

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

API 47 - 049 - 02493 County Marion District Lincoln
Quad Shinnston Pad Name Sands Pad Field/Pool Name Marcellus
Farm name XTO Energy Inc. Well Number Crands Unit 6H
Operator (as registered with the OOG) XTO Energy Inc.
Address PO Box 1008 City Jane Lew State WV Zip 26378

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4368402.857 Easting 559067.642
Landing Point of Curve Northing 4368675.448 Easting 559465.363
Bottom Hole Northing 4366086.672 Easting 562091.708

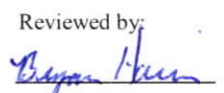
Elevation (ft) 1,230' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution 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)
OBM, Fluid Loss, Wetting Agent, Viscosifier, Barite, Emulsifier.

Date permit issued 4/16/2019 Date drilling commenced 8/6/2019 Date drilling ceased 1/19/2020
Date completion activities began 6/12/2021 Date completion activities ceased 10/1/2021
Verbal plugging (Y/N) _____ Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft 120', 200' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,450' & 1,800' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 420' - 427' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) Y

Reviewed by:

01/21/2022

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API 47-049-02493 Farm name XTO Energy Inc. Well number Crands Unit 6H

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	28"	24"	40'	New	PE&B / 95#		N
Surface	17 1/2"	13 3/8"	521'	New	H-40 / 48#		Y
Coal							
Intermediate 1	12 3/8"	9 5/8"	3,180'	New	J-55 / 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4" & 8 1/2"	5 1/2"	19,967'	New	P-110 / 20#		Est. TOC 5,100'
Tubing							
Packer type and depth set							

Comment Details Conductor - cement poured directly into annulus.

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	90				0	8
Surface	A	475	15.6	1.21	574.75	0	8
Coal							
Intermediate 1	A	1,125	15.6	1.19	1,338.75	0	8
Intermediate 2							
Intermediate 3							
Production	H	525 / 2,055	15.2 / 15.6	1.10 / 1.57	577.5 / 3,226.35	Est. TOC 5,100'	8
Tubing							

Drillers TD (ft) 19,967' Loggers TD (ft) 19,942'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 7,184'

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
 Surface - Every 120'
 Intermediate - Every 120'
 Production - Every 80'

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS

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

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Well Crands Unit 6H
 API 47-049-02493

Stage	Perf Date	Perf from MD ft.	Perf to MD ft.	Number of Perfs	Formation(s)
1	6/12/2021	19630	19780	48	Marcellus
2	6/13/2021	19430	19580	48	Marcellus
3	6/13/2021	19230	19380	48	Marcellus
4	6/13/2021	19030	19180	48	Marcellus
5	6/14/2021	18830	18980	48	Marcellus
6	6/14/2021	18630	18780	48	Marcellus
7	6/14/2021	18430	18580	48	Marcellus
8	6/15/2021	18230	18380	48	Marcellus
9	6/16/2021	18030	18180	48	Marcellus
10	6/16/2021	17830	17980	48	Marcellus
11	6/17/2021	17630	17780	48	Marcellus
12	6/17/2021	17430	17580	48	Marcellus
13	6/17/2021	17230	17380	48	Marcellus
14	6/17/2021	17030	17180	48	Marcellus
15	6/18/2021	16830	16980	48	Marcellus
16	6/18/2021	16630	16780	48	Marcellus
17	6/18/2021	16430	16580	48	Marcellus
18	6/18/2021	16230	16380	48	Marcellus
19	6/18/2021	16030	16180	48	Marcellus
20	6/19/2021	15830	15980	48	Marcellus
21	6/19/2021	15630	15780	48	Marcellus
22	6/19/2021	15430	15580	48	Marcellus
23	6/19/2021	15230	15380	48	Marcellus
24	6/20/2021	15030	15180	48	Marcellus
25	6/20/2021	14830	14980	48	Marcellus
26	6/20/2021	14630	14780	48	Marcellus
27	6/20/2021	14430	14580	48	Marcellus
28	6/20/2021	14230	14380	48	Marcellus
29	6/21/2021	14030	14180	48	Marcellus
30	6/21/2021	13830	13980	48	Marcellus
31	6/21/2021	13630	13780	48	Marcellus
32	6/22/2021	13430	13580	48	Marcellus
33	6/22/2021	13230	13380	48	Marcellus
34	6/22/2021	13030	13180	48	Marcellus
35	6/22/2021	12830	12980	48	Marcellus
36	6/22/2021	12630	12780	48	Marcellus
37	6/23/2021	12430	12580	48	Marcellus
38	6/23/2021	12230	12380	48	Marcellus
39	6/23/2021	12030	12180	48	Marcellus
40	6/23/2021	11830	11980	48	Marcellus
41	6/23/2021	11630	11780	48	Marcellus
42	6/23/2021	11430	11580	48	Marcellus
43	6/24/2021	11230	11380	48	Marcellus
44	6/24/2021	11030	11180	48	Marcellus
45	6/24/2021	10830	10980	48	Marcellus
46	6/24/2021	10630	10780	48	Marcellus
47	6/24/2021	10430	10580	48	Marcellus
48	6/25/2021	10230	10380	48	Marcellus
49	6/25/2021	10030	10180	48	Marcellus
50	6/25/2021	9830	9980	48	Marcellus
51	6/25/2021	9630	9780	48	Marcellus
52	6/26/2021	9430	9580	48	Marcellus
53	6/26/2021	9230	9380	48	Marcellus
54	6/26/2021	9030	9180	48	Marcellus
55	6/27/2021	8830	8980	48	Marcellus

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Well Crands Unit 6H
API 47-049-02493

