

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

API 47 - 069 - 00373 County Ohio District Richland
Quad Tiltonsville Pad Name Roth Field/Pool Name Panhandle Field
Farm name Roth OHIO Well Number 406H
Operator (as registered with the OOG) SWN Production Company LLC
Address PO Box 12359 City Spring State TX Zip 77391

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,444,588.947 Easting 526,657.570
Landing Point of Curve Northing 4,445,226.311 Easting 526,044.775
Bottom Hole Northing 4,439,802.571 Easting 527,834.557

Elevation (ft) 1,104 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 ☐ 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

Date permit issued 2024-11-18 Date drilling commenced 2025-03-27 Date drilling ceased 2025-04-27
Date completion activities began 2025-05-17 Date completion activities ceased 2025-05-29
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 422 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,126 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 200 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

09/26/2025

API 47-069 - 00373 Farm name Roth OHIO Well number 406H

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	20.000	20.000	136		J-55		Y
Surface	17.500	13.375	511		J-55		Y
Coal							
Intermediate 1	12.250	9.625	2,123		J-55		Y
Intermediate 2							
Intermediate 3							
Production	8.500	5.500	26,068		P-110HP		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	Class A	Grout to Surface				Surface	24
Surface	Class A	719	15.6	1.19	0	Surface	8
Coal							
Intermediate 1	Class A	765	15.6	1.18	0	Surface	8
Intermediate 2							
Intermediate 3							
Production	Class A	4,901	14.5	1.26	0	Surface	24
Tubing							

Drillers TD (ft) 26,068 Loggers TD (ft) 26,068

Deepest formation penetrated Marcellus Plug back to (ft) 0

Plug back procedure N/A

Kick off depth (ft) _____

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: CENTRALIZERS - EVERY THIRD JOINT OF CASING

INTERMEDIATE: CENTRALIZERS - EVERY THIRD JOINT OF CASING

PRODUCTION: CENTRALIZERS - EVERY THIRD JOINT FROM SURFACE TO TOP OF CURVE, THEN EVERY JOINT UNTIL TD

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 _____

RECEIVED
Office Of Oil and Gas
SEP 11 2025
WV Department of
Environmental Protection

09/26/2025

Well number 406H

[illegible]

STIMULATION INFORMATION PER STAGE

SEP 11 2025

Proppant (lbs)	WV Department of Environmental Protection
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[illegible]

09/26/2025

Well number 406H

DEPTHS

Please insert additional pages as applicable.

OIL TEST Flow Pump

OPEN FLOW	Gas	Oil	NGL	Water	GAS MEASURED BY
	6,886 mcfpd	1,390 bpd	0 bpd	2,947 bpd	☐ Estimated ☒ Orifice ☐ Pilot

[illegible][illegible]

Please insert additional pages as applicable.

Address PO Box 12395 City Spring State TX Zip 77391-2359
Office Of Oil and Gas

Address 9110 Grogans Mill Road City The Woodlands State TX Zip 77380

Address 110 Schlumberger Drive City Sugar Land State TX Zip 77478

Address PO Box 12395 City Spring State TX Zip 77391

Please insert additional pages as applicable.

Completed by Eric Haskins Telephone 570 290-8837
Signature [Signature] Title Regulatory Manager Date 9/8/25

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

09/26/2025

Refresh	Wellbore Name	ROTH OHI 210H - Original Hole																
	Operator	EXPAND OPERATING LLC																
	Division	SOUTHWEST APPALACHIA																
	Pad	EXPAND OPERATING LLC																
Frac String :		5.5in 20R P-110 HP Production Casing Set at 22,115 ft																
		CLAT: 15,491 ft Stages/Day: 6.15																
	Stage:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Date:	5/17/2025	5/17/2025	5/17/2025	5/18/2025	5/18/2025	5/18/2025	5/18/2025	5/18/2025	5/18/2025	5/18/2025	5/19/2025	5/19/2025	5/19/2025	5/19/2025	5/19/2025	5/19/2025	5/20/2025
	Top Perf (ft)	21,929	21,715	21,504	21,294	21,083	20,872	20,661	20,450	20,239	20,028	19,817	19,607	19,396	19,185	18,974	18,763	18,552
	Btm Perf (ft)	22,023	21,893	21,682	21,471	21,260	21,049	20,839	20,628	20,417	20,206	19,995	19,784	19,573	19,362	19,152	18,941	18,730
	Number of Perf Holes:	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
	Perf Hole ID (in):	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
	TVD (ft)	5,814	5,815	5,815	5,814	5,813	5,810	5,808	5,806	5,804	5,802	5,799	5,797	5,795	5,794	5,792	5,791	5,788
	Capacity to Top Perf (bbbls):	465	460	456	451	447	442	438	433	429	424	420	415	411	406	402	398	393
	Capacity to Bottom Perf (bbbls):	467	464	459	455	450	446	441	437	433	428	424	419	415	410	406	401	397
	Survey (inclination):																	
	Mid-Perf (MD):	21,976	21,804	21,593	21,383	21,172	20,961	20,750	20,539	20,328	20,117	19,906	19,696	19,485	19,274	19,063	18,852	18,641
	Pump Down Start Time:	5/17/25 12:50	5/17/25 20:22	5/17/25 23:56	5/18/25 1:31	5/18/25 6:34	5/18/25 9:51	5/18/25 14:23	5/18/25 17:25	5/18/25 21:34	5/19/25 1:01	5/19/25 10:13	5/19/25 13:17	5/19/25 16:21	5/19/25 19:29	5/19/25 22:27	5/20/25 1:21	5/20/25 4:26
	Pump Down Stop Time:	5/17/25 13:41	5/17/25 20:57	5/18/25 0:29	5/18/25 4:04	5/18/25 7:02	5/18/25 10:16	5/18/25 14:51	5/18/25 17:54	5/18/25 22:02	5/19/25 1:27	5/19/25 10:48	5/19/25 13:48	5/19/25 16:45	5/19/25 19:59	5/19/25 22:55	5/20/25 1:48	5/20/25 4:54
	Pumpdown Total Time:	0.85	0.58	0.55	0.55	0.47	0.42	0.47	0.48	0.47	0.43	0.58	0.52	0.40	0.50	0.47	0.45	0.47
	Stage Start Time:	5/17/25 12:26	5/17/25 20:57	5/18/25 0:29	5/18/25 4:04	5/18/25 7:02	5/18/25 10:16	5/18/25 14:51	5/18/25 17:54	5/18/25 22:02	5/19/25 1:27	5/19/25 10:48	5/19/25 13:48	5/19/25 16:45	5/19/25 19:59	5/19/25 22:55	5/20/25 1:48	5/20/25 4:54
	Stage Stop Time:	5/17/25 19:30	5/17/25 23:42	5/18/25 3:13	5/18/25 6:37	5/18/25 9:36	5/18/25 12:39	5/18/25 17:21	5/18/25 21:28	5/19/25 0:55	5/19/25 4:02	5/19/25 13:11	5/19/25 16:15	5/19/25 19:22	5/19/25 22:20	5/20/25 1:13	5/20/25 4:20	5/20/25 7:26
	Total Stage time : (hrs)	7.07	2.75	2.73	2.38	2.57	2.38	2.50	3.57	2.88	2.58	2.38	2.45	2.62	2.35	2.30	2.53	2.52
	IWHP (psi):	1,200	2,722	2,810	3,044	2,988	2,361	2,751	2,833	2,821	2,925	2,956	2,672	3,200	3,297	3,212	3,580	3,140
	15 % HCl Acid (bbbls):	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	Number of Perf Clusters:	3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Perf Spacing (ft)	47	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	Pump down (bbbls):	132	105	101	104	99	93	95	91	89	87	96	85	84	88	81	78	80
	Frac Water (bbbls):	1,378	7,683	7,871	7,431	7,972	7,643	7,571	7,592	7,433	7,566	7,391	7,396	7,530	7,675	7,461	7,377	7,265
	Load to Recover (Total Vol Pumped) (bbbls):	1,378	7,815	7,976	7,532	8,076	7,742	7,664	7,687	7,524	7,655	7,478	7,492	7,615	7,759	7,549	7,458	7,343
	Slurry Volume (bbbls):	1,378	8,208	8,383	7,907	8,487	8,150	8,070	8,095	7,921	8,063	7,874	7,900	8,024	8,170	7,953	7,858	7,737
	100 Mesh (lbs):	0	152,480	152,720	150,740	151,130	153,540	151,070	154,200	153,630	151,880	154,240	153,760	155,180	154,040	152,330	151,210	153,200
	20/40, 30/50, 30/70, & 40/70 (lbs):	0	219,740	229,240	217,380	219,480	217,920	217,240	218,740	217,660	221,160	222,460	220,400	220,820	220,800	217,460	219,400	214,240
	Total Prop from Stim Int Prop Table (lbs):	0	372,220	381,960	368,120	370,610	371,460	368,310	372,940	371,290	373,040	376,700	374,160	376,000	374,840	369,790	370,610	367,440
	Total Prop from StimStageTable (lbs)	0	372,220	381,960	368,120	370,610	371,460	368,310	372,940	371,290	373,040	376,700	374,160	376,000	374,840	369,790	370,610	367,440
	Avg Rate (bbbls/min):	35	87	98	92	98	98	99	99	98	99	88	98	98	99	97	88	95
	Avg Pressure (psi):	7,400	8,934	9,450	9,058	9,387	8,607	8,811	8,584	7,444	8,405	8,029	8,556	8,780	8,532	8,154	8,407	7,599
	Max Rate (bpm):	55	91	100	95	100	100	100	100	100	100	91	100	100	100	100	90	96
	Max Pressure (psi):	8,621	9,488	9,883	9,497	9,662	9,055	9,357	9,149	9,454	9,402	9,432	8,990	9,130	9,274	9,520	9,418	8,195
	Break Pressure (psi):	6,753	5,737	4,573	5,099	6,007	4,643	4,698	6,119	6,563	4,692	6,166	5,529	4,573	4,950	5,237	6,128	4,781
	ISIP (psi):	3,344	5,026	4,720	5,046	5,122	4,940	5,003	5,147	5,250	5,383	5,184	5,101	5,158	5,272	5,605	5,134	5,307
	FG (psi/ft):	1.00	1.31	1.25	1.31	1.32	1.29	1.30	1.33	1.35	1.37	1.33	1.32	1.33	1.35	1.41	1.33	1.36
	Biocide (gal)		42	45	44	45	44	43	44	43	43	42	43	43	44	42	42	41
	Corrosion Inhibitor (lbs)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Friction Reducer (gal)		8,108	8,297	7,856	8,408	8,034	6,493	6,189	5,966	5,032	5,416	5,902	6,745	7,994	6,600	5,707	6,581
	HCl 15% (gal)		1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
	Scale Inhibitor (gal)		28	30	30	30	29	28	29	28	30	28	28	29	29	28	28	27
	Breaker																	
	Average Density (SG)																	
	Average of pH																	
	Average of Conductivity																	
	Average of Calcium																	
	Average of Magnesium																	
	Average of Chlorides																	
	Average of Iron																	
	Average of Temp pH																	
	Average of Sulfide																	
	Fluid Density (lb/gal)																	
	Frac																	
	Pumpdown																	
	HCl 15%																	
	HCl 7.5%																	
	Difference																	
	Frac																	
	PD																	
	HCl																	

