

Well Operator's Report of Well Work



Well Number: Willett S-3HM (L027528)

API: 47 - 051 - 02415

Submission: Initial Amended

Notes: Original

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AUG 2 2024

WV Department of
Environmental Protection

11/08/2024

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

API 47 - 051 - 02415 County Marshall District Meade
Quad Glen Easton 7.5' Pad Name WILLETT Field/Pool Name N/A
Farm name CNX Land, LLC Well Number Willett S-3HM (L027528)
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 4,408,169.77 Easting 529,425.95
Landing Point of Curve Northing 4,407,648.0 Easting 530,321.1
Bottom Hole Northing 4,404,862.9 Easting 531,966.3

Elevation (ft) 1310' 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 13.82 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, ferrocchrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 10/19/2021 Date drilling commenced 06/02/2022 Date drilling ceased 10/16/2023
Date completion activities began 03/26/2024 Date completion activities ceased 05/14/2024
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A RECEIVED
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Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug AUG 2 2024

Freshwater depth(s) ft 991' Open mine(s) (Y/N) depths N WV Department of
Salt water depth(s) ft 1463' Void(s) encountered (Y/N) depths N Environmental Protection
Coal depth(s) ft 888', 986' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED

Reviewed by:
[Signature]
STRADER
9/6/2024

11/08/2024

API 47- 051 - 02415

Farm name CNX Land, LLC

Well number Willett S-3HM (L027528)

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"	1081'	NEW	J-55 54.5#	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2889'	NEW	J-55 36#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4", 8-1/2"	5-1/2"	18,776'	NEW	P-110 20#	N/A	N
Tubing							
Packer type and depth set							

Comment Details Production Cement job has a calculated TOC of 1705' 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	560	15.6	1.21	677	0	8+
Surface	CLASS A	1200	15.6	1.18	1416	0	8
Coal							
Intermediate 1	CLASS A	850	15.0	1.38	1173	0	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3425	15.0	1.18	4041	1705'	8+
Tubing							

Drillers TD (ft) 18,797' Loggers TD (ft) N/A
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 2973'

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 AND EVERY OTHER JOINT TO 22' _____

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 - 02415

Farm name CNX Land, LLC

Well number Willett S-3HM (L027528)

PERFORATION RECORD

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

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

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

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Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS	
	TVD	MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2248 psi Bottom Hole _____ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 10477 mcfpd Oil 123 bpd NGL _____ bpd Water 631 bpd GAS MEASURED BY Estimated Orifice Pilot

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

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Please insert additional pages as applicable.

Drilling Contractor Nabors Drilling (X14)
Address 143 Cresswood Drive City Clearfield State PA Zip 16830

Logging Company Baker Hughes
Address 400 Technology Dr Suite 100 City Canonsburg State PA Zip 15317

Cementing Company Halliburton
Address 121 Champion Way Suite 110 City Canonsburg State PA Zip 15317

Cementing Company Lightning Energy Services
Address 603 US Highway 19 N City Weston State WV Zip 26452

Please insert additional pages as applicable.

Completed by Adam Hughey Telephone 724-579-5475
Signature _____ Title Director of Completions Date 2024-07-17

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

11/08/2024

API 47- 051 - 02415 Farm name CNX Land, LLC Well number Willett S-3HM (L027528)

Drilling Contractor Falcon (Rig 29)
Address 1120 US-119 City Indiana State PA Zip 15701

Logging Company Nzone Guidance, LLC
Address 140 Falcon Lane City Liberty Hill State TX Zip 78642

Logging Company _____
Address _____ City _____ State _____ Zip _____

Drilling Contractor _____
Address _____ City _____ State _____ Zip _____

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Well # WILLETT S-3HM (L027528) Final Formations API# 47-051-02415				
Formation Name	Drill Top MD (ftGRD)	Drill Top (TVD) (ftGRD)	Drill Btm MD (ftGRD)	Drill Btm (TVD) (ftGRD)
Sand/Shale	1	1	889	888
Sewickley	889	888	891	890
Sand/Shale	891	890	987	986
Pittsburgh	987	986	991	990
Sand/Shale	991	990	2,099	2,095
Big Lime	2,099	2,095	2,396	2,385
Big Injun	2,396	2,385	2,451	2,438
Sand/Shale	2,451	2,438	2,726	2,698
Berea	2,726	2,698	3,144	3,099
Gordon	3,144	3,099	3,221	3,172
50F	3,221	3,172	3,339	3,280
Bayard	3,339	3,280	5,515	5,043
Alexander	5,515	5,043	5,958	5,398
Elks	5,958	5,398	6,692	5,987
Sonyea	6,692	5,987	6,975	6,217
Middlesex	6,975	6,217	7,101	6,317
Genesee	7,101	6,317	7,368	6,529
Geneseo	7,368	6,529	7,552	6,675
Tully	7,552	6,675	7,594	6,707
Hamilton	7,594	6,707	7,872	6,872
Marcellus	7,872	6,872	18,797	7,039