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Stage	Stimulation Date	Avg. Pump Rate (BPM)	Avg. Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen
1	6/13/2021	85.89	8327	6411	4521.00	360780	12340	0
2	6/13/2021	90.95	8644	6429	4800.00	360840	12142	0
3	6/14/2021	96.19	8933	6569	4788.00	359621	11804	0
4	6/14/2021	95.05	8695	6115	5057.00	358879	12619	0
5	6/14/2021	95.2	8794	5784	4945.00	362250	11704	0
6	6/14/2021	98.77	8985	6230	5200.00	360070	11903	0
7	6/15/2021	93.7	8977	6575	5324.63	362108	11712	0
8	6/15/2021	98.27	8939	6124	5905.28	356452	11163	0
9	6/16/2021	94.83	8936	6570	4827.00	359295	11724	0
10	6/17/2021	96.77	9010	6169	5402.01	357445	11737	0
11	6/17/2021	96.29	9011	6250	5237.19	355940	11181	0
12	6/17/2021	97.7	9029	6297	4752.00	359620	11336	0
13	6/17/2021	97.83	8992	6705	5119.00	359079	11701	0
14	6/18/2021	95.49	9033	7502	5654.30	360661	11676	0
15	6/18/2021	98.56	9002	6793	5087.96	358800	11098	0
16	6/18/2021	98.36	9010	6730	5327.38	358680	11005	0
17	6/18/2021	95.76	9053	7070	5011.00	359343	11464	0
18	6/19/2021	96.03	9031	7560	5306.00	360697	11532	0
19	6/19/2021	100.16	8822	5999	5393.73	358970	10976	0
20	6/19/2021	100.31	8773	5951	5209.81	359150	11022	0
21	6/19/2021	99.65	8721	6953	4808.00	363020	11565	0
22	6/19/2021	100.79	8677	7152	5130.00	353820	11441	0
23	6/20/2021	100.48	8885	5976	5609.52	359940	11430	0
24	6/20/2021	99.17	8929	6637	5518.86	361100	10859	0
25	6/20/2021	100.28	8843	6366	5378.64	360860	10808	0
26	6/20/2021	100.04	8823	6437	4964.00	356900	11349	0
27	6/21/2021	100.31	8509	5898	5092.00	356560	11351	0
28	6/21/2021	100.09	8530	6432	5346.32	360280	10695	0
29	6/21/2021	100.53	8747	5956	5496.96	363160	10859	0
30	6/21/2021	100.49	8632	6400	5556.00	354300	11330	0
31	6/22/2021	99.22	8538	6474	5707.61	360332	13144	0
32	6/22/2021	100.19	8604	6153	5797.45	339348	10695	0
33	6/22/2021	100.52	8442	6234	5546.04	356190	11185	0
34	6/22/2021	99.64	8594	6394	4890.00	358970	11230	0
35	6/23/2021	100.05	8377	6168	4909.00	361630	11336	0
36	6/23/2021	100.45	8491	6722	5525.93	356329	11192	0
37	6/23/2021	100.45	8410	6163	5673.66	357980	10960	0
38	6/23/2021	100.65	8314	5978	5189.10	359920	11067	0
39	6/23/2021	100.79	8272	6311	5074.00	361899	11192	0
40	6/23/2021	100.23	8232	6814	5318.00	359910	11077	0
41	6/24/2021	99.95	8337	6722	5103.00	358899	11271	0
42	6/24/2021	100.49	7957	3856	5429.96	358120	11088	0
43	6/24/2021	100.06	8182	6028	5447.67	355830	10895	0
44	6/24/2021	99.85	8149	7419	5039.00	359470	11414	0
45	6/24/2021	100.13	8073	5669	5486.00	359660	11250	0
46	6/25/2021	100.54	8049	6859	5751.00	362160	11137	0
47	6/25/2021	100.16	8034	6290	5450.98	361750	10967	0
48	6/25/2021	99.97	8048	6158	5951.72	355730	10836	0
49	6/25/2021	99.86	8039	6832	5191.00	357570	11341	0
50	6/25/2021	100.47	7916	7044	4858.00	357470	11008	0
51	6/26/2021	100.33	7651	6422	5430.40	357270	11211	0
52	6/26/2021	100.56	7762	5706	5302.03	357890	10718	0
53	6/26/2021	100.32	7614	5673	4896.00	358210	10749	0
54	6/27/2021	100.13	7635	6224	5330.79	357450	10573	0
55	6/27/2021	100.44	7804	6543	5593.00	357760	10912	0
56	6/28/2021	99.78	7769	6169	4988.35	356970	10806	0
57	6/28/2021	100.35	7677	6862	4876.00	356500	10668	0
58	6/28/2021	100.13	7724	6629	5152.51	360740	10666	0
59	6/28/2021	100.38	7712	6651	5116.00	354660	10939	0

