

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

Monday, October 21, 2024 PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

EQT PRODUCTION COMPANY 400 WOODCLIFF DR.

CANONSBURG, PA 15317

Re:

Permit Modification Approval for BRECKENRIDGE S-8HM

47-051-02429-00-00

Lateral Extension

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.

Operator's Well Number: BRECKENRIDGE S-8HM

Farm Name: CNX LAND LLC

U.S. WELL NUMBER: 47-051-02429-00-00

Horizontal 6A New Drill

Date Modification Issued: 10/21/2024

Promoting a healthy environment.

API NO. 47-051	- 02429	
OPERATOR W	ELL NO. S-8HM	1
Well Pad Nar	ne: Breckenridge	

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

1) Well Operator: EQT Produ	ction Company	306686	Marshall	Cameron Glen Easton 7.5
		Operator ID	County	District Quadrangle
2) Operator's Well Number: S-8	8HM	Well Pad	Name: Breck	enridge
3) Farm Name/Surface Owner:	CNX Land LLC	Public Road	d Access: CR	65
4) Elevation, current ground:	1370.61' (pad built) El	evation, proposed p	oost-construction	on: 1370.61'
5) Well Type (a) Gas X	Oil		rground Storag	
Other			-8	
(b)If Gas Sha	llow X	Deep		
Hor	izontal X			
6) Existing Pad: Yes or No Yes				
7) Proposed Target Formation(s) Marcellus, 6,977', 52', 3,800 ps), Depth(s), Antic	ipated Thickness ar	nd Expected Pr	essure(s):
2) Proposed Total Vertical Devil	6.077'			Office of Oil and Gas
8) Proposed Total Vertical Depth	Steeler Landson and the Market Landson and the	~		NCT 1 5 2024
9) Formation at Total Vertical D		1		OCT 1 5 2024
10) Proposed Total Measured De	epth: 17,731'			WV Department of
11) Proposed Horizontal Leg Lea	ngth: 7,765'			Environmental Protection
12) Approximate Fresh Water St	rata Depths:	1,038'		
13) Method to Determine Fresh	Water Depths: C	Offset Wells - 051-	70164, 051-0	0754, 051-00750
14) Approximate Saltwater Dept	hs: 1,803', 1,843	3', 1,903', 2,008'		
15) Approximate Coal Seam Dep	oths: 778'-784',	965'-968', 1,051'-1	1,056'	
16) Approximate Depth to Possil	ole Void (coal mi	ne, karst, other): N	I/A	
17) Does Proposed well location directly overlying or adjacent to		Yes X	No	
(a) If Yes, provide Mine Info:	Name: Marsh	nall County Mine		
	Depth: 1,051	'-1,056'		
	Seam: Pittsb	urgh		
	Owner: Marsh	nall County Coal F	Resources, Inc).

Strader Gower

API NO. 47- 051 - 02429

OPERATOR WELL NO. S-8HM
Well Pad Name: Breckenridge

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	<u>Grade</u>	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	1158	1158	1460 ft^3 / CTS
Coal						4	
Intermediate	9 5/8	New	J-55	36	2608	2608	1000 ft^3 / CTS
Production	6	New	P-110	24	17731	17731	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	
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

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	TICIALIA	OCT 1 5 2024
Kind:		
		Www Department of Environmental Protection
Sizes:		Environmental Protection
Depths Set:		

Strader Gower

OPERATOR WELL NO. S-8HM

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.

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WV Department of Environmental Protection

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,

Anti-Settling/Suspension Agent

25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at 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
08/06/2024

EQT Production (Tug Hill) Wellbore Diagram Well: Breckenridge S-8HM County: Marshall Pad: Breckenridge State: West Virginia Elevation: 1370' GL 1383' KB Conductor @ 120' 30", BW, BW, cement to surface w/ Class A Surface @ 1,158' 13-3/8", 54.5#, J-55, cement to surface w/ Class A RECEIVED Office of Oil and Gas OCT 1.5 2024 WV Department of Environmental Protection Intermediate @ 2,608' 9-5/8", 36#, J-55, cement to surface w/ Class A/H/L 17,731' MD / 6,977' TVD Production @ 6", 24#, P-110, cement to 500' inside 9-5/8" w/ Class A/H/L Formation: Marcellus Strader Gower 08/06/2024 100257203QALE

WEST VIRGINIA GEOLOGICAL PROGNOSIS

Breckenridge S-002889

383 KB Breckenridge Marcellus Marshall Recommended Azimuth Drilling Objectives: Pad Name Elevation: County:

149 Degrees

370 GL

Run a deviation survey from surface to the drilled depth approximately 20' from the top of the Pittsburgh #8 coal seam and shall prompty provide the certified results of the deviation survey to Marshall County Coal Resources, Inc.

ESTIMATED FORMATION TOPS

Coal requirements:

Red Rock Base of

RECEIVED Gas Office of Oil and OCT 15 2024 Top RR Base RR M Debaument o 1026 anmental Prote ENV Solid Coal - Active Mine Possible oil/gas show Possible oil/gas show Possible oil/gas show Possible oil/gas show Start Lateral at 6977 FW @ ,1038,, Solid Coal Possible Gas Possible Gas Comments Solid Coal 6808 Gray shale interbedded 6622 Gray Shales and Silts 6952 Gray shale with some Lithology 6834 Black Shale 3446 Silty Sand 5622 Silty Sand 7003 Black Shale 3249 Silty Sand 3313 Silty Sand 6729 Gray shale 6065 Silty Sand 6994 Limestone 2503 Sandstone 6859 Limestone 6974 Limestone 2558 Sandstone 6758 Shale 784 Coal 1056 Coal 968 Coal Base (TVD) 52 feet 3800 PSI 778 965 1050 2249 2503 2608 2833 3251 3328 3446 5622 6065 6622 6729 **LL**69 6859 Top (TVD) 8089 Max Anticipated Rock Pressure Int. csg pt Fresh Water Zone Cherry Valley Target Thickness Lateral Zone Waynesburg Middlesex Marcellus Hamilton Formation Sewickley ittsburgh Alexander Purcell Geneseo Big Injun Genesee Onondaga Big Lime Sonyea Bayard Gordon Elks Fully Berea 50F