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**WILLETT S LEASE
3HM
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. 483,971.32 E. 1,643,778.94
NAD'83 GEO. LAT-(N) 39.823009 LONG-(W) 80.645158
NAD'83 UTM (M) N. 4,408,169.77 E. 529,425.95

LANDING POINT

NAD'83 S.P.C.(FT) N. 482,249.6 E. 1,646,685.1
NAD'83 GEO. LAT-(N) 39.818385 LONG-(W) 80.645733
NAD'83 UTM (M) N. 4,407,660.0 E. 530,320.1

BOTTOM HOLE

NAD'83 S.P.C.(FT) N. 472,969.3 E. 1,651,919.9
NAD'83 GEO. LAT-(N) 39.793091 LONG-(W) 80.626684
NAD'83 UTM (M) N. 4,404,859.4 E. 531,962.2

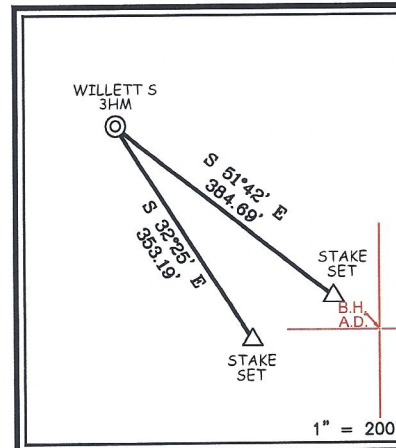
T.H. LONGITUDE 80°37'30"
B.H. LONGITUDE 80°37'30"

A.D.
T.H.

TAG	SURFACE OWNER	PARCEL	ACRES
A	CNX LAND, LLC	9-8-6	27.596
B	LARRY S. NEELY - LIFE	9-8-7.1	76.005
C	GLEN G. GORCZYCA - TOD	9-9-6	25.12
D	JOSEPH B. & JUDITH PATRELLO	9-9-9.1	149.924
E	DANNY R. & FRANCES V. KERNS ESTATE	7-1-3	58.00
F	CONSOLIDATION COAL COMPANY	7-1-4	52.00
G	DANNY R. & FRANCES V. KERNS ESTATE	7-8-2	94.00
H	GEO A. BURRIS	7-8-14	95.44
I	BLAINE E. STERN, JR.	7-8-13	104.92

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-3-17.1	BRIAN & LEAH KESTNER	11.8
9-8-5.2	AMY EVANS & KAREN WHETZAL	4.586
9-8-6.1	KAYLA E BRATTON	1.423
9-9-8.1	DIANA MAE PIATT	2.253
9-9-8.2	VINCENT PATRELLO	0.723
9-9-9	VINCENT P. PATRELLO	1.076

REFERENCES



NOTES ON SURVEY

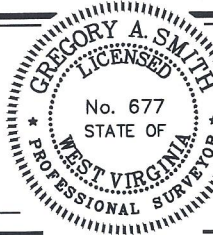
1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=200'
3. PLAT UPDATED TO SHOW AS DRILLED PATH, AS DRILLED DATA PROVIDED BY EQT PRODUCTION CO.



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5654
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.8952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.9296
sllwv.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 SEPTEMBER 2, 20 21

REVISED OCTOBER 30, 20 23

OPERATORS WELL NO. WILLETT S 3HM

API WELL NO. 47 - 051 - 02415
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 8939P3HM Asdrilled.dwg
WILLETT S 3HM-REV2
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 1,310.03' WATERSHED TRIBUTARY OF UPPER BOWMAN RUN
DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CNX LAND LLC ACREAGE 27.596±
ROYALTY OWNER APPALACHIAN BASIN MINERALS, LP, ET AL ACREAGE 27.596±