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Well
API

Crands Unit 6H
47-049-02493

Lithology/Formation Name	Top Depth TVD	Bottom Depth TVD	Top Depth MD	Bottom Depth MD	Describe Rock Type and Record Quantity and Type of Fluid (Freshwater, Brine, Oil, Gas, H2S, ETC)
Dirt	0	31	0	31	
Sandstone	31	143	31	143	
Shale	143	279	143	279	
Sandstone	279	420	279	420	
Coal	420	427	420	427	
Shale	427	542	427	542	
SDY Shale	542	629	542	629	
Red Rock	629	639	629	639	
SDY Shale	639	659	639	659	
Red Rock	659	704	659	704	
Shale	704	969	704	969	
Sandstone	969	1,009	969	1,009	
SDY Shale	1,009	1,409	1,009	1,409	
Sandstone	1,409	1,539	1,409	1,539	
Shale	1,539	1,819	1,539	1,819	
Sandstone	1,819	1,899	1,819	1,899	
Shale	1,899	2,039	1,899	2,039	
Sandstone	2,039	2,109	2,039	2,109	
SDY Shale	2,109	2,309	2,109	2,309	
Sandstone	2,309	2,389	2,309	2,389	
SDY Shale	2,389	2,519	2,389	2,519	
Sandstone	2,519	2,549	2,519	2,549	
SDY Shale	2,549	2,629	2,549	2,629	
Sandstone	2,629	2,739	2,629	2,739	
Shale	2,739	2,889	2,739	2,889	
Sandstone	2,889	2,919	2,889	2,919	
SDY Shale	2,919	3,154	2,919	3,154	
Shale	3,154	3,989	3,154	3,989	
Sandstone	3,989	4,259	3,989	4,259	
Shale	4,259	4,469	4,259	4,469	
SDY Shale	4,469	4,638	4,469	4,638	
Sandstone	4,638	4,679	4,638	4,679	
SDY Shale	4,679	5,209	4,679	5,209	
Shale	5,209	5,319	5,209	5,319	
Sandstone	5,319	5,459	5,319	5,459	
Shale	5,459	7,241	5,459	7,460	
Burket Shale	7,253	7,277	7,477	7,508	
Tully Limestone	7,277	7,324	7,508	7,567	
Hamilton Shale	7,324	7,470	7,567	7,809	
Marcellus	7,470		7,809	19,967	

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/13/2021
Job End Date:	6/28/2021
State:	West Virginia
County:	Marion
API Number:	47-049-02493-00-00
Operator Name:	XTO Energy/ExxonMobil
Well Name and Number:	CRANDS UNIT 6H
Latitude:	39.46320000
Longitude:	-80.31340000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,586
Total Base Water Volume (gal):	27,964,871
Total Base Non Water Volume:	0



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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
Fresh Water	Halliburton	Base Fluid					
				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			

HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
Sand-Premium White-40/70	Halliburton	Proppant					
				Listed Below			
FDP-S1358-19	Halliburton	Friction Reducer					
				Listed Below			
LEGEND(TM) LD-7750W	MultiChem	Scale Control					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					
				Listed Below			
MC B-8614A	MultiChem	Biocide					
				Listed Below			

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Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.

			Crystalline silica, quartz	14808-60-7	100.00000	99.45021	
			Water	7732-18-5	100.00000	0.54820	Density = 8.34
			Water	7732-18-5	100.00000	0.00142	
			Hydrochloric acid	7647-01-0	30.00000	0.00032	
			Polyacrylate	Proprietary	30.00000	0.00012	
			Hydrotreated distillate	Proprietary	30.00000	0.00012	
			Ammonium sulfate	7783-20-2	30.00000	0.00012	
			Methanol	67-56-1	100.00000	0.00004	

			Surfactant blend	Proprietary	5.00000	0.00002	
			Ethoxylated alcohol	Proprietary	5.00000	0.00002	
			Ammonium chloride	12125-02-9	5.00000	0.00002	
			Glutaraldehyde	111-30-8	30.00000	0.00002	
			Sorbitan monooleate polyoxyethylene derivative	9005-65-6	1.00000	0.00000	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	1.00000	0.00000	
			Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	5.00000	0.00000	
			Phosphoric Acid Salt	Proprietary	5.00000	0.00000	
			Sodium chloride	7647-14-5	5.00000	0.00000	
			Ethanol	64-17-5	1.00000	0.00000	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00000	
			Modified thiourea polymer	Proprietary	30.00000	0.00000	
			Propargyl alcohol	107-19-7	5.00000	0.00000	
			Ethoxylated alcohols	Proprietary	5.00000	0.00000	
			Hexadecene	629-73-2	5.00000	0.00000	
			Formaldehyde	50-00-0	0.10000	0.00000	

* 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%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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BOTTOM HOLE | TOP HOLE | 8029' | 6126'

CRANDS UNIT 6H AS-DRILLED

SCALE: 1" = 2000' LATITUDE: 39°30'00" (TOP HOLE)
 SCALE: 1" = 2000' LATITUDE: 39°27'30" (BOTTOM HOLE)

SCALE: 1" = 100'

