

Well Operator's Report of Well Work



Well Number: Breckenridge S-19HU

API: 47 - 051 - 02398

Submission: Initial Amended

Notes:

RECEIVED
Office of Oil and Gas
JAN 29 2024
WV Department of
Environmental Protection

02/23/2024

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

API 47-051-02398 County Marshall District Cameron
Quad Glen Easton 7.5' Pad Name Breckenridge Field/Pool Name _____
Farm name CNX Land, LLC Well Number Breckenridge S-19HU
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 4,408,985.65 Easting 531,947.73
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1,370' 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.

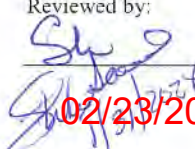
Date permit issued 11/17/2021 Date drilling commenced ^{spud: 2/11/2022 big rig: 8/23/2022} 9/25/2022 Date drilling ceased 9/25/2022
Date completion activities began 9/12/2023 Date completion activities ceased 10/30/2023
Verbal plugging (Y/N) N Date permission granted NA Granted by NA

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

Freshwater depth(s) ft 1,081' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,548' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 985' & 1,075' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED

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Reviewed by:

02/23/2024

API 47-051 - 02398 Farm name CNX Land, LLC Well number Breckenridge S-19HU

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grad wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	38"	30"	120'	NEW	118.65#	N/A	Y
Surface	26"	20"	1,160'	NEW	106.5#	N/A	Y
Coal	26"	20"	1,160'	NEW	106.5#	N/A	Y
Intermediate 1	17 1/2"	13 3/8"	3,015'	NEW	54.5#	N/A	Y
Intermediate 2	12 1/4"	9 5/8"	10,938'	NEW	47#	N/A	Y
Intermediate 3							
Production	8 1/2"	5 1/2"	23,730'	NEW	23#	N/A	Y
Tubing							
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	A	400	15.6	1.21	484	0	8
Surface	A	2008	15.6	1.18	2369	0	8
Coal	A	2008	15.6	1.18	2369	0	8
Intermediate 1	A	2359	15.6	1.18	2783	0	8
Intermediate 2	A	4210	14.5	1.31	5515	0	8
Intermediate 3							
Production	A	5765	16.5	1.03	5937	0	8
Tubing							

Drillers TD (ft) 23,773' Loggers TD (ft) N/A
 Deepest formation penetrated Utica Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 10,985'

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 _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

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Well # BRECKENRIDGE S-19HU (L027199) Final Formations API# 47-051-02398				
Formation Name	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)	Drill Btm MD (ftKB)	Drill Btm (TVD) (ftKB)
Sand/Shale	1	1	985	985
Sewickley Coal	985	985	1,075	1,075
Pittsburgh Coal	1,075	1,075	1,081	1,081
Sand/Shale	1,081	1,081	2,005	2,005
Maxton	2,005	2,005	2,207	2,207
Big Lime	2,207	2,207	2,328	2,328
Big Injun	2,328	2,328	2,619	2,619
Weir	2,619	2,619	2,821	2,821
Berea	2,821	2,821	3,077	3,077
Gordon	3,077	3,077	3,176	3,176
Fifty Foot	3,176	3,176	3,743	3,742
Spechley	3,743	3,742	5,236	5,233
Benson	5,236	5,233	5,634	5,631
Alexander	5,634	5,631	6,264	6,261
Rhinestreet	6,264	6,261	6,752	6,749
Middlesex	6,752	6,749	6,821	6,818
Geneseo	6,821	6,818	6,855	6,852
Tully	6,855	6,852	6,882	6,879
Hamilton	6,882	6,879	6,978	6,975
Marcellus	6,978	6,975	7,028	7,025
Onondaga	7,028	7,025	7,244	7,241
Oriskany	7,244	7,241	7,380	7,376
Helderberg	7,380	7,376	7,735	7,726
Salina	7,735	7,726	8,863	8,795
Lockport	8,863	8,795	9,245	9,159
Rose Hill	9,245	9,159	9,555	9,449
Packer Shell	9,555	9,449	9,801	9,676
Clinton/Tuscarora	9,801	9,676	9,908	9,775
Juniata/Queenston	9,908	9,775	10,776	10,594
Reedsville	10,776	10,594	11,888	11,622
Utica	11,888	11,622	23,773	12,125

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**BRECKENRIDGE S LEASE
UTICA UNIT - 352.75 AC±
WELL 19HU
EQT PRODUCTION CO.**

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

T.H.
A.D.

TAG	SURFACE OWNER	PARCEL	ACRES
A	CONSOL MINING COMPANY LLC	3-19-76	53.25
B	CONSOL MINING COMPANY LLC	3-19-74	44.59
C	CONSOL MINING COMPANY LLC	3-19-78	30.927
D	CONSOL MINING COMPANY LLC	3-19-79	10.75
E	XCL PROCESSING OPERATING LLC	3-19-81	26.52
F	SONIA J. STROPE	3-19-77	46.783
G	NANCY L. PARSONS - LIFE	7-1-7	40.86
H	SONIA J. STROPE	3-18-3	74.757
I	JEREMY HILL & BRITTA HILL	3-18-3.4	4.78
J	CAROL J. EVANS - LIFE	3-18-3.1	1.173
K	NANCY L. PARSONS - LIFE	7-1-9	4.94
L	NANCY L. PARSONS - LIFE	7-1-10	1.00
M	NANCY L. PARSONS - LIFE	7-1-8	33.00
N	MOLLY KAY HUBBS COLLINS, ET AL	7-1-11	98.44
O	OLIVIA SUZANNE HUBBS	7-1-12	17.68
P	OLIVIA SUZANNE HUBBS	7-1-13	120.937
Q	MOLLY KAY HUBBS COLLINS, ET AL	7-1-15	57.32
R	MOLLY KAY HUBBS COLLINS, ET AL	7-1-16	54.44
S	JEFFREY L. ALBRIGHT	7-1-17	57.17
T	JEAN JAMISON	7-1-19	51.89
U	BEVERLY MAE DAVIS	7-2-4	58.08
V	JEAN JAMISON	7-7-9.1	97.896
W	WILLARD JUNIOR EVANS & ROSE MARIE EVANS - LIFE	7-7-9	2.214

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

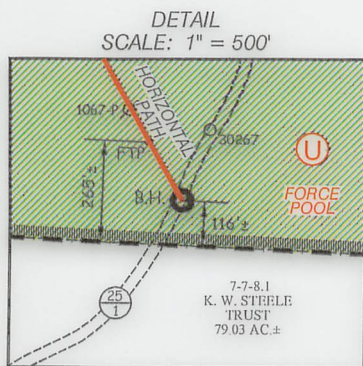
NAD'83 S.P.C.(FT)	N. 486,510.28	E. 1,652,098.87
NAD'83 GEO.	LAT-(N) 39.830269	LONG-(W) 80.626651
NAD'83 UTM (M)	N. 4,408,985.65	E. 531,947.73
LANDING POINT/LTP		
NAD'83 S.P.C.(FT)	N. 485,978.9	E. 1,650,974.7
NAD'83 GEO.	LAT-(N) 39.828771	LONG-(W) 80.630630
NAD'83 UTM (M)	N. 4,408,818.0	E. 531,608.0
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 476,216.0	E. 1,656,467.5
NAD'83 GEO.	LAT-(N) 39.802159	LONG-(W) 80.610644
NAD'83 UTM (M)	N. 4,405,871.7	E. 533,331.1

T.H. LONGITUDE 80°37'30"
B.H. LONGITUDE 80°35'00"

