

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

RECEIVED
Office of Oil and Gas
DEC 23 2024
WV Department of
Environmental Protection

API 47 - 051 - 02251 County Marshall District Meade
Quad Glen Easton 7.5' Pad Name HUDSON Field/Pool Name N/A
Farm name CNX LAND, LLC Well Number Hudson S-4HM (L018025)
Operator (as registered with the OOG) EQT Production Company
Address 400 Woodcliff Drive 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 4,408,814.32 Easting 528,008.05
Landing Point of Curve Northing 4,408,874.5 Easting 527,777.4
Bottom Hole Northing 4,406,017.5 Easting 529,504.9

Elevation (ft) 1346' 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)

Synthetic Oil Based Mud 14.0 ppg barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and alkyl phosphates, glutaraldehyde solution, calcium hydroxide, partially hydrolyzed polyacrylamide/polyacrylate, potassium chloride, sodium carbonate, ground walnut shells, alcohol and modified fatty acid, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 11/04/2019 Date drilling commenced 03/22/2021 Date drilling ceased 02/22/2024
Date completion activities began 07/22/2024 Date completion activities ceased 09/26/2024
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 77', 572', 622', 766', 916', 976', 1036' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1736', 1887', 2076' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 888', 966' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED

Reviewed by:

[Signature]
02/07/2025
[Signature]

API 47-051 - 02251

Farm name CNX LAND, LLC

Well number Hudson S-4HM (L018025)

CASING STRINGS	Hole Size	Casing Size	Depth (GL)	New or Used	Grade wt/ft	Basket Depth(s) (GL)	Did cement circulate (Y/N) * Provide details below*
Conductor	38"	30"	120'	NEW	118.65#	N/A	Y
Surface	17-1/2"	13-3/8"	1320'	NEW	J-55 54.5#	N/A	RECEIVED Office of Oil and Gas
Coal							
Intermediate 1	12-1/4"	9-5/8"	2413'	NEW	J-55 36#	N/A	DEC 23 2024
Intermediate 2							
Intermediate 3							WV Department of Environmental Protection
Production	8-3/4", 8-1/2"	6"	18,462'	NEW	P-110 24#	N/A	N
Tubing							
Packer type and depth set							

Comment Details Production Cement job has a calculated TOC of 1189' GL, which is greater than 500' TVD above the producing formation. No issues during cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (GL)	WOC (hrs)
Conductor	CLASS A	366	15.6	1.21	443	0	8+
Surface	CLASS L	1344	16.0	1.13	1519	0	8
Coal							
Intermediate 1	CLASS A	865	15.6	1.18	1021	0	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2985	15.0	1.18	3522	1189'	8+
Tubing							

Drillers TD (ft) 18,477' Loggers TD (ft) N/A
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure _____

Kick off depth (ft) 1561'

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

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____
 CONDUCTOR- NONE _____
 SURFACE- ON SHOE TRACK AND EVERY 500' TO SURFACE _____
 INTERMEDIATE: ON SHOE TRACK AND EVERY 500' FEET TO SURFACE _____
 PRODUCTION: ON SHOE TRACK, EVERY OTHER JOINT TO 7521' AND EVERY JOINT TO 1862' _____

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 _____

WR-35
Rev. 8/23/13

API 47- 051 - 02251 Farm name CNX LAND, LLC Well number Hudson S-4HM (L018025)

Drilling Contractor Falcon (Rig 27)
Address 1120 US-119 City Indiana State PA Zip 15701

Logging Company Scientific Drilling International
Address 124 Vista Drive City Charleroi State PA Zip 15022

Logging Company GyroData
Address 73 Noblestown Road City Carnegie State PA Zip 15106

Drilling Contractor _____
Address _____ City _____ State _____ Zip _____

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Well # HUDSON S-4HM (L018025) Final Formations API# 47-051-02251					
Formation Name	Drill Top MD (ftGRD)	Drill Top (TVD) (ftGRD)	Drill Btm MD (ftGRD)	Drill Btm (TVD) (ftGRD)	
Sand/Shale	1	1	888	888	
Sewickley Coal	888	888	891	891	
Sand/Shale	891	891	970	970	
Pittsburgh Coal	970	970	977	977	
Sand/Shale	977	977	2,049	2,045	
Big Lime	2,049	2,045	2,303	2,296	
Big Injun	2,303	2,296	2,359	2,351	
Sand/Shale	2,359	2,351	2,633	2,621	
Berea	2,633	2,621	3,070	3,052	
Sand/Shale	3,070	3,052	3,128	3,108	
Gordon	3,128	3,108	3,197	3,176	
Sand/Shale	3,197	3,176	3,338	3,310	
Bayard	3,338	3,310	3,618	3,576	
Sand/Shale	3,618	3,576	5,460	5,303	
Alexander	5,460	5,303	5,908	5,720	
Elks	5,908	5,720	6,669	6,415	
Sonyea	6,669	6,415	6,792	6,517	
Middlesex	6,792	6,517	6,832	6,548	
Genesee	6,832	6,548	6,908	6,600	
Geneseo	6,908	6,600	6,942	6,622	
Tully	6,942	6,622	6,982	6,646	
Hamilton	6,982	6,646	7,192	6,744	
Marcellus	7,192	6,744	18,477	7,003	

