

## west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary www.dep.wv.gov

Friday, July 19, 2024
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

EQT PRODUCTION COMPANY 400 WOODCLIFF DR.

CANONSBURG, PA 15317

47-051-02428-00-00

Modified Lateral Location

Re:

## EQT PRODUCTION COMPANY

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

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

Permit Modification Approval for BRECKENRIDGE S-7HM

James A. Martin

Chief

Operator's Well Number: BRECKENRIDGE S-7HM

Farm Name: CNX LAND LLC

U.S. WELL NUMBER: 47-051-02428-00-00

Horizontal 6A New Drill

Date Modification Issued: 7/19/2024

Promoting a healthy environment.

API NO. 47-051	- 02428	
OPERATOR W	/ELL NO. S-7HM	
Well Pad Nar	me. Breckenridge	

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

1) Well Operator: EQT Production Company 306686 Marshall Cameron Glen Easton 7.5
Operator ID County District Quadrangle
2) Operator's Well Number: S-7HM Well Pad Name: Breckenridge
3) Farm Name/Surface Owner: CNX Land LLC Public Road Access: CR 62
4) Elevation, current ground: 1370.61' (pad built) Elevation, proposed post-construction: 1370.61'
5) Well Type (a) Gas X Oil Underground Storage
Other
(b)If Gas Shallow X Deep
Horizontal X
6) Existing Pad: Yes or No Yes
7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  Marcellus, 6,977', 52', 3,800 psi
8) Proposed Total Vertical Depth: 6,977'
9) Formation at Total Vertical Depth: Marcellus
10) Proposed Total Measured Depth: 14,417'
11) Proposed Horizontal Leg Length: 6,445'
12) Approximate Fresh Water Strata Depths: 1,038'
13) Method to Determine Fresh Water Depths: Offset Wells - 051-70164, 051-00754, 051-00750
14) Approximate Saltwater Depths: 1,803', 1,843', 1,903', 2,008'
15) Approximate Coal Seam Depths: 778'-784', 965'-968', 1,051'-1,056'
16) Approximate Depth to Possible Void (coal mine, karst, other): N/A
17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine?  Yes X  No RECEIVED  Office of Oil and Gas
(a) If Yes, provide Mine Info: Name: Marshall County Mine
CV# 604969 Depth: 1,051'-1,056'
CK# 604968 Depth: 1,051'-1,056'  # 7500 Seam: Pittsburgh Environmental Protection
6/20/24 Owner: Marshall County Coal Resources, Inc.

WW-6B	
(04/15)	

API NO. 47-\_051 \_\_ 02428

OPERATOR WELL NO. S-7HM
Well Pad Name: Breckenridge

18)

# **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30	New	BW	BW	120	120	259 ft^3 / CTS
Fresh Water	13 3/8	New	J-55	54.5	1168	1168	1200 ft^3 / CTS
Coal							
Intermediate	9 5/8	New	J-55	36	2608	2608	1000 ft^3 / CTS
Production	6	New	P-110	24	14417	14417	500' above intermediate casing
Tubing							
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30	36	1.0	2333	1866	Class A	1.2
Fresh Water	13 3/8	17 1/2	0.380	2730	2184	Class A	1.18
Coal							
Intermediate	9 5/8	12 3/8 - 12 1/4	0.352	3520	2816	Class A/H/L	1.04 - 1.20
Production	6	8 3/4 - 8 1/2	0.400	14580	11664	Class A/H/L	1.04 - 2.10
Tubing							
Liners							

# **PACKERS**

Kind:	
Sizes:	RECEIVED Office of Oil and Gas
Depths Set:	JUL 0 1 2024
	WV Department of Environmental Protection

Strader Gower 6/26/2024

OPERATOR WELL NO. S-7HM

Well Pad Name: Breckenridge

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

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical, kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

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

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.1%) of chemicals (including 15% Hydrochloric acid, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10,000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 350,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000-600,000 pounds of proppant per stage.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 45.60 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 8.59 acres
- 23) Describe centralizer placement for each casing string:
- Surface: Bow spring centralizers One centralizer at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers- One centralizer at the shoe and one spaced every 500'.
- · Production: One solid body centralizer spaced every other joint from production casing shoe to landing point. One solid body centralizer spaced every joint from landing point to planned top of cement.

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

Conductor: No additives

Surface: Calcium Chloride. Used to speed the setting of cement slurries Intermediate: Calcium Chloride. Used to speed the setting of cement slurries.

Production: Calcium Carbonate, Fluid Loss, Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Poz, Bon

Anti-Settling/Suspension Agent

25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at or surface.

Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.

Production: Perform a cleanup cycle by pumping 3-8 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

\*Note: Attach additional sheets as needed.

Strader Gower 6/26/2024

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Wellbore Diagram **EQT Production (Tug Hill)** County: Marshall Breckenridge S-7HM Well: Pad: Breckenridge State: West Virginia 1383' KB Elevation: 1370' GL 120' Conductor @ 30", BW, BW, cement to surface w/ Class A **Surface** 1,168' 13-3/8", 54.5#, J-55, cement to surface w/ Class A Intermediate 2.608' 9-5/8", 36#, J-55, cement to surface w/ Class A/H/L RECEIVED Office of Oil and Gas JUL 0 / 1024 WV Department of Environmental Protection 14,417' MD / 6,977' TVD 6", 24#, P-110, cement to 500' inside 9-5/8" w/ Class A/H/L Formation: Marcellus ON OF TOUR SEALE

#### WEST VIRGINIA GEOLOGICAL PROGNOSIS

Breckenridge D-000226

1370 GL

1929

Base of Red Rock

**Drilling Objectives:** Marcellus County: Marshall **Pad Name** Breckenridge

Elevation: 1383 KB

Recommended Azimuth 149 Degrees Recommended LP to TD: TBD

### ESTIMATED FORMATION TOPS

Formation	Top (TVD)	Base (TVD)	Lithology	Comments	Top RR Base RR
Fresh Water Zone	1	1038		FW @ ,1038, , , ,	1026 192
Waynesburg	778	784	Coal		
Sewickley	965	968	Coal		
Pittsburgh	1051	1056	Coal		
Big Lime	2249	2503	Sandstone		
Big Injun	2503	2558	Sandstone		
Int. csg pt	2608				
Berea	2833	3249	Silty Sand	Possible oil/gas show	
Gordon	3251	3313	Silty Sand	Possible oil/gas show	
50F	3328		Silty Sand	Possible oil/gas show	
Bayard	3446		Silty Sand	Possible oil/gas show	
Alexander	5622		Silty Sand	8	
Elks	6065	6622	Gray Shales and Silts		
Sonyea	6622		Gray shale		
Middlesex	6729	6758	Shale	Possible Gas	
Genesee	6758	6808	Gray shale interbedded	Possible Gas	
Geneseo	6808		Black Shale		
Tully	6834	6859	Limestone		
Hamilton	6859	6952	Gray shale with some		
Marcellus	6952		Black Shale		
Purcell	6972	6974	Limestone		
-Lateral Zone	6977			Start Lateral at 6977.25'	
Cherry Valley	6992	6994	Limestone		
Onondaga	7003		Limestone		
Target Thickness	52 fee	t			
Max Anticipated Rock Pressure	3800 PS	I			

#### Comments:

Note that this is a TVD prog for a horizontal well (azimuth of 149 degrees; target formation = Marcellus). All measurements taken from estimated KB elevation. Water and coal information estimated from surrounding well data.