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', 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

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

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	2	
A COURT		

	50' below pittsburgh coal	50' Below Big Iniun	,
	1106	2608	
	CSG DEPTH:	CSG DEPTH:	CSG DEPTH: @ TD
	13 3/8	9 5/8	5 1/2
SING POINTS	CSG OD	CSG OD	CSG OD
KECOMMENDED CA	Fresh Water/Coal	Intermediate 1:	Production:

EQT Production

Hydraulic Fracturing Monitoring Plan

Pad ID: Breckenridge

County: Marshall

October 10, 2024

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Page 1 of 2

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
- 3. Inspect or install master valves or other necessary equipment for wellhead integrity capable of a pressure recommended by EQT
- 4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

2. Reporting

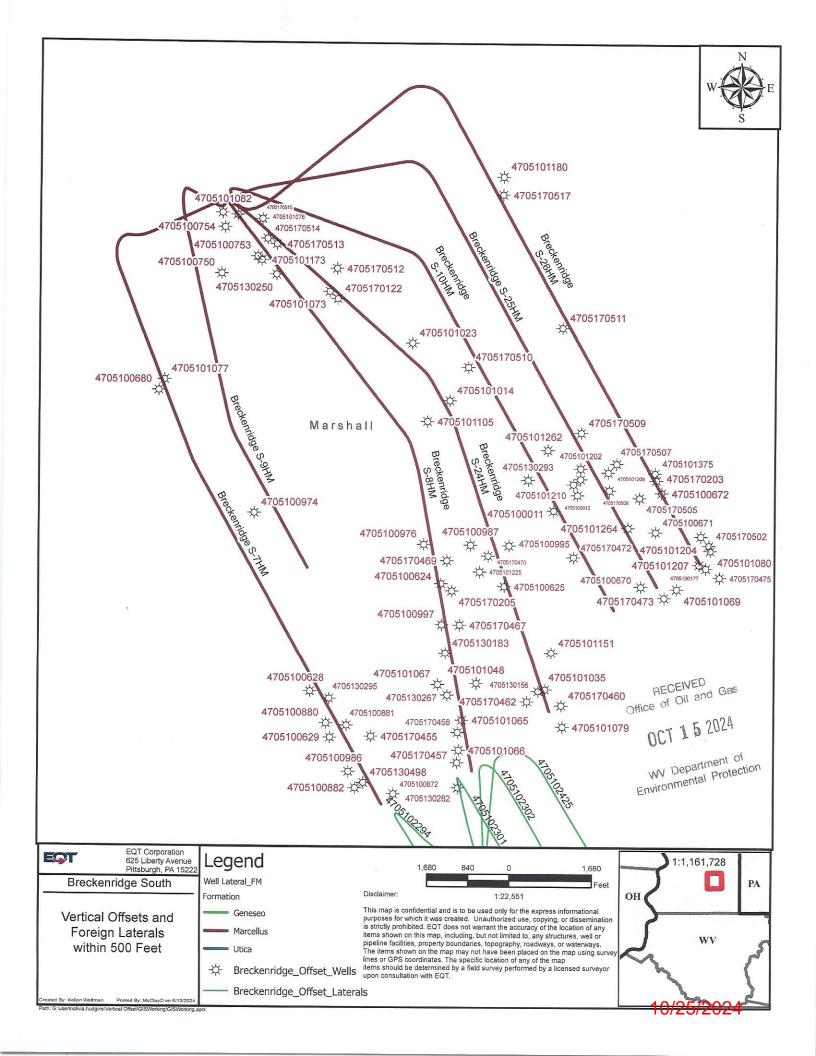
EQT will provide information relating to the hydraulic fracturing schedule, communication with other operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.

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> > Page 2 of 2 OCT 1 5 2024