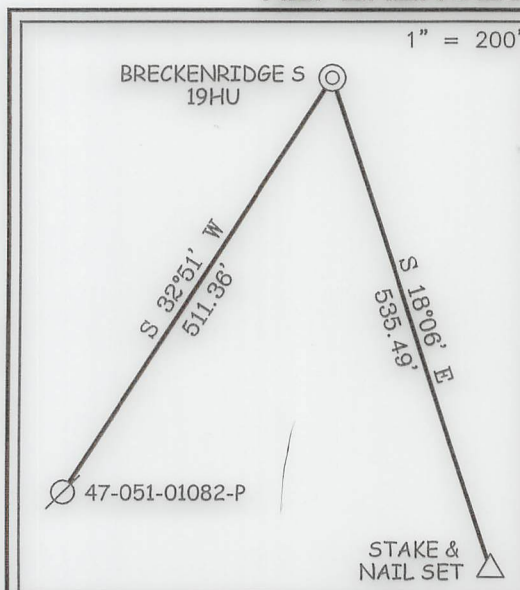
MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
3-18-3.2	DAVID L. & ARIANNE R. ROBINSON	1.886
3-18-3.3	DAVID L. & ARIANNE R. ROBINSON	16.884
3-18-4	CHARLES JARED STROPE	7.25
3-18-5	MOLLY KAY HUBBS COLLINS & OLIVIA SUZANNE HUBBS	25.372
3-18-38	OLIVIA SUZANNE HUBBS	0.433

LEGEND

AS DRILLED	
PROPOSED	



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 ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF PROPOSED BRECKENRIDGE S-19HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF PROPOSED OR EXISTING WELLS:
PROPOSED BRECKENRIDGE S-17HU,
PROPOSED BRECKENRIDGE S-18HU,
PROPOSED BRECKENRIDGE S-20HU,
PROPOSED BRECKENRIDGE S-21HU,
PROPOSED BRECKENRIDGE S-22HU,
PROPOSED BRECKENRIDGE S-23HU.
- WELL PLAT UPDATED TO SHOW AS-DRILLED PATH.
- AS-DRILLED INFORMATION PROVIDED BY EQT PRODUCTION CO.



12 Vanhorn Drive | P.O. Box 150 | Glenview, 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



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE JANUARY 23, 20 24
REVISED _____
OPERATORS WELL NO. BRECKENRIDGE S-19HU
API WELL NO. 47 - 051 - 02398
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9026P19HUAD.dwg
BRECKENRIDGE S-19HU-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 X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP X SHALLOW ___

LOCATION: ELEVATION 1,370.61' WATERSHED GRAVE CREEK (HUC 10) & LAUREL RUN
DISTRICT CAMERON COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CONSOL MINING COMPANY LLC ACREAGE 53.25±
ROYALTY OWNER HASAN'S VENTURES, ET AL ACREAGE 53.25±

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION POINT PLEASANT
ESTIMATED DEPTH TVD: 12,102' / TMD: 23,745'

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

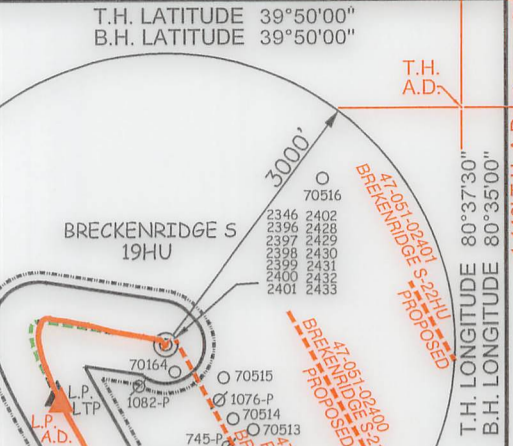
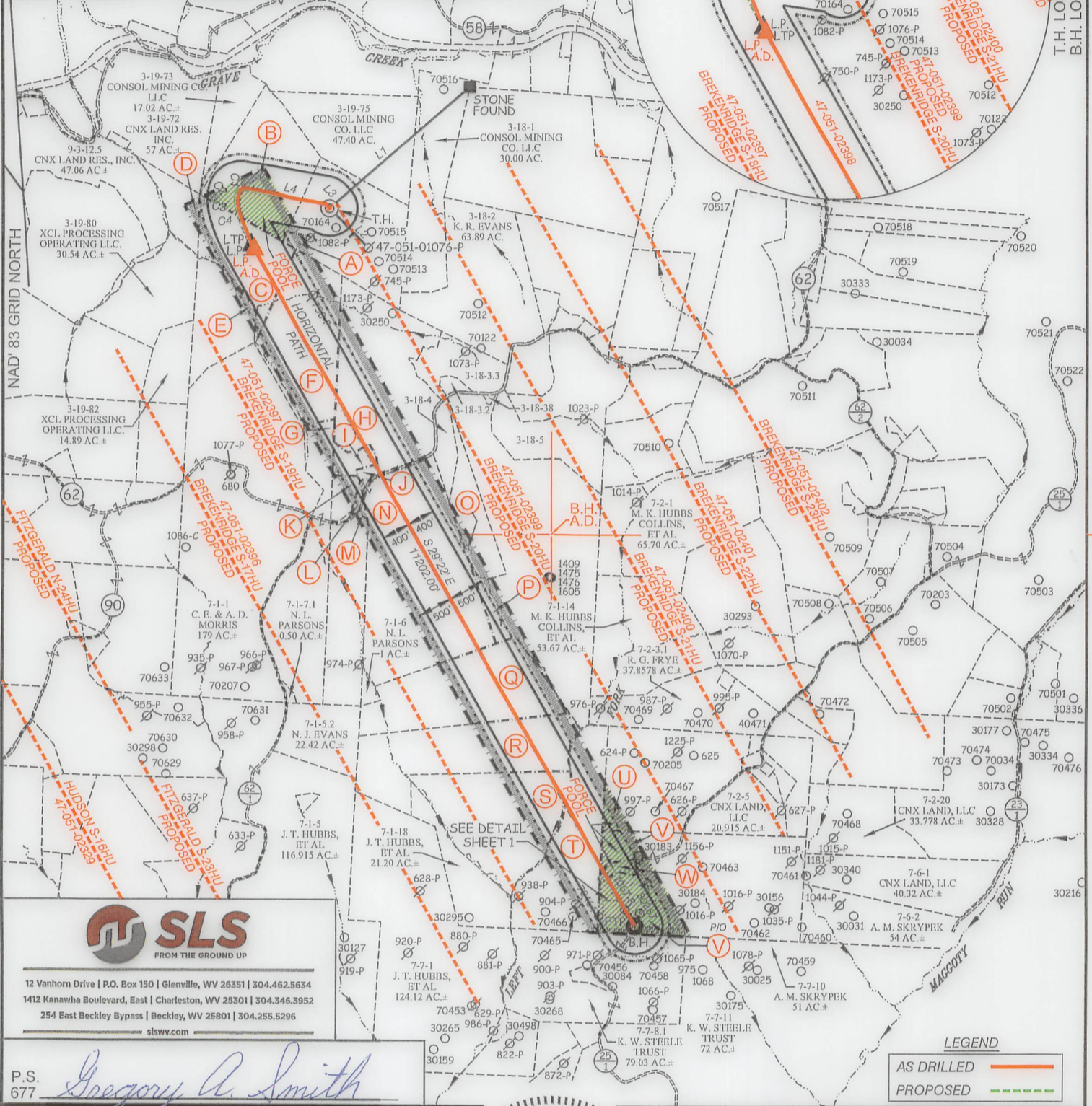
PERMIT