Intermediate casing point is recommended beneath the Big Injun to shut off any water production from the Upper Devonian sands. Intermediate casing should be cemented into the surface string, per WV

The estimated landing point TVD is 6977.25', rig geologist may adjust landing point. After the well is landed, drill to reported bed dips/ geologists' recommendation. The geologic structure is unknown at this time.

#### LATERAL DRILLING TOLERANCES

Mapview - Lateral: Deviate as little as possible to the left or right of the planned wellbore. Mapview - TD: DO NOT EXTEND beyond recommended wellbore to avoid leaseline.

2

#### RECOMMENDED CASING POINTS

Fresh Water/Coal	CSG OD	133/8	H H	CSG DEPTH:		1106	50' below pittsburgh coal
Intermediate 1:	CSG OD	9 5/8	ďΩ	CSG DEPTH:		2608	50' Below Big Injun
Production:	CSG OD	5 1/2	≥ E	CSG DEPTH:	@ TD		

## **EQT Production**

Hydraulic Fracturing Monitoring Plan

Pad ID: Breckenridge

County: Marshall

June 27, 2024

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WV Department of Environmental Protection

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## Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Marshall County, WV prior to hydraulic fracturing at the following EQT wells on the Breckenridge pad: S-7HM, S-8HM, S-9HM, S-10HM, S-24HM, S-25HM, S-26HM

Due to the requirements under 35CSR8 5.11, the permittee is required to review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation.

A report is required to be submitted along with a well work permit application.

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. These additional measures include coordination with well operators of the timing and location of the hydraulic fracturing, establishment of measures well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing.

#### 1. **Communications with Well Operators**

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known wells and well operators within 500 feet of this pad and the lateral sections that are known or could reasonably be expected to be within range of the fracture propagation. A map showing these wells along with a list of the wells and operators is included in Attachment A.

EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

EQT will recommend to these operators at a minimum to:

- 1. Inspect their surface equipment prior to fracturing to establish integrity and establish prefrac well conditions
- 2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
- Inspect or install master valves or other necessary equipment for wellhead integrity capable 3. of a pressure recommended by EQT
- Notify the OOG and EQT if any changes in water, gas production, pressure, or other 4. anomalies are identified

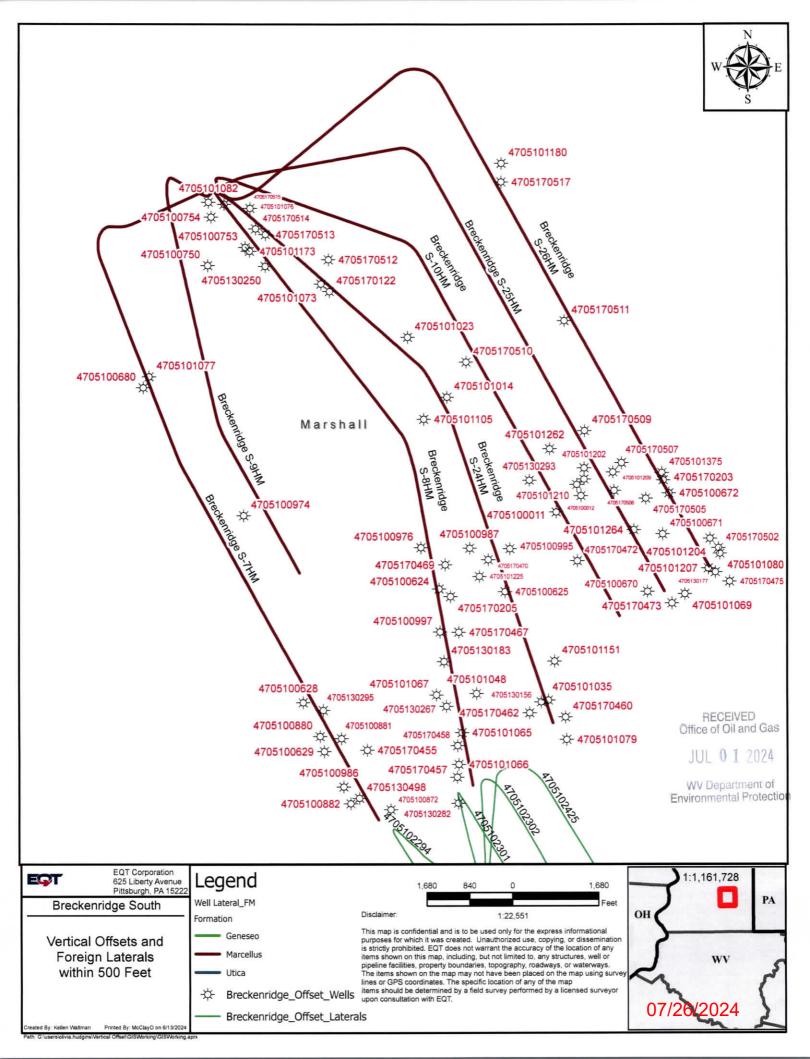
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#### 2. Reporting

WV Department of

Environmental Protection EQT will provide information relating to the hydraulic fracturing schedule, communication with other operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.