Office Of Oil and Gas
SEP 11 2025
WV Department of
Environmental Protection

Refresh	Wellbore Name																			
	Operator																			
	Division																			
	Pad																			
Frac String :																				
Stage :	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Date :	5/20/2025	5/20/2025	5/20/2025	5/21/2025	5/21/2025	5/21/2025	5/21/2025	5/21/2025	5/21/2025	5/21/2025	5/22/2025	5/22/2025	5/22/2025	5/22/2025	5/22/2025	5/22/2025	5/22/2025	5/23/2025	5/23/2025	5/23/2025
Top Perf (ft) :	17,919	17,709	17,498	17,287	17,076	16,865	16,654	16,443	16,232	16,022	15,811	15,600	15,389	15,178	14,967	14,756	14,545	14,335	14,124	13,913
Btm Perf (ft) :	18,097	17,886	17,675	17,465	17,254	17,043	16,832	16,621	16,410	16,199	15,988	15,778	15,567	15,356	15,145	14,934	14,723	14,512	14,301	14,091
Number of Perf Holes :	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Perf Hole ID (in) :	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
TVD (ft) :	5,782	5,780	5,779	5,777	5,776	5,774	5,772	5,771	5,770	5,769	5,768	5,767	5,765	5,764	5,762	5,760	5,759	5,757	5,755	5,752
Capacity to Top Perf (bbbls) :	380	375	371	366	362	357	353	348	344	339	335	331	326	322	317	313	308	304	299	295
Capacity to Bottom Perf (bbbls) :	383	379	374	370	366	361	357	352	348	343	339	334	330	325	321	316	312	307	303	299
Survey (Inclination) :																				
Mid-Perf (MD) :	18,008	17,798	17,587	17,376	17,165	16,954	16,743	16,532	16,321	16,111	15,900	15,689	15,478	15,267	15,056	14,845	14,634	14,424	14,213	14,002
Pump Down Start Time :	5/20/25 14:58	5/20/25 17:59	5/20/25 20:51	5/20/25 23:53	5/21/25 2:52	5/21/25 5:53	5/21/25 8:45	5/21/25 11:41	5/21/25 19:09	5/21/25 22:10	5/22/25 1:07	5/22/25 3:54	5/22/25 6:40	5/22/25 11:26	5/22/25 14:15	5/22/25 17:03	5/22/25 20:31	5/23/25 0:39	5/23/25 6:00	5/23/25 12:40
Pump Down Stop Time :	5/20/25 15:23	5/20/25 18:26	5/20/25 21:18	5/21/25 0:18	5/21/25 3:17	5/21/25 6:23	5/21/25 9:13	5/21/25 12:05	5/21/25 19:25	5/21/25 22:34	5/22/25 1:31	5/22/25 4:20	5/22/25 7:04	5/22/25 11:50	5/22/25 14:39	5/22/25 17:26	5/22/25 20:35	5/23/25 1:02	5/23/25 6:17	5/23/25 12:59
Pumpdown Total Time :	0.42	0.45	0.45	0.42	0.42	0.50	0.47	0.40	0.27	0.40	0.40	0.43	0.40	0.40	0.40	0.38	0.40	0.38	0.28	0.32
Stage Start Time :	5/20/25 15:23	5/20/25 18:26	5/20/25 21:18	5/21/25 0:18	5/21/25 3:17	5/21/25 6:23	5/21/25 9:13	5/21/25 10:07	5/21/25 19:25	5/21/25 22:34	5/22/25 1:31	5/22/25 4:20	5/22/25 7:04	5/22/25 11:50	5/22/25 14:39	5/22/25 17:26	5/22/25 20:35	5/23/25 1:02	5/23/25 6:17	5/23/25 12:59
Stage Stop Time :	5/20/25 17:48	5/20/25 20:45	5/20/25 23:47	5/21/25 2:47	5/21/25 5:40	5/21/25 8:40	5/21/25 11:34	5/21/25 16:25	5/21/25 22:01	5/22/25 0:59	5/22/25 3:45	5/22/25 6:34	5/22/25 11:19	5/22/25 14:08	5/22/25 16:57	5/22/25 19:47	5/22/25 23:49	5/23/25 5:46	5/23/25 12:32	5/23/25 15:21
Total Stage time : (hrs)	2.42	2.32	2.48	2.48	2.38	2.28	2.35	2.60	2.42	2.23	2.23	2.23	4.25	2.30	2.30	2.35	3.23	4.73	6.25	2.38
IWHP (psi) :	3,199	3,427	2,953	3,242	3,340	3,554	3,465	3,425	3,018	3,093	3,239	3,431	2,938	3,275	3,280	3,246	3,225	2,745	2,711	2,529
15 % HCl Acid (bbbls) :	33	33	33	33	24	24	24	24	24	24	24	24	12	12	12	12	12	12	12	12
Number of Perf Clusters	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Perf Spacing (ft)	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Pump down (bbbls)	79	79	79	76	72	76	76	71	51	67	68	66	69	68	66	65	62	60	61	59
Frac Water (bbbls) :	7,494	7,442	7,462	7,489	7,418	7,245	7,369	8,310	7,029	6,858	7,094	7,129	7,304	7,223	7,270	7,121	8,088	7,942	7,236	7,289
Load to Recover (Total Vol Pumped) (bbbls) :	7,573	7,521	7,541	7,565	7,490	7,321	7,445	8,381	7,080	6,925	7,162	7,195	7,373	7,291	7,336	7,186	8,150	8,002	7,297	7,348
Slurry Volume (bbbls) :	7,983	7,929	7,951	7,977	7,900	7,722	7,857	8,778	7,479	7,311	7,560	7,597	7,783	7,697	7,745	7,592	8,550	8,406	7,708	7,756
100 Mesh (lbs) :	153,220	153,870	155,460	154,170	154,750	149,580	155,360	155,280	154,060	150,308	152,250	152,940	154,220	153,400	154,790	154,370	153,770	153,990	151,730	153,400
20/40, 30/50, 30/70, & 40/70 (lbs) :	222,880	222,380	221,640	217,540	221,880	217,240	220,780	205,580	220,360	212,360	217,340	217,438	219,720	219,530	218,400	223,520	213,960	219,590	223,110	216,100
Total Prop from Stim Int Prop Table (lbs) :	376,100	376,250	377,100	371,710	376,630	366,820	376,140	360,860	374,420	362,668	369,590	370,378	373,940	372,930	373,190	377,890	367,730	373,580	374,840	369,500
Total Prop from StimStageTable (lbs)	376,100	376,250	377,100	371,710	376,630	366,820	376,140	360,860	374,420	362,668	369,590	370,378	373,940	372,930	373,190	377,890	367,730	373,580	374,840	369,500
Avg Rate (bbbls/min) :	99	99	97	98	99	96	96	94	96	94	96	96	96	98	98	95	90	92	97	99
Avg Pressure (psi) :	8,191	8,252	8,343	8,302	7,782	7,784	8,130	8,064	8,130	8,092	8,172	7,959	8,250	8,340	8,230	8,032	7,652	7,664	8,067	7,872
Max Rate (bpm) :	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Max Pressure (psi) :	8,700	9,538	9,538	9,675	9,575	8,307	8,600	8,659	8,466	9,052	8,550	8,231	8,726	8,785	8,763	8,344	8,440	9,000	8,488	8,241
Break Pressure (psi) :	4,733	4,728	5,800	4,966	4,311	4,919	5,379	5,381	4,357	5,787	5,428	5,495	5,776	5,660	4,508	4,451	5,311	5,427	6,170	5,772
ISIP (psi) :	5,613	5,376	5,500	5,410	4,952	4,656	4,659	4,987	4,521	4,325	4,410	4,698	4,680	4,659	4,573	4,451	4,387	4,420	4,468	4,582
FG (psi/ft) :	1.41	1.37	1.39	1.37	1.29	1.24	1.24	1.30	1.22	1.18	1.20	1.25	1.25	1.24	1.23	1.21	1.20	1.20	1.21	1.23
Biocide (gal)	43	43	43	43	43	42	42	48	42	40	41	41	42	41	42	41	47	46	42	43
Corrosion Inhibitor (lbs)	3	3	3	3	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
Friction Reducer (gal)	7,833	5,779	5,918	5,830	7,746	6,813	5,722	5,040	4,612	5,423	5,361	6,263	1,400	5,099	5,577	6,007	5,121	4,973	4,153	4,059
HCL 15% (gal)	1,400	1,400	1,400	1,400	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	500	500	500	500	500	500	500	500
Scale Inhibitor (gal)	29	28	29	29	29	28	28	32	28	27	28	27	28	27	28	28	31	30	28	28
Breaker																				
Average Density (SG)																				
Average of pH																				
Average of Conductivity																				
Average of Calcium																				
Average of Magnesium																				
Average of Chlorides																				
Average of Iron																				
Average of Temp pH																				
Average of Sulfide																				
Fluid Density (lb/gal)																				
Frac																				
Pumpdown																				
HCl 15%																				
HCl 7.5%																				
Difference																				
Frac																				
PD																				
HCl																				