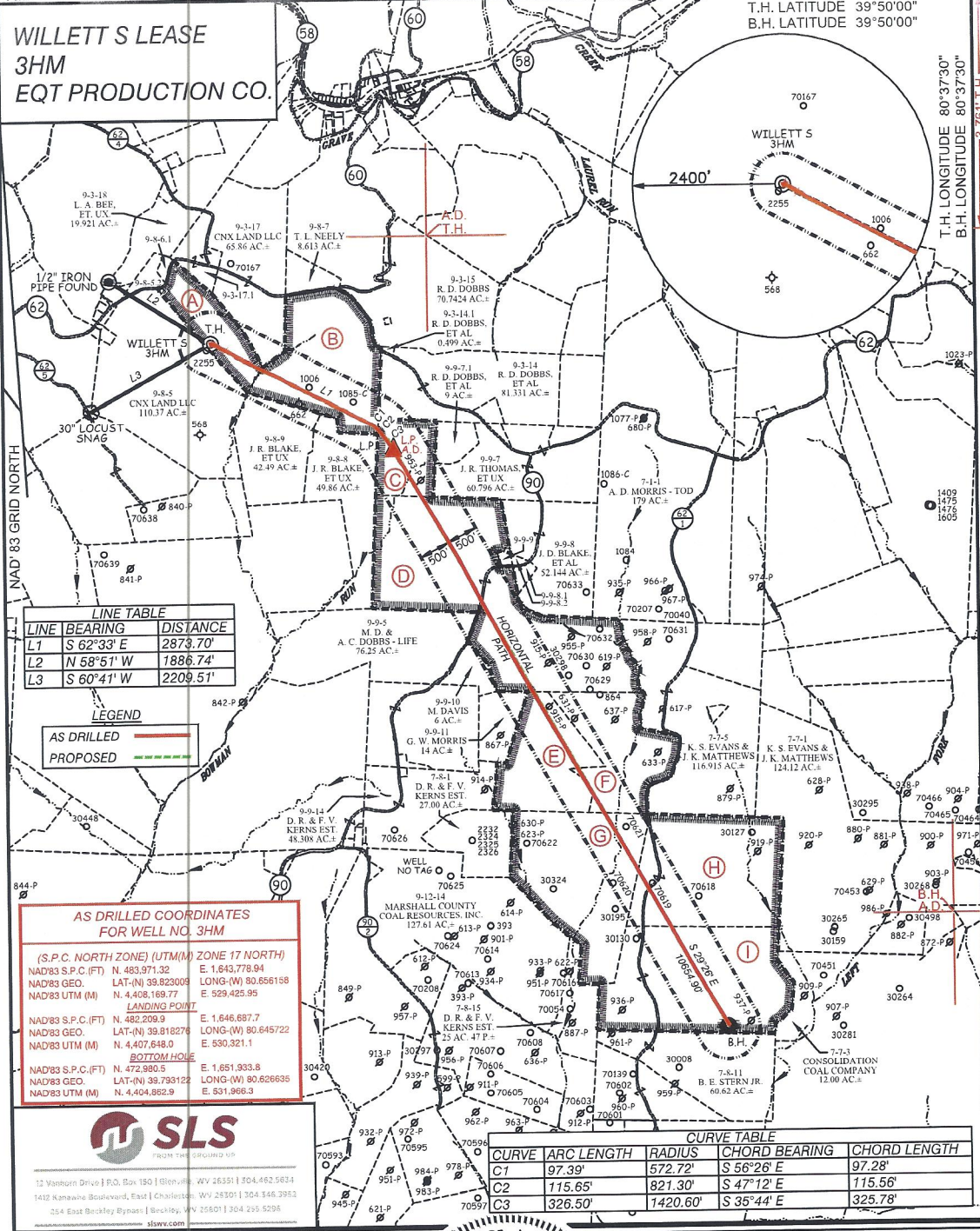
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
ESTIMATED DEPTH TVD: 7,018' / TMD: 18,749'

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

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WILLETT S LEASE
3HM
EQT PRODUCTION CO.

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

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

LINE TABLE

LINE	BEARING	DISTANCE
L1	S 62°33' E	2873.70'
L2	N 58°51' W	1886.74'
L3	S 60°41' W	2209.51'

LEGEND
 AS DRILLED (Red line)
 PROPOSED (Green dashed line)

AS DRILLED COORDINATES FOR WELL NO. 3HM

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

NAD83 S.P.C.(FT)	N. 483,971.32	E. 1,643,778.94
NAD83 GEO.	LAT-(N) 39.823009	LONG-(W) 80.656158
NAD83 UTM (M)	N. 4,408,169.77	E. 929,425.95