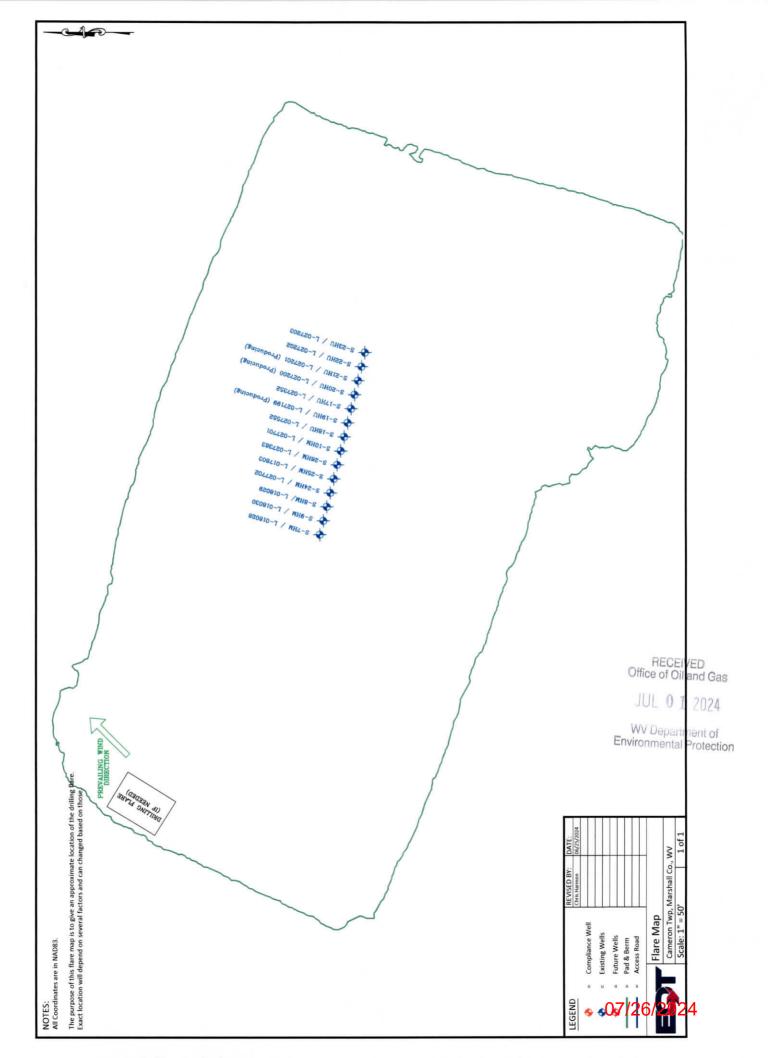
API_UWI_Un	API_UWI_12	ENVOperato	ENVWellSta	ENVWellTyp	InitialOpe	Latitude (	.ongitude E	ElevationG Elev	ationK	MD_FT_1	VD_FT WellName	WellSymbol
		CONSOLIDATION COAL COMPANY	P& A	OIL	CONSOLIDATION COAL COMPANY	39.802788	-80.620364	1292	1301	3221	3221 HUBBS, JAMES - ESTATE M-364	OIL-P & A
		MCELROY COAL COMPANY	P & A	OTHER	MCELROY COAL COMPANY	39.809706	-80.60825	1327	1336	0	O DAVIS, JOHN & BEVERLY M-375	OTHER-P & A
	47-051-00753-00		P & A	GAS	CAMERON GAS COMPANY	39.827171	-80.624802	1261	1271	3045	3045 J.O. WILLIAMS 1	GAS-P & A
4705100754	47-051-00754-00 47-051-00011-00	CONSOL MARSHALL-PRESTON OIL	P & A P & A	OIL & GAS OTHER	LEATHERWOOD, INC. OPERATOR UNKNOWN	39.828767 39.813238	-80.627247 -80.602877	129 <del>9</del> 1194	1309 1204	3045 0	3045 WAYT, RICHARD M-108 O CLARK, BELLE 1	OIL & GAS-P & A OTHER-P & A
		CONSOLIDATION COAL COMPANY	P&A	OTHER	CONSOLIDATION COAL COMPANY	39.812802	-80.624689	1182	1191	ő	0 MORRIS, SAMANTHA G. M-328A	OTHER-P & A
		(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.829347	-80.6245	1322	0	ő	D SUSANNA WILLIAMS	UNREPORTED-UNREPORTED
		CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.799626	-80.609454	1380	1389	0	O STEELE, KENNETH WAYNE M-387	OTHER-P & A
4705170512	47-051-70512-00	MANUFACTURERS LIGHT & HEAT CO	UNREPORTED	GAS	MANUFACTURERS LIGHT&HEAT	39.826591	-80.619047	1381	0	0	6 J G CRAWFORD	GAS-UNREPORTED
		CHARTIERS OIL	UNREPORTED		CHARTIERS OIL	39.814997	-80.595545	1374	0	0	0 THOMPSON HRS	UNREPORTED-UNREPORTED
		CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.818126	-80.612187	1215	1224	0	6 MCELROY COAL COMPANY M-440	OTHER-P & A
4705101210		MCELROY COAL COMPANY	P&A	OTHER DRY HOLE	MCELROY COAL COMPANY EAST RESOURCES	39,81467 39,819624	-80.601477 -80.631761	1199 1424	1208 1433	0 3880	0 PARSONS, WILLIAM M-454 3880 MORRIS, W.D. 3	OTHER-P & A DRY HOLE-P & A
4705100680 4705101080	47-051-00680-00 47-051-01080-00	NATIONAL FUEL GAS CONSOLIDATION COAL COMPANY	P & A P & A	OTHER	CONSOLIDATION COAL COMPANY	39.811063	-80.59152	1173	1183	0	0 MCELROY COAL COMPANY M-433	OTHER-P & A
4705130156	47-051-30156-00	INTERSTATE PIPE & SUPPLY	INACTIVE COMPLETED	OIL	INTERSTATE PIPE & SUPPLY	39.802961	-80.603815	1415	0	ō	3175 EDWARD WELLING HEIRS 1	OIL-INACTIVE COMPLETED
	47-051-70460-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.802208	-80.602126	1232	0	0	0 VINCENT GORBY	UNREPORTED-UNREPORTED
4705101207	47-051-01207-00	MCELROY COAL COMPANY	P&A	OTHER	MCELROY COAL COMPANY	39.810258	-80.592315	1229	1238	0	0 CONSOLIDATION COAL CO. M-431	OTHER-P & A
		• • •	UNREPORTED	UNREPORTED	(N/A)	39.828187	-80.624124	1311	0	0	O SUSANNA WILLIAMS	UNREPORTED-UNREPORTED
	47-051-00624-00		P & A	OIL	CNX GAS COMPANY	39.809022	-80.61095	1253	1262 1271	3009 0	3009 BEVERLY MAE DAVIS 1	OIL-P & A OTHER-P & A
	47-051-01082-00	CONSOLIDATION COAL COMPANY SOUTH PENN OIL (S. PENN NAT. GAS)	P & A INACTIVE COMPLETED	OTHER OIL	CONSOLIDATION COAL COMPANY SOUTH PENN OIL (S PENN NAT GAS)	39.829551 39.805136	-80.627439 -80.610584	1262 1314	12/1	0	0 WAYT, J. RICHARD M-1334 3067 V P GORBY 1	OIL-INACTIVE COMPLETED
4705130183 4705101173	47-051-01173-00	MCELROY COAL COMPANY	P& A	OTHER	MCELROY COAL COMPANY	39.826957	-80.624518	1171	1180	ŏ	D STROPE, CHARLES & SONIA M-1335	OTHER-P & A
4705101079		CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.801012	-80.60204	1403	1412	0	O SKRYPEK, ANTHONY M-425	OTHER-P & A
4705170164	47-051-70164-00	ВР	UNREPORTED	UNREPORTED	BP	39.829496	-80.626308	1401	0	2374	O ELIJAH WILLIAMS	UNREPORTED-UNREPORTED
4705100997	47-051-00997-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.806668	-80.6109	1195	1204	0	O DAVIS, JOHN & BEVERLY M-378	OTHER-P & A
4705100880			P&A	OfL	CONSOLIDATION COAL COMPANY	39.801046	-80.619236	1171	1181	2 <del>9</del> 35	2935 HUBBS, JAMES A ESTATE M-366	OIL-P & A
4705100672		SMITH, CARL E PETROLEUM INC	UNREPORTED	OTHER	SMITH CARL E	39.814316	-80.595094	1380	1390	0	O PARSONS, WILLIAM 214-2	OTHER-UNREPORTED
4705101202 4705101204		MCELROY COAL COMPANY MCELROY COAL COMPANY	P & A P & A	OTHER OTHER	MCELROY COAL COMPANY MCELROY COAL COMPANY	39.815572 39.811853	-80.600955 -80.59221	1199 1195	1208 1204	0	O PARSONS, WILLIAM M-453 D MCELROY COAL COMPANY M-443	OTHER-P & A OTHER-P & A
4705170472	47-051-70472-00		UNREPORTED	UNREPORTED		39.810625	-80.601374	1354	0	a	O LOUIS E CHAMBERS	UNREPORTED-UNREPORTED
4705170467	47-051-70467-00		UNREPORTED	UNREPORTED		39.806707	-80.609647	1202	ō	ō	D GUMP & GARBY	UNREPORTED-UNREPORTED