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**HUDSON
WELL S-4HM
EQT PRODUCTION CO.**

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

NAD'83 S.P.C.(FT)	N. 486,164.2	E. 1,639,161.5
NAD'83 GEO.	LAT-(N) 39.828864	LONG-(W) 80.672698
NAD'83 UTM (M)	N. 4,408,814.32	E. 528,008.05
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 486,468.1	E. 1,638,338.7
NAD'83 GEO.	LAT-(N) 39.829669	LONG-(W) 80.675642
NAD'83 UTM (M)	N. 4,408,902.7	E. 527,755.8
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 476,896.9	E. 1,643,909.6
NAD'83 GEO.	LAT-(N) 39.803593	LONG-(W) 80.655369
NAD'83 UTM (M)	N. 4,406,015.2	E. 529,501.8

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
9-3-1.2	MARSHALL COUNTY COAL RESOURCES INC.	1.00
9-2-9.2	CONSOLIDATION COAL CO.	1.00
9-2-9.1	MARSHALL COUNTY COAL RESOURCES INC.	1.00
9-5-11.2	LARRY WHETZEL JR.	2.355
9-5-11.1	MARK H FOX	2.619
9-8-2	CNX LAND CO. LLC	6000 SQ.FT.
9-8-1	CNX LAND CO. LLC	2.908
9-7-9	CNX LAND CO. LLC	2
9-8-13.1	LARRY LEE CONKLE SR. ET UX	1.666
9-8-13.2	TERESA & MICHAEL HUGHES	3.582
9-8-13.3	CASSANDRA & JAMES DOWNES	3.22
9-9-22	GARY W MORRIS	0.15
9-9-17	NAUVOO CEMETERY ASSOC	1
9-9-14.2	NAUVOO CEMETERY ASSOC	0.292
9-9-16.1	NAUVOO CEMETERY ASSOC	0.126
9-8-4.1	CNX LAND CO. LLC	0.333
P/O 9-3-19	RAYMOND E. & CINDY L. WHITE	0.5
9-8-5.1	RAYMOND E. & CINDY L. WHITE	1.04
N/A	NEW BETHEL CEMETERY	1.90
N/A	BOARD OF EDUCATION	0.1

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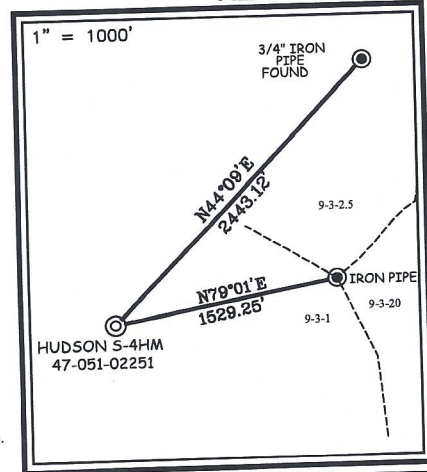
WV Department of
Environmental Protection

**AS DRILLED COORDINATES
FOR WELL NO. 4HM**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17)		
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NAD'83 GEO.	LAT-(N) 39.828864	LONG-(W) 80.672698
NAD'83 UTM (M)	N. 4,408,814.32	E. 528,008.05
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 486,374.5	E. 1,638,408.0
NAD'83 GEO.	LAT-(N) 39.829414	LONG-(W) 80.675391
NAD'83 UTM (M)	N. 4,408,874.5	E. 527,777.4
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 476,804.3	E. 1,643,920.0
NAD'83 GEO.	LAT-(N) 39.803614	LONG-(W) 80.655332
NAD'83 UTM (M)	N. 4,406,017.5	E. 529,504.9

B.H.
A.D.

REFERENCES



NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELLS. NO AGRICULTURAL BUILDINGS OR DWELLINGS > 2500 SQ. FT. WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'
- TAX MAP LOCATION FOR 9-5-9 & 9-5-10 IS INCORRECT. 9-5-9'S DEED CALLS FOR BEING A RESERVATION OF 20 ACRES LYING ON THE NORTHEAST SIDE OF ROAD. THEREFORE MAKING THE ACREAGE ASSESSMENT INCORRECT DUE TO THE OUT SALES OF 9-5-10.1 AND 9-5-10.2.
- WELL PLAT UPDATED TO SHOW AS-DRILLED PATH.
- AS-DRILLED INFORMATION PROVIDED BY EQT PRODUCTION CO.