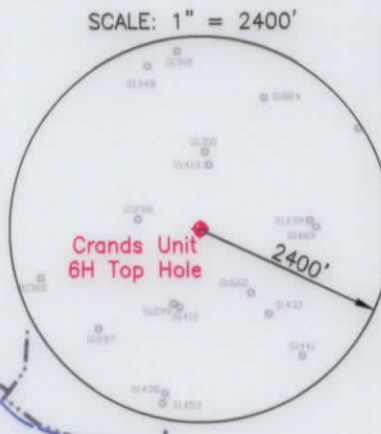
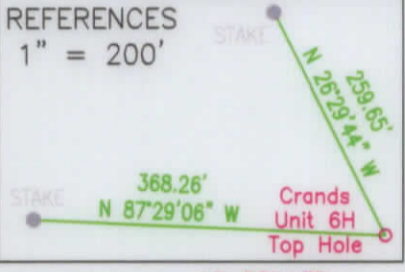
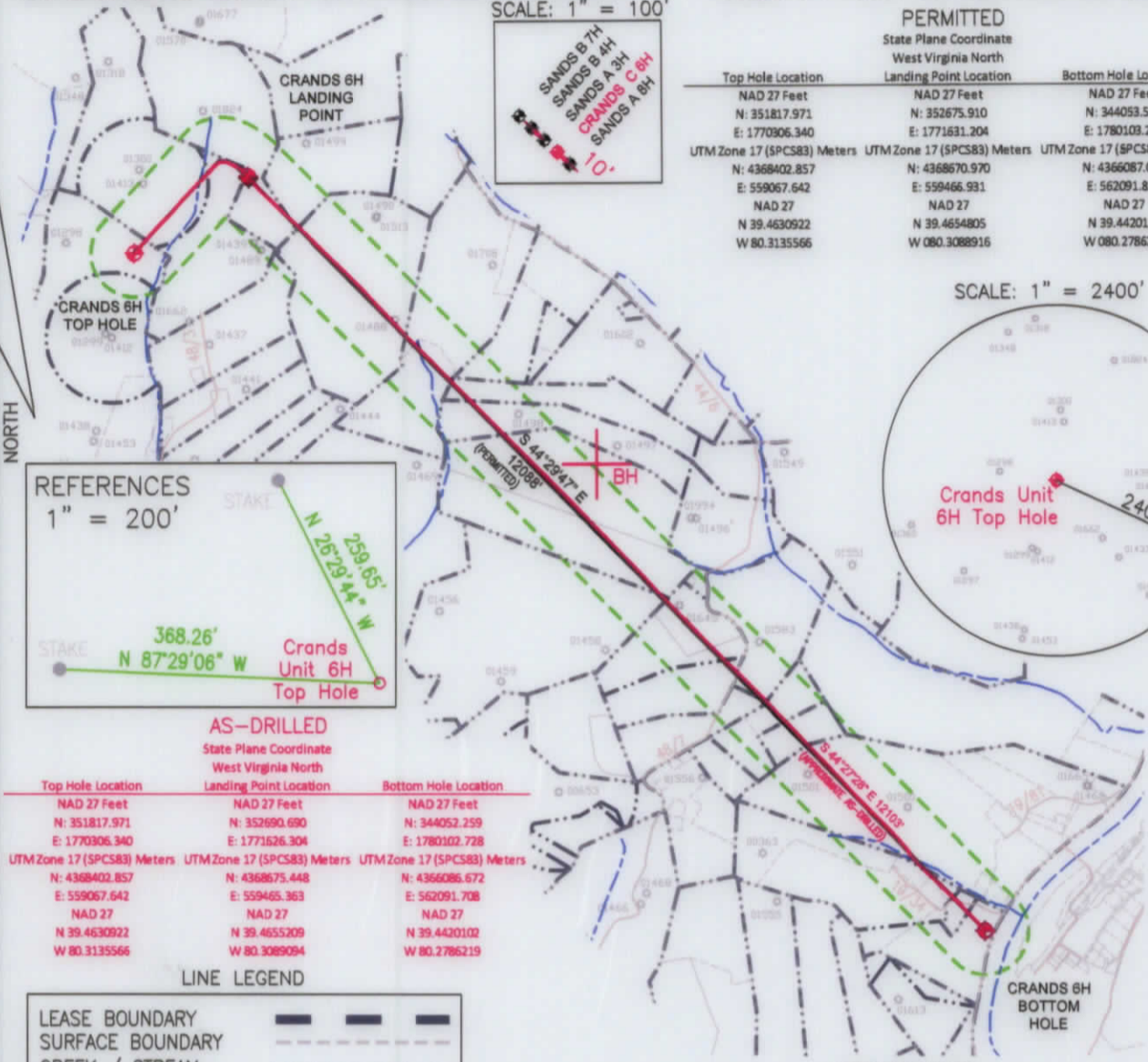


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State Plane Coordinate
 West Virginia North

Top Hole Location	Landing Point Location	Bottom Hole Location
NAD 27 Feet N: 351817.971 E: 1770306.340	NAD 27 Feet N: 352675.910 E: 1771631.204	NAD 27 Feet N: 344053.579 E: 1780103.228
UTM Zone 17 (SPCS83) Meters N: 4368402.857 E: 559067.642 NAD 27 N 39.4630922 W 80.3135566	UTM Zone 17 (SPCS83) Meters N: 4368670.970 E: 559466.931 NAD 27 N 39.4654805 W 80.3088916	UTM Zone 17 (SPCS83) Meters N: 4366087.077 E: 562091.854 NAD 27 N 39.4420138 W 80.2786202

5915'
 13413'
 1" = 2000' LONGITUDE: 80°17'30" (TOP HOLE)
 1" = 2000' LONGITUDE: 80°15'00" (BOTTOM HOLE)
 SCALE: 1" = 1'



AS-DRILLED
 State Plane Coordinate
 West Virginia North

Top Hole Location	Landing Point Location	Bottom Hole Location
NAD 27 Feet N: 351817.971 E: 1770306.340	NAD 27 Feet N: 352690.690 E: 1771626.304	NAD 27 Feet N: 344052.259 E: 1780102.728
UTM Zone 17 (SPCS83) Meters N: 4368402.857 E: 559067.642 NAD 27 N 39.4630922 W 80.3135566	UTM Zone 17 (SPCS83) Meters N: 4368675.448 E: 559465.363 NAD 27 N 39.4655209 W 80.3089094	UTM Zone 17 (SPCS83) Meters N: 4366086.672 E: 562091.708 NAD 27 N 39.4420102 W 80.2786219

LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	- - - -
CREEK / STREAM	~ ~ ~ ~
ROADS	— · — ·
PROPOSED LATERAL	—
APPROXIMATE CURVE	- · - · - ·
AS-DRILLED LATERAL	— (Red)
500' LATERAL OFFSET	- · - · (Green)
EXISTING GAS WELL	☉

- NOTES ON SURVEY
1. NO DWELLINGS WITHIN 625' WERE FOUND.
 2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
 3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD 83.
 4. WELL ELEVATION ESTABLISHED BY RTK GPS NAVD 88.
 5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN AUGUST 2021 AND FILES PROVIDED BY XTO ENERGY INC.
 6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP AND SURVEYED LOCATIONS OF WELLS WITHIN 500' OF WELL BORE.



