

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: Van Winkle N-19HU

API: 47 - 051 - 02352

Submission: Initial Amended

Notes:

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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 47-051-02352 County Marshall District Meade
Quad Glen Easton 7.5' Pad Name Hunter Pethel Field/Pool Name _____
Farm name XcL Midstream Operating, LLC Well Number Van Winkle N-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 4,403,545.21 Easting 523,389.70
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 753' 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

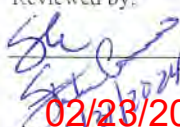
Mud Type(s) and Additive(s)
SOBM; Base oil, osmotic inhibitor, weighting agent, viscosifier, emulsifier, hardness buffer, fluid loss additive, LCM, Shale inhibitor, de-foamer, soaping agent, coagulant, flocculant; specific additives per WSSP and Permit.

Date permit issued 7/7/2021 Date drilling commenced ^{spud: 12/4/2021 big rig: 7/9/2022} Date drilling ceased 8/26/2022
Date completion activities began 07/01/2023 Date completion activities ceased 10/24/2023
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 440' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 895' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 339' & 434' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED

Reviewed by:

02/23/2024

API 47-051 - 02352 Farm name XcL Midstream Operating, LLC Well number Van Winkle N-19HU

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	38"	30"	110'	NEW	118.65#	N/A	Y
Surface	26"	20"	518'	NEW	106.5#	N/A	Y
Coal	26"	20"	518'	NEW	106.5#	N/A	Y
Intermediate 1	17 1/2"	13 3/8"	2,215'	NEW	54.5#	N/A	Y
Intermediate 2	12 3/8"	9 5/8"	10,036'	NEW	47#	N/A	Y
Intermediate 3							
Production	8 1/2"	5 1/2"	22,728'	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	380	15.6	1.21	459	0	8
Surface	A	956	15.6	1.18	1128	0	8
Coal	A	956	15.6	1.18	1128	0	8
Intermediate 1	A	1375	15.6	1.18	1622	0	8
Intermediate 2	A	3978	14.5	1.31	5211	0	8
Intermediate 3							
Production	A	2755	19.0	2.08	5730	0	8
Tubing							

Drillers TD (ft) 22,787' Loggers TD (ft) N/A
 Deepest formation penetrated Utica Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 10,081'

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.

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS JAN 23 2014

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

Well # VAN WINKLE N-19HU (L027356) Final Formations API# 47-051-02352				
Formation Name	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)	Drill Btm MD (ftKB)	Drill Btm (TVD) (ftKB)
Sand/Shale	1	1	339	339
Sewickley Coal	339	339	434	434
Pittsburgh Coal	434	434	440	440
Sand/Shale	440	440	1,477	1,477
Maxton	1,477	1,477	1,656	1,656
Big Lime	1,656	1,656	1,705	1,705
Big Injun	1,705	1,705	1,949	1,949
Weir	1,949	1,949	2,148	2,147
Berea	2,148	2,147	2,419	2,418
Gordon	2,419	2,418	2,491	2,490
Fifty Foot	2,491	2,490	3,083	3,082
Speechley	3,083	3,082	4,565	4,561
Benson	4,565	4,561	4,933	4,929
Alexander	4,933	4,929	5,580	5,576
Rhinestreet	5,580	5,576	6,019	6,015
Middlesex	6,019	6,015	6,095	6,091
Geneseo	6,095	6,091	6,122	6,118
Tully	6,122	6,118	6,158	6,154
Hamilton	6,158	6,154	6,227	6,223
Marcellus	6,227	6,223	6,277	6,273
Onondaga	6,277	6,273	6,514	6,510
Oriskany	6,514	6,510	6,636	6,632
Helderberg	6,636	6,632	7,011	7,007
Salina	7,011	7,007	8,182	8,151
Lockport	8,182	8,151	8,604	8,558
Rose Hill	8,604	8,558	8,921	8,860
Packer Shell	8,921	8,860	9,166	9,095
Clinton/Tuscarora	9,166	9,095	9,278	9,204
Juniata/Queenston	9,278	9,204	10,158	10,052
Reedsville	10,158	10,052	11,319	10,969
Utica	11,319	10,969	21,008	11,031