02/23/2024

**BRECKENRIDGE S LEASE
UTICA UNIT - 352.75 AC±
WELL 19HU
EQT PRODUCTION CO.**

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 48°57' E	2657.13'
L2	S 43°54' E	796.04'
L3	N 44°02' W	86.36'
L4	N 79°48' W	1211.37'

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	117.15'	80.18'	S 56°20' W	107.01'
C2	37.90'	192.27'	S 13°19' W	37.84'
C3	190.92'	589.05'	S 04°22' E	190.08'
C4	565.57'	1929.66'	S 22°02' E	563.55'



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1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsww.com

P.S. 677 *Gregory A. Smith*



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

LEGEND	
EXTERIOR UNIT BOUNDARY	
INTERIOR LEASE BOUNDARY	
SURFACE UTICA	
PROPOSED UTICA	
WELL LATERAL	
400' OFFSET LINE	
500' OFFSET LINE	
TIE LINE	
CREEK	
ROAD	
FORCE POOL TRACT	
PROPOSED FIRST TAKE POINT	
PROPOSED LAST TAKE POINT	
PROPOSED WELL	
EXISTING WELL	
PERMITTED WELL	
SURFACE OWNER (SEE TABLE)	
LEASE # (SEE ADDITIONAL SHEETS)	

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)		
NAD'83 S.P.C.(FT)	N. 486,510.28	E. 1,652,098.87
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SCALE 1" = 2000' FILE NO. 9026P19HUAD.dwg
BRECKENRIDGE S-19HU-REV6
DATE JANUARY 23, 2024
REVISED
OPERATORS WELL NO. BRECKENRIDGE S-19HU
API WELL NO. 47-051-02398
NO. 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

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slsvv.com

NO.	Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Book/Page	
1	10*31241	3-19-76	A	JAMES R WAYT, ET AL	729	40
2	**FORCE POOL**	3-19-74	B	KATHERINE ZOGG OLIVER	663	449
3	10*25525	3-19-78	C	JAN MARIE CREGO, ET AL	939	601
4	10*22872	3-19-79	D	OKEY RAY GILBERT SR, ET AL	974	210
5	10*25525	3-19-81	E	JAN MARIE CREGO, ET AL	939	601
6	10*25525	3-19-77	F	JAN MARIE CREGO, ET AL	939	601
7	10*23798	7-1-7	G	WILLIAM E PARSONS AND NANCY L PARSONS	1011	489
8	10*17925	3-18-3	H	BOUNTY MINERALS LLC	928	393
9	10*17925	3-18-3.4	I	BOUNTY MINERALS LLC	928	393
10	10*17925	3-18-3.1	J	BOUNTY MINERALS LLC	928	393
11	10*17925	7-1-9	K	BOUNTY MINERALS LLC	928	393
12	10*17925	7-1-10	L	BOUNTY MINERALS LLC	928	393
13	10*17925	7-1-8	M	BOUNTY MINERALS LLC	928	393
14	10*17925	7-1-11	N	BOUNTY MINERALS LLC	928	393
15	10*17925	7-1-12	O	BOUNTY MINERALS LLC	928	393
16	10*17925	7-1-13	P	BOUNTY MINERALS LLC	928	393
17	10*17925	7-1-15	Q	BOUNTY MINERALS LLC	928	393
18	10*17925	7-1-16	R	BOUNTY MINERALS LLC	928	393
19	10*17925	7-1-17	S	BOUNTY MINERALS LLC	928	393
20	10*17925	7-1-19	T	BOUNTY MINERALS LLC	928	393
21	**FORCE POOL**	7-2-4	U	DAVID W MITCHELL, ETAL	1105	1
22	**FORCE POOL**	7-7-9.1	V	CONSTANCE LINT, ET AL	747	86
23	**FORCE POOL**	7-7-9	W	CONSTANCE LINT, ET AL	747	86

LEGEND

AS DRILLED	
PROPOSED	

AS DRILLED COORDINATES
FOR WELL NO. 19HU

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

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<u>LANDING POINT</u>		
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NAD'83 UTM (M)	N. 4,408,800.0	E. 531,621.2
<u>BOTTOM HOLE</u>		
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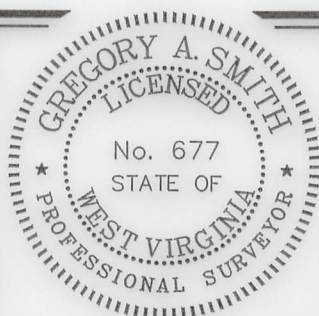
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DATE JANUARY 23, 20 24

REVISED _____

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API WELL NO. 47 — 051 — 02398
STATE COUNTY PERMIT



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DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



P.S. 677

Gregory A. Smith

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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464' T.H. A.D.

T.H. A.D.

T.H. LONGITUDE 80°37'30"
B.H. LONGITUDE 80°35'00"

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T	JEAN JAMISON	7-1-19	51.89
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V	JEAN JAMISON	7-7-9.1	97.896
W	WILLARD JUNIOR EVANS & ROSE MARIE EVANS - LIFE	7-7-9	2.214

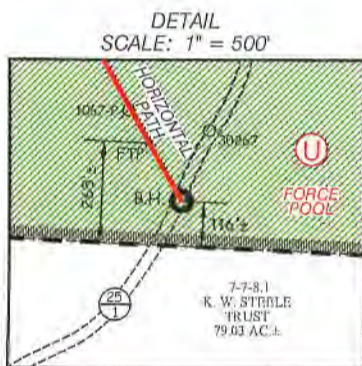
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'83 S.P.C.(FT)	N. 486,510.28	E. 1,652,098.87
NAD'83 GEO.	LAT-(N) 39.830269	LONG-(W) 80.626651
NAD'83 UTM (M)	N. 4,408,985.65	E. 531,947.73
LANDING POINT/LTP		
NAD'83 S.P.C.(FT)	N. 485,978.9	E. 1,650,974.7
NAD'83 GEO.	LAT-(N) 39.828771	LONG-(W) 80.630630
NAD'83 UTM (M)	N. 4,408,818.0	E. 531,608.0
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 476,216.0	E. 1,656,467.5
NAD'83 GEO.	LAT-(N) 39.802159	LONG-(W) 80.610644
NAD'83 UTM (M)	N. 4,405,871.7	E. 533,331.1

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
3-18-3.2	DAVID L. & ARIANNE R. ROBINSON	1.886
3-18-3.3	DAVID L. & ARIANNE R. ROBINSON	16.884
3-18-4	CHARLES JARED STROPE	7.25
3-18-5	MOLLY KAY HUBBS COLLINS & OLIVIA SUZANNE HUBBS	25.372
3-18-38	OLIVIA SUZANNE HUBBS	0.433

LEGEND

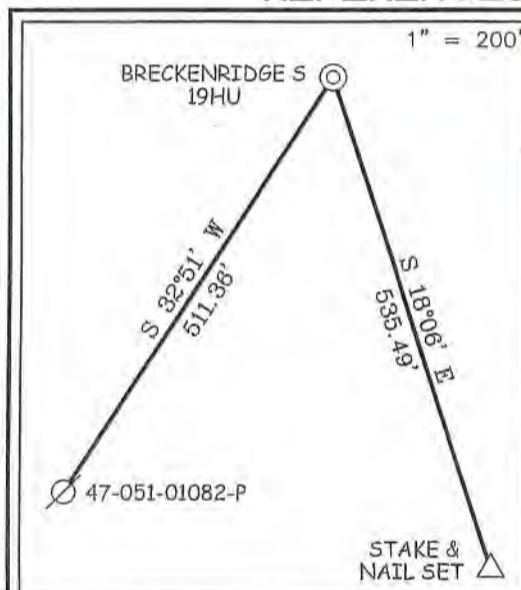
AS DRILLED ———
PROPOSED - - - - -



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 ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF PROPOSED BRECKENRIDGE S-19HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF PROPOSED OR EXISTING WELLS:
PROPOSED BRECKENRIDGE S-17HU,
PROPOSED BRECKENRIDGE S-18HU,
PROPOSED BRECKENRIDGE S-20HU,
PROPOSED BRECKENRIDGE S-21HU,
PROPOSED BRECKENRIDGE S-22HU,
PROPOSED BRECKENRIDGE S-23HU.
- WELL PLAT UPDATED TO SHOW AS-DRILLED PATH.
- AS-DRILLED INFORMATION PROVIDED BY EQT PRODUCTION CO.