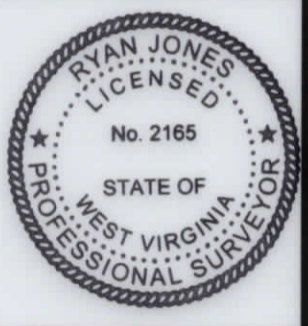
2402 PENNSYLVANIA 66 DELMONT, PA 15626
 (724) 757 - 2417 www.jonesconsultant.com

SHEET 1 OF 2

FILE #: JC2018-79
 DRAWING #: CRANDS 6H AS-DRILLED
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: RTK GPS

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: *[Signature]*
 R.P.E.: _____ P.S.: 2165



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

DATE: 8/5/2021
 OPERATOR'S WELL #: CRANDS UNIT 6H
 API WELL #: 47 049 02493
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: LOWER WEST FORK RIVER (0502000206)
 COUNTY/DISTRICT: MARION / LINCOLN
 SURFACE OWNER: XTO ENERGY INC
 OIL & GAS ROYALTY OWNER: XTO ENERGY INC

ELEVATION: 1,230' (EXISTING GRADE)
 QUADRANGLE: SHINNSTON 7.5'
 ACREAGE: 105.34±
 ACREAGE: 1018.7±

01/21/2022

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: MARCELLUS
 WELL OPERATOR: XTO ENERGY INC.
 Address: 190 THORN HILL ROAD
 City: WARRENDALE State: PA Zip Code: 15086

ESTIMATED DEPTH: 7,586' (TVD), 19,967' (TMD) AS-DRILLED
 DESIGNATED AGENT: GARY BEALL
 Address: P.O. BOX 1008
 City: JANE LEW State: WV Zip Code: 26378

City: WARRENDALE State: PA Zip Code: 15086
 Well Operator: XTO ENERGY INC.
 Address: 190 THORN HILL ROAD
 Designated Agent: GARY BEALL
 Address: P.O. BOX 1008
 State: WV Zip Code: 26278
 Target Formation: MARCELLUS
 Estimated Depth: 7,586' (TVD), 19,967' (TMD) AS-DRILLED
 Clean Out & Replug Other Change (Specify):
 Plug Off Old Formation Perforate New Formation Plug & Abandon
 Drill Convert Drill Deeper Redrill Fracture or Stimulate
 Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow
 Oil & Gas Royalty Owner: XTO ENERGY INC
 County: MARION / LINCOLN
 Watershed: LOWER WEST FORK RIVER (050200208)
 Elevation: 1,230' (EXISTING GRADE)
 Quadrangle: SHINNSTON 7.5
 Acreage: 101.87±
 Acreage: 102.34±
 State: STATE # 47
 County: COUNTY # 049
 Permit: PERMIT # 02493
 Operator's Well #: GRANDS UNIT 6H
 Date: 8/2/2021
 UNITED STATES TOPOGRAPHIC MAPS
 (+) DENOTES LOCATION OF WELL ON

FILE #: 152018-78
 DRAWING #: GRANDS 6H AS-DRILLED
 SCALE: 1" = 200'
 MINIMUM DEGREE
 OF ACCURACY: 1:2500
 PROVEN SOURCE
 OF ELEVATION: RTK GPS

R.P.E.: _____
 P.S.: S162
 Signed: _____
 I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS
 PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND
 BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY
 LAW AND THE RULES ISSUED AND PRESCRIBED BY
 THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

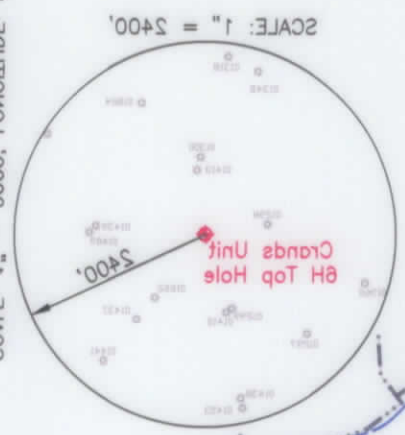
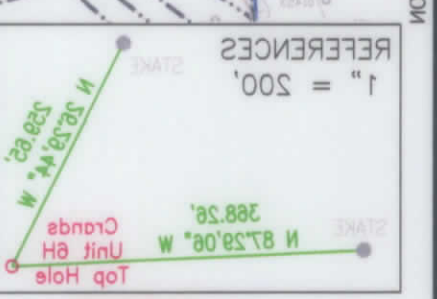


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 SHEET 1 OF 2

LINE LEGEND

	EXISTING GAS WELL
	500' LATERAL OFFSET
	AS-DRILLED LATERAL
	APPROXIMATE CURVE
	PROPOSED LATERAL
	ROADS
	CREEK / STREAM
	SURFACE BOUNDARY
	LEASE BOUNDARY