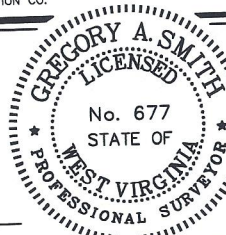


12 Vaahora Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsv.com

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.
677

Gregory A. Smith



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

DATE MARCH 11, 20 24
REVISED _____, 20 _____
OPERATORS WELL NO. HUDSON S-4HM
API WELL NO. 47 - 051 - 02251
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8911P4HMAD.dwg

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: ELEVATION 1,346.26' WATERSHED GRAVE CREEK (HUC 10)
DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CNX LAND LLC ACREAGE 106.935±
ROYALTY OWNER STONE HILL MINERALS HOLDINGS LLC, ET AL ACREAGE 106.935±
LEASE NO. SEE WW-6A1

PROPOSED WORK: 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: 6782' / TMD: 18,604'

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT JOSEPH C. MALLOW
ADDRESS 400 WOODCLIFF DRIVE ADDRESS 427 MIDSTATE DRIVE
CANONSBURG, PA 15317 CLARKSBURG, WV 26301

02/07/2025

COUNTY NAME

PERMIT

**HUDSON WELL S-4HM
EQT PRODUCTION CO.**

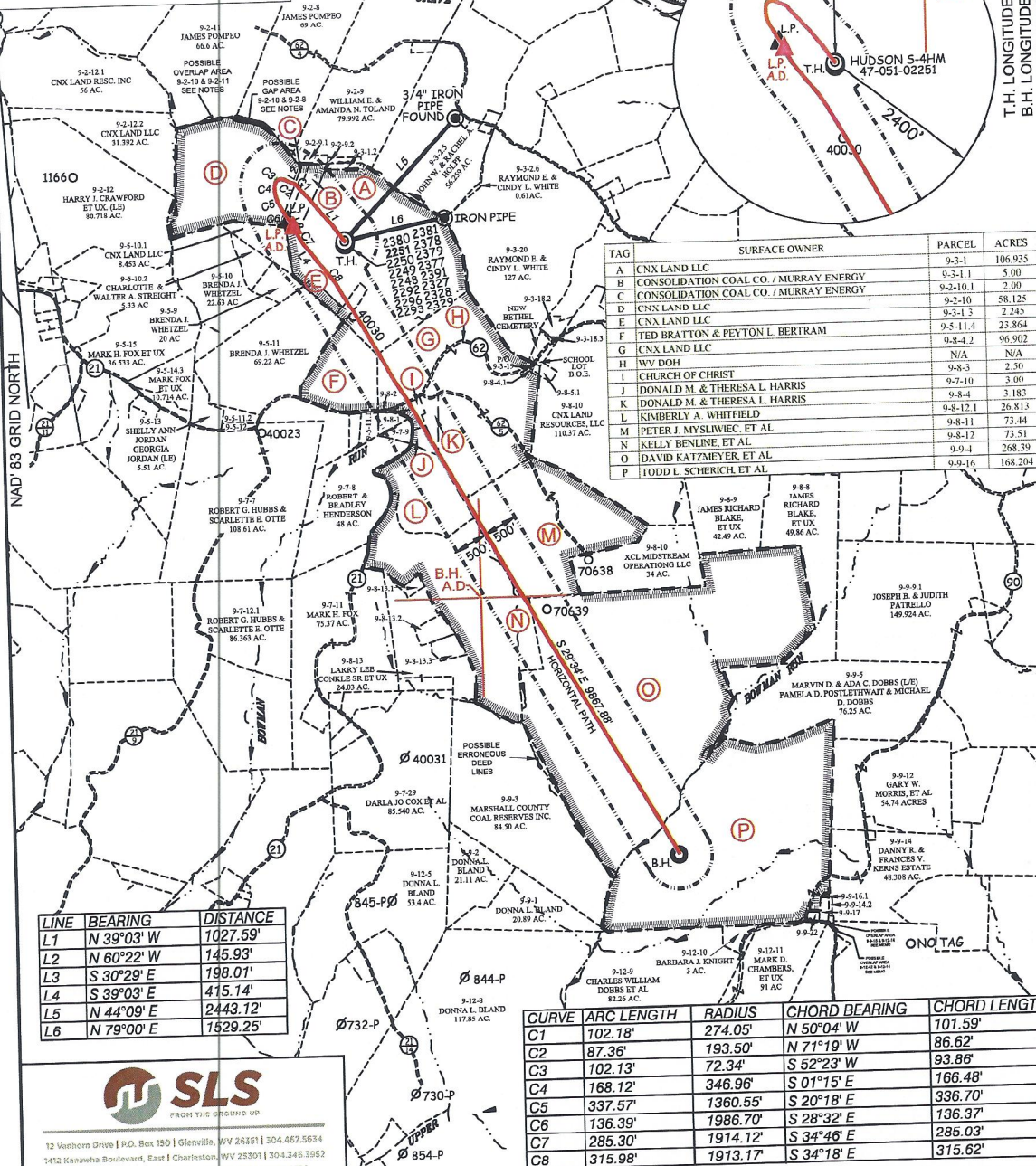
LEGEND
AS DRILLED
PROPOSED

8,522' B.H. A.D. 1,694' T.H. A.D.