REFERENCES



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26331 | 304.462.3634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.546.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
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 JANUARY 23, 2024
REVISED _____
OPERATORS WELL NO. BRECKENRIDGE S-19HU
API WELL NO. 47 - 051 - 02398
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9026P19HUAD.dwg
BRECKENRIDGE S-19HU-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 INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1,370.61' WATERSHED GRAVE CREEK (HUC 10) & LAUREL RUN
DISTRICT CAMERON COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CONSOL MINING COMPANY LLC ACREAGE 53.25±
ROYALTY OWNER HASAN'S VENTURES, ET AL ACREAGE 02/23/2024

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 POINT PLEASANT
ESTIMATED DEPTH TVD: 12,102' / TMD: 23,745'

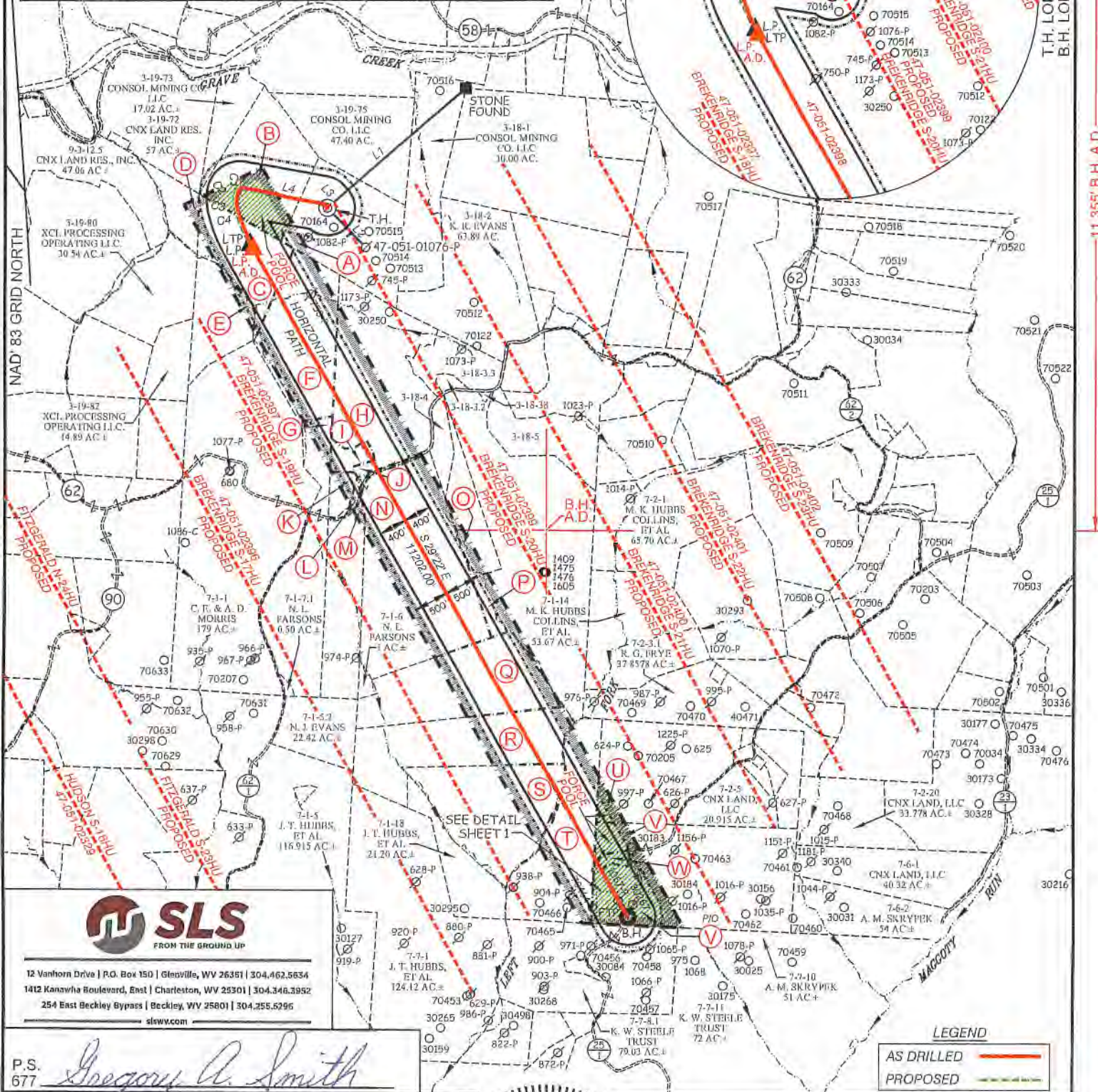
WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT JOSEPH C. MALLOW
ADDRESS 400 WOODCLIFF DRIVE ADDRESS 427 MIDSTATE DRIVE
CANONSBURG, PA 15317 CLARKSBURG, WV 26301

COUNTY NAME
PERMIT

**BRECKENRIDGE S LEASE
UTICA UNIT - 352.75 AC±
WELL 19HU
EQT PRODUCTION CO.**

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 48°57' E	2657.13'
L2	S 43°54' E	796.04'
L3	N 44°02' W	86.36'
L4	N 79°48' W	1211.37'

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	117.15'	80.18'	S 56°20' W	107.01'
C2	37.90'	192.27'	S 13°19' W	37.84'
C3	190.92'	589.05'	S 04°22' E	190.08'
C4	565.57'	1929.66'	S 22°02' E	563.55'



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
slsw.com

P.S. 677 *Gregory A. Smith*



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

LEGEND

- EXTERIOR UNIT BOUNDARY
- INTERIOR LEASE BOUNDARY
- SURFACE LINE
- PROPOSED UTICA WELL LATERAL
- 400' OFFSET LINE
- 500' OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- FORCE POOL TRACT
- PROPOSED FIRST TAKE POINT
- PROPOSED LAST TAKE POINT
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE ADDITIONAL SHEETS)

02/23/2024

SCALE 1" = 2000' FILE NO. 9028P19HUAD.dwg
BRECKENRIDGE S-19HU-REV6
DATE JANUARY 23, 2024
REVISED
OPERATORS WELL NO. BRECKENRIDGE S-19HU
API WELL NO. 47-051-02398
STATE COUNTY PERMIT

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



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

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

COUNTY NAME PERMIT

**BRECKENRIDGE S LEASE
UTICA UNIT - 352.75 AC±
WELL 19HU
EQT PRODUCTION CO.**



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1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slwv.com