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Refresh		Wellbore Name Operator Division Pad																			
Frac String :																					
Stage :	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	
Date :	5/23/2025	5/23/2025	5/23/2025	5/24/2025	5/24/2025	5/24/2025	5/24/2025	5/24/2025	5/24/2025	5/24/2025	5/25/2025	5/25/2025	5/25/2025	5/25/2025	5/25/2025	5/25/2025	5/25/2025	5/25/2025	5/26/2025	5/26/2025	
Top Perf (ft) :	13,702	13,491	13,280	13,069	12,858	12,648	12,437	12,226	12,015	11,804	11,593	11,382	11,171	10,961	10,750	10,539	10,328	10,117	9,906	9,695	
Btm Perf (ft) :	13,880	13,669	13,458	13,247	13,036	12,825	12,614	12,404	12,193	11,982	11,771	11,560	11,349	11,138	10,927	10,717	10,506	10,295	10,084	9,873	
Number of Perf Holes :	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	
Perf Hole ID (in) :	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	
TVD (ft) :	5,750	5,747	5,745	5,743	5,740	5,738	5,736	5,734	5,732	5,730	5,729	5,727	5,726	5,725	5,721	5,712	5,701	5,693	5,687	5,685	
Capacity to Top Perf (bbbl) :	290	286	281	277	272	268	263	259	255	250	246	241	237	232	228	223	219	214	210	205	
Capacity to Bottom Perf (bbbl) :	294	290	285	281	276	272	267	263	258	254	249	245	240	236	231	227	223	218	214	209	
Survey (Inclination) :																					
Mid-Perf (MD) :	13,791	13,580	13,369	13,158	12,947	12,737	12,526	12,315	12,104	11,893	11,682	11,471	11,260	11,050	10,839	10,628	10,417	10,206	9,995	9,784	
Pump Down Start Time :	5/23/25 15:30	5/23/25 18:19	5/23/25 22:00	5/24/25 1:05	5/24/25 3:54	5/24/25 3:54	5/24/25 12:31	5/24/25 14:59	5/24/25 17:35	5/24/25 20:26	5/25/25 2:02	5/25/25 4:33	5/25/25 6:56	5/25/25 11:25	5/25/25 14:23	5/25/25 17:04	5/25/25 19:39	5/25/25 22:26	5/26/25 1:08	5/26/25 3:56	
Pump Down Stop Time :	5/23/25 15:47	5/23/25 18:38	5/23/25 22:22	5/24/25 1:20	5/24/25 4:13	5/24/25 4:13	5/24/25 12:40	5/24/25 15:08	5/24/25 17:54	5/24/25 20:42	5/25/25 2:20	5/25/25 4:27	5/25/25 7:13	5/25/25 11:37	5/25/25 14:30	5/25/25 17:11	5/25/25 19:55	5/25/25 22:40	5/26/25 1:22	5/26/25 4:07	
Pumpdown Total Time :	0.28	0.32	0.37	0.25	0.32	0.32	0.15	0.15	0.32	0.27	0.30	0.23	0.28	0.20	0.12	0.12	0.27	0.23	0.23	0.18	
Stage Start Time :	5/23/25 15:47	5/23/25 18:38	5/23/25 22:22	5/24/25 1:20	5/24/25 4:13	5/24/25 4:13	5/24/25 12:40	5/24/25 15:08	5/24/25 17:54	5/24/25 20:42	5/25/25 1:14	5/25/25 4:27	5/25/25 7:13	5/25/25 11:37	5/25/25 14:30	5/25/25 17:11	5/25/25 19:55	5/25/25 22:40	5/26/25 1:22	5/26/25 4:07	
Stage Stop Time :	5/23/25 18:08	5/23/25 21:55	5/24/25 0:54	5/24/25 3:45	5/24/25 6:51	5/24/25 11:59	5/24/25 14:45	5/24/25 17:30	5/24/25 20:15	5/24/25 23:03	5/25/25 4:01	5/25/25 6:50	5/25/25 9:35	5/25/25 14:07	5/25/25 16:49	5/25/25 19:31	5/25/25 22:16	5/26/25 0:59	5/26/25 3:43	5/26/25 6:19	
Total Stage Time : (hrs)	2.35	3.28	2.53	2.42	2.63	7.77	2.08	2.37	2.35	2.35	2.78	2.38	2.37	2.50	2.32	2.33	2.35	2.32	2.35	2.20	
IWHP (psi)	3,486	3,452	3,201	3,289	3,026	2,805	3,192	3,372	3,415	3,565	3,210	3,300	3,161	2,868	2,604	3,502	3,163	3,516	3,541	3,637	
15 % HCl Acid (bbbl)	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
Number of Perf Clusters	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Perf Spacing (ft)	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
Pump down (bbbl)	58	58	54	53	51	51	50	49	48	47	49	48	46	35	44	44	42	41	40	38	
Frac Water (bbbl)	7,112	8,571	6,906	6,913	6,952	7,137	7,062	7,063	6,969	6,960	6,945	7,069	7,134	7,020	7,128	7,049	6,924	6,491	6,922	6,833	
Load to Recover (Total Vol Pumped) (bbbl)	7,170	8,629	6,960	6,966	7,003	7,188	7,112	7,112	7,017	7,007	6,994	7,117	7,180	7,055	7,172	7,093	6,966	6,532	6,962	6,871	
Slurry Volume (bbbl)	7,574	9,098	7,355	7,365	7,400	7,597	7,517	7,517	7,424	7,414	7,396	7,528	7,594	7,462	7,587	7,526	7,369	6,907	7,368	7,273	
100 Mesh (lbs)	155,170	155,120	153,520	153,000	151,460	149,220	150,620	149,920	149,780	150,720	149,470	150,440	153,320	151,920	154,120	156,540	148,480	152,200	151,420	152,950	
20/40, 30/50, 30/70, & 40/70 (lbs)	219,000	221,270	217,470	217,680	216,840	219,560	219,550	219,280	219,890	218,980	219,400	219,240	220,450	218,370	223,530	217,520	220,870	199,560	222,020	216,440	
Total Prop from Stim Int Prop Table (lbs)	374,170	376,390	370,990	370,680	368,300	368,780	370,170	369,200	369,670	369,700	368,870	369,680	373,770	370,290	377,650	374,060	369,350	351,760	373,440	369,390	
Total Prop from StimStageTable (lbs)	374,170	376,390	370,990	370,680	368,300	368,780	370,170	369,200	369,670	369,700	368,870	369,680	373,770	370,290	377,650	374,060	369,350	351,760	373,440	369,390	
Avg Rate (bbbls/min)	98	90	88	90	97	97	98	96	96	96	95	96	98	98	98	96	96	94	96	97	
Avg Pressure (psi)	7,543	7,099	7,195	7,363	7,402	7,745	7,393	7,428	7,641	7,355	7,581	7,510	7,240	7,469	7,423	7,234	7,209	7,131	6,920	6,768	
Max Rate (bpm)	100	100	91	94	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Max Pressure (psi)	7,814	7,680	7,369	7,694	7,771	8,172	7,653	7,674	8,180	7,595	7,994	8,270	7,878	7,688	8,068	7,537	7,497	9,291	7,080	7,119	
Break Pressure (psi)	4,585	4,403	5,482	5,510	4,351	6,350	4,547	5,290	5,932	5,277	5,350	5,275	4,471	5,416	5,436	5,435	6,091	5,601	4,832	4,524	
ISIP (psi)	4,389	4,510	4,513	4,385	4,700	4,587	4,852	4,276	4,457	4,255	4,457	4,525	4,485	4,752	4,485	4,600	4,418	4,512	4,510	4,689	
FG (psi/ft)	1.20	1.22	1.22	1.20	1.25	1.23	1.28	1.19	1.18	1.17	1.21	1.22	1.21	1.26	1.21	1.23	1.20	1.22	1.22	1.25	
Biocide (gal)	42	35	40	41	41	42	42	41	41	41	41	41	41	42	42	42	41	39	41	40	
Corrosion Inhibitor (lbs)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Friction Reducer (gal)	5,976	7,373	5,552	5,232	6,083	1,784	6,196	6,117	5,920	6,011	3,923	6,801	5,488	5,995	6,424	6,064	5,770	4,838	6,101	7,005	
HCl 15% (gal)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	
Scale Inhibitor (gal)	28	23	27	27	27	28	28	27	27	28	27	27	28	27	28	28	27	26	27	27	
Breaker																					
Average Density (SG)																					
Average of pH																					
Average of Conductivity																					
Average of Calcium																					
Average of Magnesium																					
Average of Chlorides																					
Average of Iron																					
Average of Temp pH																					
Average of Sulfide																					
Fluid Density (lb/gal)																					
Frac Pumpdown																					
HCl 15%																					
HCl 7.5%																					
Difference																					
Frac																					
PD																					
HCl																					

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Refresh	Wellbore Name																
	Operator																
	Division																
	Pad																
Frac String :																	
Stage :	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	Total/Avg	
Date :	5/26/2025	5/26/2025	5/26/2025	5/26/2025	5/26/2025	5/28/2025	5/28/2025	5/28/2025	5/28/2025	5/29/2025	5/29/2025	5/29/2025	5/29/2025	5/29/2025	5/29/2025		
Top Perf (ft) :	9,484	9,274	9,063	8,852	8,641	8,430	8,219	8,008	7,797	7,587	7,376	7,165	6,954	6,743	6,532	6,532	
Btm Perf (ft) :	9,662	9,451	9,240	9,030	8,819	8,608	8,397	8,186	7,975	7,764	7,553	7,343	7,132	6,921	6,710	22,023	
Number of Perf Holes :	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	2664	
Perf Hole ID (in) :	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41		
TVD (ft) :	5,686	5,691	5,695	5,695	5,695	5,695	5,695	5,693	5,692	5,690	5,688	5,686	5,683	5,681	5,669	5,749	
Capacity to Top Perf (bbls) :	201	196	192	188	183	179	174	170	165	161	156	152	147	143	138		
Capacity to Bottom Perf (bbls) :	205	200	196	191	187	182	178	173	169	164	160	156	151	147	142		
Survey (Inclination) :																	
Mid-Perf (MD) :	9,573	9,363	9,152	8,941	8,730	8,519	8,308	8,097	7,886	7,676	7,465	7,254	7,043	6,832	6,621		
Pump Down Start Time :	5/26/25 6:38	5/26/25 9:32	5/26/25 12:09	5/26/25 15:43	5/26/25 18:33	5/26/25 21:19	5/28/25 13:06	5/28/25 15:45	5/28/25 19:14	5/28/25 21:17	5/29/25 0:03	5/29/25 2:41	5/29/25 5:37	5/29/25 8:16	5/29/25 10:52	5/17/25 12:36	
Pump Down Stop Time :	5/26/25 6:43	5/26/25 9:38	5/26/25 12:14	5/26/25 15:48	5/26/25 18:47	5/26/25 21:33	5/28/25 13:10	5/28/25 15:48	5/28/25 19:28	5/28/25 21:27	5/29/25 0:15	5/29/25 2:52	5/29/25 5:39	5/29/25 8:18	5/29/25 10:54	5/29/25 10:54	
Pumpdown Total Time :	0.08	0.10	0.08	0.08	0.23	0.23	0.07	0.05	0.23	0.17	0.20	0.18	0.03	0.03	0.03	0.34	
Stage Start Time :	5/26/25 6:43	5/26/25 9:38	5/26/25 12:14	5/26/25 15:48	5/26/25 18:47	5/26/25 21:33	5/28/25 13:10	5/28/25 15:48	5/28/25 19:28	5/28/25 21:27	5/29/25 0:15	5/29/25 2:52	5/29/25 5:39	5/29/25 8:18	5/29/25 10:54	5/17/25 12:26	
Stage Stop Time :	5/26/25 9:03	5/26/25 11:52	5/26/25 14:32	5/26/25 18:25	5/26/25 21:11	5/28/25 12:51	5/28/25 15:30	5/28/25 18:19	5/28/25 21:08	5/28/25 21:56	5/29/25 2:35	5/29/25 5:22	5/29/25 8:01	5/29/25 10:38	5/29/25 13:21	5/29/25 13:21	
Total Stage time : (hrs)	2.33	2.40	2.30	2.62	2.40	39.30	2.33	2.52	1.67	2.48	2.33	2.50	2.37	2.33	2.45	3.26	
IWHP (psi)	3,437	3,050	2,723	2,701	3,352	1,598	3,108	3,001	3,178	3,205	3,350	2,052	3,350	2,997	3,390	3,085	
15 % HCl Acid (bbls) :	45	12	12	12	12	12	12	12	12	12	12	12	12	12	12	1,469	
Number of Perf Clusters	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	441	
Perf Spacing (ft)	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
Pump down (bbls) :	38	39	35	30	33	33	32	31	32	29	28	27	27	26	25	4,448	
Frac Water (bbls) :	6,026	6,930	6,941	7,112	6,808	6,889	6,857	7,027	6,992	7,122	6,832	6,949	6,905	6,856	7,368	529,502	
Load to Recover (Total Vol Pumped) (bbls) :	6,064	6,969	6,976	7,142	6,841	6,922	6,889	7,058	7,024	7,151	6,860	6,976	6,932	6,882	7,393	533,950	
Slurry Volume (bbls) :	6,340	7,375	7,384	7,559	7,244	7,329	7,293	7,478	7,441	7,577	7,272	7,384	7,344	7,292	7,803	563,479	
100 Mesh (lbs)	152,830	156,640	154,020	157,120	157,060	151,540	152,130	153,640	153,360	155,280	154,880	150,300	154,380	155,540	153,730	11,170,378	
20/40, 30/50, 30/70, & 40/70 (lbs)	106,960	219,240	217,600	219,600	219,610	220,540	219,080	221,920	220,900	222,840	218,080	221,240	218,180	219,080	219,840	15,875,638	
Total Prop from Stim Int Prop Table (lbs)	259,790	375,880	371,620	376,720	376,670	372,080	371,210	375,560	374,260	378,120	372,960	371,540	372,560	374,620	373,570	27,046,016	
Total Prop from StimStageTable (lbs)	259,790	375,880	371,620	376,720	376,670	372,080	371,210	375,560	374,260	378,120	372,960	371,540	372,560	374,620	373,570	27,046,016	
Avg Rate (bbls/min) :	97	97	98	98	97	98	98	98	94	96	97	97	98	98	98	95	
Avg Pressure (psi) :	7,341	7,107	7,085	6,940	6,800	6,558	6,685	6,639	6,471	6,339	6,748	6,289	6,419	6,309	6,351	7,683	
Max Rate (bpm) :	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Max Pressure (psi) :	10,361	8,151	7,986	7,561	7,576	6,836	6,981	6,943	7,064	6,642	7,139	6,765	6,610	6,501	6,733	10,361	
Break Pressure (psi) :	5,718	5,228	5,573	5,933	5,259	4,520	5,424	5,524	5,086	4,386	4,923	5,107	5,272	5,278	5,207	5,246	
ISIP (psi) :	4,090	4,510	4,856	4,401	4,386	4,621	4,756	4,320	4,457	4,430	4,021	4,414	4,010	4,540	4,466	4,698	
FG (psi/ft) :	1.14	1.22	1.28	1.20	1.20	1.24	1.26	1.18	1.21	1.20	1.13	1.20	1.13	1.22	1.21	1.25	
Biocide (gal)	35	41	41	43	40	41	41	42	42	43	41	42	41	41	44	3,064	
Corrosion Inhibitor (lbs)	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	123	
Friction Reducer (gal)	6,192	5,841	7,118	5,571	5,410	7,058	5,573	7,198	4,696	5,724	6,998	7,115	7,070	7,020	7,545	440,531	
HCL 15% (gal)	1,900	500	500	500	500	500	500	500	500	500	500	500	500	500	500	61,700	
Scale Inhibitor (gal)	23	27	27	28	27	27	27	28	28	28	27	28	27	27	29	2,035	
Breaker																0	
Average Density (SG)																	
Average of pH																	
Average of Conductivity																	
Average of Calcium																	
Average of Magnesium																	
Average of Chlorides																	
Average of Iron																	
Average of Temp pH																	
Average of Sulfide																	
Fluid Density (lb/gal)																	
Frac																	
Pumpdown																	
HCl 15%																	
HCl 7.5%																	
Difference																	
Frac																	
PD																	
HCl																	