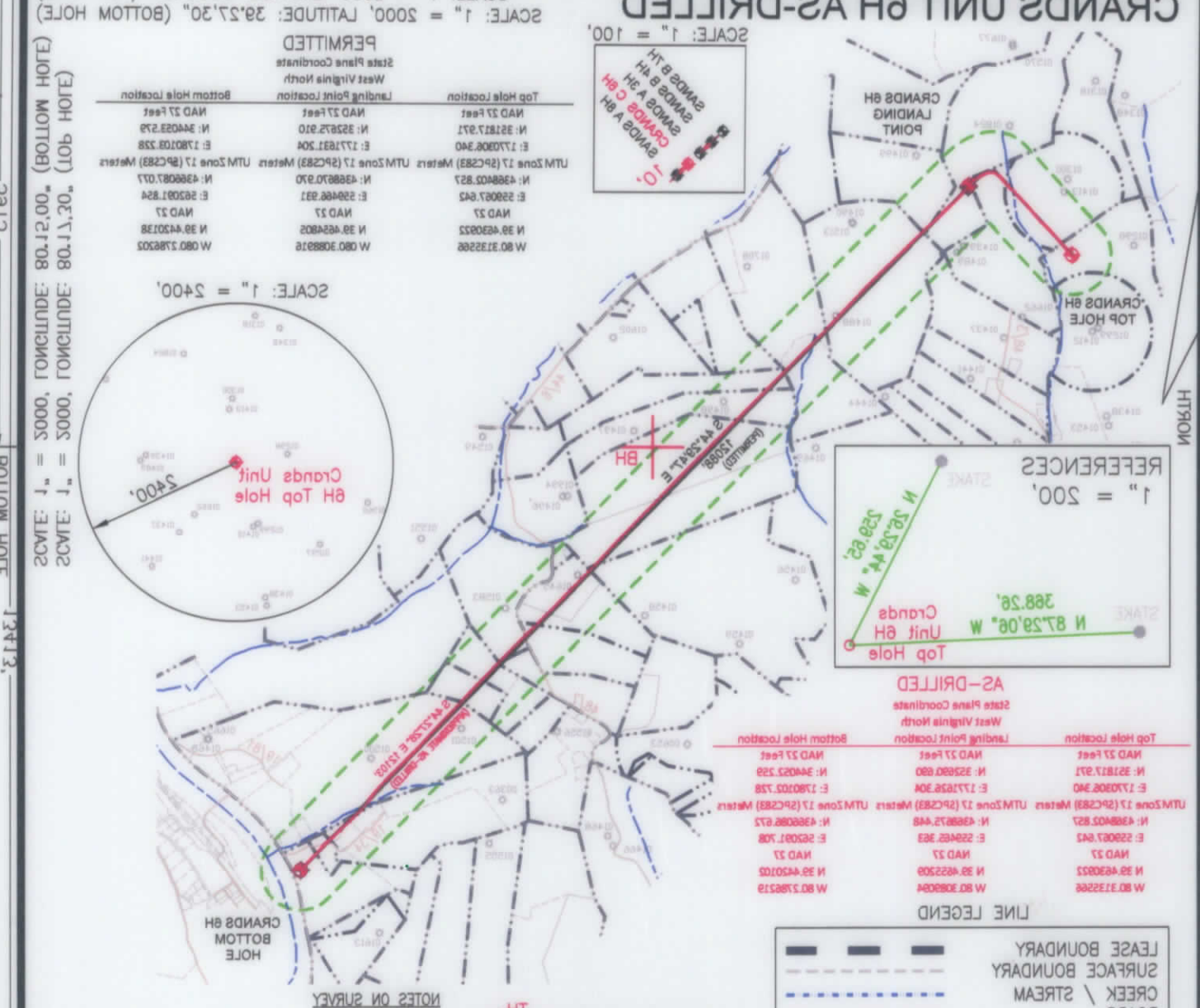
Top Hole Location	Bottom Hole Location
NAD 23 Feet N: 25187.971 E: 177026.340 UTM Zone 17 (2PC283) Meters N: 438802.827 E: 25087.943 NAD 23 N: 39.462023 W: 80.238279	NAD 23 Feet N: 25187.971 E: 177026.340 UTM Zone 17 (2PC283) Meters N: 438802.827 E: 25087.943 NAD 23 N: 39.462023 W: 80.238279



Top Hole Location	Bottom Hole Location
NAD 23 Feet N: 25187.971 E: 177026.340 UTM Zone 17 (2PC283) Meters N: 438802.827 E: 25087.943 NAD 23 N: 39.462023 W: 80.238279	NAD 23 Feet N: 25187.971 E: 177026.340 UTM Zone 17 (2PC283) Meters N: 438802.827 E: 25087.943 NAD 23 N: 39.462023 W: 80.238279

SCALE: 1" = 2000', LATITUDE: 39.27.30" (BOTTOM HOLE) / 39.30.00" (TOP HOLE)
 SCALE: 1" = 100'
 SCALE: 1" = 2400'

BOTTOM HOLE: 80.12.00" (JOB HOLE)
 BOTTOM HOLE: 80.11.30" (JOB HOLE)
 BOTTOM HOLE: 13413'
 BOTTOM HOLE: 2912'



NOTES ON SURVEY:
 1. NO DWELLINGS WITHIN 625' WERE FOUND.
 2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
 3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH W NORTH ZONE NAD 83.
 4. WELL ELEVATION ESTABLISHED BY RTK GPS NAD 83.
 5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN AUGUST 2021 AND FILES PROVIDED BY XTO ENERGY INC.
 6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP AND SURVEYED LOCATIONS OF WELLS WITHIN 500' OF WELL BORE.