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

2380 2381
2251 2378
2250 2379
2249 2377
2248 2391
2247 2377
2296 2328
2293 2329

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



TAG	SURFACE OWNER	PARCEL	ACRES
A	CNX LAND LLC	9-3-1	106.935
B	CONSOLIDATION COAL CO. / MURRAY ENERGY	9-3-1-1	5.00
C	CONSOLIDATION COAL CO. / MURRAY ENERGY	9-2-10-1	2.00
D	CNX LAND LLC	9-2-10	58.125
E	CNX LAND LLC	9-3-1-3	2.245
F	TED BRATTON & PEYTON L. BERTRAM	9-3-1-4	23.864
G	CNX LAND LLC	9-3-4-2	96.902
H	N/A	N/A	N/A
I	CHURCH OF CHRIST	9-8-3	2.50
J	DONALD M. & THERESA L. HARRIS	9-7-10	3.00
K	DONALD M. & THERESA L. HARRIS	9-8-4	3.183
L	KIMBERLY A. WHITFIELD	9-8-12-1	26.813
M	PETER J. MYSLIWIC, ET AL	9-8-11	73.44
N	KELLY BENLINE, ET AL	9-8-12	73.51
O	DAVID KATZMEYER, ET AL	9-9-4	268.39
P	TODD L. SCHERKCH, ET AL	9-9-16	168.204

LINE	BEARING	DISTANCE
L1	N 39°03' W	1027.59'
L2	N 60°22' W	145.93'
L3	S 30°29' E	198.01'
L4	S 39°03' E	415.14'
L5	N 44°09' E	2443.12'
L6	N 79°00' E	1529.25'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	102.18'	274.05'	N 50°04' W	101.59'
C2	87.36'	193.50'	N 71°19' W	86.62'
C3	102.13'	72.34'	S 52°23' W	93.86'
C4	168.12'	346.96'	S 01°15' E	166.48'
C5	337.57'	1360.55'	S 20°18' E	336.70'
C6	136.39'	1986.70'	S 28°32' E	136.37'
C7	285.30'	1914.12'	S 34°46' E	285.03'
C8	315.98'	1913.17'	S 34°18' E	315.62'

SLS
FROM THE GROUND UP

12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5634
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
 254 East Beckley Bypass | Beckley, WV 25301 | 304.255.5296
 slswc.com

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GREGORY A. SMITH
 LICENSED
 No. 677
 STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR

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

P.S. 677 *Gregory A. Smith*

SCALE 1" = 2000' FILE NO. 8911P4HMAD.dwg

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 API WELL 47 - 051 - 02251
 NO. STATE COUNTY PERMIT

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

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

WELL OPERATOR EQT PRODUCTION COMPANY
 ADDRESS 400 WOODCLIFF DRIVE
 CANONSBURG, PA 15317

DESIGNATED AGENT JOSEPH C. MALLOW
 ADDRESS 427 MIDSTATE DRIVE
 CLARKSBURG, WV 26301

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Perforation Data

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Stage No.	Perforation Date	Stage Perforated From TMD Ft.	Stage Perforated To TMD Ft.	# of Perforations/Stage	Formation(s)
2	07/22/2024	18367	18215	48	Marcellus
3	07/23/2024	18186	18033	48	Marcellus
4	07/23/2024	18004	17851	48	Marcellus
5	07/23/2024	17822	17669	48	Marcellus
6	07/24/2024	17640	17488	48	Marcellus
7	07/25/2024	17458	17306	48	Marcellus
8	07/25/2024	17277	17124	48	Marcellus
9	07/26/2024	17095	16942	48	Marcellus
10	07/27/2024	16913	16760	48	Marcellus
11	07/27/2024	16731	16579	48	Marcellus
12	07/29/2024	16549	16397	48	Marcellus
13	07/29/2024	16368	16215	48	Marcellus
14	07/29/2024	16186	16033	48	Marcellus
15	07/29/2024	16004	15851	48	Marcellus
16	07/30/2024	15822	15670	48	Marcellus
17	07/30/2024	15640	15488	48	Marcellus
18	07/30/2024	15459	15306	48	Marcellus
19	07/31/2024	15277	15124	48	Marcellus
20	07/31/2024	15095	14942	48	Marcellus
21	07/31/2024	14913	14761	48	Marcellus
22	07/31/2024	14731	14579	48	Marcellus
23	07/31/2024	14550	14397	48	Marcellus
24	08/01/2024	14368	14215	48	Marcellus
25	08/01/2024	14186	14033	48	Marcellus
26	08/02/2024	14004	13852	48	Marcellus
27	08/03/2024	13822	13670	48	Marcellus
28	08/03/2024	13641	13488	48	Marcellus
29	08/04/2024	13459	13306	48	Marcellus
30	08/04/2024	13277	13124	48	Marcellus
31	08/04/2024	13095	12943	48	Marcellus
32	08/05/2024	12913	12761	48	Marcellus
33	08/06/2024	12732	12579	48	Marcellus
34	08/06/2024	12550	12397	48	Marcellus
35	08/06/2024	12368	12215	48	Marcellus
36	08/07/2024	12186	12034	48	Marcellus
37	08/07/2024	12004	11852	48	Marcellus
38	08/07/2024	11823	11670	48	Marcellus
39	08/11/2024	11641	11488	48	Marcellus
40	08/11/2024	11459	11306	48	Marcellus
41	08/11/2024	11277	11125	48	Marcellus
42	08/12/2024	11095	10943	48	Marcellus