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Environmental Protection



Protection

4705101209	47-051-01209-00	MCELROY COAL COMPANY	P & A	OTHER	MCELROY COAL COMPANY	39.81542	-80.59898	1245	4254			
4705101375	47-051-01375-00	MCELROY COAL COMPANY	P & A	OTHER	MCELROY COAL COMPANY	39.815372	-80.595647	S. S	1254	0	0 PARSONS, WILLIAM M-452	OTHER-P & A
A705130267	47-051-30267-00	RANDALL-ZOGG SUPPLY CO.	COMPLETED	OIL	RANDALL-ZOGG SUPPLY CO.	39.802671		1399	1408	0	0 PARSONS, WILLIAM & NANCY M 450	OTHER-P & A
24705170513	47-051-70513-00		UNREPORTED	UNREPORTED			-80.610395		0	0	3044 V P GORBY	OIL-COMPLETED
/ 4705101076		CONSOLIDATION COAL COMPANY	P&A	OTHER	CONSOLIDATION COAL COMPANY	39.827897	-80.623372		0	0	O SUSANNA WILLIAMS	UNREPORTED-UNREPORTED
4705100629		CONSOLIDATION COAL COMPANY	P&A	OIL	CONSOLIDATION COAL COMPANY	39.829319	-80.624484	1356	1365	0	0 WAYT, J. RICHARD M-109	OTHER-P & A
4705101262		MCELROY COAL COMPANY	P & A	OTHER		39.800175	-80.61886	1197	1206	2963	2963 HUBBS, JAMES - ESTATE M-370	OIL-P & A
4705100995		CONSOLIDATION COAL COMPANY	P & A		MCELROY COAL COMPANY	39.816618	-80.6034	1352	1361	0	O PARSONS, WILLIAM M-455	OTHER-P & A
4705130295	47-051-30295-00		COMPLETED	OTHER	CONSOLIDATION COAL COMPANY	39.811206	-80.606074	1286	1295	0	O FRYE, BERNARD G. M-441	OTHER-P & A
4705130233		CONSOLIDATION COAL COMPANY		OIL	(N/A)	39.802353	-80.6190477	1247	0	2935	0 GEO W HUBBS 6	OIL-COMPLETED
4705101077		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			P & A	OTHER	CONSOLIDATION COAL COMPANY	39.805173	-80.602871	1217	1226	0	0 JAMISON, JEAN M-381	OTHER-P & A
4705170509		CONSOLIDATION COAL COMPANY	P & A	GAS	CONSOLIDATION COAL COMPANY	39.826155	-80.627436	1087	1097	2965	2965 STROPE, CHARLES M-107	GAS-P & A
	47-051-70509-00		UNREPORTED			39.817592	-80.600997	1266	0	0	O JUSTICE PHILLIPS	UNREPORTED-UNREPORTED
4705170475	47-051-70475-00	1 SCA (Caracacacacacacacacacacacacacacacacacaca	UNREPORTED		(N/A)	39.809609	-80.590844	1177	0	0	O S L CHAMBERS	UNREPORTED-UNREPORTED
4705100881		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		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		UNREPORTED	UNREPORTED	(N/A)	39.810626	-80.607578	1208	0	0	O AARON A PORTER	UNREPORTED-UNREPORTED
4705101069		CONSOLIDATION COAL COMPANY	P & A	OTHER	CONSOLIDATION COAL COMPANY	39.80891	-80.593872	1382	1391	0	0 CONSOLIDATION COAL CO. M-436	OTHER-P & A
4705170507	47-051-70507-00		UNREPORTED	UNREPORTED	(N/A)	39.815851	-80.598365	1266	0	0	O JUSTICE PHILLIPS	Fig. 1 and the second s
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	O MELVIN CLARK	UNREPORTED-UNREPORTED
					and the second of the second o	051025504	00.550075	1421	U	U	O WELVIN CLARK	UNREPORTED-UNREPORTED
Laterals												
API_UWI_Un	API_UWI_14	ENVOperato	ENVWellSta	ENVWellTyp	InitialOpe	Latitude L	Longitude	Flouration C. Flour				
4705102301	47-051-02301-00-0	SOUTHWESTERN ENERGY	PRODUCING	GAS	SWN PROD				-		VD_FT WellName	WellSymbol
4705102302		SOUTHWESTERN ENERGY	PRODUCING	GAS	SWN PROD	39.791879	-80.607586	1335	1363		7292.86 CHARLES JAMISON MSH 10H	GAS-PRODUCING
4705102294		SOUTHWESTERN ENERGY	PRODUCING		SWN PROD	39.7918763	-80.6075548	1335			7284.53 CHARLES JAMISON 210H	GAS-PRODUCING
4705102425		SOUTHWESTERN ENERGY	PRODUCING			39.791892	-80.607655	1335		21230	7154 CHARLES JAMISON MSH 6H	GAS-PRODUCING
			FRODUCING	GAS	SWN PROD	39.791866	-80.607499	1337	1363	27375	8267 CHARLES JAMISON MSH 410H	GAS-PRODUCING

Office of Oil and Gase
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OCT 15 2024

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WV Department of
Environmental Protection

BRECKENRIDGE S LEASE

EQT PRODUCTION CO.

WELL 8HM

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

)°37'30")°35'00"

808

LONGITUDE & LONGITUDE &

H H

-	
(S.P.C. NORTH ZONE) (UTM(M) ZONE 1	17)

NAD'83 GEO.

NAD'83 GEO.

NAD'83 UTM (M)

NAD'83 UTM (M)

-7.072' B.H. --

NAD'83 S.P.C.(FT) N. 486,527.60 LAT-(N) 39.830314 N. 4,408,990.57 LANDING POINT

E. 1,652,028.99 LONG-(W) 80.626901 E. 531,926.35

E. 1,655,793.4 NAD'83 S.P.C.(FT) N. 481,469.6 LAT-(N) 39.816558 LONG-(W) 80.613275 N. 4,407,468.8 E. 533,099.0

BOTTOM HOLE

NAD'83 S.P.C.(FT) N. 476,866.1 E. 1,657,052.7 NAD'83 GEO. LAT-(N) 39.798473 LONG-(W) 80.608502 NAD'83 UTM (M) N. 4,405,463.4 E. 533,516.3

TAG	SURFACE OWNER	PARCEL	ACRES
Α	CNX LAND, LLC	3-19-76	53.25
В	SONJA J. STROPE	3-18-3	69.977
C	DAVID L & ARIANNE R. ROBINSON	3-18-3.3	16.884
D	DAVID L & ARIANNE R. ROBINSON	3-18-3.2	1.886
Е	P/O OLIVIA SUZANNE HUBBS	7-1-13	120.937
F	MARY KAY HUBBS COLLINS & OLIVIA SUZANNE HUBBS	3-18-5	25.372
G	P/O OLIVIA SUZANNE HUBBS	7-1-13	120.937
Н	MARY KAY HUBBS COLLINS & OLIVIA SUZANNE HUBBS	7-1-14	53.67
I	RICKIE GENE FRYE	7-2-3.1	37.8578
J	BEVERLY MAE DAVIS	7-2-4	58.08
K	JEAN JAMISON	7-7-9.1	97.896
L	KENNETH W. STEELE TRUST	7-7-8.1	79.03
M	KEVIN R.EVANS	3-18-2	63.89