LANDING POINT

NAD83 S.P.C.(FT)	N. 482,209.9	E. 1,646,687.7
NAD83 GEO.	LAT-(N) 39.818279	LONG-(W) 80.645722
NAD83 UTM (M)	N. 4,407,648.0	E. 530,321.1

BOTTOM HOLE

NAD83 S.P.C.(FT)	N. 472,989.5	E. 1,651,933.8
NAD83 GEO.	LAT-(N) 39.793122	LONG-(W) 80.626696
NAD83 UTM (M)	N. 4,404,852.9	E. 531,966.3

SLS
 FROM THE SURROUNDING

12 Vannom Drive | P.O. Box 150 | Glenville, WV 26031 | 304.452.5634
 1412 Kenawha Boulevard, East | Charleston, WV 25301 | 304.546.3963
 354 East Beckley Bypass | Beckley, WV 26001 | 304.293.5298
 slsv.com

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	97.39'	572.72'	S 56°26' E	97.28'
C2	115.65'	821.30'	S 47°12' E	115.56'
C3	326.50'	1420.60'	S 35°44' E	325.78'

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

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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*

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-8A1)

SCALE 1" = 2000' FILE NO. 8939P3HM Asdrilled.dwg
 WILLETT S 3HM-REV2

DATE SEPTEMBER 2, 20 21
 REVISED OCTOBER 30, 20 23

OPERATORS WELL NO. WILLETT S 3HM

API WELL NO. 47-051-02415

STATE COUNTY PERMIT

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

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT JOSEPH C. MALLOW
 ADDRESS 400 WOODCLIFF DRIVE ADDRESS 427 MIDSTATE DRIVE
CANONSBURG, PA 15317 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	03/28/2024	18675	18524	48	Marcellus
3	03/28/2024	18495	18345	48	Marcellus
4	03/29/2024	18316	18165	48	Marcellus
5	03/29/2024	18136	17985	48	Marcellus
6	03/29/2024	17956	17806	48	Marcellus
7	03/29/2024	17777	17626	48	Marcellus
8	04/01/2024	17597	17446	48	Marcellus
9	04/02/2024	17417	17266	48	Marcellus
10	04/03/2024	17238	17087	48	Marcellus
11	04/03/2024	17058	16907	48	Marcellus
12	04/04/2024	16878	16727	48	Marcellus
13	04/04/2024	16698	16548	48	Marcellus
14	04/06/2024	16519	16368	48	Marcellus
15	04/07/2024	16339	16188	48	Marcellus
16	04/07/2024	16159	16009	48	Marcellus
17	04/07/2024	15980	15829	48	Marcellus
18	04/08/2024	15800	15649	48	Marcellus
19	04/08/2024	15620	15469	48	Marcellus
20	04/09/2024	15441	15290	48	Marcellus
21	04/09/2024	15261	15110	48	Marcellus
22	04/10/2024	15081	14930	48	Marcellus
23	04/10/2024	14901	14751	48	Marcellus
24	04/10/2024	14722	14571	48	Marcellus
25	04/11/2024	14542	14391	48	Marcellus
26	04/11/2024	14362	14212	48	Marcellus
27	04/12/2024	14183	14032	48	Marcellus
28	04/12/2024	14003	13852	48	Marcellus
29	04/13/2024	13823	13672	48	Marcellus
30	04/13/2024	13644	13493	48	Marcellus
31	04/14/2024	13464	13313	48	Marcellus
32	04/14/2024	13284	13133	48	Marcellus
33	04/15/2024	13104	12954	48	Marcellus
34	04/16/2024	12925	12774	48	Marcellus
35	04/16/2024	12745	12594	48	Marcellus
36	04/17/2024	12565	12415	48	Marcellus
37	04/18/2024	12386	12235	48	Marcellus
38	04/18/2024	12206	12055	48	Marcellus
39	04/19/2024	12026	11875	48	Marcellus
40	04/19/2024	11847	11696	48	Marcellus
41	04/20/2024	11667	11516	48	Marcellus
42	04/21/2024	11487	11336	48	Marcellus
43	04/22/2024	11307	11157	48	Marcellus
44	04/22/2024	11128	10977	48	Marcellus