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43	08/12/2024	10914	10761	48	Marcellus
44	08/12/2024	10732	10579	48	Marcellus
45	08/13/2024	10550	10397	48	Marcellus
46	08/13/2024	10368	10216	48	Marcellus
47	08/14/2024	10186	10034	48	Marcellus
48	08/14/2024	10005	9852	48	Marcellus
49	08/15/2024	9823	9670	48	Marcellus
50	08/16/2024	9641	9488	48	Marcellus
51	08/16/2024	9459	9307	48	Marcellus
52	08/16/2024	9277	9125	48	Marcellus
53	08/16/2024	9096	8943	48	Marcellus
54	08/17/2024	8914	8761	48	Marcellus
55	08/17/2024	8732	8579	48	Marcellus
56	08/17/2024	8550	8398	48	Marcellus
57	08/18/2024	8368	8216	48	Marcellus
58	08/18/2024	8187	8034	48	Marcellus
59	08/19/2024	8005	7852	48	Marcellus
60	08/19/2024	7823	7670	48	Marcellus

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Stimulation Data

02/07/2025

Stage #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	07/22/2024	93	8401	7839	4649	250042	6479	
2	07/23/2024	100	7965	8455	21	449500	9161	
3	07/23/2024	100	8249	5948	4411	450029	9133	
4	07/24/2024	98	8263	7487	4656	451011	9226	
5	07/24/2024	100	8057	7744	4425	450862	9253	
6	07/25/2024	99	8332	8524	3612	450616	10246	
7	07/25/2024	90	8745	5988	4429	450434	9234	
8	07/25/2024	98	8380	5971	4651	450500	9628	
9	07/26/2024	88	8514	6278	4027	452378	9193	
10	07/27/2024	99	8160	7953	4755	451187	9200	
11	07/29/2024	90	8788	7445	4204	449983	15304	
12	07/29/2024	99	8092	5452	4704	451102	9158	
13	07/29/2024	100	8164	5412	4822	450050	9189	
14	07/30/2024	94	8383	5347	4558	450180	9397	
15	07/30/2024	98	8032	5365	4766	450246	9095	
16	07/30/2024	99	7743	5518	4837	450313	9114	
17	07/30/2024	100	7976	6932	4692	450124	9383	
18	07/31/2024	99	7840	5903	4879	450604	9289	
19	07/31/2024	100	7637	5752	4773	449808	8996	
20	07/31/2024	100	7788	5504	4956	450007	9101	
21	07/31/2024	100	7033	2671	5076	451855	9487	
22	07/31/2024	100	7973	5814	4799	450257	9402	
23	08/01/2024	100	8032	7921	4796	499905	9064	
24	08/01/2024	100	7974	5876	4854	448922	9457	
25	08/02/2024	90	7486	6741	5239	441642	9210	
26	08/03/2024	100	7574	6864	5335	450106	9202	
27	08/04/2024	97	7834	5971	5010	450204	9441	
28	08/04/2024	100	7489	5664	5412	450169	9413	
29	08/04/2024	96	7488	5905	5302	450342	9064	
30	08/04/2024	96	8018	7286	4965	451280	8963	
31	08/05/2024	97	8041	6197	5170	451090	9342	
32	08/06/2024	96	7975	5792	5360	455141	9015	
33	08/06/2024	99	7603	6875	5202	451510	9047	
34	08/06/2024	99	7540	5874	4980	453000	8951	
35	08/07/2024	100	7511	5648	5299	450329	9300	
36	08/07/2024	96	7578	5539	5483	437561	8971	
37	08/07/2024	100	7339	7464	4389	414822	8952	
38	08/11/2024	91	8529	7359	4760	450017	11042	
39	08/11/2024	100	7379	5876	4775	452754	9036	
40	08/12/2024	100	7160	6001	4928	450031	8882	
41	08/12/2024	98	7577	6666	4871	450278	8911	

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42	08/12/2024	99	7418	6208	5169	450051	8963
43	08/13/2024	100	7082	6010	5088	450100	8889
44	08/13/2024	66	8613	6687	4257	450233	9483
45	08/13/2024	100	7224	6084	4742	450105	8911
46	08/14/2024	99	7019	6051	4677	449988	8854
47	08/14/2024	100	6865	6514	5048	450324	8871
48	08/16/2024	99	7357	5611	4825	450100	8845
49	08/16/2024	100	6928	5908	4905	450000	8838
50	08/16/2024	100	7257	6218	5050	450012	8856
51	08/16/2024	99	7162	7930	4720	450020	8851
52	08/17/2024	100	6748	5967	4657	449993	8827
53	08/17/2024	99	7900	5655	4883	450096	9175
54	08/17/2024	100	6515	5753	4600	449943	8830
55	08/18/2024	99	6494	5513	4964	450152	8796
56	08/18/2024	100	6526	5792	5067	449978	8757
57	08/18/2024	100	7063	6016	5102	450049	8873
58	08/19/2024	100	6838	5913	5049	450100	8814
59	08/19/2024	100	6407	5681	4820	450124	8764
60	08/19/2024	100	6396	6266	4883	450426	8828

02/07/2025

Hydraulic Fracturing Fluid Product Component Information Disclosure



Water Source	Percent
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Job Start Date:	07/22/2024
Job End Date:	08/19/2024
State:	West Virginia
County:	Marshall
API Number:	47-051-02251-00-00
Operator Name:	EQT Production
Well Name and Number:	Hudson S-4HM
Latitude:	39.828864
Longitude:	-80.672698
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7032
Total Base Water Volume (gal)*:	23182152
Total Base Non Water Volume:	0