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	05/17/2025
Job End Date:	05/29/2025
State:	West Virginia
County:	Ohio
API Number:	47-069-00373-00-00
Operator Name:	Expand Operating LLC
Well Name and Number:	ROTH OHI 406H
Latitude:	40.151147
Longitude:	-80.687209
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5788.15
Total Base Water Volume (gal)*:	27895728
Total Base Non Water Volume:	92816.1



Water Source	Percent
Surface Water, < 1000TDS	77.91%
Produced Water	22.09%

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
655 NM	Expand Completion Services	Scale Inhibitor					
Base Water	Operator	Base Fluid					
FERRIPLEX 80	Expand Completion Services	Iron Control Agent					
FSTI-CI-02	Expand Completion Services	Corrosion Inhibitor					
Hydrochloric Acid	Expand Completion Services	Solvent					
Plexslick CX 810	Expand Completion Services	Friction Reducer					
Sand	Expand Completion Services	Proppant					

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Tolcide 4 Frac 50	Expand Completion Services	Biocide					
Items above are Trade Names. Items below are the individual ingredients.							
			Water	7732-18-5	100.00000	87.45469	
			Crystalline Silica, Quartz	14808-60-7	100.00000	12.40277	
			HYDROCHLORIC ACID	7647-01-0	37.00000	0.08585	
			Copolymer of 2-propenamide	Proprietary	60.00000	0.02310	
			Isoalkanes	64742-47-8	30.00000	0.01733	
			Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	50.00000	0.00752	
			Ethoxylated Tridecanol	Proprietary	2.50000	0.00289	
			Surfactant	Proprietary	3.00000	0.00173	
			Quaternary ammonium compounds, benzyl-C12-16- alkyldimethyl, chlorides	68424-85-1	10.00000	0.00150	
			Sodium erythorbate	6381-77-7	98.00000	0.00121	
			Ethanol	64-17-5	1.50000	0.00075	
			Ethylene glycol	107-21-1	40.00000	0.00014	
			Cinnamaldehyde	104-55-2	19.00000	0.00007	
			1-Octanol	111-87-5	19.00000	0.00007	
			1-Decanol	112-30-1	19.00000	0.00007	
			N,N-Dimethylformamide	68-12-2	19.00000	0.00007	
			Triethyl phosphate	78-40-0	19.00000	0.00007	
			Poly(oxy-1,2-ethanediyl), .alpha.- (nonylphenyl)-.omega.- hydroxy-	9016-45-9	19.00000	0.00007	
			2-Butoxyethanol	111-76-2	10.00000	0.00004	
			Isopropyl alcohol	67-63-0	10.00000	0.00004	
			Tar bases, quinoline derivatives, benzyl chloride- quaternized	72480-70-7	10.00000	0.00004	

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* 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)

WV Department of
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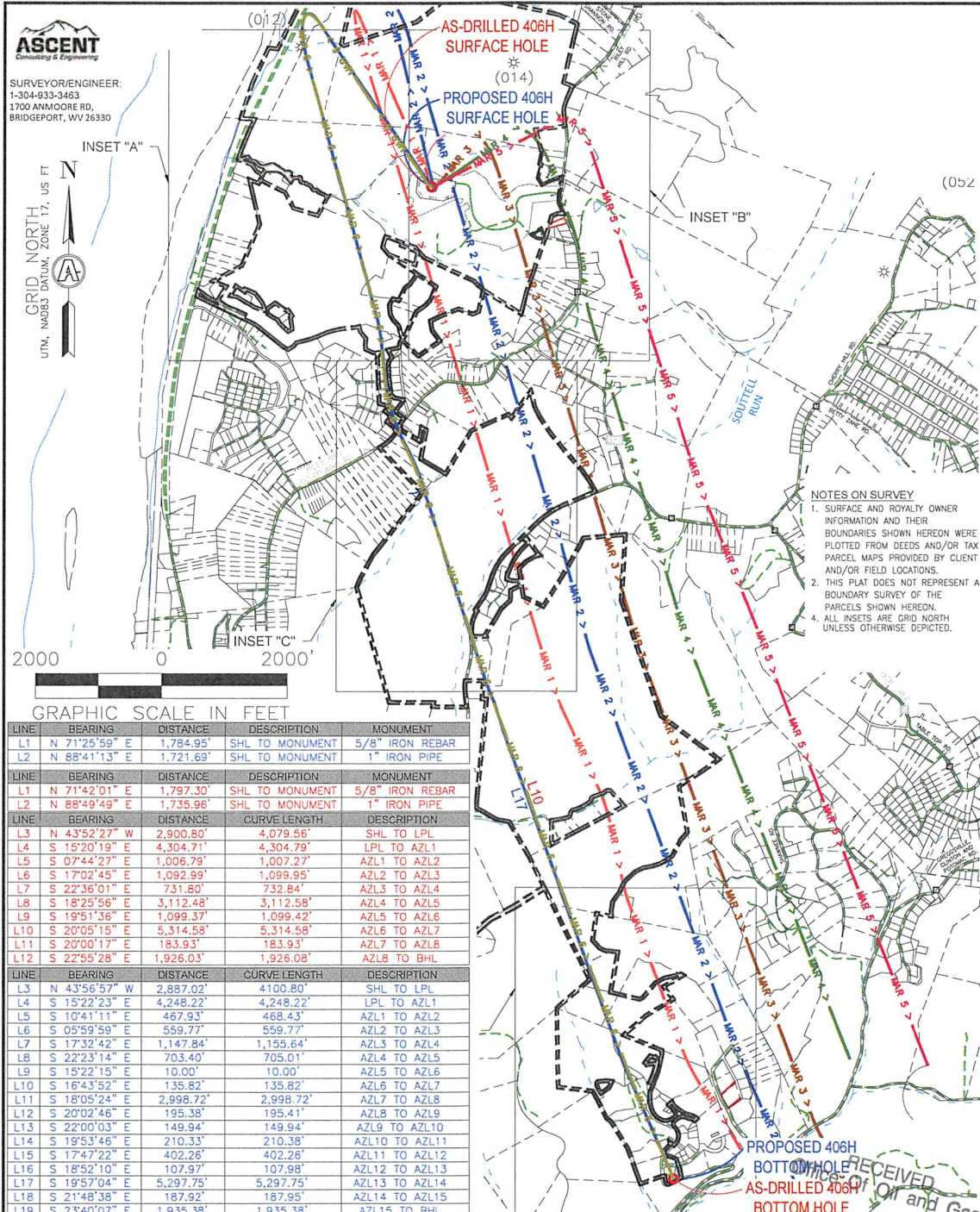
Well Name:

Roth OHI 406H

47069003730000

LITHOLOGY/FORMATION	TOP DEPTH, MD (FT)	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, MD (FT)	BOTTOM DEPTH, TVD (FT)
Base of Fresh Water	0	0	422	422
Top of Salt Water	1126	1119	NA	NA
Pittsburgh Coal	200	200	214	214
Pottsville (ss)	366	366	419	419
Raven Cliff (ss)	682	682	930	928
Maxton (ss)	1103	1097	1184	1175
Big Injun (ss)	1340	1324	1524	1489
Berea (siltstone)	1891	1780	2018	1878
Rhinestreet (shale)	6404	5110	6659	5337
Cashaqua (shale)	6659	5337	6717	5382
Middlesex (shale)	6717	5382	6819	5454
Burket (shale)	6819	5454	6843	5469
Tully (ls)	6843	5469	6919	5514
Mahantango (shale)	6919	5514	7083	5586
Marcellus (shale)	7083	5586	NA	NA

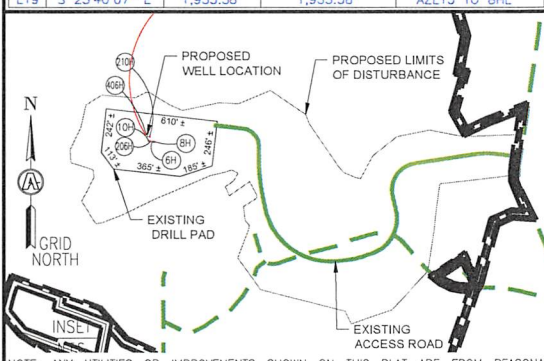
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- NOTES ON SURVEY
1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
 2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 3. ALL SURVEY DATA IS BASED ON THE GRID NORTH UNLESS OTHERWISE DEPICTED.
 4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

GRAPHIC SCALE IN FEET

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 71°25'59" E	1,784.95'	SHL TO MONUMENT	5/8" IRON REBAR
L2	N 88°41'13" E	1,721.69'	SHL TO MONUMENT	1" IRON PIPE
LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 71°42'01" E	1,797.30'	SHL TO MONUMENT	5/8" IRON REBAR
L2	N 88°49'49" E	1,735.96'	SHL TO MONUMENT	1" IRON PIPE
LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 43°52'27" W	2,900.80'	4,079.56'	SHL TO LPL
L4	S 15°20'19" E	4,304.71'	4,304.79'	LPL TO AZL1
L5	S 07°44'27" E	1,006.79'	1,007.27'	AZL1 TO AZL2
L6	S 17°02'45" E	1,092.99'	1,099.95'	AZL2 TO AZL3
L7	S 22°36'01" E	731.80'	732.84'	AZL3 TO AZL4
L8	S 18°25'56" E	3,112.48'	3,112.58'	AZL4 TO AZL5
L9	S 19°51'36" E	1,099.37'	1,099.42'	AZL5 TO AZL6
L10	S 20°05'15" E	5,314.58'	5,314.58'	AZL6 TO AZL7
L11	S 20°00'17" E	183.93'	183.93'	AZL7 TO AZL8
L12	S 22°55'28" E	1,926.03'	1,926.08'	AZL8 TO BHL
LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 43°52'57" W	2,887.02'	4,100.80'	SHL TO LPL
L4	S 15°22'23" E	4,248.22'	4,248.22'	LPL TO AZL1
L5	S 10°41'11" E	467.93'	468.43'	AZL1 TO AZL2
L6	S 05°59'59" E	559.77'	559.77'	AZL2 TO AZL3
L7	S 17°32'42" E	1,147.84'	1,155.64'	AZL3 TO AZL4
L8	S 22°23'14" E	703.40'	705.01'	AZL4 TO AZL5
L9	S 15°22'15" E	10.00'	10.00'	AZL5 TO AZL6
L10	S 16°43'52" E	135.82'	135.82'	AZL6 TO AZL7
L11	S 18°05'24" E	2,998.72'	2,998.72'	AZL7 TO AZL8
L12	S 20°02'46" E	195.38'	195.41'	AZL8 TO AZL9
L13	S 22°00'03" E	149.94'	149.94'	AZL9 TO AZL10
L14	S 19°53'46" E	210.33'	210.38'	AZL10 TO AZL11
L15	S 17°47'22" E	402.26'	402.26'	AZL11 TO AZL12
L16	S 18°52'10" E	107.97'	107.98'	AZL12 TO AZL13
L17	S 19°57'04" E	5,297.75'	5,297.75'	AZL13 TO AZL14
L18	S 21°48'38" E	187.92'	187.95'	AZL14 TO AZL15
L19	S 23°40'07" E	1,935.38'	1,935.38'	AZL15 TO BHL



NOTE: ANY UTILITIES OR IMPROVEMENTS SHOWN ON THIS PLAT ARE FROM REASONABLE VISUAL OBSERVATIONS. NO UTILITY COMPANIES WERE CONTACTED FOR UTILITY LINE LOCATIONS.