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Perforation Data

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Van Winkle N-19HU Perf Table

Data Source: EQT Corporation

Stage_Number	Perf_Date	Depth_Bottom	Depth_Top	Shot_Count	Formation
1	08/16/2023	22497	22321		48 Utica
2	08/17/2023	22297	22120		48 Utica
3	08/17/2023	22096	21920		48 Utica
4	08/17/2023	21896	21719		48 Utica
5	08/18/2023	21695	21519		48 Utica
6	08/18/2023	21495	21322		48 Utica
7	08/18/2023	21295	21118		48 Utica
8	08/18/2023	21094	20918		48 Utica
9	08/18/2023	20894	20717		48 Utica
10	08/19/2023	20693	20517		48 Utica
11	08/19/2023	20493	20317		48 Utica
12	08/19/2023	20293	20116		48 Utica
13	08/19/2023	20092	19916		48 Utica
14	08/19/2023	19892	19715		48 Utica
15	08/20/2023	19691	19515		48 Utica
16	09/01/2023	19491	19315		48 Utica
17	09/02/2023	19291	19114		48 Utica
18	09/02/2023	19090	18914		48 Utica
19	09/03/2023	18890	18713		48 Utica
20	09/03/2023	18689	18513		48 Utica
21	09/04/2023	18489	18313		48 Utica
22	09/04/2023	18289	18112		48 Utica
23	09/04/2023	18088	17912		48 Utica
24	09/05/2023	17888	17711		48 Utica
25	09/05/2023	17687	17511		48 Utica
26	09/05/2023	17487	17311		48 Utica
27	09/06/2023	17287	17110		48 Utica
28	09/06/2023	17086	16910		48 Utica
29	09/06/2023	16886	16709		48 Utica
30	09/07/2023	16685	16509		48 Utica
31	09/07/2023	16485	16309		48 Utica
32	09/07/2023	16285	16108		48 Utica
33	09/07/2023	16084	15908		48 Utica
34	09/08/2023	15884	15707		48 Utica
35	09/08/2023	15683	15507		48 Utica
36	09/08/2023	15483	15307		48 Utica
37	09/08/2023	15283	15106		48 Utica
38	09/08/2023	15082	14906		48 Utica
39	09/09/2023	14882	14705		48 Utica
40	09/09/2023	14681	14505		48 Utica
41	09/09/2023	14481	14305		48 Utica
42	09/09/2023	14281	14104		48 Utica
43	09/10/2023	14080	13904		48 Utica
44	09/10/2023	13880	13703		48 Utica

45 09/10/2023	13679	13503	48 Utica
46 09/10/2023	13479	13303	48 Utica
47 09/10/2023	13279	13102	48 Utica
48 09/11/2023	13078	12902	48 Utica
49 09/11/2023	12878	12701	48 Utica
50 09/11/2023	12677	12501	48 Utica
51 09/11/2023	12477	12301	48 Utica
52 09/12/2023	12277	12100	48 Utica
53 09/12/2023	12076	11900	48 Utica
54 09/12/2023	11876	11699	48 Utica
55 09/13/2023	11675	11499	48 Utica