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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	EQT	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	87.63087	None
Sand (Proppant)	EQT	Proppant					
			Silica Substrate	14808-60-7	100.00000	12.14977	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			ACRYLAMIDE-CHLORIDE SALT OF TRIMETHYLAMMONIO-ETHYL ACRYLATE COPOLYMER	69418-26-4	40.00000	0.01860	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			ALKANES, C12-26-BRANCHED AND LINEAR	90622-53-0	40.00000	0.01860	None
Clearal 268	ChemStream	Biocide					
			Water	7732-18-5	80.00000	0.00882	None

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Enviro-Syn HCR-7000- WL	Fluid USA, Inc.	Synthetic Acid					
			FLUID-Acid-00001	Proprietary	20.00000	0.00320	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Water	7732-18-5	15.00000	0.00262	None
Enviro-Syn HCR-7000- WL	Fluid USA, Inc.	Synthetic Acid					
			FLUID-Amine-00001	Proprietary	10.00000	0.00080	None
Clearal 268	ChemStream	Biocide					
			Glutaraldehyde	111-30-8	20.00000	0.00055	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			ETHOXYLATED ALCOHOLS (C12-16)	68551-12-2	5.00000	0.00029	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			AA/ATBS Co-polymer	9003-05-8	5.00000	0.00002	None
Clearal 268	ChemStream	Biocide					
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00001	None
Clearal 268	ChemStream	Biocide					
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00001	None
Clearal 268	ChemStream	Biocide					
			Ethanol	64-17-5	1.50000	0.00000	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			AA/Maleic Anhydride Co- polymer	9003-04-7	1.00000	0.00000	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

* Total Water Volume sources may include various types of water including fresh water, produced water, and 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)

02/07/2025

HUDSON WELL S-4HM EQT PRODUCTION CO.

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

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

NAD'83 S.P.C.(FT)	N. 486,164.2	E. 1,639,161.5
NAD'83 GEO.	LAT-(N) 39.828864	LONG-(W) 80.672698
NAD'83 UTM (M)	N. 4,408,814.32	E. 528,008.05
<u>LANDING POINT</u>		
NAD'83 S.P.C.(FT)	N. 486,468.1	E. 1,638,338.7
NAD'83 GEO.	LAT-(N) 39.829669	LONG-(W) 80.675642
NAD'83 UTM (M)	N. 4,408,902.7	E. 527,755.8
<u>BOTTOM HOLE</u>		
NAD'83 S.P.C.(FT)	N. 476,896.9	E. 1,643,909.6
NAD'83 GEO.	LAT-(N) 39.803593	LONG-(W) 80.655369
NAD'83 UTM (M)	N. 4,406,015.2	E. 529,501.8

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

10,826' B.H. A.D.

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-3-1.2	MARSHALL COUNTY COAL RESOURCES INC.	1.00
9-2-9.2	CONSOLIDATION COAL CO.	1.00
9-2-9.1	MARSHALL COUNTY COAL RESOURCES INC.	1.00
9-5-11.2	LARRY WHETZEL, JR.	2.355
9-5-11.1	MARK H. FOX	2.619
9-8-2	CNX LAND CO. LLC	6000 SQ.FT.
9-8-1	CNX LAND CO. LLC	2,908
9-7-9	CNX LAND CO. LLC	2
9-8-13.1	LARRY LEE CONKLE SR., ET UX	1.666
9-8-13.2	TERESA & MICHAEL HUGHES	3.582
9-8-13.3	CASSANDRA & JAMES DOWNES	3.22
9-9-22	GARY W. MORRIS	0.15
9-9-17	NAUVOO CEMETERY ASSOC.	1
9-9-14.2	NAUVOO CEMETERY ASSOC.	0.292
9-9-16.1	NAUVOO CEMETERY ASSOC.	0.126
9-8-4.1	CNX LAND CO. LLC	0.333
P/O 9-3-19	RAYMOND E. & CINDY L. WHITE	0.5
9-8-5.1	RAYMOND E. & CINDY L. WHITE	1.04
N/A	NEW BETHEL CEMETERY	1.90
N/A	BOARD OF EDUCATION	0.1

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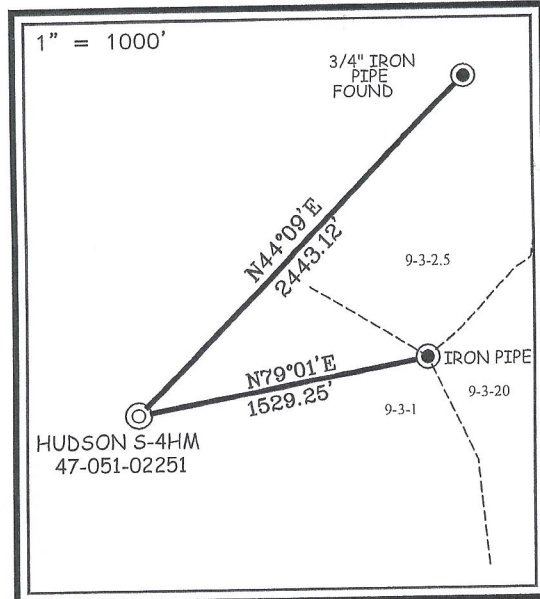
AS DRILLED COORDINATES FOR WELL NO. 4HM

