GOUDY LEASE
WELL 1S-8HM
766.5487± ACRES**

Number	TAX MAP -PARCEL	SURFACE OWNER	ACRES
S98	12-6A-02	Ronald E. McCoy	3.49
S99	12-6A-01	Ronald E. McCoy	6.51
S100	12-06-05	Steven & Susan Louis Hafer	9.0
S101	12-06-04	Steven & Susan Hafer	6.5
S102 ^W	12-01-27	Steven J. & Susan Hafer	83.69
S103	12-01-26	William Joseph Blake	13.83
S104	12-01-25	Jack R. & Linda S. Blake	17.42
S105	12-01-15.3	Daniel L. & Vickie L Williams	7.0
S106	12-01-1.1	W.V. D.O.H	10.59
S107	12-01-15.2	Michael Goddard	1.09
S108	12-01-15.1	Marshall & Tara Cecil (L/C), Roy Yoho	1.46
S109	12-01-22	William D. Glover	18.84
S110	12-01-23.2	Raymond L. Pribble	0.782
S111	12-01-23	Raymond L. Pribble	1.55
S112	12-01-23.1	RHL Properties, LLC	34.17
S113	12-01-25.1	Timothy Q. & Ronda K. Bohrer	1.2
S114	12-01-24	Mitzilou Cecil, Trustee of the Tiger Cecil Irrevocable	0.85
S115	12-06-02	Brock T. Conner	23.83
S116	12-06-49	Kirkland Enterprises, LLC.	10.32
S117	12-06-51	Steven & Susan Hafer	0.599
S118	12-06-48	Ronald E. & Susan L. McCoy	0.36
S119	05-27-39	Covestro, LLC	3.74
S120	12-23-04	Pittsburgh Plate Glass Corp.	2.41
S121	12-23-09	Covestro, LLC	3.95
S122	12-23-08	Dora N. Moore Hrs., Et al	6.95
S123	12-01-1.5	United States of America	7.14
S124	12-23-02	Covestro, LLC	1.27
S125	12-23-03	Covestro, LLC	4.67
S126	12-27-38	Covestro, LLC	2.72
S127	12-27-37	Covestro, LLC	3.20
S128	12-27-35	Covestro, LLC	1.79
S129	12-27-34	Covestro, LLC	1.91
S130	12-27-36	Covestro, LLC	1.58
S131	12-27-33	Covestro, LLC	1.95
S137	12-01-1.2	West Virginia Dept. of Transportation	0.27
S138	12-22-59	Kenneth R. Morris	2.00
S139	12-22-60	Franklin W. & Barabara J. Cogar	0.5
S140	12-22-09	M.B. Investment	0.20
S141	12-22-10	M.B. Investment	0.24
S142	12-22-12	Jack Ray & Linda S. Blake	0.16
S143	12-22-13	Dewayne E. & Patricia A. Yost	0.07
S144	12-22-28	Kenneth R. Morris	0.12
S145	12-22-29	Jack R. & Linda S. Blake	0.50
S146	12-22-30	Jack R. & Linda S. Blake	0.24
S147	12-22-32	Ren Realty, LLC.	0.27
S148	12-22-33	Ren Realty, LLC.	0.08
S149	12-22-34	Ren Realty, LLC.	0.08
S150	12-22-51	Eric R. & Debra S. Sims	0.10
S151	12-22-52	Eric R. & Debra S. Sims	0.10
S152	12-22-53	Eric R. & Debra S. Sims	0.10
S153	12-22-54	Eric R. & Debra S. Sims	0.10
S154	12-22-55	Eric R. & Debra S. Sims	0.19
S155	12-22-56	Michael L. & Joyce D. Durig	0.22
S156	12-22-57	Michael L. & Joyce D. Durig	0.11
S157	12-22-58	Michael L. & Joyce D. Durig	0.15
S158	12-22-50	Michael L. & Joyce D. Durig	0.17
S159	12-22-49	Daniel J. Stillwagoner	0.13
S160	12-22-62	Virginia Bohrer, et al	0.05
S161	12-22-62.1	John R. & Toni Wright	0.314
S162	12-22-44	John R. & Toni Wright	0.52
S163	12-01-1.9	Grandview Doolin Public Service District	0.13
S164	12-22-27	Grandview Doolin Public Service District	0.27
S165	12-01-1.12	United States of America	22.55
S166	12-01-1.8	Grandview Doolin Public Service District	0.0895



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P.S. 708 *David L Jackson*

10/21/2022

	OPERATOR'S	WELL PLAT
	WELL #: <u>Goudy 1S-8HM</u>	PAGE: <u>4 OF 4</u>
	DISTRICT: <u>Franklin</u>	DATE: <u>10/03/2022</u>
	COUNTY: <u>Marshall</u>	
	STATE: <u>WV</u>	
	API # <u>47-051-02228</u>	