- LEGEND:
- PROPOSED SURFACE HOLE / BOTTOM HOLE
 - EXISTING / PRODUCING WELLHEAD
 - ABANDONED WELL
 - PLUGGED & ABANDONED WELL
 - LANDING POINT LOCATION
 - DRILLING UNIT
 - LEASE BOUNDARY
 - HARDLINE BOUNDARY
 - UPP 2 > UPPER POINT PLEASANT PATH
 - MAR 2 > MARCELLUS PATH

COMPANY: **expand**

OPERATOR'S: **ROTH OHI**

WELL #: **406H**

DISTRICT: **RICHLAND** COUNTY: **OHIO** STATE: **WV**

SWN PRODUCTION COMPANY, LLC
SURFACE HOLES

1. "ROTH-OHI 206H"
2. "ROTH-OHI 6H"
3. "ROTH-OHI 8H"
4. "ROTH-OHI 10H"
5. "ROTH-OHI 210H"
6. "ROTH-OHI 406H"

REVISIONS:

DATE: 05-21-2025

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DRAWN BY: TMF

SCALE: 1" = 2000'

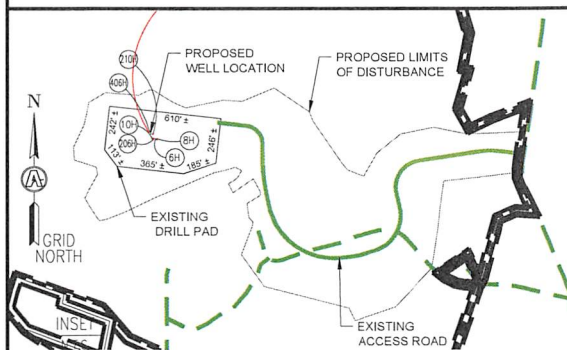
DRAWING NO: ACE-2598

INTERNAL WELL: 09/26/2025



SURVEYOR/ENGINEER:
1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330

SURFACE HOLE LOCATION (SHL):	AZIMUTH POINT LOCATION (AZL8):
GEOGRAPHIC (NAD27): LATITUDE: 40.151147° LONGITUDE: -80.687209°	GEOGRAPHIC (NAD27): LATITUDE: 40.129804° LONGITUDE: -80.684249°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 603,594.703 EASTING: 1,668,129.179	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 595,809.376 EASTING: 1,668,853.953
LANDING POINT LOCATION (LPL):	AZIMUTH POINT LOCATION (AZL9):
GEOGRAPHIC (NAD27): LATITUDE: 40.156874° LONGITUDE: -80.694353°	GEOGRAPHIC (NAD27): LATITUDE: 40.129299° LONGITUDE: -80.684012°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 605,707.260 EASTING: 1,666,159.906	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 595,624.673 EASTING: 1,668,917.865
AZIMUTH POINT LOCATION (AZL1):	AZIMUTH POINT LOCATION (AZL10):
GEOGRAPHIC (NAD27): LATITUDE: 40.145615° LONGITUDE: -80.690374°	GEOGRAPHIC (NAD27): LATITUDE: 40.128917° LONGITUDE: -80.683813°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 601,591.235 EASTING: 1,667,217.787	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 595,484.680 EASTING: 1,668,971.719
AZIMUTH POINT LOCATION (AZL2):	AZIMUTH POINT LOCATION (AZL11):
GEOGRAPHIC (NAD27): LATITUDE: 40.144351° LONGITUDE: -80.690069°	GEOGRAPHIC (NAD27): LATITUDE: 40.128373° LONGITUDE: -80.683559°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 601,129.867 EASTING: 1,667,296.878	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 595,285.657 EASTING: 1,669,040.003
AZIMUTH POINT LOCATION (AZL3):	AZIMUTH POINT LOCATION (AZL12):
GEOGRAPHIC (NAD27): LATITUDE: 40.142822° LONGITUDE: -80.689867°	GEOGRAPHIC (NAD27): LATITUDE: 40.127320° LONGITUDE: -80.683125°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 600,572.059 EASTING: 1,667,346.083	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 594,900.482 EASTING: 1,669,156.517
AZIMUTH POINT LOCATION (AZL4):	AZIMUTH POINT LOCATION (AZL13):
GEOGRAPHIC (NAD27): LATITUDE: 40.139813° LONGITUDE: -80.688642°	GEOGRAPHIC (NAD27): LATITUDE: 40.127039° LONGITUDE: -80.683001°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 599,471.574 EASTING: 1,667,673.855	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 594,797.704 EASTING: 1,669,189.734
AZIMUTH POINT LOCATION (AZL5):	AZIMUTH POINT LOCATION (AZL14):
GEOGRAPHIC (NAD27): LATITUDE: 40.138025° LONGITUDE: -80.687692°	GEOGRAPHIC (NAD27): LATITUDE: 40.113346° LONGITUDE: -80.67660°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 598,816.549 EASTING: 1,667,930.924	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 589,786.509 EASTING: 1,670,914.429
AZIMUTH POINT LOCATION (AZL6):	AZIMUTH POINT LOCATION (AZL15):
GEOGRAPHIC (NAD27): LATITUDE: 40.137998° LONGITUDE: -80.687683°	GEOGRAPHIC (NAD27): LATITUDE: 40.112866° LONGITUDE: -80.676352°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 598,806.862 EASTING: 1,667,933.413	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 589,610.831 EASTING: 1,670,981.343
AZIMUTH POINT LOCATION (AZL7):	BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD27): LATITUDE: 40.137640° LONGITUDE: -80.687544°	GEOGRAPHIC (NAD27): LATITUDE: 40.107990° LONGITUDE: -80.673596°
SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 598,676.108 EASTING: 1,667,970.344	SPCS (NAD27, WEST VIRGINIA NORTH): NORTHING: 587,824.843 EASTING: 1,671,728.779



NOTE: ANY UTILITIES OR IMPROVEMENTS SHOWN ON THIS PLAT ARE FROM REASONABLE VISUAL OBSERVATIONS. NO UTILITY COMPANIES WERE CONTACTED FOR UTILITY LINE LOCATIONS.

LEGEND:	
	PROPOSED SURFACE HOLE / BOTTOM HOLE
	EXISTING / PRODUCING WELLHEAD
	ABANDONED WELL
	PLUGGED & ABANDONED WELL
	LPL
	DRILLING UNIT
	LEASE BOUNDARY
	HARDLINE BOUNDARY
	UPP 2 > UPPER POINT PLEASANT PATH
	MAR 2 > MARCELLUS PATH

COMPANY:

expand

OPERATOR'S

ROTH OHI

WELL #:

406H

DISTRICT:

RICHLAND

COUNTY:

OHIO

STATE:

WV

SWN PRODUCTION COMPANY, LLC

SURFACE HOLES

1. "ROTH-OHI 206H"
2. "ROTH-OHI 6H"
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6. "ROTH-OHI 406H"

REVISIONS:

DATE: 05-21-2025

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DRAWN BY: TMF

SCALE: 1" = 2000'

DRAWING NO: ACE-2598

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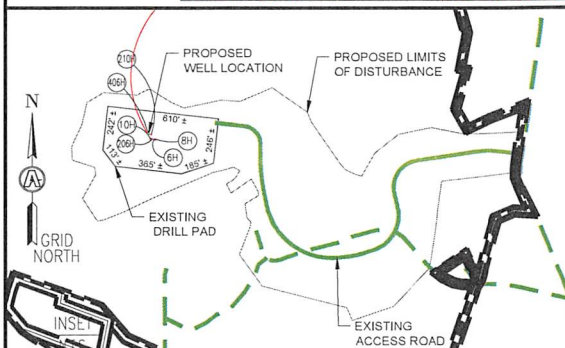
RECEIVED
Office Of Oil and Gas
SEP 11 2025
Department of Environmental Protection