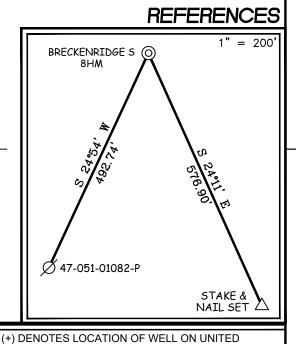
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	12.19'	10.91'	10.55'	S 21°23' W
C2	1331.55'	124.13'	124.08'	S 35°05' E
C3	4580.76'	377.93'	377.82'	S 36°35' E
C4	874.15'	206.72'	206.24'	S 22°53' E

DISTANCE BEARING LINE N 50°13' E 2699.10 S 88°33' E 2713.58 S 20°07' W 7.52' L4 S 42°56' W 31.75 S 19°34' E 28.68' 5561 11 16 S 37°46' F S 16°11' E 382.25 S 13°17' E 192.93 L8 6149.32



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"=2000'

∕B.H.



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.

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

PS

No. 677
STATE OF
VIRCENSIONAL SURVINIA No. 677

. 20 OPERATORS WELL NO. BRECKENRIDGE S-8HM

WELL

DATE

REVISED

STATE COUNTY

STATES TOPOGRAPHIC MAPS

OCTOBER 18

PERMIT

__, 20 <u>___24</u>

MINIMUM DEGREE OF ACCURACY

HORIZONTAL & VERTICAL

CONTROL DETERMINED BY:

1 / 2500

FILE NO. 9026EQT-P8HMR8.dwg

1" = 2000' **SCALE** DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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



LIQUID WASTE IF TYPE: OIL _ $_$ GAS $_{ extstyle X}_$ INJECTION $__$ _ DISPOSAL _ $_$ "GAS" PRODUCTION $_{ extstyle X}_$ STORAGE $___$ DEEP $___$ SHALLOW $_$

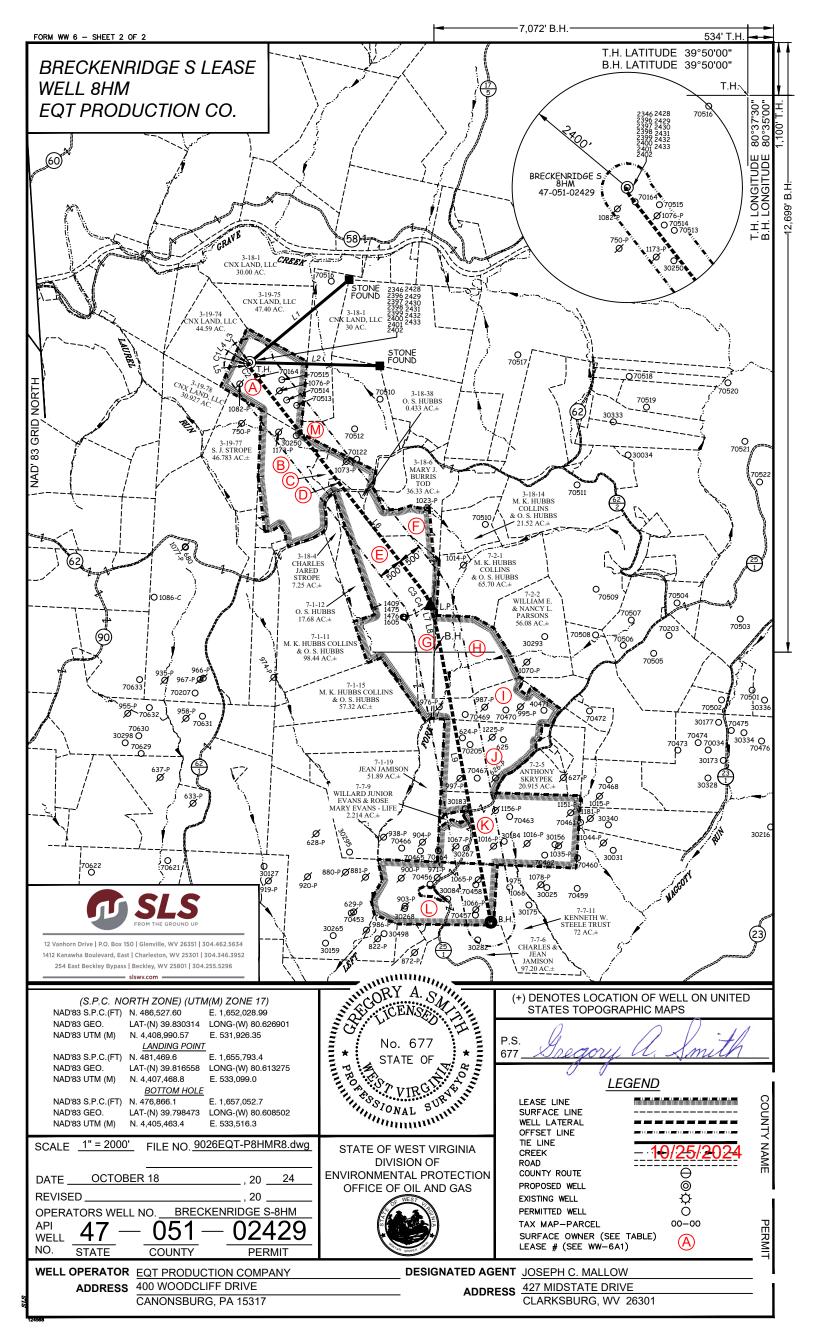
LOCATION:

ELEVATION ___1,370.61' _ WATERSHED ___ GRAVE CREEK (HUC 10) & LAUREL RUN DISTRICT <u>CAMERON</u> COUNTY ___ GLEN EASTON 7.5' MARSHALL QUADRANGLE SURFACE OWNER ____CNX LAND LLC 53.25± ACREAGE ___ ROYALTY OWNER COUNTRY ROADS MINERALS, LLC, ET AL 10725/2024 ACREAGE ____

SEE WW-6A1 PROPOSED WORK · LEASE NO 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 _

__ TARGET FORMATION _____ MARCELLUS PHYSICAL CHANGE IN WELL (SPECIFY) _ TVD: 6,977' / TMD: 17,731' ESTIMATED DEPTH _

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



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

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OCT 1-5 2024

WV Department of Environmental Protection

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

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 4

					8 NO 1281		Dreckennage e er nør	
Tag	Tax Parcel	Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page	
			Country Roads Minerals, LLC, et al.		Trans Energy, Inc.	"at least 1/8th per WV Code 22-6-8"		
A	<u>3-19-76</u>	<u>241117001</u>	James R. Wayt, single Trans Energy, Inc. Trans Energy, Inc.	53.25 ac	Republic Energy Ventures, LLC Republic Energy Ventures, LLC American Shale Development Inc.		DB 729/40 AB 24/260 AB 27/172	
			Republic Energy Ventures, LLC, et al. American Shale Development Inc. EQT Production Company TH Exploration, LLC		EQT Production Company EQT Production Company TH Exploration, LLC EQT TGHL Exploration LLC		AB 37/25 DB 968/541 AB 48/21 CB 2/472	
			Bounty Minerals, LLC, et al.			"at least 1/8th per WV Code 22-6-8"		
<u>B</u>	<u>p/o 3-18-3</u>	241102002	Goshorn Ridgle LLC Trans Energy, Inc. Trans Energy, Inc. Republic Energy Ventures, LLC American Shale Development Inc. Republic Energy Ventures, LLC	937 ac	Trans Energy, Inc. Republic Energy Ventures, LLC Republic Energy Ventures, LLC American Shale Development Inc. Republic Partners VIII, LLC Republic Partners VIII, LLC		DB 723/192 AB 24/425 AB 27/172 AB 28/184 AB 31/482	
			Republic Partners VIII, LLC, et al. American Shale Development Inc.		EQT Production Company EQT Production Company		AB 37/25 DB 968/541	
			Bounty Minerals, LLC, et al.			"at least 1/8th per WV Code 22-6-8"		
<u>c</u>	<u>3-18-3.3</u>	241102002	Goshorn Ridgle LLC Trans Energy, Inc. Trans Energy, Inc. Republic Energy Ventures, LLC American Shale Development Inc.	937 ac	Trans Energy, Inc. Republic Energy Ventures, LLC Republic Energy Ventures, LLC American Shale Development Inc. Republic Partners VIII, LLC Republic Partners VIII, LLC		DB 723/192 AB 24/425 AB 27/172 AB 28/184 AB 31/482	
			Republic Energy Ventures, LLC Republic Partners VIII, LLC, et al. American Shale Development Inc.		EQT Production Company EQT Production Company		AB 37/25 DB 968/541	Office of Gland
			Bounty Minerals, LLC, et al.		Topo Coopy Inc	"at least 1/8th per WV Code 22-6-8"	<	THE CHANGE OF ST.
<u>/b</u>	<u>3-18-3.2</u>	<u>241102002</u>	Goshorn Ridgle LLC Trans Energy, Inc. Trans Energy, Inc.	937 ac	Trans Energy, Inc. Republic Energy Ventures, LLC Republic Energy Ventures, LLC American Shale Development Inc.		DB 723/192 AB 24/425 AB 27/172	OCT OF CHANGE OF THE PROPERTY OF STREET