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

NAD'83 S.P.C.(FT)	N. 486,164.2	E. 1,639,161.5
NAD'83 GEO.	LAT-(N) 39.828864	LONG-(W) 80.672698
NAD'83 UTM (M)	N. 4,408,814.32	E. 528,008.05
<u>LANDING POINT</u>		
NAD'83 S.P.C.(FT)	N. 486,374.5	E. 1,638,408.0
NAD'83 GEO.	LAT-(N) 39.829414	LONG-(W) 80.675391
NAD'83 UTM (M)	N. 4,408,874.5	E. 527,777.4
<u>BOTTOM HOLE</u>		
NAD'83 S.P.C.(FT)	N. 476,904.3	E. 1,643,920.0
NAD'83 GEO.	LAT-(N) 39.803614	LONG-(W) 80.655332
NAD'83 UTM (M)	N. 4,406,017.5	E. 529,504.9

B.H.
A.D.

REFERENCES



NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS OR DWELLINGS > 2500 SQ. FT. WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.
- TAX MAP LOCATION FOR 9-5-9 & 9-5-10 IS INCORRECT. 9-5-9'S DEED CALLS FOR BEING A RESERVATION OF 20 ACRES LYING ON THE NORTHEAST SIDE OF ROAD. THEREFORE MAKING THE ACREAGE ASSESSMENT INCORRECT DUE TO THE OUT SALES OF 9-5-10.1 AND 9-5-10.2.
- WELL PLAT UPDATED TO SHOW AS-DRILLED PATH.
- AS-DRILLED INFORMATION PROVIDED BY EQT PRODUCTION CO.

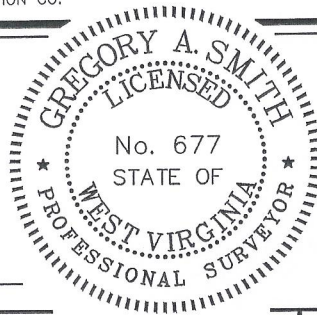


12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
 1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5295
 slswv.com

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.
677

Gregory A. Smith



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

DATE MARCH 11, 20 24

REVISED _____, 20 _____

OPERATORS WELL NO. HUDSON S-4HM

API WELL NO. **47** - **051** - **02251**
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8911P4HMAD.dwg

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: ELEVATION 1,346.26' WATERSHED GRAVE CREEK (HUC 10)

DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CNX LAND LLC ACREAGE 106.935±

ROYALTY OWNER STONE HILL MINERALS HOLDINGS LLC, ET AL ACREAGE 106.935±

PROPOSED WORK: 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: 6782' / TMD: 18,604'

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT JOSEPH C. MALLOW
 ADDRESS 400 WOODCLIFF DRIVE ADDRESS 427 MIDSTATE DRIVE
 CANONSBURG, PA 15317 CLARKSBURG, WV 26301

COUNTY NAME

PERMIT

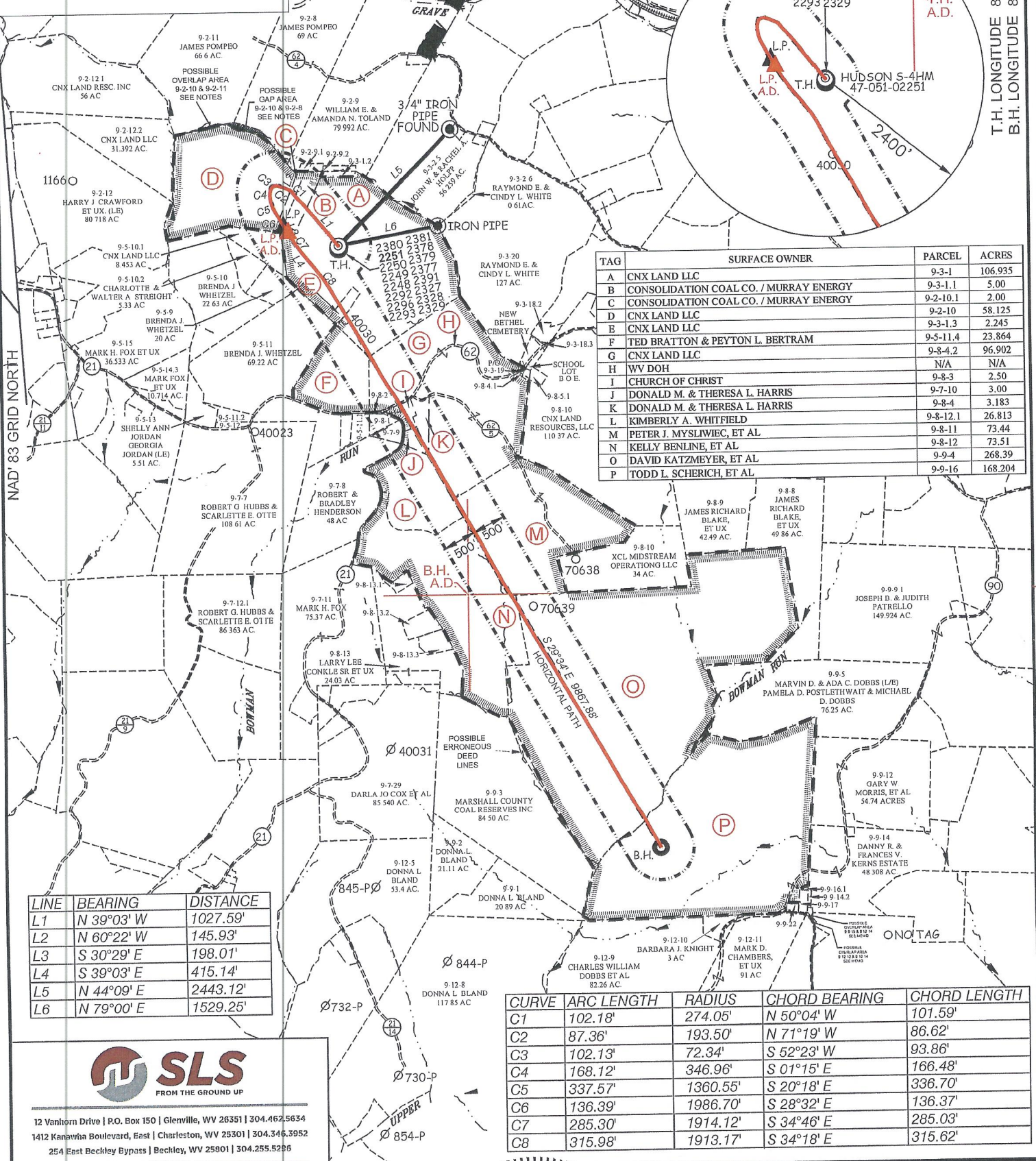
HUDSON WELL S-4HM EQT PRODUCTION CO.