09/26/2025



SURVEYOR/ENGINEER:
1-304-933-3463
1700 ANMOORE RD.
BRIDGEPORT, WV 26330

SURFACE HOLE LOCATION (SHL)	AZIMUTH POINT LOCATION (AZL3)	AZIMUTH POINT LOCATION (AZL7)
GEOGRAPHIC (NAD83): LATITUDE: 40.151226° LONGITUDE: -80.687012° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,581,955.569 EASTING: 1,727,875.710 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,444,588.947 EASTING: 526,657.570 SPCS, WV NORTH (NAD83): NORTHING: 603,633.912 EASTING: 1,636,693.363 GEOGRAPHIC (NAD27): LATITUDE: 40.151154° LONGITUDE: -80.687210° SPCS, WV NORTH (NAD27): NORTHING: 603,597.140 EASTING: 1,668,128.760	GEOGRAPHIC (NAD83): LATITUDE: 40.139963° LONGITUDE: -80.688551° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,577,852.685 EASTING: 1,727,459.929 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,443,338.385 EASTING: 526,530.839 SPCS, WV NORTH (NAD83): NORTHING: 599,537.033 EASTING: 1,636,208.802 GEOGRAPHIC (NAD27): LATITUDE: 40.139891° LONGITUDE: -80.688750° SPCS, WV NORTH (NAD27): NORTHING: 599,500.280 EASTING: 1,667,644.220	GEOGRAPHIC (NAD83): LATITUDE: 40.113419° LONGITUDE: -80.676282° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,568,199.004 EASTING: 1,730,924.067 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,440,395.937 EASTING: 527,586.711 SPCS, WV NORTH (NAD83): NORTHING: 589,823.144 EASTING: 1,639,512.139 GEOGRAPHIC (NAD27): LATITUDE: 40.113347° LONGITUDE: -80.676481° SPCS, WV NORTH (NAD27): NORTHING: 589,786.400 EASTING: 1,670,947.480
LANDING POINT LOCATION (LPL)	AZIMUTH POINT LOCATION (AZL4)	AZIMUTH POINT LOCATION (AZL8)
GEOGRAPHIC (NAD83): LATITUDE: 40.156987° LONGITUDE: -80.694181° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,584,046.654 EASTING: 1,725,865.234 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,445,226.311 EASTING: 526,044.775 SPCS, WV NORTH (NAD83): NORTHING: 605,759.145 EASTING: 1,634,717.421 GEOGRAPHIC (NAD27): LATITUDE: 40.156916° LONGITUDE: -80.694379° SPCS, WV NORTH (NAD27): NORTHING: 605,722.380 EASTING: 1,666,152.870	GEOGRAPHIC (NAD83): LATITUDE: 40.138105° LONGITUDE: -80.687553° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,577,177.080 EASTING: 1,727,741.160 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,443,132.460 EASTING: 526,616.559 SPCS, WV NORTH (NAD83): NORTHING: 598,856.562 EASTING: 1,636,478.788 GEOGRAPHIC (NAD27): LATITUDE: 40.138033° LONGITUDE: -80.687752° SPCS, WV NORTH (NAD27): NORTHING: 598,819.810 EASTING: 1,667,914.200	GEOGRAPHIC (NAD83): LATITUDE: 40.112944° LONGITUDE: -80.676059° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,568,026.176 EASTING: 1,730,986.987 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,440,343.259 EASTING: 527,605.889 SPCS, WV NORTH (NAD83): NORTHING: 589,649.223 EASTING: 1,639,572.180 GEOGRAPHIC (NAD27): LATITUDE: 40.112871° LONGITUDE: -80.676258° SPCS, WV NORTH (NAD27): NORTHING: 589,612.480 EASTING: 1,671,007.520
AZIMUTH POINT LOCATION (AZL1)	AZIMUTH POINT LOCATION (AZL5)	BOTTOM HOLE LOCATION (BHL)
GEOGRAPHIC (NAD83): LATITUDE: 40.145576° LONGITUDE: -80.690157° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,579,895.281 EASTING: 1,727,003.924 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,443,960.970 EASTING: 526,391.849 SPCS, WV NORTH (NAD83): NORTHING: 601,587.737 EASTING: 1,635,786.883 GEOGRAPHIC (NAD27): LATITUDE: 40.145504° LONGITUDE: -80.690356° SPCS, WV NORTH (NAD27): NORTHING: 601,550.980 EASTING: 1,667,222.310	GEOGRAPHIC (NAD83): LATITUDE: 40.129987° LONGITUDE: -80.684070° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,574,224.272 EASTING: 1,728,725.272 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,442,232.443 EASTING: 526,916.517 SPCS, WV NORTH (NAD83): NORTHING: 595,886.599 EASTING: 1,637,413.699 GEOGRAPHIC (NAD27): LATITUDE: 40.129915° LONGITUDE: -80.684269° SPCS, WV NORTH (NAD27): NORTHING: 595,849.850 EASTING: 1,668,849.090	GEOGRAPHIC (NAD83): LATITUDE: 40.108065° LONGITUDE: -80.673399° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,566,252.267 EASTING: 1,731,737.208 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,439,802.571 EASTING: 527,834.557 SPCS, WV NORTH (NAD83): NORTHING: 587,862.353 EASTING: 1,640,292.878 GEOGRAPHIC (NAD27): LATITUDE: 40.107992° LONGITUDE: -80.673599° SPCS, WV NORTH (NAD27): NORTHING: 587,825.610 EASTING: 1,671,728.200
AZIMUTH POINT LOCATION (AZL2)	AZIMUTH POINT LOCATION (AZL6)	
GEOGRAPHIC (NAD83): LATITUDE: 40.142835° LONGITUDE: -80.689685° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,578,897.661 EASTING: 1,727,139.534 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,443,656.894 EASTING: 526,433.183 SPCS, WV NORTH (NAD83): NORTHING: 600,587.614 EASTING: 1,635,905.825 GEOGRAPHIC (NAD27): LATITUDE: 40.142764° LONGITUDE: -80.689883° SPCS, WV NORTH (NAD27): NORTHING: 600,550.860 EASTING: 1,667,341.250	GEOGRAPHIC (NAD83): LATITUDE: 40.127143° LONGITUDE: -80.682747° UTM (NAD83, ZONE 17, FEET): NORTHING: 14,573,190.291 EASTING: 1,729,098.753 UTM (NAD83, ZONE 17, METERS): NORTHING: 4,441,917.285 EASTING: 527,030.354 SPCS, WV NORTH (NAD83): NORTHING: 594,846.128 EASTING: 1,637,769.958 GEOGRAPHIC (NAD27): LATITUDE: 40.127071° LONGITUDE: -80.682946° SPCS, WV NORTH (NAD27): NORTHING: 594,809.380 EASTING: 1,669,205.340	



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LEGEND:	
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	— DRILLING UNIT
⊗ EXISTING / PRODUCING WELLHEAD	== LEASE BOUNDARY
⊗ ABANDONED WELL	— HARDLINE BOUNDARY
⊗ PLUGGED & ABANDONED WELL	— UPP 2 > — UPPER POINT PLEASANT PATH
⊗ LPL LANDING POINT LOCATION	— MAR 2 > — MARCELLUS PATH

COMPANY:		
expand		
OPERATOR'S: ROTH OHI		
WELL #: 406H		
DISTRICT:	COUNTY:	STATE:
RICHLAND	OHIO	WV
SWN PRODUCTION COMPANY, LLC		
SURFACE HOLES		
1. "ROTH-OHI 208H"		
2. "ROTH-OHI 6H"		
3. "ROTH-OHI 8H"		
4. "ROTH-OHI 10H"		
5. "ROTH-OHI 210H"		
6. "ROTH-OHI 406H"		
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SURVEYOR/ENGINEER: 1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,444,588.947
EASTING: 526,657.570

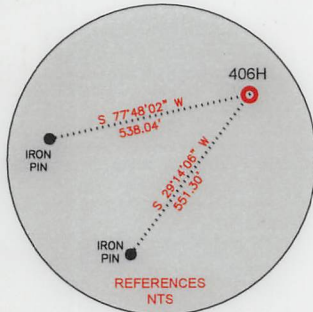
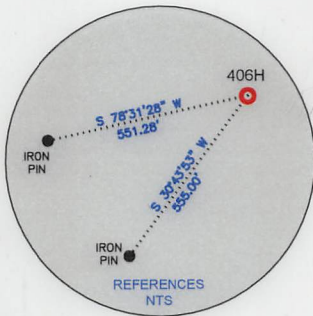
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,445,226.311
EASTING: 526,044.775

BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,439,802.571
EASTING: 527,834.557

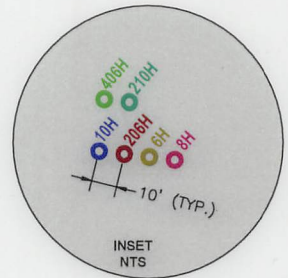
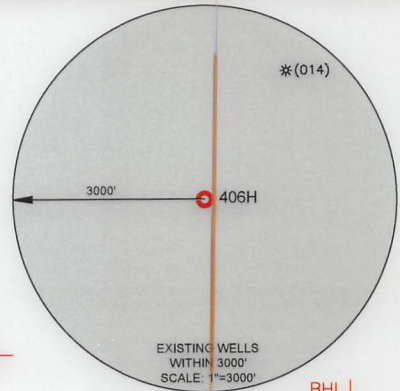
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,444,588.206
EASTING: 526,657.710

LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,445,221.740
EASTING: 526,046.996

BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,439,802.340
EASTING: 527,834.737



LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 71°25'59" E	1,784.95'	SHL TO MONUMENT	5/8" IRON REBAR
L2	N 88°41'13" E	1,721.69'	SHL TO MONUMENT	1" IRON PIPE
LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 71°42'01" E	1,797.30'	SHL TO MONUMENT	5/8" IRON REBAR
L2	N 88°49'49" E	1,735.96'	SHL TO MONUMENT	1" IRON PIPE



LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 43°56'57" W	2,887.02'	4100.80'	SHL TO LPL
L4	S 15°22'23" E	4,248.22'	4,248.22'	LPL TO AZL1
L5	S 10°41'11" E	467.93'	468.43'	AZL1 TO AZL2
L6	S 05°59'59" E	559.77'	559.77'	AZL2 TO AZL3
L7	S 17°32'42" E	1,147.84'	1,155.64'	AZL3 TO AZL4
L8	S 22°23'14" E	703.40'	705.01'	AZL4 TO AZL5
L9	S 15°22'15" E	10.00'	10.00'	AZL5 TO AZL6
L10	S 16°43'52" E	135.82'	135.82'	AZL6 TO AZL7
L11	S 18°05'24" E	2,998.72'	2,998.72'	AZL7 TO AZL8
L12	S 20°02'46" E	195.38'	195.41'	AZL8 TO AZL9
L13	S 22°00'03" E	149.94'	149.94'	AZL9 TO AZL10
L14	S 19°53'46" E	210.33'	210.38'	AZL10 TO AZL11
L15	S 17°47'22" E	402.26'	402.26'	AZL11 TO AZL12
L16	S 18°52'10" E	107.97'	107.98'	AZL12 TO AZL13
L17	S 19°57'04" E	5,297.75'	5,297.75'	AZL13 TO AZL14
L18	S 21°48'38" E	187.92'	187.95'	AZL14 TO AZL15
L19	S 23°40'07" E	1,935.38'	1,935.38'	AZL15 TO BHL

WELL RESTRICTIONS

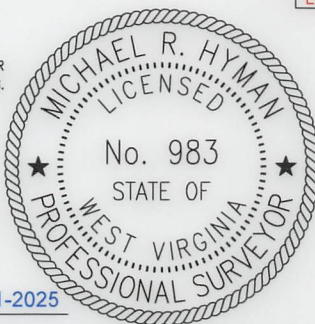
- NO OCCUPIED DWELLINGS > 2500 SQ. FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO AGRICULTURE BUILDINGS > 2500 SQ. FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
- NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 100 FEET OF LIMITS OF DISTURBANCE.
- NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

NOTES ON SURVEY

- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 983 *Michael R. Hyman* 05-21-2025



LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 43°52'27" W	2,900.80'	4,079.56'	SHL TO LPL
L4	S 15°20'19" E	4,304.71'	4,304.79'	LPL TO AZL1
L5	S 07°44'27" E	1,006.79'	1,007.27'	AZL1 TO AZL2
L6	S 17°02'45" E	1,092.99'	1,099.95'	AZL2 TO AZL3
L7	S 22°36'01" E	731.80'	732.84'	AZL3 TO AZL4
L8	S 18°25'56" E	3,112.48'	3,112.58'	AZL4 TO AZL5
L9	S 19°51'36" E	1,099.37'	1,099.42'	AZL5 TO AZL6
L10	S 20°05'15" E	5,314.58'	5,314.58'	AZL6 TO AZL7
L11	S 20°00'17" E	183.93'	183.93'	AZL7 TO AZL8
L12	S 22°55'28" E	1,926.03'	1,926.08'	AZL8 TO BHL



COMPANY:



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)

ROTH OHI
OPERATOR'S WELL #: 406H
API WELL #: 47 69 00373
STATE COUNTY PERMIT

WELL TYPE: OIL ☐ WASTE DISPOSAL ☐ PRODUCTION ☒ DEEP ☒ GAS ☒ LIQUID INJECTION ☐ STORAGE ☐ SHALLOW ☐
WATERSHED: UPPER OHIO-WHEELING ELEVATION: 1004.04
DISTRICT: RICHLAND COUNTY: OHIO QUADRANGLE: TILTONSVILLE 7.5', OH
SURFACE OWNER: ROTH FARMS, LLC ACREAGE: ±118.93
OIL & GAS ROYALTY OWNER: ROTH FARMS, LLC ACREAGE: ±118.93
DRILL ☒ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐
CONVERT ☐ PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE ☒ (SPECIFY) AS-DRILLED 09/26/2025
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,788 TVD 26,068 TMD

WELL OPERATOR: EXPAND OPERATING, LLC DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:	REVISIONS:	DATE:
PROPOSED SURFACE HOLE / BOTTOM HOLE	SURVEYED BOUNDARY	05-21-2025
EXISTING / PRODUCING WELLHEAD	DRILLING UNIT	XXXXX
LANDING POINT LOCATION	LEASE BOUNDARY	DRAWN BY: TMF
EXISTING WATER WELL	ASDRILLED PATH	SCALE: 1" = 2000'
EXISTING SPRING	PROPOSED PATH	DRAWING NO: ACE-2598
	DHP BUFFER	WELL LOCATION PLAT 1