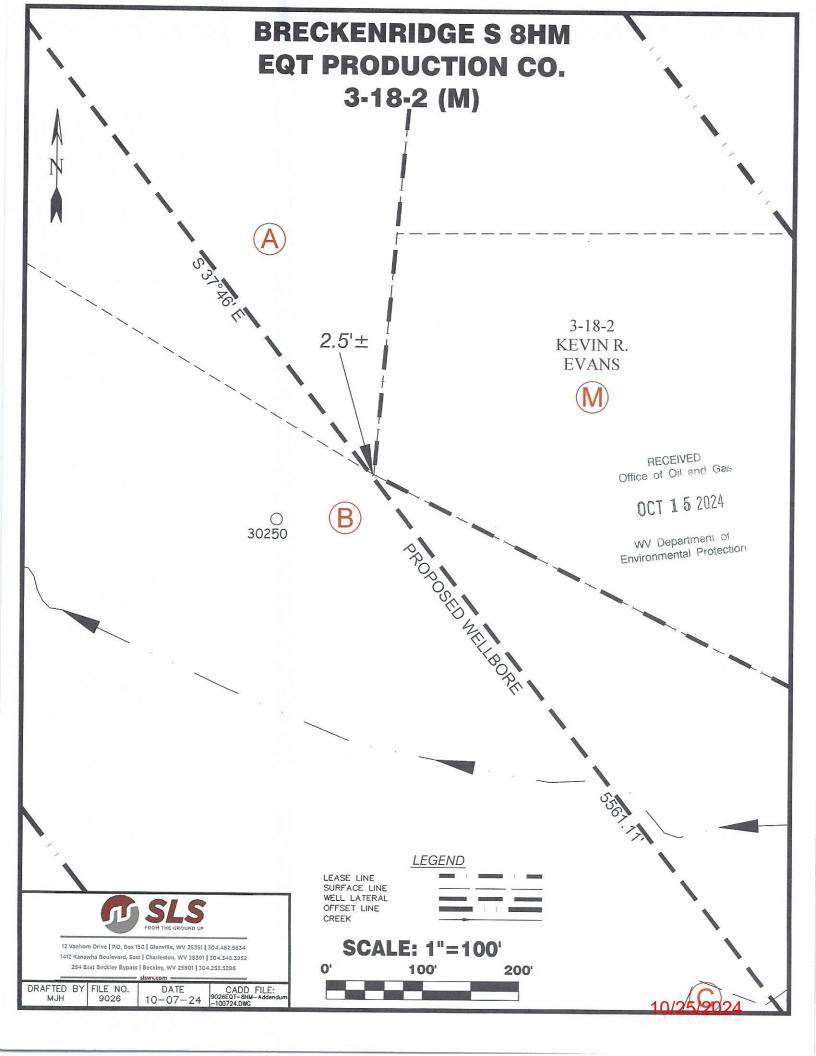
			Republic Energy Ventures, LLC American Shale Development Inc. Republic Energy Ventures, LLC Republic Partners VIII, LLC, et al. American Shale Development Inc.		Republic Partners VIII, LLC Republic Partners VIII, LLC EQT Production Company EQT Production Company		AB 28/184 AB 31/482 AB 37/25 DB 968/541
			Bounty Minerals, LLC, et al.			"at least 1/8th per WV Code 22-6-8"	
/ <u>E</u>	<u>p/o 7-1-13</u>	<u>241102002</u>	Goshorn Ridgle LLC Trans Energy, Inc. Trans Energy, Inc. Republic Energy Ventures, LLC American Shale Development Inc. Republic Energy Ventures, LLC Republic Energy Ventures, LLC Republic Partners VIII, LLC, et al.	937 ac	Trans Energy, Inc. Republic Energy Ventures, LLC Republic Energy Ventures, LLC American Shale Development Inc. Republic Partners VIII, LLC Republic Partners VIII, LLC	WV Code 22-0-0	DB 723/192 AB 24/425 AB 27/172 AB 28/184 AB 31/482 AB 37/25
			American Shale Development Inc.		EQT Production Company		DB 968/541
/ <u>E</u>	<u>p/o 3-18-5</u>	<u>241102002</u>	Bounty Minerals, LLC, et al. Goshorn Ridgle LLC Trans Energy, Inc. Trans Energy, Inc. Republic Energy Ventures, LLC American Shale Development Inc. Republic Energy Ventures, LLC	937 ac	Trans Energy, Inc. Republic Energy Ventures, LLC Republic Energy Ventures, LLC American Shale Development Inc. Republic Partners VIII, LLC Republic Partners VIII, LLC	"at least 1/8th per WV Code 22-6-8"	DB 723/192 AB 24/425 AB 27/172 AB 28/184 AB 31/482
			Republic Partners VIII, LLC, et al. American Shale Development Inc.		EQT Production Company EQT Production Company		AB 37/25
/ <u>G</u>	<u>plo 7-1-13</u>	<u>241102001</u>	Bounty Minerals, LLC, et al. Bounty Minerals, LLC TH Exploration, LLC	836.998 ac		"at least 1/8th per WV Code 22-6-8"	DB 968/541 DB 928/393 CB 2/472
/ <u>H</u>	<u>7-1-14</u>	<u>241103003</u>	Olivia S. Allen, et al. James Timothy Hubbs Testamentary Trust of Molly Kay Hubbs and James Timothy Hubbs Trust of Olivia Suzanne Hubbs, c/o Judy Kay Matthews, Trustee American Shale Development Inc. Republic Energy Ventures, LLC, et al. American Shale Development Inc. EQT Production Company TH Exploration, LLC	177.408 ac	American Shale Development Inc. Republic Energy Ventures, LLC Republic Energy Ventures, LLC EQT Production Company EQT Production Company TH Exploration, LLC EQT TGHL Exploration LLC	"at least 1/8th per WV Code 22-6-8"	DB 848/6 AB 23/255 AB 37/25 DB 968/541 AB 48/21 CB 2/472

1	<u>1</u> 7-2-3.1	<u>241802001</u>	Beverly Mae Davis, et al. Beverly Mae Davis, a widow American Petroleum Partners Operating LLC TH Exploration, LLC	50.258 ac	American Petroleum Partners Operating LLC TH Exploration, LLC EQT TGHL Exploration LLC	WV Code 22-6-8"	DB 910/270 AB 43/503 CB 2/472
1	<u>J</u> 7-2-4	241805012	Donald Wayne Andrews, et al. Donald Wayne Andrews and Jeri Andrews, husband and wife TH Exploration, LLC	200 ac	TH Exploration, LLC EQT TGHL Exploration LLC	"at least 1/8th per WV Code 22-6-8"	DB 1124/555 CB 2/472
			Five Star JV II, et al.		. <u>n</u>	"at least 1/8th per WV Code 22-6-8"	
/!	<u> 7-7-9.1</u>	241821012	James W. Raymond, single American Shale Development Inc. Republic Energy Ventures, LLC Republic Partners VIII, LLC, et al.	198.65 ac	American Shale Development Inc. Republic Energy Ventures, LLC Republic Partners VIII, LLC		DB 789/299 AB 31/482
			American Shale Development Inc.		EQT Production Company EQT Production Company SWN Production Company LLC		AB 37/25 DB 968/541
			EQT Production Company SWN Production Company LLC Equinor USA Onshore Properties Inc. TH Exploration, LLC		Equinor USA Onshore Properties Inc. TH Exploration, LLC TH Exploration, LLC EQT TGHL Exploration LLC		AB 44/489 AB 49/635 AB 49/604 CB 2/472
,			Anna Laurie Winters, et al.			"at least 1/8th per WV Code 22-6-8"	652.1.2
<u> </u>	<u>7-7-8.1</u>	<u>778.1</u>	Wilbur Whipkey and Mary M. Whipkey, his wife, et al. Manufacturers Light and Heat Company	81 ac	Manufacturers Light and Heat Company Columbia Gas Transmission Corporation	WV Code 22-6-8	DB 360/234 DB 422/204
			Columbia Gas Transmission Corporation Chesapeake Appalachia, L.L.C. Statoilhydro USA Onshore Properties Inc.		Chesapeake Appalachia, L.L.C. Statoilhydro USA Onshore Properties Inc. Statoil USA Onshore Properties Inc.		DB 662/322, DB 663/592, DB 871/34, & DB 928/270 DB 675/279 WVSOS
	OCT 15 202 wv Department Environmental Prot	RECEIVED Office of Oil and	Statoil USA Onshore Properties Inc. Chesapeake Appalachia, L.L.C, SWN Exchange Titleholder LLC		SWN Exchange Titleholder LLC SWN Production Company, LLC SWN Production Company, LLC		AB 33/424 AB 33/110 CB 19/624
	1 5 202 partment ental Prote	EIVED Oil and G	SWN Production Company, LLC		EQT Production Company		Leasehold Commitment Agreement dated October 1, 2024