4705170205			UNREPORTED	UNREPORTED	SOUTH PENN OIL (S PENN NAT GAS)	39.808616	-80.610209	1279	0	0	0 V P GORBY	UNREPORTED-UNREPORTED
4705101035	47-051-01035-00	CONSOLIDATION COAL COMPANY	P&A	OTHER	CONSOLIDATION COAL COMPANY	39.803078	-80.603253	1365	1374	0	O JAMISON, JEAN M-382	OTHER-P & A
4705130282	47-051-30282-00	TRI-STATE PIPE COMPANY, THE	COMPLETED	OIL	TRI-STATE PIPE COMPANY, THE	39,797451	-80.609453	1380	0	0	3142 JOHN BRUHN 7	OIL-COMPLETED
4705170508	47-051-70508-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.814979 39.800612	-80.600997 -80.609646	1203 1447	0	0	O JUSTICE PHILLIPS O FRANK HIBBS	UNREPORTED-UNREPORTED UNREPORTED
4705170458 4705170122	47-051-70458-00 47-051-70122-00	(N/A) MANUFACTURERS LIGHT & HEAT CO	UNREPORTED COMPLETED	UNREPORTED	MANUFACTURERS LIGHT&HEAT	39.824857	-80.618866	1274	0	0	3109 RHODA A PARSONS	UNREPORTED-COMPLETED
4705101065		CONSOLIDATION COAL COMPANY	P&A	OTHER	CONSOLIDATION COAL COMPANY	39.801336	-80.609271	1420	1429	o	D STEELE, KENNETH WAYNE M-386	OTHER-P & A
4705100625			P&A	OIL	CNX GAS COMPANY	39.808884	-80.606449	1379	1388	3092	3092 GRAY, WILLIAM 3	OIL-P & A
4705101067		CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.803342	-80.61112	1275	1284	0	D JAMISON, JEAN M-388	OTHER-P & A
4705130293	47-051-30293-00	TRI-STATE PIPE COMPANY, THE	COMPLETED	GAS	TRI-STATE PIPE COMPANY, THE	39.814852	-80.604759	1201	0	0	3134 E V BARTLEFF 1	GAS-COMPLETED
4705100986	47-051-00986-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.798289	-80.617544	1016	1025	0	O HUBBS ESTATE, JAMES A. M-461	OTHER-P & A
4705170510	47-051-70510-00	(N/A)	UNREPORTED	UNREPORTED OTHER	(N/A)	39.821221 39.809029	-80.60927 -80.596484	1279 1479	0 1488	0	O WILLIAM D PHILLIPS  D CONSOLIDATION COAL CO M-437	UNREPORTED-UNREPORTED OTHER-P & A
4705100670 4705130498	47-051-00670-00 47-051-30498-00	CONSOLIDATION COAL COMPANY MANUFACTURERS LIGHT & HEAT CO	P & A COMPLETED	GAS	CONSOLIDATION COAL COMPANY MANUFACTURERS LIGHT&HEAT	39.797741	-80.616409	1089	2400	0	2860 1	GAS-COMPLETED
4705100872	47-051-00872-00	CONSOLIDATION COAL COMPANY	P & A	OIL	CONSOLIDATION COAL COMPANY	39.797128	-80.61416	1344	1353	3108	3108 MCELROY COAL COMPANY M-420	OIL-P & A
	47-051-00012-00		P & A	OTHER	OPERATOR UNKNOWN	39.814109	-80.601185	1228	1238	0	O CLARK, BELLE 2	OTHER-P & A
4705100671	47-051-00671-00	PARSONS, WILLIAM E & NANCY	PRODUCING	GAS	PARSONS WILLIAM E&NANCY	39.812077	-80.595545	1355	1354	0	O PARSONS, WILLIAM 213-1	GAS-PRODUCING
4705130177	47-051-30177-00	INTERSTATE PIPE & SUPPLY	INACTIVE COMPLETED	OIL	INTERSTATE PIPE & SUPPLY	39.810067	-80.591784	1220	0	0	3014 3	OIL-INACTIVE COMPLETED
4705170502	47-051-70502-00	(N/A)	UNREPORTED	UNREPORTED		39.811352	-80.591597	1190	0	0	O S L CHAMBERS O FRANK HIBBS 1	UNREPORTED-UNREPORTED UNREPORTED-UNREPORTED
4705170455	47-051-70455-00 47-051-70462-00	(N/A)	UNREPORTED UNREPORTED	UNREPORTED UNREPORTED	(N/A) (N/A)	39.8003212 39.802353	-80.6158516 -80.60457	1172 1416	0	0	O VINCENT GORBY	UNREPORTED-UNREPORTED
4705170462 4705170473	47-051-70473-00	(N/A) MANUFACTURERS LIGHT & HEAT CO	UNREPORTED	UNREPORTED	MANUFACTURERS LIGHT&HEAT	39.808448	-80.594793	1388	ä	ō	O LOUIS E CHAMBERS	UNREPORTED-UNREPORTED
4705170506	47-051-70506-00	(N/A)	UNREPORTED	UNREPORTED		39.814399	-80.598929	1292	0	0	O JUSTICE PHILLIPS	UNREPORTED-UNREPORTED
4705170457	47-051-70457-00		UNREPORTED	UNREPORTED	(N/A)	39.79887	-80.609647	1391	0	0	O FRANK HIBBS	UNREPORTED-UNREPORTED
4705101073	47-051-01073-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.825293	-80.619495	1228	1237	0	O STROPE, CHARLES & SONJA M-1313	OTHER-P & A
4705101048	47-051-01048-00		P & A	OTHER	CONSOLIDATION COAL COMPANY	39.803362	-80.608318	1374	1383	0	G JAMISON, JEAN M-384	OTHER-P & A
4705170511	47-051-70511-00 47-051-01023-00	(N/A)	UNREPORTED	UNREPORTED OTHER	(N/A) CONSOLIDATION COAL COMPANY	39.823542 39.822527	-80.602501 -80.613407	1330 1191	0 1200	0	O JUSTICE PHILLIPS O HUBBS, JAMES T. M-1312	UNREPORTED-UNREPORTED OTHER-P & A
4705101023 4705130250	47-051-01023-00	CONSOLIDATION COAL COMPANY MANUFACTURERS LIGHT & HEAT CO	P & A INACTIVE COMPLETED	GAS	MANUFACTURERS LIGHT&HEAT	39.826161	-80.62338	1205	0	ő	3143 GOSHORN HEIRS 1	GAS-INACTIVE COMPLETED
4705101014	47-051-01014-00	CONSOLIDATION COAL COMPANY	P&A	OTHER	CONSOLIDATION COAL COMPANY	39,819334	-80.610585	1141	1150	0	O HUBBS, JAMES M-1320	OTHER-P & A
4705101180	47-051-01180-00	MCELROY COAL COMPANY	P & A	OTHER	MCELROY COAL COMPANY	39.831889	-80.606988	1178	1187	0	0 HOWARD, WILLIS M-1592	OTHER-P & A
4705170469	47-051-70469-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.810336	-80.610586	1188	0	0	D AARON A PORTER	UNREPORTED-UNREPORTED