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45	04/23/2024	10948	10797	48	Marcellus
46	04/23/2024	10768	10618	48	Marcellus
47	04/23/2024	10589	10438	48	Marcellus
48	04/24/2024	10409	10258	48	Marcellus
49	04/24/2024	10229	10078	48	Marcellus
50	04/25/2024	10050	9899	48	Marcellus
51	04/25/2024	9870	9719	48	Marcellus
52	04/25/2024	9690	9539	48	Marcellus
53	04/26/2024	9510	9360	48	Marcellus
54	04/28/2024	9331	9180	48	Marcellus
55	04/28/2024	9151	9000	48	Marcellus
56	04/28/2024	8971	8821	48	Marcellus
57	04/29/2024	8792	8641	48	Marcellus
58	04/29/2024	8612	8461	48	Marcellus
59	04/29/2024	8432	8281	48	Marcellus
60	04/29/2024	8253	8102	48	Marcellus
61	04/30/2024	8073	7982	32	Marcellus

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Stimulation Data

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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	03/28/2024	63	7790	9170	3817	246344	6522.86	
2	03/28/2024	87	8249	0	4525	449592	9118.90	
3	03/29/2024	88	8197	0	4999	453900	9426.57	
4	03/29/2024	88	8335	0	4897	449560	9665.79	
5	03/29/2024	98	8651	9065	5673	450303	9058.14	
6	03/29/2024	100	8732	8635	5548	451539	9144.88	
7	03/30/2024	98	8898	0	5700	449780	9888.57	
8	04/02/2024	100	8704	0	5144	451540	9091.62	
9	04/03/2024	100	8527	8734	5268	450305	9104.36	
10	04/04/2024	100	8383	0	5004	449919	9081.81	
11	04/04/2024	100	8327	9131	4746	450389	9059.55	
12	04/04/2024	100	8420	8979	5199	450425	9313.95	
13	04/06/2024	99	8600	8844	5067	449879	8977.76	
14	04/07/2024	100	8428	9214	4643	450040	9047.62	
15	04/07/2024	100	8222	7835	5182	450161	9005.95	
16	04/08/2024	100	8189	8505	5120	450110	9534.64	
17	04/08/2024	100	8237	8135	5732	450553	8998.95	
18	04/09/2024	100	8159	8771	5186	450001	9115.36	
19	04/09/2024	100	8251	8278	4961	450422	8998.36	
20	04/09/2024	100	8389	8494	4979	450381	9289.98	
21	04/10/2024	100	8539	8828	4809	450701	9025.21	
22	04/10/2024	100	8143	8503	4944	450297	9165.50	
23	04/11/2024	100	8013	8045	5103	450485	9043.17	
24	04/11/2024	100	8014	8268	4986	450182	9085.07	
25	04/11/2024	100	8174	8244	5277	451871	9260.71	
26	04/12/2024	100	8105	7975	4935	448024	8974.38	
27	04/12/2024	100	8162	8507	4978	450455	8981.57	
28	04/13/2024	100	8294	8566	4827	450417	8925.17	
29	04/14/2024	100	8111	0	5367	450806	9012.00	
30	04/14/2024	100	8065	8114	5112	450481	9179.36	
31	04/14/2024	100	7912	0	5361	450839	8955.98	
32	04/15/2024	100	7923	7751	4774	450284	8930.10	
33	04/16/2024	100	7648	0	4895	450280	8955.76	
34	04/16/2024	99	7997	0	4708	451320	8963.40	
35	04/17/2024	97	8140	0	3895	451340	9472.52	
36	04/18/2024	100	8207	8398	4689	450003	8886.88	
37	04/18/2024	100	7334	7958	5100	450474	8963.86	
38	04/19/2024	100	7420	7997	4886	450377	8893.12	
39	04/19/2024	100	7730	0	4608	449500	9354.19	
40	04/20/2024	100	7809	0	4777	449880	8900.21	
41	04/21/2024	99	7931	0	5656	450450	9402.02	
42	04/22/2024	101	7385	8744	5014	451292	8884.21	
43	04/22/2024	100	7740	9194	5154	450635	8866.45	

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44	04/23/2024	100	7477	8542	5317	449705	8846.69
45	04/23/2024	100	7503	8427	5024	450099	8924.79
46	04/24/2024	100	7415	8265	5050	450278	9015.69
47	04/24/2024	100	7609	8650	4980	450011	8800.64
48	04/24/2024	100	7182	8719	5300	450060	9170.64
49	04/25/2024	100	7095	7876	5060	450267	9025.81
50	04/25/2024	101	7531	7702	4630	450060	8905.45
51	04/25/2024	100	7921	9065	5679	450105	8848.05
52	04/26/2024	101	7518	9430	4957	450502	9023.12
53	04/28/2024	34	8128	8619	6183	35988	13782.19
54	04/28/2024	93	7490	8965	5255	449706	8831.74
55	04/29/2024	100	7446	8113	4988	450031	8692.36
56	04/29/2024	100	7310	8040	5097	450213	8667.52
57	04/29/2024	100	7303	7420	4630	450006	9145.86
58	04/29/2024	101	7136	7200	5005	450380	8783.88
59	04/29/2024	101	7367	5664	4830	450008	8843.67
60	04/30/2024	100	7522	8199	4833	450119	8798.88
61	04/30/2024	85	7495	0	5312	299781	5990.95