CRANDS UNIT 6H AS-DRILLED

PERMITTED

State Plane Coordinate
West Virginia North

Top Hole Location	Landing Point Location	Bottom Hole Location
NAD 27 Feet	NAD 27 Feet	NAD 27 Feet
N: 351817.971	N: 352675.910	N: 344052.579
E: 1770306.340	E: 1771631.204	E: 1780103.228
UTM Zone 17 (SPCS83) Meters	UTM Zone 17 (SPCS83) Meters	UTM Zone 17 (SPCS83) Meters
N: 4368402.857	N: 4368670.970	N: 4366087.077
E: 559067.642	E: 559466.931	E: 562091.854
NAD 27	NAD 27	NAD 27
N 39.4630922	N 39.4654805	N 39.4420138
W 80.3135566	W 80.3088916	W 80.2786202

CRANDS UNIT 6H		
LEASE	LESSOR	MINERAL ACREAGE
1)	TRIO PETROLEUM CORP	138.05
2)	WACO OIL AND GAS CO. INC.	35.441
3)	WACO OIL AND GAS CO. INC.	85.25
4)	SHIRLEY A. MEADE, ET AL	74.81
5)	MARION JOSEPH, ET AL	30.112
6)	SHARI J. SANDER	65.00
7)	BRUCE WILFONG, ET UX	68.25
8)	WACO OIL AND GAS CO. INC.	22.00
9)	WACO OIL AND GAS CO. INC.	21.85
10)	A. M. HESS, ET UX	85.00
11)	WACO OIL AND GAS CO. INC.	86.00
12)	WACO OIL AND GAS CO. INC.	23.00
13)	RHONDA K. JOHNSTON GREEK	17.89375
14)	WACO OIL AND GAS CO. INC.	45.00
15)	RHONDA K. JOHNSTON GREEK	15.54
16)	VIVIAN B. SCHAFER REVOCABLE TRUST	13.48125
17)	XTO ENERGY INC.	7.70
18)	ULRIC LEDDY, ET AL	106.36
19)	J.P. SANDY, ET UX	78.00
20)	J.P. SANDY, ET UX	SAME AS 18
21)	J.P. SANDY, ET UX	SAME AS 18



	SURFACE OWNER	TAX PARCEL
A	FRANK ROTA, ET UX	11-51-32.2
B	LINDA F. HALL, ET AL	11-51-32.3
C	MARY A. EAVENSON	11-51-32.1
D	PAUL D. MARKLEY, ET UX	11-51-34.1
E	PAUL D. MARKLEY	11-51-34
F	BRIAN D. WRIGHT	11-51-35
G	ROGER E. DUCKWORTH, ET UX	11-51-31.1
H	HARLEY D. SWIGER, JR., ET UX	11-51-31

LINE LEGEND

- LEASE BOUNDARY
- SURFACE BOUNDARY
- CREEK / STREAM
- ROADS
- PROPOSED LATERAL
- APPROXIMATE CURVE
- AS-DRILLED LATERAL
- 500' LATERAL OFFSET

AS-DRILLED

State Plane Coordinate
West Virginia North

Top Hole Location	Landing Point Location	Bottom Hole Location
NAD 27 Feet	NAD 27 Feet	NAD 27 Feet
N: 351817.971	N: 352690.690	N: 344052.259
E: 1770306.340	E: 1771626.304	E: 1780102.728
UTM Zone 17 (SPCS83) Meters	UTM Zone 17 (SPCS83) Meters	UTM Zone 17 (SPCS83) Meters
N: 4368402.857	N: 4368675.448	N: 4366086.672
E: 559067.642	E: 559465.363	E: 562091.708
NAD 27	NAD 27	NAD 27
N 39.4630922	N 39.4655209	N 39.4420102
W 80.3135566	W 80.3089094	W 80.2786219

NOTES ON SURVEY

- NO DWELLINGS WITHIN 625' WERE FOUND.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
- TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD 83.
- WELL ELEVATION ESTABLISHED BY RTK GPS NAVD 88.
- SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN AUGUST 2021 AND FILES PROVIDED BY XTO ENERGY INC.
- WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP AND SURVEYED LOCATIONS OF WELLS WITHIN 500' OF WELL BORE.

JONES CONSULTANTS, LLC

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01/21/2022

SUPPLEMENTAL SURFACE AND LESSOR EXHIBIT

CRANDS UNIT 6H

Drawn By:	Date:	LINCOLN DISTRICT MARION COUNTY, WEST VIRGINIA
JRV	8/5/21	
Scale:	1" = 1500'	Sheet:
AFE #	1004835	File No.:
		SHEET 2 OF 2
		JC2018-79



190 THORN HILL ROAD
WARRENDALE, PA 15086

0' 1500'



01/21/2022

2022 NORTH CAROLINA
SURVEYING BOARD

XTO ENERGY
150 THORN HILL ROAD
WARRENDALE, PA 15086




DATE: 8/2/21	DRAWN BY: JRV
SHEET 2 OF 2	FILE NO.: 1004872
SURFACE AND LESSOR EXHIBIT	
SUPPLEMENTAL	
GRANDS UNIT 6H	
MARION COUNTY, WEST VIRGINIA	
LINCOLN DISTRICT	

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JONES CONSULTANTS, LLC

1. NO DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH W/ NORTH ZONE NAD 83.
4. WELL ELEVATION ESTABLISHED BY RTK GPS NAD 88.
5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN AUGUST 2021 AND FILES PROVIDED BY XTO ENERGY INC.
6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP AND SURVEYED LOCATIONS OF WELLS WITHIN 500' OF WELL BORE.

NOTES ON SURVEY

Top Hole Location	Bottom Hole Location
UTM Zone 17 (29C283) Meters N: 4388403.827 E: 229087.642	UTM Zone 17 (29C283) Meters N: 4388403.827 E: 229087.642
NAD 23 N: 39 443023 W: 80 378829	NAD 23 N: 39 443023 W: 80 378829
State Plane Coordinate	State Plane Coordinate

A2-DRILLED

TAX PARCEL	SURFACE OWNER
11-21-32.3	FRANK ROTA, ET LUX
11-21-32.3	LINDA F. HALL, ET AL
11-21-32.1	MARY A. EAVENSON
11-21-34.1	PAUL D. MARKLEY, ET LUX
11-21-34	PAUL D. MARKLEY
11-21-32	BRIAN D. WRIGHT
11-21-31.1	ROGER E. DUCKWORTH, ET LUX
11-21-31	HARLEY D. SWIGER, JR., ET LUX