"at least 1/8th per

Tag	Tax Parcel	Lease No.	Grantor, Lessor, etc.	Acres	Grantee, Lessee, etc.	Royalty	Book/Page
			Bounty Minerals, LLC, et al.			"at least 1/8th per W Code 22-6-8"	V
<u>∕ M</u>	n/o 2 10 2	241102002	Cookern Didale III C	007	Trans Energy, Inc.		
/ IVI	<u>p/o 3-18-2</u>	241102002	Goshorn Ridgle LLC	937 ac	Republic Energy Ventures, LLC		DB 723/192
			Trans Energy, Inc.		Republic Energy Ventures, LLC		AB 24/425
			Trans Energy, Inc.		American Shale Development Inc.		AB 27/172
			Republic Energy Ventures, LLC		Republic Partners VIII, LLC		AB 28/184
			American Shale Development Inc.		Republic Partners VIII, LLC		
			Republic Energy Ventures, LLC		republic raithers vill, LEG		AB 31/482
			Republic Partners VIII, LLC, et al.		EQT Production Company		
					in the Property of the Propert		AB 37/25
			American Shale Development Inc.		EQT Production Company		DB 968/541

Office of Oil and Gaso Office of Oil and O





October 1, 2024

VIA ELECTRONIC MAIL

SWN Production Company, LLC 10000 Energy Drive Spring, Texas 77389 PREDENTED
Office of City and Case

OCT 1 5 2024

WV Department of Environmental Protestion

Re:

Leasehold Commitment Agreement

EQT Production Company Proposed Breckenridge South Unit Area 7HM, 8HM, 9HM,10HM, 24HM,

25HM, and 26HM Wells

Cameron, Liberty and Meade Districts, Marshall Co., WV

Dear Gavin:

This letter (this "Leasehold Commitment Agreement") shall serve as a formal agreement between EQT Production Company, LLC, a Pennsylvania company with an address of 400 Woodcliff Drive, Canonsburg, PA 15317 ("EQT") and SWN Production Company, a Texas limited liability company with an address of 10000 Energy Drive, Spring, Texas 77389 ("SWN"), Equinor USA Onshore Properties Inc., a Delaware corporation, whose address is 2107 City West Blvd, Houston, Texas 77042 ("EQNR") (SWN and EQNR are collectively referred to as "SWN/EQNR") regarding certain tracts of land and leases in Cameron, Liberty, and Meade Districts, Marshall County, West Virginia, as described in the attached Exhibit "A", wherein SWN/EQNR may own a leasehold or fee interest in the oil and gas rights (the "Subject Tracts"). Intending to be legally bound hereby, the parties agree as follows:

EQT and SWN/EQNR executed an Acreage Trade Agreement on September 6, 2024 ("Trade Agreement") with respect to certain tracts in Marshall and Wetzel County, West Virginia, covering the leasehold and fee interests owned by each company, and it has come to EQT's attention that the Subject Tracts, which SWN/EQNR and EQT included in said Trade Agreement, are located within EQT's Breckenridge South Unit Area (the "Units"). EQT plans to drill wells (the "Wells") in these Units and the wellbore laterals for such Wells may reach the Subject Tracts prior to EQT and SWN/EQNR closing the aforementioned Trade Agreement. EQT intends to drill the Wells to the Marcellus Formation. As used herein, "Marcellus Formation" means all depths and formations from five-hundred feet (500') above the correlative stratigraphic equivalent of the top of the Tully Limestone of the Mahantango formation, the top of such formation being at a measured depth of 7398 feet on the Log, down to two-hundred feet (200') below the correlative stratigraphic equivalent of the top of the Onondaga Limestone formation, the top of such formation being at a measured depth of 7576 feet on the log of the 1 BURLEY J WELL, API No. 4705100539, IN Marshall County, West Virginia.

Subject to the terms and conditions of this Leasehold Commitment Agreement, SWN/EQNR consents to and grants EQT all of SWN/EQNR's rights to make regulatory permit applications and, upon receipt of all necessary permits and governmental approvals, to proceed to develop such Oil and Gas Leases and Fee Interests and extract, produce and market the Hydrocarbons therefrom.