SURVEYOR/ENGINEER:
1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330

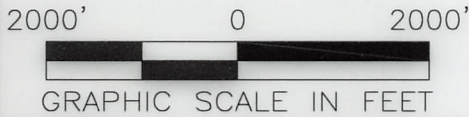
INSET "A"

INSET "B"

INSET "C"

INSET "D"

GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT



09/26/2025

REVISIONS:

COMPANY:



OPERATOR'S

ROTH OHI

WELL #:

406H

DISTRICT:
RICHLAND

COUNTY:
OHIO

STATE:
WV

DATE: 05-21-2025
XXXXX

DRAWN BY: TMF

SCALE: 1"=2000'

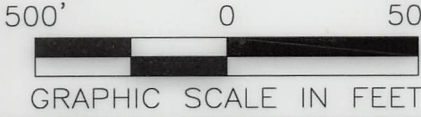
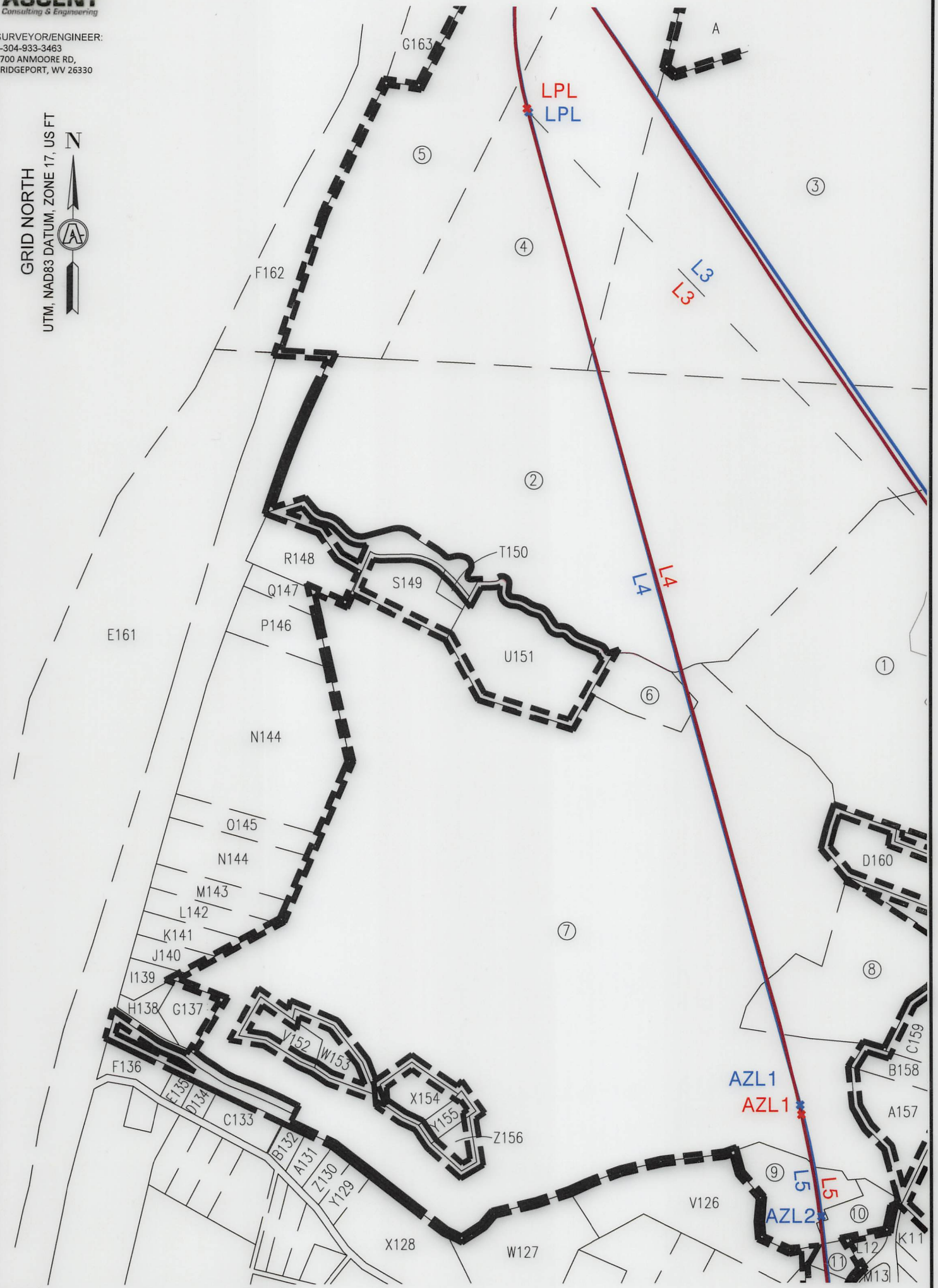
DRAWING NO: ACE-2598

WELL LOCATION PLAT 2



SURVEYOR/ENGINEER:
1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330

GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT



INSET "A"

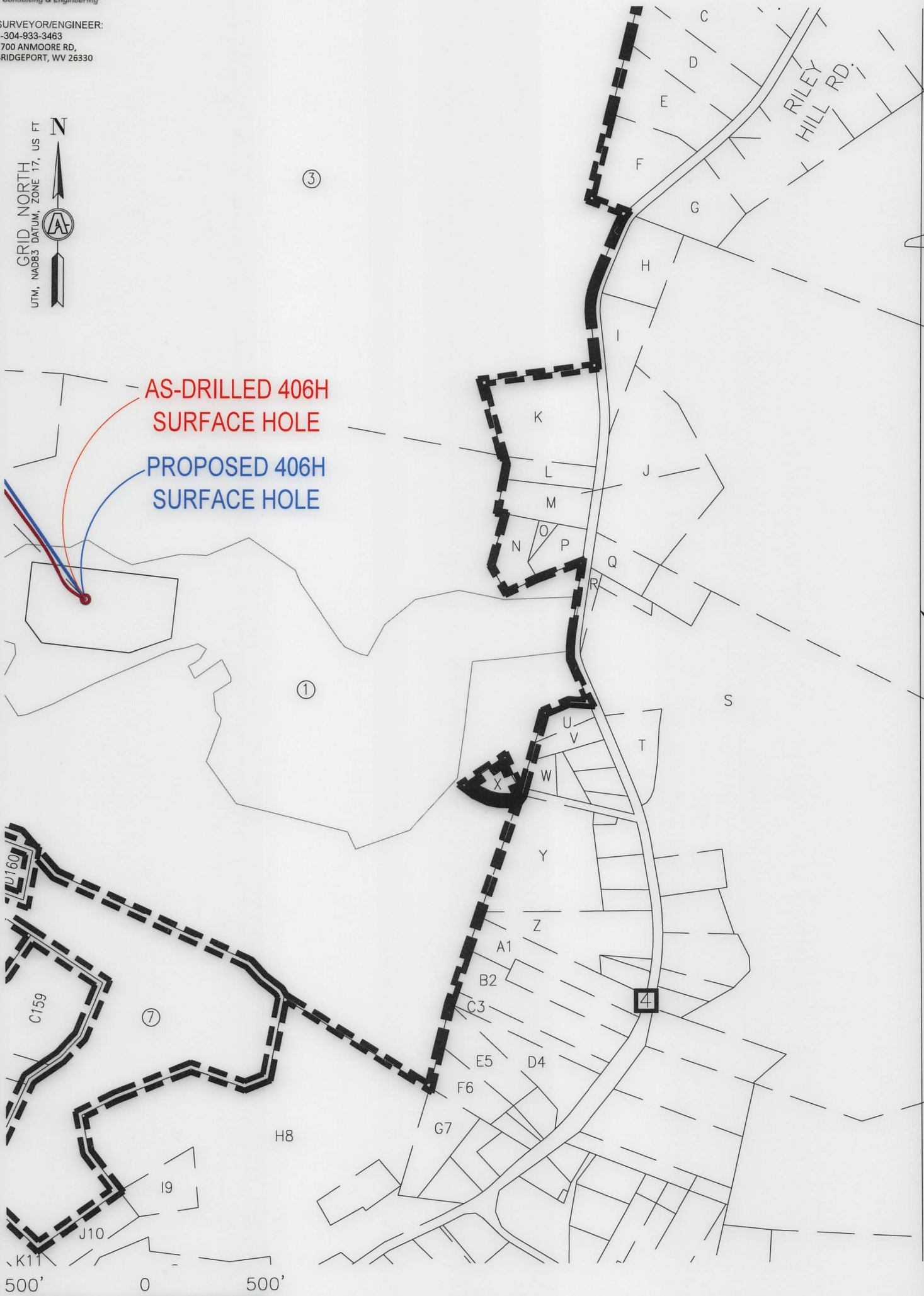
09/26/2025

REVISIONS:

COMPANY:				
OPERATOR'S			ROTH OHI	
WELL #:			406H	
DISTRICT:		COUNTY:	STATE:	DATE:
RICHLAND		OHIO	WV	05-21-2025
				XXXXX
				DRAWN BY: TMF
				SCALE: 1"=500'
				DRAWING NO: ACE-2598
				WELL LOCATION PLAT 3



SURVEYOR/ENGINEER:
1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330



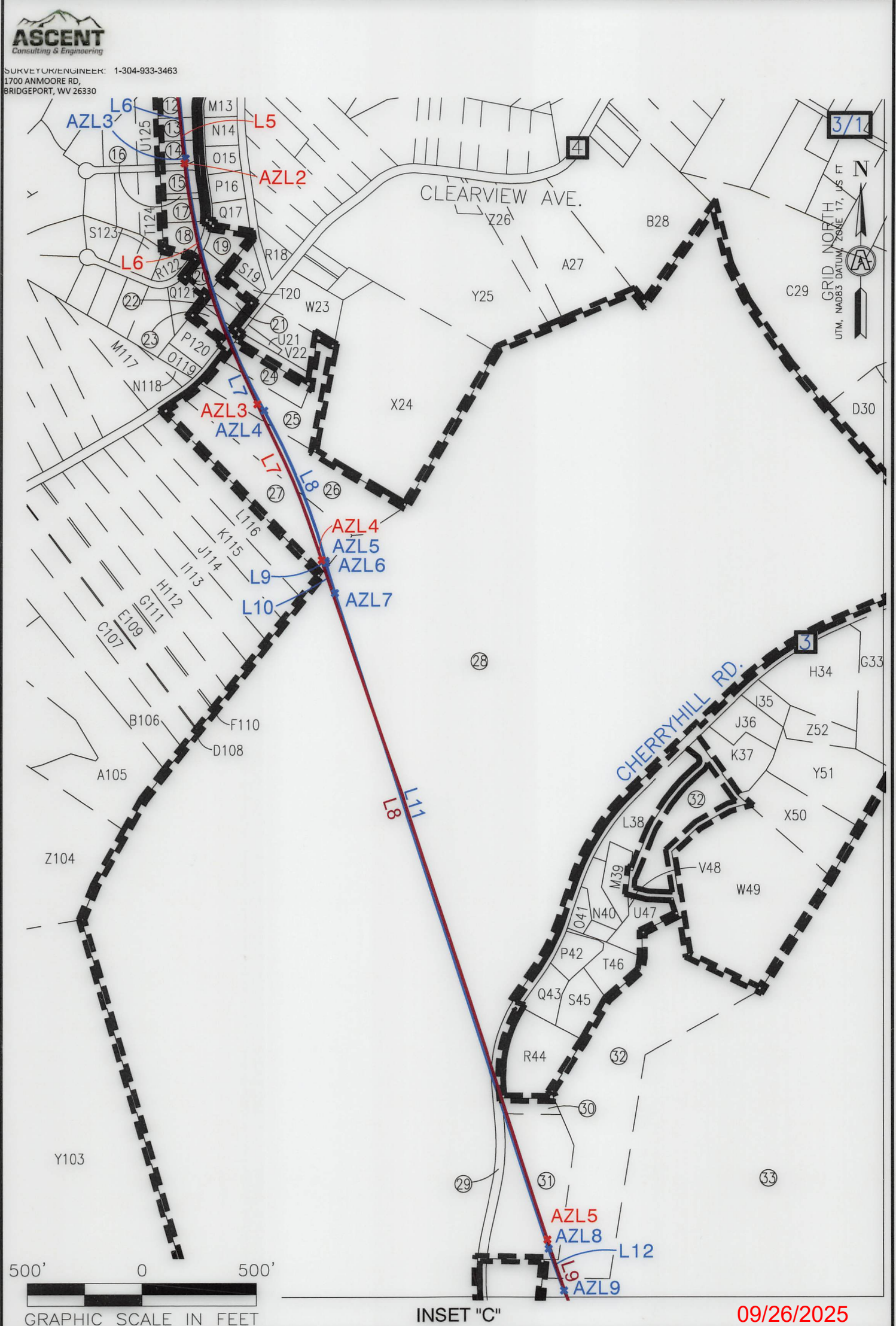
GRAPHIC SCALE IN FEET

INSET "B"