		CONSOLIDATION COAL COMPANY	1 P&A	OTHER	CONSOLIDATION COAL COMPANY	39.797418	-80.61698	1089	1098	0	O HUBBS, JAMES A ESTATE M-421	OTHER-P & A
4705101264		MCELROY COAL COMPANY		OTHER	MCELROY COAL COMPANY	39.812322	-80.597456	1434	1443	0	0 PARSONS, WILLIAM & NANCY M-442	OTHER P & A
4705100987	47-051-00987-00	CONSOLIDATION COAL COMPANY	<b>₹*</b> ^ <u></u> #	OTHER	CONSOLIDATION COAL COMPANY	39.811206	-80.608894	1245	1254	0	D FRYE, BERNARD G. M-438	OTHER-P & A
		CONSOLIDATION COAL COMPANY	Office of Oil and Gas	E C								
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4705101209	47-051-01209-00	MCELROY COAL COMPANY	P&A	OTHER	MCELROY COAL COMPANY	39.81542	-80.59898	1245	1254	0	0 PARSONS, WILLIAM M-452	OTHER-P & A
4705101375	47-051-01375-00	MCELROY COAL COMPANY	P&A	OTHER	MCELROY COAL COMPANY	39.815372	-80.595647	1399	1408	0	O PARSONS, WILLIAM & NANCY M 450	OTHER-P & A
4705130267	47-051-30267-00	RANDALL-ZOGG SUPPLY CO.	COMPLETED	OIL	RANDALL-ZOGG SUPPLY CO.	39.802671	-80.610395	1281	D	0	3044 V P GORBY	OIL-COMPLETED
4705170513	47-051-70513-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.827897	-80.623372	1269	0	0	O SUSANNA WILLIAMS	UNREPORTED-UNREPORTED
4705101076	47-051-01076-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.829319	-80.624484	1356	1365	0	G WAYT, J. RICHARD M-109	OTHER-P & A
4705100629	47-051-00629-00	CONSOLIDATION COAL COMPANY	P & A	OIL	CONSOLIDATION COAL COMPANY	39.800175	-80.61886	1197	1206	2963	2963 HUBBS, JAMES - ESTATE M-370	OIL-P & A
4705101262	47-051-01262-00	MCELROY COAL COMPANY	P & A	OTHER	MCELROY COAL COMPANY	39.816618	-80.6034	1352	1361	0	O PARSONS, WILLIAM M-455	OTHER-P & A
4705100995	47-051-00995-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.811206	-80.606074	1286	1295	0	O FRYE, BERNARD G. M-441	OTHER-P & A
4705130295	47-051-30295-00	(N/A)	COMPLETED	OIL	(N/A)	39.802353	-80.6190477	1247	0	2935	0 GEO W HUBBS 6	OIL-COMPLETED
4705101077	47-051-01077-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.820204	-80.631392	1420	1429	0	0 MORRIS, CARROLL & ANNA M-110	OTHER-P & A
4705101151	47-051-01151-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.805173	-80.602871	1217	1226	0	G JAMISON, JEAN M-381	OTHER-P & A
4705100750	47-051-00750-00	CONSOLIDATION COAL COMPANY	P & A	GAS	CONSOLIDATION COAL COMPANY	39.826155	-80.627436	1087	1097	2965	2965 STROPE, CHARLES M-107	GAS-P & A
4705170509	47-051-70509-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.817592	-80.600997	1266	0	0	O JUSTICE PHILLIPS	UNREPORTED-UNREPORTED
4705170475	47-051-70475-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.809609	-80.590844	1177	0	0	O S L CHAMBERS	UNREPORTED-UNREPORTED
4705100881	47-051-00881-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.800902	-80.617732	1071	1080	0	O HUBBS, JAMES A ESTATE M-390	OTHER-P & A
4705100976	47-051-00976-00	CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.811206	-80.61228	1084	1093	0	O FRYE, BERNARD G. M-434	OTHER-P & A
4705170470	47-051-70470-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.810626	-80.607578	1208	0	0	G AARON A PORTER	UNREPORTED-UNREPORTED
4705101069	47-051-01069-00	CONSOLIDATION COAL COMPANY	P&A	OTHER	CONSOLIDATION COAL COMPANY	39.80891	-80.593872	1382	1391	0	O CONSOLIDATION COAL CO. M-436	OTHER-P & A
4705170507	47-051-70507-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.815851	-80.598365	1266	0	0	O JUSTICE PHILLIPS	UNREPORTED-UNREPORTED
4705170517	47-051-70517-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.830945	-80.607014	1159	0	0	O VIRGINIA FRANCIS	UNREPORTED-UNREPORTED
4705170505	47-051-70505-00	(N/A)	UNREPORTED	UNREPORTED	(N/A)	39.813964	-80.596673	1421	0	0	G MELVIN CLARK	UNREPORTED-UNREPORTED
Laterals												
API_UWI_Uri	API_UWI_14	ENVOperato	ENVWellSta	<b>ENVWellTyp</b>	InitialOpe	Latitude l	ongitude E	ElevationG Ele	evationK i	MD_FT	TVD_FT WellName	WellSymbol
4705102301	47-051-02301-00-	O SOUTHWESTERN ENERGY	PRODUCING	GAS	SWN PROD	39.791879	-80.607586	1335	1363	0	7292.86 CHARLES JAMISON MSH 10H	GAS-PRODUCING
4705102302	47-051-02302-00-	O SOUTHWESTERN ENERGY	PRODUCING	GAS	SWN PROD	39.7918763	-80.6075548	1335	1363	23950	7284.53 CHARLES JAMISON 210H	GAS-PRODUCING
4705102294	47-051-02294-00-	O SOUTHWESTERN ENERGY	PRODUCING	GAS	SWN PROD	39.791892	-80.607655	1335	1361	21230	7154 CHARLES JAMISON MSH 6H	GAS-PRODUCING
4705102425	47-051-02425-00-	O SOUTHWESTERN ENERGY	PRODUCING	GAS	SWN PROD	39.791866	-80.607499	1337	1363	27375	8267 CHARLES JAMISON MSH 410H	GAS-PRODUCING