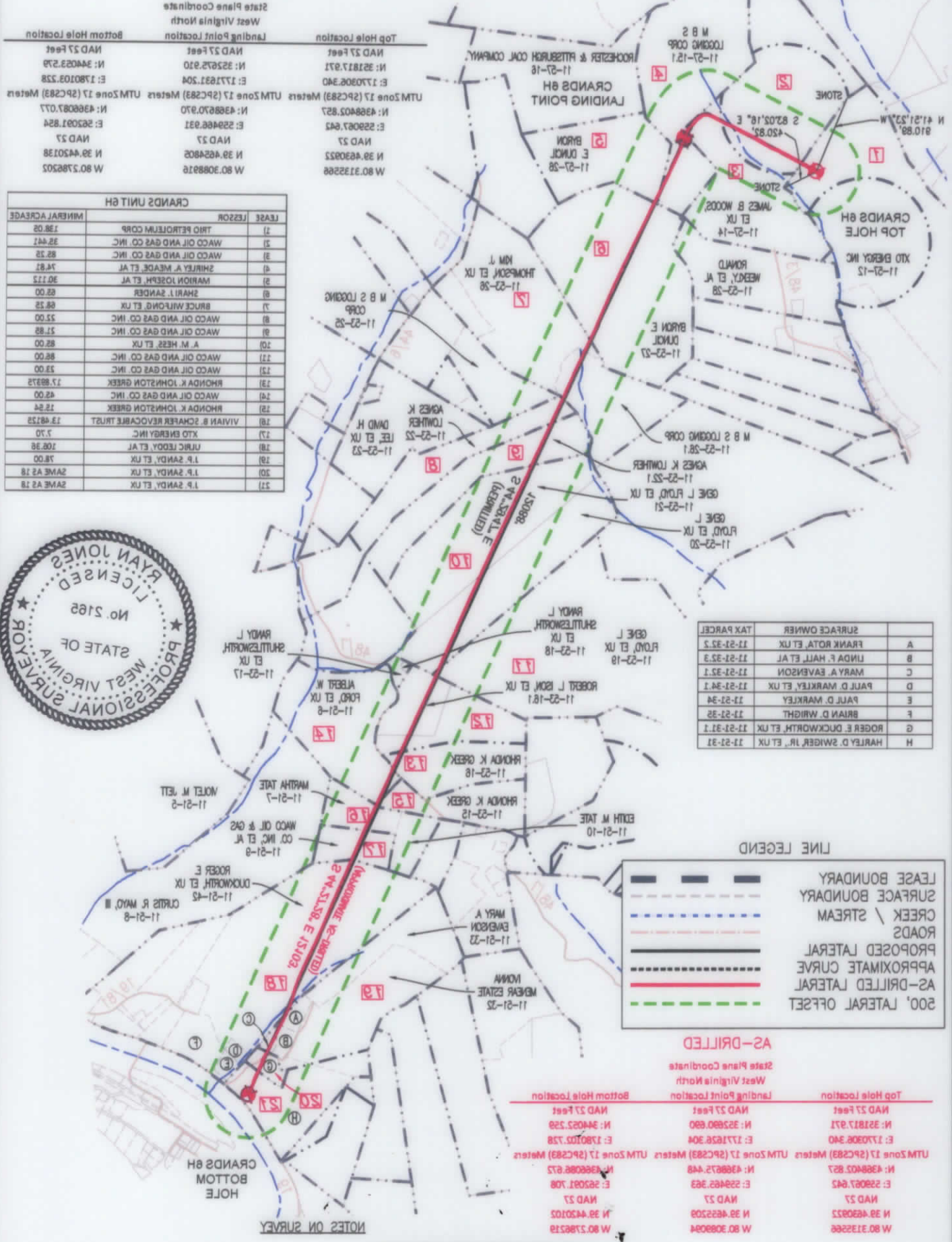
LINE LEGEND

	LEASE BOUNDARY
	SURFACE BOUNDARY
	CREEK / STREAM
	ROADS
	PROPOSED LATERAL
	APPROXIMATE CURVE
	A2-DRILLED LATERAL
	200' LATERAL OFFSET

LEASE	LESSOR
21	TRIO PETROLEUM CORP.
22	WACO OIL AND GAS CO. INC.
23	WACO OIL AND GAS CO. INC.
24	WACO OIL AND GAS CO. INC.
25	SHIRLEY A. MEADE, ET AL
26	MARION JOSEPH, ET AL
27	SHARI L. SANDER
28	BRUCE WILSON, ET LUX
29	WACO OIL AND GAS CO. INC.
30	WACO OIL AND GAS CO. INC.
31	WACO OIL AND GAS CO. INC.
32	A. M. HERS, ET LUX
33	WACO OIL AND GAS CO. INC.
34	WACO OIL AND GAS CO. INC.
35	RHONDA K. JOHNSON GREEK
36	WACO OIL AND GAS CO. INC.
37	RHONDA K. JOHNSON GREEK
38	VIVIAN B. SCHAEFER REVOCABLE TRUST
39	XTO ENERGY INC.
40	ULRIC LEODY, ET AL
41	1.P. SANDY, ET LUX
42	1.P. SANDY, ET LUX
43	1.P. SANDY, ET LUX



GRANDS UNIT 6H A2-DRILLED



Top Hole Location	Bottom Hole Location
UTM Zone 17 (29C283) Meters N: 4388403.827 E: 229087.642	UTM Zone 17 (29C283) Meters N: 4388403.827 E: 229087.642
NAD 23 N: 39 443023 W: 80 378829	NAD 23 N: 39 443023 W: 80 378829
State Plane Coordinate	State Plane Coordinate

PERMITTED