NO.	Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Book/Page
1	10*31241	3-19-76	A	JAMES R WAYT, ET AL	729 40
2	**FORCE POOL**	3-19-74	B	KATHERINE ZOGG OLIVER	663 449
3	10*25525	3-19-78	C	JAN MARIE CREGO, ET AL	939 601
4	10*22872	3-19-79	D	OKEY RAY GILBERT SR, ET AL	974 210
5	10*25525	3-19-81	E	JAN MARIE CREGO, ET AL	939 601
6	10*25525	3-19-77	F	JAN MARIE CREGO, ET AL	939 601
7	10*23798	7-1-7	G	WILLIAM E PARSONS AND NANCY L PARSONS	1011 489
8	10*17925	3-18-3	H	BOUNTY MINERALS LLC	928 393
9	10*17925	3-18-3.4	I	BOUNTY MINERALS LLC	928 393
10	10*17925	3-18-3.1	J	BOUNTY MINERALS LLC	928 393
11	10*17925	7-1-9	K	BOUNTY MINERALS LLC	928 393
12	10*17925	7-1-10	L	BOUNTY MINERALS LLC	928 393
13	10*17925	7-1-8	M	BOUNTY MINERALS LLC	928 393
14	10*17925	7-1-11	N	BOUNTY MINERALS LLC	928 393
15	10*17925	7-1-12	O	BOUNTY MINERALS LLC	928 393
16	10*17925	7-1-13	P	BOUNTY MINERALS LLC	928 393
17	10*17925	7-1-15	Q	BOUNTY MINERALS LLC	928 393
18	10*17925	7-1-16	R	BOUNTY MINERALS LLC	928 393
19	10*17925	7-1-17	S	BOUNTY MINERALS LLC	928 393
20	10*17925	7-1-19	T	BOUNTY MINERALS LLC	928 393
21	**FORCE POOL**	7-2-4	U	DAVID W MITCHELL, ETAL	1105 1
22	**FORCE POOL**	7-7-9.1	V	CONSTANCE LINT, ET AL	747 86
23	**FORCE POOL**	7-7-9	W	CONSTANCE LINT, ET AL	747 86

LEGEND

AS DRILLED ———
PROPOSED - - - - -

**AS DRILLED COORDINATES
FOR WELL NO. 19HU**

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

NAD'83 S.P.C.(FT) N. 486,510.28 E. 1,652,098.87
NAD'83 GEO. LAT-(N) 39.830269 LONG-(W) 80.626651
NAD'83 UTM (M) N. 4,408,985.65 E. 531,947.73

LANDING POINT

NAD'83 S.P.C.(FT) N. 485,919.0 E. 1,651,017.0
NAD'83 GEO. LAT-(N) 39.828603 LONG-(W) 80.630477
NAD'83 UTM (M) N. 4,408,800.0 E. 531,621.2

BOTTOM HOLE

NAD'83 S.P.C.(FT) N. 476,217.0 E. 1,656,487.7
NAD'83 GEO. LAT-(N) 39.802162 LONG-(W) 80.610643
NAD'83 UTM (M) N. 4,405,872.0 E. 533,331.1

RECEIVED
Office of Oil and Gas

JAN 29 2024

WV Department of
Environmental Protection

FILE NO. 9026P19HUAD.dwg

BRECKENRIDGE S-19HU-REV6

DATE JANUARY 23, 20 24

REVISED _____

OPERATORS WELL NO. BRECKENRIDGE S-19HU

API WELL NO. 47 — 051 — 02398
STATE COUNTY PERMIT



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



P.S.
677

Gregory A. Smith

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

**BRECKENRIDGE S LEASE
UTICA UNIT - 352.75 AC±
WELL 19HU
EQT PRODUCTION CO.**

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

T.H.
A.D.

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

NAD'83 S.P.C.(FT)	N. 486,510.28	E. 1,652,098.87
NAD'83 GEO.	LAT.(N) 39.830269	LONG.(W) 80.626651
NAD'83 UTM (M)	N. 4,408,985.65	E. 531,947.73

LANDING POINT/LTP

NAD'83 S.P.C.(FT)	N. 485,978.9	E. 1,650,974.7
NAD'83 GEO.	LAT.(N) 39.828771	LONG.(W) 80.630630
NAD'83 UTM (M)	N. 4,408,818.0	E. 531,608.0

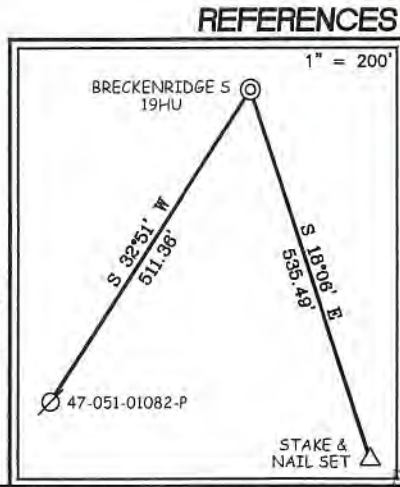
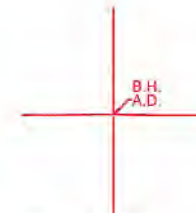
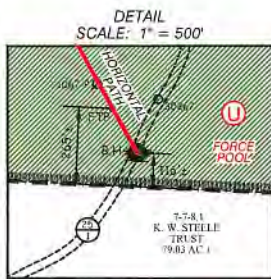
BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 476,216.0	E. 1,656,467.5
NAD'83 GEO.	LAT.(N) 39.802159	LONG.(W) 80.610644
NAD'83 UTM (M)	N. 4,405,871.7	E. 533,331.1

TAG	SURFACE OWNER	PARCEL	ACRES
A	CONSOL MINING COMPANY LLC	3-19-76	32.25
B	CONSOL MINING COMPANY LLC	3-19-74	44.50
C	CONSOL MINING COMPANY LLC	3-19-78	10.927
D	CONSOL MINING COMPANY LLC	3-19-79	10.75
E	XCL PROCESSING OPERATING LLC	3-19-81	26.52
F	SONJA J STROPE	3-19-77	40.783
G	NANCY L PARSONS - LIFE	7-1-7	40.86
H	SONJA J STROPE	3-18-3	74.757
I	JEREMY HILL & BRITTA HILL	3-18-3 4	4.78
J	CAROL J EVANS - LIFE	3-18-3 1	1.175
K	NANCY L PARSONS - LIFE	7-1-9	4.94
L	NANCY L PARSONS - LIFE	7-1-10	1.10
M	NANCY L PARSONS - LIFE	7-1-8	35.09
N	MOLLY KAY HUBBS COLLINS, ET AL	7-1-11	98.44
O	OLIVIA SUZANNE HUBBS	7-1-12	17.68
P	OLIVIA SUZANNE HUBBS	7-1-11	(20,937)
Q	MOLLY KAY HUBBS COLLINS, ET AL	7-1-15	57.32
R	MOLLY KAY HUBBS COLLINS, ET AL	7-1-16	54.44
S	JEFFREY L ALBRIGHT	7-1-17	57.17
T	JEAN JAMISON	3-1-19	51.89
U	BEVERLY MAE DAVIS	7-2-4	58.08
V	JEAN JAMISON	7-7-9 1	67.836
W	WH LARD JR NIOR EVANS & ROSE-MARIE EVANS - LIFE	7-7-9	2.214

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
3-18-3 2	DAVID L & ARIANNE R ROBINSON	1.880
3-18-3 3	DAVID L & ARIANNE R ROBINSON	16.883
3-18-4	CHARLES JARED STROPE	7.25
3-18-5	MOLLY KAY HUBBS COLLINS & OLIVIA SUZANNE HUBBS	25.472
3-18-18	OLIVIA SUZANNE HUBBS	0.435

LEGEND
AS DRILLED ———
PROPOSED - - - - -

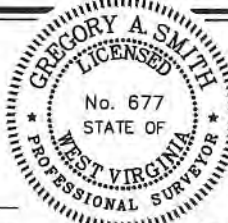


NOTES ON SURVEY

- 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 & TOP MARK SCALE ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF PROPOSED BRECKENRIDGE S-19HU IS WITHIN 2000' OF THE TOP HOLES OR LATERALS OF PROPOSED OR EXISTING WELLS:
PROPOSED BRECKENRIDGE S-17HU,
PROPOSED BRECKENRIDGE S-18HU,
PROPOSED BRECKENRIDGE S-20HU,
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PROPOSED BRECKENRIDGE S-22HU,
PROPOSED BRECKENRIDGE S-23HU.
- WELL PLAT UPDATED TO SHOW AS-DRILLED PATH.
- AS-DRILLED INFORMATION PROVIDED BY EQT PRODUCTION CO.