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WV Deparament of Environmental Protection



172' B.H. 557' T.H. T.H. LATITUDE 39°50'00' B.H. LATITUDE 39°50'00'

80°37'30"

LONGITUDE

TAG	SURFACE OWNER	PARCEL	ACRES
A	CNX LAND, LLC	3-19-76	53.25
В	CNX LAND, LLC	3-19-74	44.59
C	CNX LAND, LLC	3-19-78	30.927
D	XCL PROCESSING OPERATING LLC	3-19-81	26.52
E	XCL PROCESSING OPERATING LLC	3-19-80	30.54
F	XCL PROCESSING OPERATING LLC	3-19-82	14.89
G	ANNA D. MORRIS TOD	7-1-1	179.00
Н	NANCY L. PARSONS - LIFE	7-1-7	40.86
I	NANCY L. PARSONS - LIFE	7-1-8	33

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17) NAD'83 S.P.C.(FT) N. 486,533.38 LAT-(N) 39.830329 LONG-(W) 80.626984 NAD'83 GEO. NAD'83 UTM (M) N. 4,408,992.21 E. 531,919.22 LANDING POINT NAD'83 S.P.C.(FT) N. 485,112.5 E. 1,649,778.7

NAD'83 GEO. LAT-(N) 39.826351 LONG-(W) 80.634849 NAD'83 UTM (M) N. 4,408,548.0 E. 531,248.0 **BOTTOM HOLE** 

NAD'83 S.P.C.(FT) N. 479,400.6 E. 1,652,301.5 LAT-(N) 39.810759 NAD'83 GEO.

LONG-(W) 80.625613 E. 532,045.7 NAD'83 UTM (M) N. 4.406.820.7

BH-

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
	431.39'	62.10'	62.04'	S 69°29' W
C1 C2 C3 C4 C5	788.81'	439.32	433.66'	S 82°14' W
C3	222.50	250.95	237.86	S 62°27' W
C4	473.91'	234.92'	232.52'	S 15°38' W
C5	854.40'	347.68	345.29'	S 10°09' E

LINE	BEARING	DISTANCE
L1	N 22°13' W	31.08'
12	N 84°37' W	2.85'
L3	S 66°09' W	190.15
L4	S 65°11' W	1474.18'
L5	S 21°20' E	4104.66'
16	S 25°12' E	257.44
L7	S 29°04' E	1893.97'
L8	N 50°37' E	2713.39'
L9	S 23°21' E	1585.29'

## NOTES ON SURVEY

NO WATER WELLS WERE FOUND WITHIN 250' OF ROPOSED 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"=2000'

REFERENCES 200 BRECKENRIDGE S (O 7HM Ø 47-051-01082-P NAIL SET

MINIMUM DEGREE

HORIZONTAL & VERTICAL

OF ACCURACY

12 Vanhorn Drive | P.O. Box 150 | Gienville, WV 26351 | 304,462,5634 2 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952 254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296

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 THAT REPORTS BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

1 / 2500

No. 677
STATE OF
STONAL SURVINION
GEOT-P7HMR4.dwg

DATE\_\_ NO.

, 20 \_ REVISED OPERATORS WELL NO. BRECKENRIDGE S-7HM WELL 051 COUNTY PERMIT STATE

(+) DENOTES LOCATION OF WELL ON UNITED

STATES TOPOGRAPHIC MAPS JUNE 19

FILE NO. 9026EQT-P7HMR4.dwg STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION 1" = 2000' SCALE \_\_\_\_\_\_1" = 2000'
DGPS (SURVEY GRADE TIE TO CORS NETWORK) OFFICE OF OIL AND GAS



MARCELLUS

TVD: 6,977' / TMD: 14,417'

20

COM I HOL DE LEKIVIII	ALD DI.	AND DESCRIPTION OF THE PARTY OF	NAME OF TAXABLE PARTY.			
WELL TYPE: OIL GA	LIQUID	WASTE DISPOSAL	IF "GAS" PRODUCTION	X STORAGE DE	EP SHALLOW _X	
LOCATION:	1,370.61'	WATERSHED	GRAVE CREEK (H	HUC 10) & LAUREL RUN		
DISTRICT	CAMERON	COUNTY	MARSHALL	QUADRANGLE	GLEN EASTON 7.5'	
SURFACE OWNER .	CNX LAND LLC			ACREAGE	53.25±	
ROYALTY OWNER	COUNTRY ROADS MIN	NERALS, LLC, ET AL		ACREAGE	07/26/2024	
PROPOSED WORK :				LEASE NO	SEE WW-6A1	
		DEEPER	REDRILL	FRACTURE OR STIMULATE		