02/23/2024

Stimulation Data

02/23/2024

Stimulation_Date	Stage_Number	Avg_Pump_Rate	Avg_Treatment_Pressure	Pressure_Breakdown	ISIP	Prop_Total	Volume_Total_Calc	Proppant_Type	Proppant_Mesh_Size
9/4/2023	1	81	11915		9611	6961	503840	8668 Sand	100 MESH; 40/70;
8/17/2023	2	80	11874		0	8304	507200	8049 Sand	100 MESH; 40/70;
8/17/2023	3	78	11782		9575	8392	505600	7989 Sand	100 MESH; 40/70;
8/18/2023	4	80	11648		8656	8253	505160	8015 Sand	100 MESH; 40/70;
8/17/2023	5	80	11293		8332	7458	506660	7999 Sand	100 MESH; 40/70;
8/17/2023	6	81	10949		8190	7766	509040	7992 Sand	100 MESH; 40/70;
8/17/2023	7	81	10884		8235	8593	505620	7962 Sand	100 MESH; 40/70;
8/17/2023	8	80	11244		8179	8081	507780	8233 Sand	100 MESH; 40/70;
8/17/2023	9	80	11291		8616	8435	505240	8182 Sand	100 MESH; 40/70;
8/17/2023	10	80	10975		7247	6922	503940	8040 Sand	100 MESH; 40/70;
8/17/2023	11	81	10885		7183	7192	502160	7913 Sand	100 MESH; 40/70;
8/17/2023	12	81	10808		7608	7368	505780	7888 Sand	100 MESH; 40/70;
8/17/2023	13	80	10862		8012	8508	507720	8012 Sand	100 MESH; 40/70;
8/17/2023	14	80	10993		9180	8487	501520	8074 Sand	100 MESH; 40/70;
8/17/2023	15	80	11029		8516	7587	498160	8032 Sand	100 MESH; 40/70;
9/2/2023	16	90	11816		10196	7902	501380	8334 Sand	100 MESH; 40/70;
8/17/2023	17	90	11802		9809	8794	500260	8189 Sand	100 MESH; 40/70;
9/3/2023	18	89	12196		9115	7811	498800	8295 Sand	100 MESH; 40/70;
8/17/2023	19	88	11575		9797	8553	500820	8298 Sand	100 MESH; 40/70;
9/4/2023	20	89	11700		9390	7979	501969	8119 Sand	100 MESH; 40/70;
8/17/2023	21	88	11200		7559	8838	500260	8318 Sand	100 MESH; 40/70;
8/17/2023	22	89	11465		9172	8193	498790	8164 Sand	100 MESH; 40/70;
8/17/2023	23	88	11345		8460	7971	499400	8270 Sand	100 MESH; 40/70;
8/17/2023	24	87	11169		8201	8461	500340	8254 Sand	100 MESH; 40/70;
8/17/2023	25	89	11228		9945	9217	496820	8392 Sand	100 MESH; 40/70;
9/6/2023	26	88	11387		8813	8366	501380	7977 Sand	100 MESH; 40/70;
9/6/2023	27	89	11193		9063	8704	500500	8107 Sand	100 MESH; 40/70;
9/6/2023	28	88	11039		8708	9384	500660	8074 Sand	100 MESH; 40/70;
9/7/2023	29	90	11326		9437	9222	497060	7819 Sand	100 MESH; 40/70;
9/7/2023	30	89	10988		8351	8172	499820	7834 Sand	100 MESH; 40/70;
9/7/2023	31	88	10909		8358	8451	499940	8040 Sand	100 MESH; 40/70;
9/8/2023	32	89	10810		8497	8905	499620	7722 Sand	100 MESH; 40/70;
9/8/2023	33	89	10941		8282	9609	504190	8053 Sand	100 MESH; 40/70;
9/8/2023	34	88	10992		8977	9240	506060	8095 Sand	100 MESH; 40/70;
9/8/2023	35	88	11186		0	9173	499040	8020 Sand	100 MESH; 40/70;
9/8/2023	36	90	11472		9185	9479	501260	8028 Sand	100 MESH; 40/70;
9/9/2023	37	90	11408		8543	8981	504040	8050 Sand	100 MESH; 40/70;
9/9/2023	38	89	11179		9106	8925	509640	8118 Sand	100 MESH; 40/70;
9/9/2023	39	86	11125		8770	8706	486120	7898 Sand	100 MESH; 40/70;
9/9/2023	40	88	10630		8736	9569	499800	8086 Sand	100 MESH; 40/70;
9/10/2023	41	90	10828		8614	0	505240	8048 Sand	100 MESH; 40/70;
9/10/2023	42	90	10873		8475	9631	509620	8076 Sand	100 MESH; 40/70;
9/10/2023	43	90	11243		8585	9117	489100	7960 Sand	100 MESH; 40/70;
9/10/2023	44	91	10848		8661	9146	500420	8018 Sand	100 MESH; 40/70;
9/10/2023	45	90	10832		8601	9480	497440	7965 Sand	100 MESH; 40/70;
9/11/2023	46	90	10941		8352	8248	508620	7981 Sand	100 MESH; 40/70;
9/11/2023	47	90	10540		8566	8852	500260	7992 Sand	100 MESH; 40/70;
9/11/2023	48	91	10898		8642	8772	500320	7946 Sand	100 MESH; 40/70;
9/11/2023	49	90	10763		9772	8000	501560	7921 Sand	100 MESH; 40/70;
9/12/2023	50	90	10900		8763	8406	498380	7956 Sand	100 MESH; 40/70;
9/12/2023	51	90	10678		8856	9410	507420	7719 Sand	100 MESH; 40/70;