RECEIVED
Office of Oil and Gas
JAN 29 2024
WV Department of
Environmental Protection

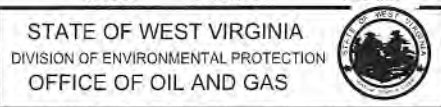
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P.S.
677 *Gregory A. Smith*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE JANUARY 23, 20 24
REVISED _____
OPERATORS WELL NO. BRECKENRIDGE S-19HU
API WELL NO. 47 - 051 - 02398
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 9026P19HUAD.dwg
BRECKENRIDGE S-19HU-REV6
HORIZONTAL & VERTICAL SCALE 1" = 2000'
CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)



WELL TYPE: OIL ___ GAS INJECTION ___ WASTE DISPOSAL ___ "GAS" PRODUCTION STORAGE ___ DEEP SHALLOW ___

LOCATION:
ELEVATION 1,370.61' WATERSHED GRAVE CREEK (HUC 10) & LAUREL RUN
DISTRICT CAMERON COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER CONSOL MINING COMPANY LLC ACREAGE 53.25±
ROYALTY OWNER HASAN'S VENTURES, ET AL ACREAGE 53.25±

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 POINT PLEASANT ESTIMATED DEPTH TVD: 12,102' / TMD: 23,745'

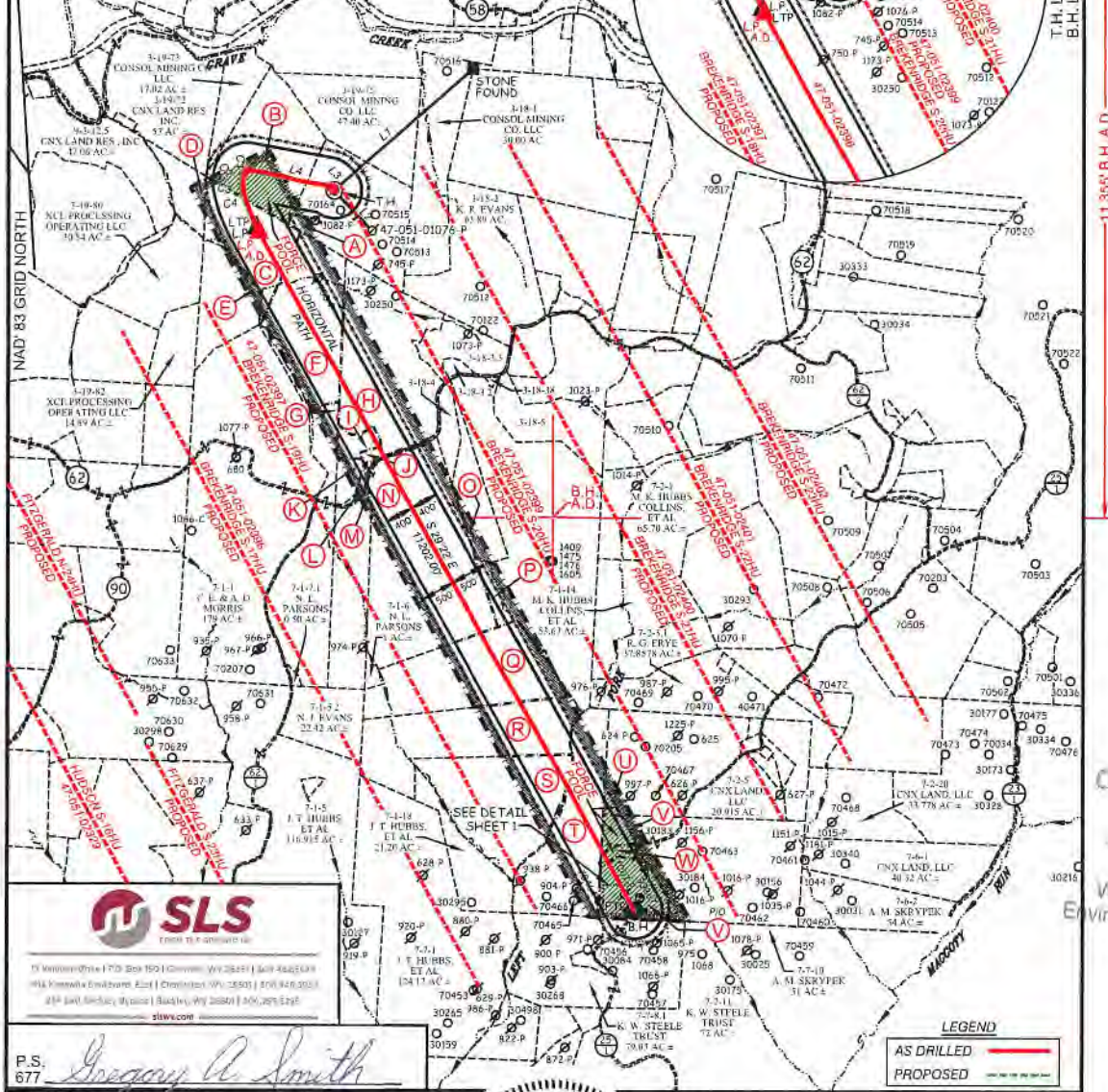
WELL OPERATOR EQT PRODUCTION COMPANY **DESIGNATED AGENT** JOSEPH C. MALLOW
ADDRESS 400 WOODCLIFF DRIVE **ADDRESS** 427 MIDSTATE DRIVE
CANONSBURG, PA 15317 CLARKSBURG, WV 26301

02/23/2024

**BRECKENRIDGE S LEASE
UTICA UNIT - 352.75 AC±
WELL 19HU
EQT PRODUCTION CO.**

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 48°57' E	2657.13'
L2	S 43°54' E	796.04'
L3	N 44°02' W	86.36'
L4	N 79°48' W	1211.37'

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	117.15'	80.18'	S 56°20' W	107.01'
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C3	190.92'	589.05'	S 04°22' E	190.08'
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SLS
SURVEYING & LAND SERVICES, LLC
15 Westover Drive | P.O. Box 150 | Canonsburg, WV 26025 | 800-442-6448
1914 Kanawha Embankment, East | Charleston, WV 25301 | 800-846-3033
234 14th Street, West | Beckley, WV 26008 | 800-385-5295
sls.com

P.S. 677 *Gregory A. Smith*

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)			
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