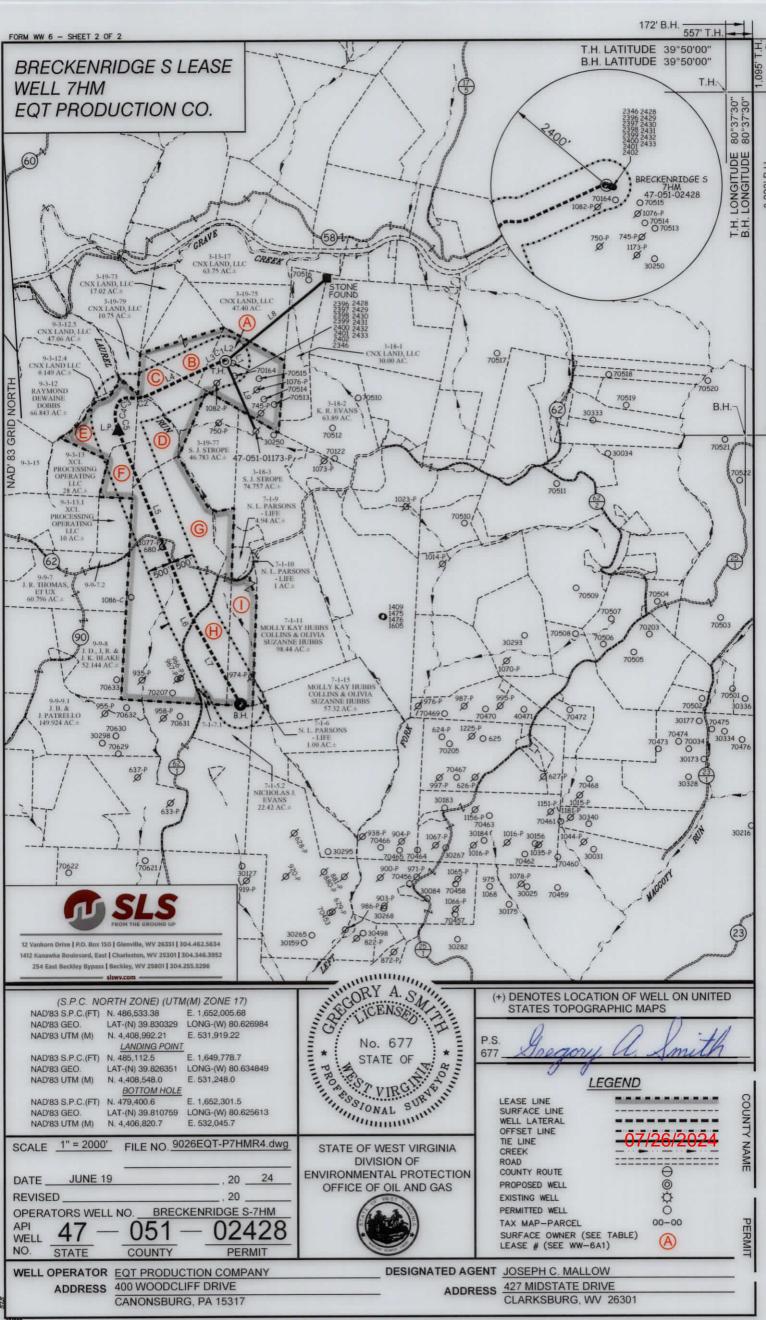
TARGET FORMATION \_\_ PHYSICAL CHANGE IN WELL (SPECIFY) ESTIMATED DEPTH \_

WELL OPERATOR EQT PRODUCTION COMPANY ADDRESS 400 WOODCLIFF DRIVE

CANONSBURG, PA 15317

DESIGNATED AGENT JOSEPH C. MALLOW

ADDRESS 427 MIDSTATE DRIVE CLARKSBURG, WV 26301



WW-6A1 (5/13)

## INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or				
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page

## See Attached

## Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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WV Department of Environmental Protection