11/08/2024

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	03/26/2024
Job End Date:	04/30/2024
State:	West Virginia
County:	Marshall
API Number:	47-051-02415-00-00
Operator Name:	EQT Production
Well Name and Number:	Willett S-3HM
Latitude:	39.823009
Longitude:	-80.656158
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7072
Total Base Water Volume (gal)*:	23168224.38
Total Base Non Water Volume:	0



Water Source	Percent
--------------	---------

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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	87.70746	None
Sand (Proppant)	EQT	Proppant					
			Silica Substrate	14808-60-7	100.00000	12.11365	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Copolymer of 2-propenamamide	Proprietary	30.00000	0.00992	None
Clearal 268	ChemStream	Biocide					
			Non-hazardous substances	Proprietary	80.00000	0.00881	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			Non-hazardous substances	Proprietary	90.00000	0.00752	None
StimSTREAM	ChemStream	Friction					

11/08/2024

FR 9800		Reducer					
			Petroleum Distillate	64742-47-8	20.00000	0.00441	None
HCR-7000 WL	Fluid Energy Group Ltd.	Synthetic Acid					
			Proprietary	Proprietary	20.00000	0.00182	None
Clearal 268	ChemStream	Biocide					
			Glutaraldehyde	111-30-8	20.00000	0.00055	None
HCR-7000 WL	Fluid Energy Group Ltd.	Synthetic Acid					
			Proprietary	Proprietary	10.00000	0.00046	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			Bis(HexaMethylene Triamine Penta(Methylene Phosphonic Acid) (BHMT)	34690-00-1		0.00009	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Oleic Acid Diethanolamide	93-83-4	2.00000	0.00004	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Alcohols, C12-16, ethoxylated	68551-12-2	2.00000	0.00004	None
Clearal 268	ChemStream	Biocide					
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00001	None
Clearal 268	ChemStream	Biocide					
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00001	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Ammonium chloride ((NH4)Cl)	12125-02-9	1.00000	0.00001	None
Clearal 268	ChemStream	Biocide					
			Ethanol	64-17-5	1.50000	0.00000	None

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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)

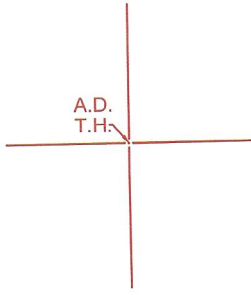
11/08/2024

**WILLETT S LEASE
3HM
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. 483,971.32	E. 1,643,778.94
NAD'83 GEO.	LAT-(N) 39.823009	LONG-(W) 80.656158
NAD'83 UTM (M)	N. 4,408,169.77	E. 529,425.95
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 482,249.6	E. 1,646,685.1
NAD'83 GEO.	LAT-(N) 39.818385	LONG-(W) 80.645733
NAD'83 UTM (M)	N. 4,407,660.0	E. 530,320.1
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 472,969.3	E. 1,651,919.9
NAD'83 GEO.	LAT-(N) 39.793091	LONG-(W) 80.626684
NAD'83 UTM (M)	N. 4,404,859.4	E. 531,962.2



T.H. LONGITUDE 80°37'30"
B.H. LONGITUDE 80°37'30"
3,761' T.H.

14,647' B.H.

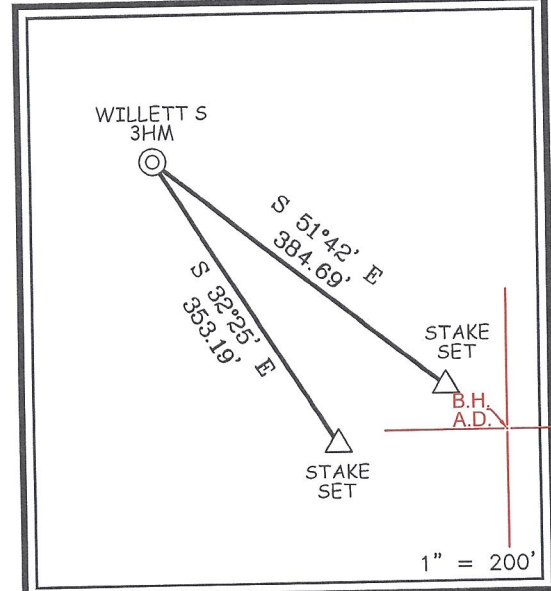
8,751' T.H.