LEGEND	
AS DRILLED	
PROPOSED	
EXTERIOR UNIT BOUNDARY	
INTERIOR LEASE BOUNDARY	
SURFACE LINE	
PROPOSED UTICA	
WELL LATERAL	
400' OFFSET LINE	
500' OFFSET LINE	
TIE LINE	
CREEK	
ROAD	
FORCE POOL TRACT	
PROPOSED FIRST TAKE POINT	
PROPOSED LAST TAKE POINT	
COUNTY ROUTE	
PROPOSED WELL	
EXISTING WELL	
PERMITTED WELL	
SURFACE OWNER (SEE TABLE)	
LEASE # (SEE ADDITIONAL SHEETS)	

SCALE 1" = 2000' FILE NO. 9026P19HUAD.dwg
BRECKENRIDGE S-19HU-REV6
DATE JANUARY 23, 2024
REVISED
OPERATORS WELL NO. BRECKENRIDGE S-19HU
API WELL 47-051-02398
NO. 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

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Office of Oil and Gas
JAN 19 2024
WV Department of Environmental Protection

02/23/2024

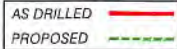
**BRECKENRIDGE S LEASE
UTICA UNIT - 352.75 AC±
WELL 19HU
EQT PRODUCTION CO.**



12 Vannoy Drive | P.O. Box 500 | Charleston, WV 25310 | 304.453.9881
1422 Kipshute Boulevard, East | Charleston, WV 25301 | 304.548.1882
254 East Beckley Bypass | Beckley, WV 25801 | 304.253.5288
slewcom

NO.	Lease ID	Parcel	Tag	Grantor, Lessor, Etc.	Deed Book/Page
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11	10*17925	7-1-8	K	BOUNTY MINERALS LLC	928 393
12	10*17925	7-1-10	L	BOUNTY MINERALS LLC	928 393
13	10*17925	7-1-8	M	BOUNTY MINERALS LLC	928 393
14	10*17925	7-1-11	N	BOUNTY MINERALS LLC	928 393
15	10*17925	7-1-12	O	BOUNTY MINERALS LLC	928 393
16	10*17925	7-1-13	P	BOUNTY MINERALS LLC	928 393
17	10*17925	7-1-15	Q	BOUNTY MINERALS LLC	928 393
18	10*17925	7-1-16	R	BOUNTY MINERALS LLC	928 393
19	10*17925	7-1-17	S	BOUNTY MINERALS LLC	928 393
20	10*17925	7-1-19	T	BOUNTY MINERALS LLC	928 393
21	**FORCE POOL**	7-2-4	U	DAVID W MITCHELL, ET AL	1105 1
22	**FORCE POOL**	7-7-9.1	V	CONSTANCE LINT, ET AL	747 86
23	**FORCE POOL**	7-7-9	W	CONSTANCE LINT, ET AL	747 86

LEGEND



**AS DRILLED COORDINATES
FOR WELL NO. 19HU**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17)
 NAD83 S.P.C.(FT) N. 486,510.28 E. 1,652,098.87
 NAD83 GEO. LAT.(N) 39.830269 LONG.(W) 80.626651
 NAD83 UTM (M) N. 4,408,985.65 E. 531,947.73
LANDING POINT
 NAD83 S.P.C.(FT) N. 485,919.0 E. 1,651,017.0
 NAD83 GEO. LAT.(N) 39.828608 LONG.(W) 80.630477
 NAD83 UTM (M) N. 4,408,800.0 E. 531,621.2
BOTTOM HOLE
 NAD83 S.P.C.(FT) N. 476,217.0 E. 1,656,467.7
 NAD83 GEO. LAT.(N) 39.802182 LONG.(W) 80.610643
 NAD83 UTM (M) N. 4,405,872.0 E. 533,331.1

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FILE NO. 9026P19HUAD.dwg
BRECKENRIDGE S-19HU-REV6
DATE JANUARY 23, 20 24
REVISED _____
OPERATORS WELL NO. BRECKENRIDGE S-19HU
API WELL NO. 47 — 051 — 02398
NO. STATE COUNTY PERMIT



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
P.S. Gregory A. Smith
677

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

02/23/2024

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	09/12/2023
Job End Date:	10/14/2023
State:	West Virginia
County:	Marshall
API Number:	47-051-02398-00-00
Operator Name:	EQT Production
Well Name and Number:	Breckenridge S-19HU
Latitude:	39.830269
Longitude:	-80.626651
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	12124
Total Base Water Volume (gal)*:	23207730
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	87.19131	None
Sand (Proppant)	EQT	Proppant					
			Silica Substrate	14808-60-7	100.00000	12.60300	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Copolymer of 2-propenamide	Proprietary	30.00000	0.01323	None
Clearal 268	ChemStream	Biocide					
			Non-hazardous substances	Proprietary	80.00000	0.00886	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			Non-hazardous substances	Proprietary	90.00000	0.00753	None
StimSTREAM	ChemStream	Friction					

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FR 9800		Reducer					
			Petroleum Distillate	64742-47-8	20.00000	0.00588	None
Enviro-Syn HCR-7000-WL	STAAR Logistics, LLC	Synthetic Acid					
			Proprietary	Proprietary	20.00000	0.00142	None
Clearal 268	ChemStream	Biocide					
			Glutaraldehyde	111-30-8	20.00000	0.00055	None
Enviro-Syn HCR-7000-WL	STAAR Logistics, LLC	Synthetic Acid					
			Proprietary	Proprietary	10.00000	0.00036	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			Bis(HexaMethylene Triamine Penta(Methylene Phosphonic Acid) (BHMT)	34690-00-1	10.00000	0.00009	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Alcohols, C12-16, ethoxylated	68551-12-2	2.00000	0.00006	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Oleic Acid Diethanolamide	93-83-4	2.00000	0.00006	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Ammonium chloride (NH ₄ Cl)	12125-02-9	1.00000	0.00002	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
Clearal 268	ChemStream	Biocide					
			Ethanol	64-17-5	1.50000	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)

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Perforation Data

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Stage_Number	Perf_Date	Depth_Bottom	Depth_Top	Shot_Count	Formation
2	09/13/2023	23517	23342	48	Utica
3	09/25/2023	23416	23240	48	Utica
4	09/25/2023	23216	23039	48	Utica
5	09/26/2023	23015	22838	48	Utica
6	09/26/2023	22814	22637	48	Utica
7	09/26/2023	22613	22436	48	Utica
8	09/26/2023	22412	22236	48	Utica
9	09/27/2023	22212	22035	48	Utica
10	09/27/2023	22011	21834	48	Utica
11	09/27/2023	21810	21633	48	Utica
12	09/27/2023	21609	21432	48	Utica
13	09/28/2023	21408	21232	48	Utica
14	09/28/2023	21208	21031	48	Utica
15	09/28/2023	21007	20830	48	Utica
16	09/28/2023	20806	20629	48	Utica
17	09/29/2023	20605	20428	48	Utica
18	09/29/2023	20404	20228	48	Utica
19	09/29/2023	20204	20027	48	Utica
20	09/30/2023	20003	19826	48	Utica
21	09/30/2023	19802	19625	48	Utica
22	09/30/2023	19601	19424	48	Utica
23	09/30/2023	19400	19224	48	Utica
24	10/01/2023	19200	19023	48	Utica
25	10/01/2023	18999	18822	48	Utica
26	10/01/2023	18798	18621	48	Utica
27	10/02/2023	18597	18420	48	Utica
28	10/02/2023	18396	18220	48	Utica
29	10/02/2023	18196	18019	48	Utica
30	10/02/2023	17995	17818	48	Utica
31	10/02/2023	17794	17617	48	Utica
32	10/03/2023	17593	17416	48	Utica
33	10/03/2023	17392	17216	48	Utica
34	10/04/2023	17192	17015	48	Utica
35	10/04/2023	16991	16814	48	Utica
36	10/04/2023	16790	16613	48	Utica
37	10/04/2023	16589	16412	48	Utica
38	10/05/2023	16388	16212	48	Utica
39	10/05/2023	16188	16011	48	Utica
40	10/05/2023	15987	15810	48	Utica
41	10/06/2023	15786	15609	48	Utica
42	10/06/2023	15585	15408	48	Utica
43	10/06/2023	15384	15208	48	Utica
44	10/07/2023	15184	15007	48	Utica
45	10/07/2023	14983	14806	48	Utica
46	10/07/2023	14782	14605	48	Utica
47	10/07/2023	14581	14404	48	Utica