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

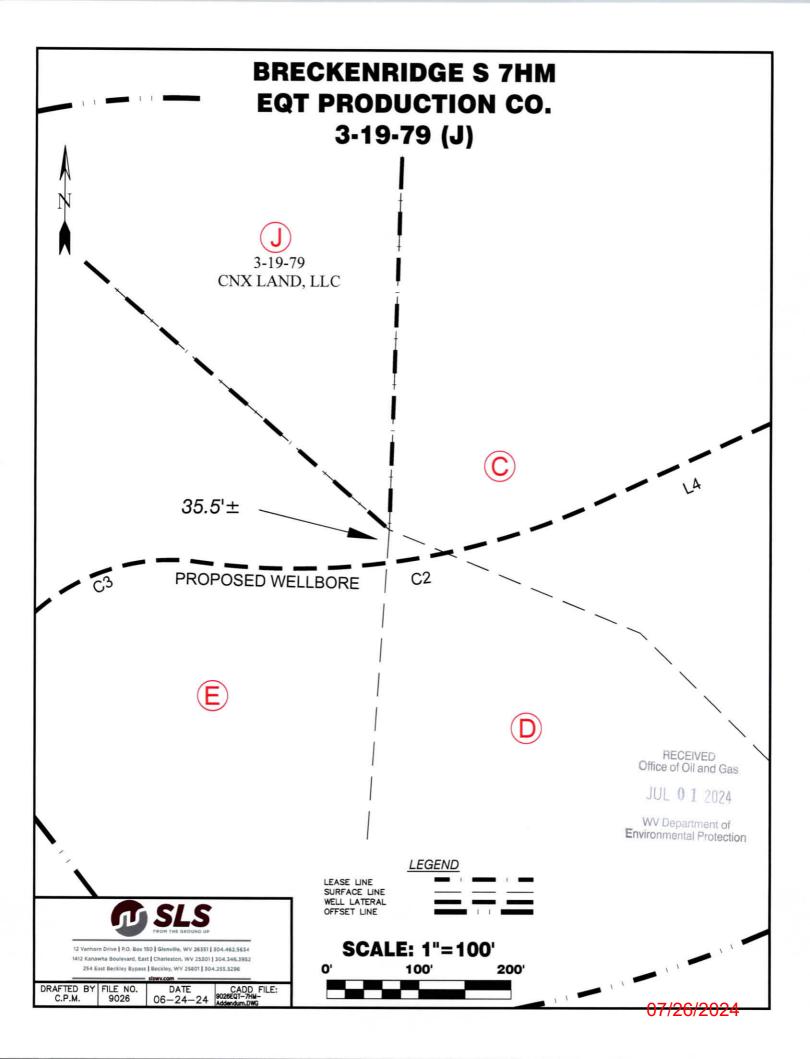
Well Operator: EQT Production Company

By: Branden Weimer

Its: Regional Manager - Subsurface Permitting

Page 1 of 2

Tag	Tax Parcel	Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
A	<u>3-19-76</u>	<u>241117001</u>	Country Roads Minerals, LLC, et al.  James R. Wayt, single Trans Energy, Inc. Trans Energy, Inc. Republic Energy Ventures, LLC, et al. American Shale Development Inc. EQT Production Company TH Exploration, LLC	53 25 ac	Trans Energy, Inc. Republic Energy Ventures, LLC Republic Energy Ventures, LLC American Shale Development inc. EQT Production Company EQT Production Company TH Exploration, LLC EQT TGHL Exploration LLC	*at least 1/8th per WV Code 22-6-8*	DB 729/40 AB 24/260 AB 27/172 AB 37/25 DB 986/541 AB 48/21 CB 24/172
В	<u>pło 3-19-74</u>	<u>240505000</u>	Sitio Appelachta, LLC Katherine Zogo Oliver, a married woman dealing in her sole and separate property Great Lakes Energy Partners LLC Range Resources - Appelachia, LLC Chesapeake Appelachia, LLC Chesapeake Appelachia, LLC	109.01 ac	Great Lakes Energy Partners LLC Range Resources - Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc. SWN Production Company LLC	*at least 1/8th per WV Code 22-6-8*	DB 663/449 CB 19/443 AB 23/368 AB 24/363 AB 33/110
			Statol USA Onshore Properties Inc. SWN Exchange Titleholder LLC SWN Production Company LLC Statol USA Onshore Properties Inc. Equinor USA Onshore Properties Inc. TH Exploration, LLC		SWN Exchange Tileholder LLC SWN Production Company LLC TH Exploration, LLC Equinor USA Onshore Properties Inc. TH Exploration, LLC EOT TGHL Exploration LLC		AB 33/424 CB 19/624 AB 49/604 CB 2/427 AB 49/604 CB 2/472
<u>c</u>	<u>3-19-78</u>	<u>241118003</u>	Greenfield Resources, LLC, et el. Greenfield Resources, LLC TH Exploration, LLC	104,23 ac	TH Exploration, LLC EQT TGHL Exploration LLC	"at least 1/8th per WV Code 22-6-8"	OB 1105/272 CB 2/472
D	<u>3-19-81</u>	241118003	Greenfield Resources, LLC, et al. Greenfield Resources, LLC TH Exploration, LLC	104.23 ac	TH Exploration, LLC EQT TGHL Exploration LLC	"at least 1/8th per WV Code 22-6-8"	DB 1105/272 CB 2/472
E	<u>3-19-80</u>	239055000	Charles Isalah Park Albright and Eun Ji Lee Charles Isalah Park Albright and Eun Ji Lee, husband and wife TH Exploration, LLC	30.54 ac	TH Exploration, LLC EQT TGHL Exploration LLC	"at least 1/8th per WV Code 22-6-8"	DB 1029/503 CB 2/472
Ē	<u>3-19-82</u>	239056000	Jeffrey L. Albright, et el. Jeffrey Lee Albright and Hyssoo Park Albright, husband and wife TH Exploration, LLC	53 ac	TH Exploration, LLC EQT TGHL Exploration LLC	*at least 1/8th per WV Code 22-6-8*	D8 1029/505 CB 2/472
<u>G</u>	<u>7-1-1</u>	<u>241776002</u>	Anna D. Morris Anna D. Morris, widow TH Exploration, LLC	179 ac	TH Exploration, LLC EQT TGHL Exploration LLC	*at least 1/8th per WV Code 22-6-8*	DB 1125/543 CB 2/472
Н	<u>7-4-7</u>	238871000	Mancy L. Parsons, et al. William E. Parsons and Naccy L. Parsons, husband and wife TH Exploration, LLC	40.86 ac	TH Exploration, LLC EQT TGHL Exploration LLC	*at least 1/8th per WV Code 22-6-8*	DB 1011/489 CB 2/472
<u>l</u>	<u>p/o 7-1-8</u>	<u>241102001</u>	Describe Minerals, LLC TH Exploration, LLC TH	836.998 ac	TH Exploration, LLC EQT TGHL Exploration LLC	*al least 1/8th per WV Code 22-6-8*	DB 928/393 CB 2/472



Logi	cahala	l Chain	Addendum
LUG	SELICIT		Accendum

Operator's Well No.

Breckenridge S-7HM

Tag	Tax Parcel	Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
			Robert Lee Glover, et al.			"at least 1/8th per WV Code 22-6-8"	
ī	<u>3-19-79</u>	<u>241119021</u>	Robert Lee Glover and Linda Lee Glover, husband and wife TH Exploration, LLC	10.79375 ac	TH Exploration, LLC EQT TGHL Exploration LLC		DB 1026/231 CB 2/472



June 28, 2024

Via FedEx Overnight Delivery

West Virginia Department of Environmental Protection Office of Oil and Gas 601 57<sup>th</sup> Street, S.E. Charleston, WV 25304

RE:

Well Work Permit Application Modification – EXPEDITED REVIEW REQUESTED

Breckenridge S-7HM

Permit Number 47-051-02428

Cameron District, Marshall County, WV

## WVDEP Recipient,

Attached please find the Well Work Permit Application for the well referenced above. You will find the following included with this submittal:

- Check in the amount \$7,500.00 for the expedited permit modification fee
- Completed WW-6B and supporting documents, approved by the O&G Inspector
- Well Location Plat
- Completed Form WW-6A1 and supporting documentation
- Hydraulic Fracturing Monitoring Plan
- Offset Well Map and Table
- Flare Map
- DVD containing the Water Management Plan & Site-Specific Safety and Environmental Plan, signed by the Inspector

EQT is proposing to extend the lateral from the previously permitted length.

EQT Production trusts that if any portion of the submitted documentation is found to be inadequate for processing the permit, notification will be made to our Permitting department at your earliest convenience. It is EQT Production's intent to cooperate fully to provide any additional requested documentation and clarification in a timely manner such that permitting proceeds in a predictable and logical manner.

Best Regards,

Branden Weimer

Regional Manager – Permitting Branden.Weimer@eqt.com

412-997-7940

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JUL 0 1 2024

WV Department of Environmental Protection