9/12/2023	52	90	10583	9324	8525	499780	7917 Sand	100 MESH; 40/70;
9/12/2023	53	89	10758	8772	8472	498820	7862 Sand	100 MESH; 40/70;
9/13/2023	54	90	10415	8908	9789	507720	8100 Sand	100 MESH; 40/70;
9/13/2023	55	90	10553	8913	8711	501780	8027.377 Sand	100 MESH; 40/70;

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	08/22/2023
Job End Date:	09/22/2023
State:	West Virginia
County:	Marshall
API Number:	47-051-02352-00-00
Operator Name:	EQT Production
Well Name and Number:	Van Winkle N-19HU
Latitude:	39.781531
Longitude:	-80.726857
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11031
Total Base Water Volume (gal)*:	19995207.834
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	85.49930	None
Sand (Proppant)	EQT	Proppant					
			Silica Substrate	14808-60-7	100.00000	14.14734	None
MX-5-3886	Multi-Chem	Bacterial treatment					
			Calcium nitrate	13477-34-4	100.00000	0.03491	None
7.5 HCl	Profrac	Acid					
			7.5 HCl	7647-01-0	7.50000	0.01887	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Copolymer of 2-propenamamide	Proprietary	30.00000	0.00728	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					

02/23/2024

			Petroleum Distillate	64742-47-8	20.00000	0.00324	None
LD-7750W	Multi-Chem	Scale Inhibitor					
			Methanol	67-56-1	60.00000	0.00279	None
MX-8-4543	Multi-Chem	Bacterial treatment					
			Contains no hazardous substances in concentrations above cut-off values according to the competent authority	Proprietary	100.00000	0.00221	None
15 HCl	Profrac	Acid					
			15 HCl	7647-01-0	15.00000	0.00151	None
ProFE 105	ProFrac	Iron Control					
			Citric Acid	77-92-9	100.00000	0.00133	None
ProFE 105	Profrac	Iron Control					
			Citric Acid	77-92-9	100.00000	0.00133	None
ProHib 100	ProFrac	Acid Corrosion Inhibitor					
			Methanol	67-56-1	90.00000	0.00050	None
ProFE 105	Profrac	Iron Control					
			2-hydroxypropane-1,2,3-tricarboxylic acid	77-92-9	60.00000	0.00048	None
ProFE 105	ProFrac	Iron Control					
			2-hydroxypropane-1,2,3-tricarboxylic acid	77-92-9	60.00000	0.00048	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Oleic Acid Diethanolamide	93-83-4	2.00000	0.00003	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Alcohols, C12-16, ethoxylated	68551-12-2	2.00000	0.00003	None
LD-7750W	Multi-Chem	Scale Inhibitor					
			Phosphonic Acid Salt	Proprietary	5.00000	0.00002	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Ammonium chloride ((NH4)Cl)	12125-02-9	1.00000	0.00001	None
ProHib 100	ProFrac	Acid Corrosion Inhibitor					

02/23/2024

			Propagyl Alcohol	107-19-7	5.00000	0.00000	None
ProHib 100	ProFrac	Acid Corrosion Inhibitor					
			Imidazoline	61790-69-0	5.00000	0.00000	None
ProHib 100	ProFrac	Acid Corrosion Inhibitor					
			Isopropanol	67-63-0	5.00000	0.00000	None
ProHib 100	ProFrac	Acid Corrosion Inhibitor					
			Alcohols, C7-ISO, C8-RICH	68526-83-0	5.00000	0.00000	None
ProHib 100	ProFrac	Acid Corrosion Inhibitor					
			Xylene	1330-20-7	5.00000	0.00000	None
ProHib 100	ProFrac	Acid Corrosion Inhibitor					
			ethylbenzene	100-41-4	1.00000	0.00000	None

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS

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

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

02/23/2024