459' B.H.

TAG	SURFACE OWNER	PARCEL	ACRES
A	CNX LAND, LLC	9-8-6	27.596
B	LARRY S. NEELY - LIFE	9-8-7.1	76.005
C	GLEN G. GORCZYCA - TOD	9-9-6	25.12
D	JOSEPH B. & JUDITH PATRELLO	9-9-9.1	149.924
E	DANNY R. & FRANCES V. KERNS ESTATE	7-1-3	58.00
F	CONSOLIDATION COAL COMPANY	7-1-4	52.00
G	DANNY R. & FRANCES V. KERNS ESTATE	7-8-2	94.00
H	GEO A. BURRIS	7-8-14	95.44
I	BLAINE E. STERN, JR.	7-8-13	104.92

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-3-17.1	BRIAN & LEAH KESTNER	11.8
9-8-5.2	AMY EVANS & KAREN WHEIZAL	4.586
9-8-6.1	KAYLA E. BRATTON	1.423
9-9-8.1	DIANA MAE PIATT	2.253
9-9-8.2	VINCENT PATRELLO	0.723
9-9-9	VINCENT P. PATRELLO	1.076

REFERENCES



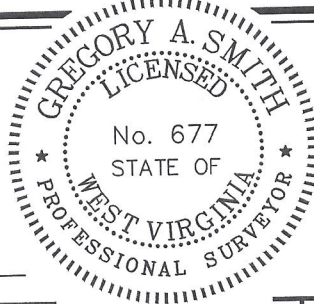
NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'
- PLAT UPDATED TO SHOW AS DRILLED PATH. AS DRILLED DATA 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 | 304.346.8952
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. 677

Gregory A. Smith

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
DATE SEPTEMBER 2, 20 21
REVISED OCTOBER 30, 20 23
OPERATORS WELL NO. WILLETT S 3HM
API WELL NO. 47 — 051 — 02415
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8939P3HM Asdrilled.dwg
WILLETT S 3HM-REV2
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

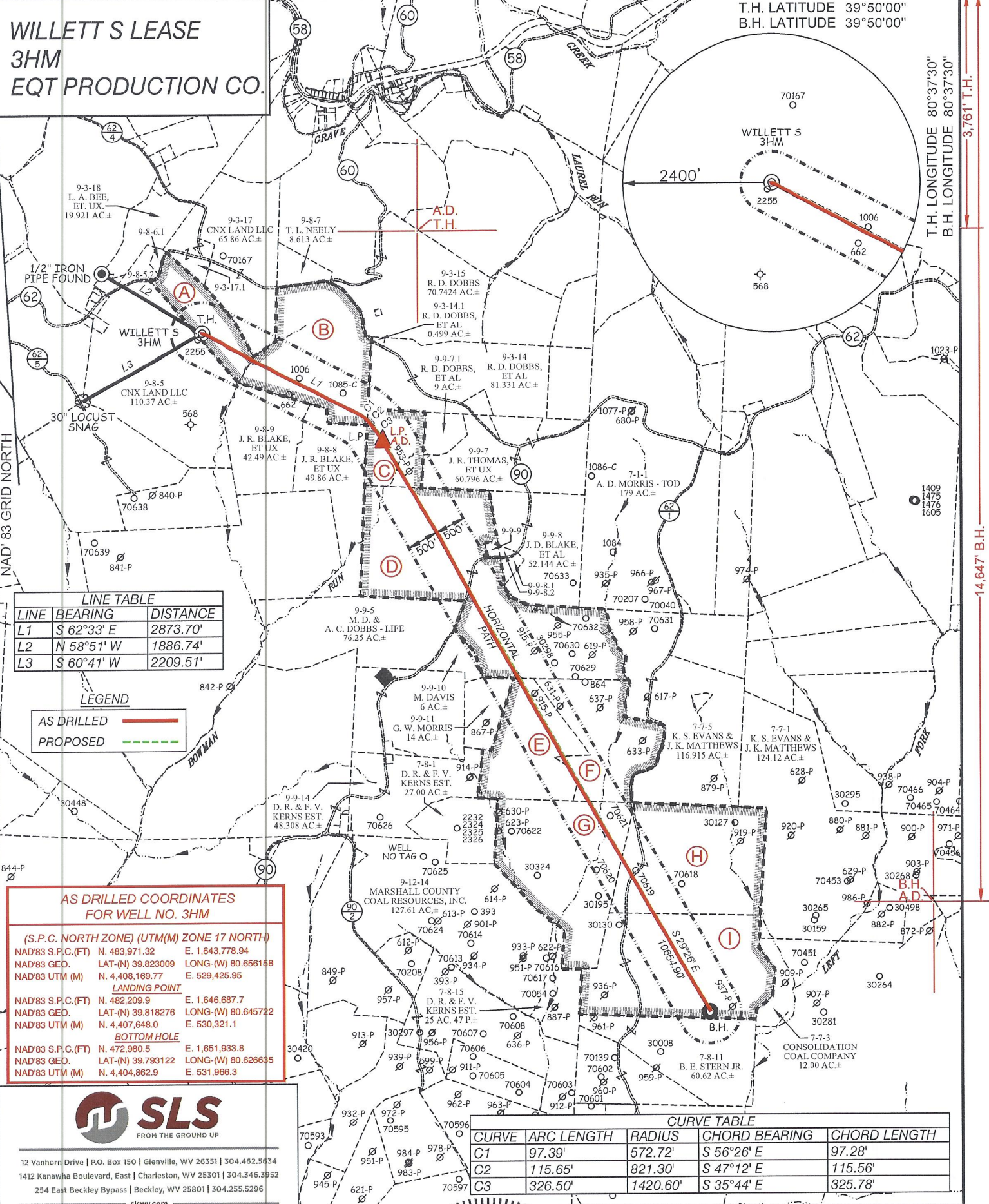
LOCATION: ELEVATION 1,310.03' WATERSHED TRIBUTARY OF UPPER BOWMAN RUN
DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CNX LAND LLC ACREAGE 27.596±
ROYALTY OWNER APPALACHIAN BASIN MINERALS, LP, ET AL ACREAGE 11/08/2024
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: 7,018' / TMD: 18,749'