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48 10/08/2023	14380	14204	48 Utica
49 10/08/2023	14180	14003	48 Utica
50 10/08/2023	13979	13802	48 Utica
51 10/08/2023	13778	13601	48 Utica
52 10/09/2023	13577	13400	48 Utica
53 10/09/2023	13376	13200	48 Utica
54 10/09/2023	13176	12999	48 Utica
55 10/09/2023	12975	12798	48 Utica
56 10/10/2023	12774	12597	48 Utica
57 10/10/2023	12573	12396	48 Utica

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Stimulation Data

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Stimulation_Date	Stage_Number	Avg_Pump_Rate	Avg_Treatment_Pressure	Pressure_Breakdown	ISIP	Amount_of_Proppant_lbs	Amount_of_Water_bbls	Proppant_Type	Proppant_Mesh_Size
09/12/2023	1	65	11449	11991	7346	200335	4066	Sand	100 MESH; 40/70;
09/25/2023	2	75	11803	11803	7527	250025	4793	Sand	100 MESH; 40/70;
09/26/2023	3	85	11806	9604	7418	500030	9530	Sand	100 MESH; 40/70;
09/26/2023	4	81	11781	9515	7523	499986	9556	Sand	100 MESH; 40/70;
09/26/2023	5	80	11786	9173	8571	500211	9550	Sand	100 MESH; 40/70;
09/26/2023	6	84	11760	9373	8365	500084	9551	Sand	100 MESH; 40/70;
09/26/2023	7	86	11775	9270	8544	500035	9564	Sand	100 MESH; 40/70;
09/27/2023	8	88	11797	9230	8942	500301	9555	Sand	100 MESH; 40/70;
09/27/2023	9	88	11691	8956	8164	484066	9650	Sand	100 MESH; 40/70;
09/27/2023	10	89	11721	9083	7812	500061	9549	Sand	100 MESH; 40/70;
09/28/2023	11	89	11657	9008	8493	500325	9559	Sand	100 MESH; 40/70;
09/28/2023	12	89	11764	8797	8309	500028	9561	Sand	100 MESH; 40/70;
09/28/2023	13	89	11672	9235	8682	500490	9565	Sand	100 MESH; 40/70;
09/28/2023	14	89	11637	9571	8116	500365	9566	Sand	100 MESH; 40/70;
09/29/2023	15	89	11704	9671	8508	499868	9565	Sand	100 MESH; 40/70;
09/29/2023	16	89	11669	9320	8925	499877	9569	Sand	100 MESH; 40/70;
09/29/2023	17	90	11642	9599	8706	500512	9567	Sand	100 MESH; 40/70;
09/30/2023	18	90	11600	9439	8494	500203	9550	Sand	100 MESH; 40/70;
09/30/2023	19	89	11606	8804	8731	499959	9558	Sand	100 MESH; 40/70;
09/30/2023	20	89	11487	9515	8504	500325	9585	Sand	100 MESH; 40/70;
09/30/2023	21	89	11528	9420	8385	500488	9566	Sand	100 MESH; 40/70;
10/01/2023	22	90	11618	8972	8045	499961	9557	Sand	100 MESH; 40/70;
10/01/2023	23	89	11557	9354	8675	501118	9554	Sand	100 MESH; 40/70;
10/01/2023	24	90	11432	9889	8030	500431	9565	Sand	100 MESH; 40/70;
10/02/2023	25	90	11572	8961	8078	500163	9553	Sand	100 MESH; 40/70;
10/02/2023	26	90	11487	8773	7901	504014	9600	Sand	100 MESH; 40/70;
10/02/2023	27	90	11427	8466	7859	500642	9575	Sand	100 MESH; 40/70;
10/02/2023	28	90	11423	9131	7973	500382	9577	Sand	100 MESH; 40/70;
10/02/2023	29	88	11233	9800	7731	500388	9566	Sand	100 MESH; 40/70;
10/03/2023	30	90	11441	9175	7648	501598	9568	Sand	100 MESH; 40/70;
10/03/2023	31	88	11351	8508	7735	500461	9560	Sand	100 MESH; 40/70;
10/04/2023	32	90	11495	9958	7938	499981	9545	Sand	100 MESH; 40/70;
10/04/2023	33	90	11383	9627	8538	500040	9556	Sand	100 MESH; 40/70;
10/04/2023	34	90	11260	9648	7984	500500	9573	Sand	100 MESH; 40/70;
10/04/2023	35	89	11320	10474	8513	500363	9567	Sand	100 MESH; 40/70;
10/04/2023	36	90	11470	9043	8009	500042	9556	Sand	100 MESH; 40/70;
10/05/2023	37	89	11376	9717	8148	500025	9550	Sand	100 MESH; 40/70;
10/05/2023	38	90	11269	9776	9118	500395	9572	Sand	100 MESH; 40/70;
10/05/2023	39	90	11273	8862	8576	500360	9762	Sand	100 MESH; 40/70;
10/06/2023	40	90	11405	9701	7944	500191	9548	Sand	100 MESH; 40/70;
10/06/2023	41	89	11275	9852	8537	500338	9657	Sand	100 MESH; 40/70;
10/06/2023	42	90	11138	9679	8135	500349	9560	Sand	100 MESH; 40/70;
10/07/2023	43	90	11380	9286	7996	500160	9553	Sand	100 MESH; 40/70;
10/07/2023	44	90	11093	9994	8386	500505	9562	Sand	100 MESH; 40/70;
10/07/2023	45	89	10996	10420	8004	500503	9570	Sand	100 MESH; 40/70;
10/08/2023	46	90	11358	9761	7696	500336	9557	Sand	100 MESH; 40/70;
10/08/2023	47	90	11350	9416	7828	500291	9568	Sand	100 MESH; 40/70;
10/08/2023	48	89	11158	9610	8428	500440	9575	Sand	100 MESH; 40/70;
10/08/2023	49	90	11036	9459	7914	500404	9576	Sand	100 MESH; 40/70;
10/08/2023	50	90	11313	10538	7839	500061	9554	Sand	100 MESH; 40/70;
10/09/2023	51	90	11256	9326	7948	540152	9556	Sand	100 MESH; 40/70;
10/09/2023	52	90	11295	10013	8030	500303	9558	Sand	100 MESH; 40/70;
10/09/2023	53	90	10763	9096	7966	500409	9577	Sand	100 MESH; 40/70;
10/09/2023	54	90	10975	8813	7881	500071	9563	Sand	100 MESH; 40/70;
10/10/2023	55	90	11144	10346	7578	500174	9567	Sand	100 MESH; 40/70;
10/10/2023	56	90	10954	9321	7654	500090	9535	Sand	100 MESH; 40/70;
10/10/2023	57	90	10510	9954	7663	500439	9605	Sand	100 MESH; 40/70;

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