LEGEND

AS DRILLED
PROPOSED

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

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



TAG	SURFACE OWNER	PARCEL	ACRES
A	CNX LAND LLC	9-3-1	106.935
B	CONSOLIDATION COAL CO. / MURRAY ENERGY	9-3-1.1	5.00
C	CONSOLIDATION COAL CO. / MURRAY ENERGY	9-2-10.1	2.00
D	CNX LAND LLC	9-2-10	58.125
E	CNX LAND LLC	9-3-1.3	2.245
F	TED BRATTON & PEYTON L. BERTRAM	9-5-11.4	23.864
G	CNX LAND LLC	9-8-4.2	96.902
H	WV DOH	N/A	N/A
I	CHURCH OF CHRIST	9-8-3	2.50
J	DONALD M. & THERESA L. HARRIS	9-7-10	3.00
K	DONALD M. & THERESA L. HARRIS	9-8-4	3.183
L	KIMBERLY A. WHITFIELD	9-8-12.1	26.813
M	PETER J. MYSLWIEC, ET AL	9-8-12	73.51
N	KELLY BENLINE, ET AL	9-9-4	268.39
O	DAVID KATZMEYER, ET AL	9-9-16	168.204
P	TODD L. SCHERICH, ET AL		

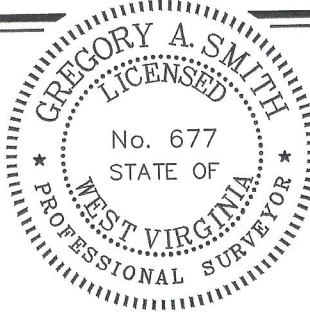
LINE	BEARING	DISTANCE
L1	N 39°03' W	1027.59'
L2	N 60°22' W	145.93'
L3	S 30°29' E	198.01'
L4	S 39°03' E	415.14'
L5	N 44°09' E	2443.12'
L6	N 79°00' E	1529.25'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	102.18'	274.05'	N 50°04' W	101.59'
C2	87.36'	193.50'	N 71°19' W	86.62'
C3	102.13'	72.34'	S 52°23' W	93.86'
C4	168.12'	346.96'	S 01°15' E	166.48'
C5	337.57'	1360.55'	S 20°18' E	336.70'
C6	136.39'	1986.70'	S 28°32' E	136.37'
C7	285.30'	1914.12'	S 34°46' E	285.03'
C8	315.98'	1913.17'	S 34°18' E	315.62'



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254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5295
sllsvw.com

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NAD'83 GEO. LAT-(N) 39.803593 LONG-(W) 80.655369
NAD'83 UTM (M) N. 4,406,015.2 E. 529,501.8



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

P.S. 677

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)

02/07/2025

SCALE 1" = 2000' FILE NO. 8911P4HMAD.dwg

DATE MARCH 11, 2024
REVISED _____, 20____
OPERATORS WELL NO. HUDSON S-4HM
API WELL NO. 47-051-02251
STATE COUNTY PERMIT

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



WELL OPERATOR EQT PRODUCTION COMPANY
ADDRESS 400 WOODCLIFF DRIVE
CANONSBURG, PA 15317

DESIGNATED AGENT JOSEPH C. MALLOW
ADDRESS 427 MIDSTATE DRIVE
CLARKSBURG, WV 26301

COUNTY NAME _____
PERMIT _____