As noted above, EQT and SWN/EQNR executed a Trade Agreement, and the parties included the Subject Tracts among those interests to be assigned by SWN/EQNR to EQT. Within ten days following the earliest to occur (on a Subject Tract-by-Subject Tract basis) of the following (as applicable, the "Conveyance Date"): (a) the date that a Subject Tract is fully and finally excluded from the assignment to occur pursuant to the Trade Agreement; or (b) the date that the Trade Agreement is terminated in accordance with

express terms, the following items in clauses (1) and (2) below shall occur (each being deemed to occur simultaneously and each being a condition to the other). For clarity, those Subject Tracts that have not been assigned or leased to EQT pursuant to a Trade Agreement on or before the applicable Conveyance Date are, collectively, the "SWN/EQNR Remaining Tracts".

- (1) SWN/EQNR and EQT shall execute, acknowledge, and deliver to one another an assignment, bill of sale, and conveyance pursuant to which SWN/EQNR will assign to EQT all of SWN/EQNR's right, title, and interest in and to the SWN/EQNR Remaining Tracts to which it owns leasehold, limited to the Marcellus Formation, and or (ii) an oil and gas lease pursuant to which SWN/EQNR will lease to EQT all of SWN/EQNR's right, title, and interest in and to the SWN/EQNR Remaining Tracts to which it owns fee interests, limited to the Marcellus Formation.
- (2) EQT shall pay to SWN/EQNR, by wire transfer of immediately available funds to an account designated in writing by SWN/EQNR, an amount equal to (y) the sum of the net acres for the SWN/EQNR Remaining Tracts (which shall be equal to the number set forth in Exhibit "A" under the column heading "Lease Net Acres" for each such SWN/EQNR Remaining Tract), *multiplied* by (z) \$10,000.00.

EQT shall be fully responsible for and shall release, defend, indemnify and hold SWN/EQNR harmless from and against any and all losses, expenses, damages, injuries, claims or obligations and liabilities (including attorneys' fees) arising from or relating to EQT's activities and operations under this Leasehold Commitment Agreement.

This Leasehold Commitment Agreement is governed by the laws of West Virginia. This Leasehold Commitment Agreement may be executed in counterparts, which when taken together, will form one instrument. Neither Party shall be liable to the other Party for any special, incidental, consequential, punitive or exemplary damages related to, arising out of, or connected with this Leasehold Commitment Agreement. This Leasehold Commitment Agreement, together with the Trade Agreement, represent the entire agreement of the Parties with respect to the subject matter hereof and supersedes all prior verbal and/or written agreements with respect to the subject matter hereof.

If the above terms and conditions of this Leasehold Commitment Agreement are acceptable to you, please indicate your approval in the space provided below and return an executed copy of this Leasehold Commitment Agreement to the attention of the undersigned.

Should you have any questions, please contact the undersigned at (724)802-2353 or by email at greg.godbey@eqt.com.

Respectfully,

EQT Production Company

Greg Godbey, CPL

Office of the control of

OCT 1 5 2024

TO FOLLOW] WV Department of Environmental Protection

SWN:
SWN-BRODUCTION COMPANY, LLC
Derek Cutright
By: Derek Cutright
Its: Vice President
EONR:
EQUINORUSA ONSHORE PROPERTIES INC.
Eric Luszez
By: Eric Luszcz
Its: Manager – Land
EQT:
EQTOPRODUCTION COMPANY
By: Corey C. Peck
Its: Vice President - Land GG MS ME

Office of Oil and Gase
OCT 15 2024
OCT 15 2024

OCT 15 2024

Environmental Protection

EXHIBIT "A"

Attached to and made a part of that certain Leasehold Commitment Agreement, dated September 26, 2024, by and between EQT and SWN/EQNR.

Original Lessor	Original Lessee	BK/PG	Lease Effective Date	Gross Acres	Leased Net Acres	Tracts Conveyed
HOLT PHYLLIS J AND WILLIAM J HOLT HUSBAND JOHN H	COLUMBIA GAS TRANSMISSION	566/572	12/14/1994	30.980000	6.234759	07-0007-0005-0000
DAVID J MULLEN AND SANDRA MULLEN HUSBAND AND WIFE	SWN PRODUCTION COMPANY LLC	931/432	7/6/2017	30.980000	3.117380	07-0007-0005-0000
MARCIA L KERANS AND GARY KERANS WIFE AND HUSBAND	SWN PRODUCTION COMPANY LLC	931/436	7/6/2017	30.980000	3.117380	07-0007-0005-0000
UNKNOWN HEIRS OF AGNES BRUHN	SWN PRODUCTION COMPANY LLC	1073/617	2/13/2020	30.980000	1.558690	07-0007-0005-0000
WHIPKEY WILBUR AND MARY M WHIPKEY HIS WIFE	MANUFACTURERS LIGHT & HEAT COMPANY	360/234	11/28/1962	79.020000	79.020000	07-0007-0008-0001
CHAMBERS CLARENCE AND BESSIE CHAMBERS HIS WIFE; LYLE DOBBS	MANUFACTURERS LIGHT & HEAT COMPANY	375/164	2/15/1965	33.778000	20.246204	07-0002-0020-0000
CHAMBERS CLARENCE AND BESSIE CHAMBERS HIS WIFE BESSIE DEL	MANUFACTURERS LIGHT & HEAT COMPANY	375/149	2/15/1965	32.000000	1.620801	07-0002-0021-0000
CHAMBERS RANDOLPH AND PAULINE CATHERINE CHAMBERS HIS WIFE;	MANUFACTURERS LIGHT & HEAT COMPANY	371/135	6/21/1964	48.938000	25,646885	07-0002-0022-0000

RECEIVED
Office of Oil and Gas

OCT 1 5 2024

WV Department of Environmental Protection



October 10, 2024

Via FedEx Overnight Delivery

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

RE:

Well Work Permit Application Modification – EXPEDITED REVIEW REQUESTED

Breckenridge S-8HM

Permit Number 47-051-02429

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

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

RECEIVED GAS Office of Oil and GAS

OCT 15 2024

WV Department Protection

Out 1500 00