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



**WILLETT S LEASE
3HM
EQT PRODUCTION CO.**

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

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

LINE TABLE

LINE	BEARING	DISTANCE
L1	S 62°33' E	2873.70'
L2	N 58°51' W	1886.74'
L3	S 60°41' W	2209.51'

LEGEND

AS DRILLED

PROPOSED

AS DRILLED COORDINATES FOR WELL NO. 3HM

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

NAD'83 S.P.C.(FT)	N. 483,971.32	E. 1,643,778.94
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NAD'83 UTM (M)	N. 4,408,169.77	E. 529,425.95
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 482,209.9	E. 1,646,687.7
NAD'83 GEO.	LAT-(N) 39.818276	LONG-(W) 80.645722
NAD'83 UTM (M)	N. 4,407,648.0	E. 530,321.1
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 472,980.5	E. 1,651,933.8
NAD'83 GEO.	LAT-(N) 39.793122	LONG-(W) 80.626635
NAD'83 UTM (M)	N. 4,404,862.9	E. 531,966.3

SLS
FROM THE GROUND UP

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

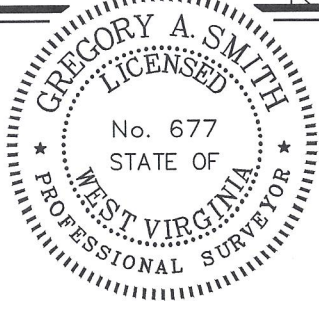
slsww.com

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	97.39'	572.72'	S 56°26' E	97.28'
C2	115.65'	821.30'	S 47°12' E	115.56'
C3	326.50'	1420.60'	S 35°44' E	325.78'

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

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

P.S. 677 *Gregory A. Smith*

LEGEND

LEASE LINE	
SURFACE LINE	
WELL LATERAL	
OFFSET LINE	
TIE LINE	
CREEK	
ROAD	
COUNTY ROUTE	
PROPOSED WELL	
EXISTING WELL	
PERMITTED WELL	
TAX MAP-PARCEL	00-00
SURFACE OWNER (SEE TABLE)	
LEASE # (SEE WW-6A1)	

SCALE 1" = 2000' FILE NO. 8939P3HM Asdrilled.dwg
WILLETT S 3HM-REV2

DATE SEPTEMBER 2, 20 21
REVISED OCTOBER 30, 20 23

OPERATORS WELL NO. WILLETT S 3HM
API WELL NO. 47-051-02415
STATE COUNTY PERMIT

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

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