09/26/2025

REVISIONS:

COMPANY:				
OPERATOR'S			ROTH OHI	
WELL #:			406H	
DISTRICT:		COUNTY:	STATE:	DATE:
RICHLAND		OHIO	WV	05-21-2025
DRAWN BY: TMF				XXXXX
SCALE: 1"=500'				
DRAWING NO: ACE-2598				
WELL LOCATION PLAT 4				



REVISIONS:		COMPANY:		expand	
		OPERATOR'S		DATE: 05-21-2025	
		WELL #:		XXXXX	
		DISTRICT:		DRAWN BY: TMF	
		COUNTY:		SCALE: 1"=500'	
		STATE:		DRAWING NO: ACE-2598	
		RICHLAND		WELL LOCATION PLAT 5	

WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS		
TRACT	SURFACE OWNER (S)/ROYALTY OWNER (R)	TAX PARCEL
1	ROTH FARMS, LLC (S)/ROTH FARMS, LLC (R)	4-R7-24
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	EDGE BRUCE W	4-R7-23
3	MCCLURE WM H & MARG A	4-R4-7
4	DONOHEW WILLIAM SCOTT & LAURA	4-R4-2.4
5	STATE OF WV, DEPARTMENT OF TRANSPORTATION	WARWOOD AVENUE
6	HARTFILE GARY L- TOD	4-R7-20
7	CITY OF WHEELING	4-R7-18
8	FLUHARTY MICHAEL AND BRENDA K	4-R7-17
9	ROWND DENISE & DANIEL T III	4-R7-14
10	ROWND DENISE A ROWND DANIEL THOMPSON III	4-R7-14.1
11	UTTERMOHLEN JAMES VINCENT & ALINA DOLORES UTTERMOHLEN	2-CV7A-8
12	JOHNSON TIMOTHY P & CRYSTAL J	2-CV7A-7
13	RATCLIFFE LINDA L & RATCLIFFE RUSSELL B ESTATE	2-CV7A-6
14	EMILY MARCY J	2-CV7A-5
15	DALLY ANDREW RAY	2-CV7A-30
16	DALLY ANDREW RAY	2-CV7A-30.1
17	LEOS JAMES JOHN III	2-CV7A-29
18	MCCORMICK TIMOTHY P - TOD	2-CV7A-28
19	TOEPFER MICHAEL & MADONNA ANNE	2-CV7A-15
20	HOSEY RONALD AND DAWN	2-CV7A-16
21	NODURFT GREGORY P & MICHELLE	2-CV3-1
22	WOLFE CHARLES	2-CV6-14
23	GARRISON NICOLE L	2-CV6-13.1
24	NICKERSON ARTHUR J & D L	2-CV6-17
25	STRITTMATTER BRENT J & STRITTMATTER AMY L	2-CV6-18
26	STEWART LOGAN G & ALICIA D	2-CV6-19
27	HLAD DOUGLAS M & LISA ANN	2-CV6-20
28	WARWOOD LAND CO LLC	4-R7-31
29	STATE OF WV, DEPARTMENT OF TRANSPORTATION	Cherry Hill Road
30	BROOKS WILLIAM S C/O WESBANCO TRUST	4-R10-27.1
31	SUNSHINE STATE INV GROUP LLC	4-R10-28
32	JOHNSON JOHN	4-R10-29
33	MARY ANN HESS REALTY LLC C/O HANNIG & ASSOCIATES PLLC	4-R10-31
34	MURRAY SANDRA	4-R10-42
35	GOLDEN CHRISTOPHER SCOTT & GOLDEN BRANDACE LYNN	4-R11-2.4
36	DOYLE DANIEL T & LUCINDA E	4-R11-2.12
37	LOWE JEREMY J & AMANDA L	4-R11-2.11
38	LOWE JEREMY J & AMANDA L	4-R11-2.6
39	CUSACK JOHN L & TAMMIE L	4-R11-2.9
40	SANTORINE LORA KAY & SANTORINE ADOLPH W JR	4-R14A-24
41	COX C NOLAN	4-R14A-25
42	DUFF FRANK X & DEBORAH M	4-R14A-69.1
43	DUFF FRANK X & DEBORAH M	4-R14A-69
44	DUFF FRANCIS X & D M	4-R14A-71
45	DUFF FRANCIS X & D M	4-R14A-53.2
46	EXLEY R BANFORD & T L	4-R14A-111
47	KIDD JOHN M	4-R14A-210
48	KIDD JOHN M	4-R14A-183
49	MAIN STREET BANK CORP	4-R14E-5

09/26/2025

REVISIONS:	COMPANY:				
	OPERATOR'S				DATE: 05-21-2025
	WELL #:				XXXXX
	DISTRICT:				DRAWN BY: TMF
	COUNTY:				SCALE: 1"=2000'
	STATE:				DRAWING NO: ACE-2598
WV			WELL LOCATION PLAT 7		

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER (S)	TAX PARCEL
A	HEART 2 HEART VOLUNTEERS INC	4-R4-5
B	BOYD ROBERT JEFFREY & CHERYL L	4-R5-24
C	OLEJASZ JOSEPH R JR	4-R5-34
D	OLEJASZ JOSEPH R JR	4-R5-35
E	KUCERA CARL J & SHARON L	4-R5-35.2
F	PAVELICH-SWIGER SHERRI J & PAVELICH JEFFREY M	4-R5-35.1
G	WEIGAND PAUL & REBECCA FAMILY TRUST	4-R5-40.1
H	SHELL RICHARD A & N	4-R8-1.1
I	HABERFIELD WAYNE K & D A	4-R8-1
J	SCHUETZ EBBIE JOSEPH & JOY	4-R8-3
K	MCCLURE WM H & MARGARET A	4-R7-26.1
L	LEFKAY SCOTT A & TRACY L	4-R8-2.3
M	FELDNER CHARLENE M - TOD	4-R8-2.1
N	CALDWELL SHANE J & CALDWELL SUZANNE M	4-R7-24.1
O	CALDWELL SUZANNE & SHANE	4-R7-24.2
P	OLEJASZ JR JOSEPH R & OLEJASZ J R SR & G (RT-OCC)	4-R8-2.2
Q	MCKEE JAMES F JR & EILEEN B	4-R8-4.14
R	MCKEE JAMES F JR & EILEEN B	4-R8-77
S	TUNNEL RIDGE LLC	4-R8-4.18
T	BAKER FAMILY RESIDENCE TRUST; STEVEN P BAKER (LE)	4-R8-4
U	KUCERA LISA A	4-R8-4.8
V	HELDEFFER GEORGE W	4-R8-4.7
W	CAMPBELL ALLEN B	4-R8-4.9
X	CALDWELL SHANE AND SUZANNE	4-R8-78
Y	CLARK JOHN M & B C	4-R8-4.10
Z	CLEGG R E & J L	2-CV1-5
A1	TOMAC ROBERT C JR	2-CV1-4
B2	ROGERSON KAREN S	2-CV1-2
C3	SHEARER PHILLIP G & CINDY M	2-CV1-1
D4	QUINN JOHN THOMAS	2-CV4-7
E5	QUINN THOMAS F & SUE ANN TAYLOR	2-CV4-7.4
F6	BENNER SUZANNE J & JAMES T BENNER	2-CV4-7.5
G7	FEDORKE AARON P & FEDORKE RACHEL SUE	2-CV4-4.1
H8	FEDORKE AARON P & TIMOTHY J	2-CV4-3
I9	FEDORKE TIMOTHY JOSEPH	4-R7-37
J10	BIEGA FRANK & CONNIE	4-R7-27.2
K11	STOEHR RONALD J & MARIE G- TOD	2-CV3-4.7
L12	UTTERMOHLEN JAMES VINCENT & ALINA DOLORES UTTERMOHLEN	2-CV7A-9
M13	LAWSON ERIC C ET AL LAWSON ARLENE J (LIFE EST)	2-CV7A-10
N14	SECRETARY OF VETERANS AFFAIRS	2-CV7A-11
O15	SENGEWALT STACEY M & JEFFREY R	2-CV7A-12
P16	SENGEWALT STACEY M & JEFFREY R	2-CV7A-13
Q17	VALENTINE DAVID M	2-CV7A-14
R18	ENGLISH DUSTIN D	2-CV3-4.1
S19	MAYLES TIMOTHY; MAYLES HARRY & MAYLES DOUGLAS	2-CV3-3
T20	MAYLES TIMOTHY; MAYLES HARRY & MAYLES DOUGLAS	2-CV3-2
U21	BEHRENS JAMES M	2-CV6-15.3
V22	BARBE FAMILY TRUST; M BARBE & D A LENNOX TRUSTEES	2-CV6-15.2
W23	DANHART LISA; BONNIE; & SELLER CAROL	2-CV6-15
X24	SZALAY FRANCIS E & PL	2-CV3-13.1
Y25	MYERS WILBERT E III & J S	2-CV3-13
Z26	KLEIN JACK W JR & BRENDA J-TOD	2-CV4-22.1
A27	MURRAY BRYAN M AND JOAN C	2-CV4-22
B28	PAVLIK NICHOLAS D AND GLORIA K	2-CV4-21.2
C29	HESTIA LLC	4-R8-65.1
D30	GLENN VIEW LIMITED PARTNERSHIP	4-R8-65.4
E31	GLENN VIEW LIMITED PARTNERSHIP	4-R8-68
F32	MEREDITH DONALD R II AND JULIE	4-R8-69.1
G33	MARY ANN HESS REALTY LLC C/O HANNIG & ASSOCIATES PLLC	4-R8-70

09/26/2025

REVISIONS:	COMPANY:			
	OPERATOR'S			DATE: 05-21-2025
	WELL #:			XXXXX
	DISTRICT:	COUNTY:	STATE:	DRAWN BY: TMF
	RICHLAND	OHIO	WV	SCALE: N/A
				DRAWING NO: ACE-2598
				WELL LOCATION PLAT 8



SURVEYOR/ENGINEER:
1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER (S)	TAX PARCEL
H34	CASTILOW CHET	4-R7-34
I35	STEVEN JOHNSON LEWIS ET AL	4-R7-33
J36	JOHNSON STEVEN LEWIS ET AL	4-R7-32
K37	SCHMALZ ANGELA	4-R7-36
L38	JOHNSON JOHN LLOYD	4-R7-39
M39	BURTRAND GARY E & T L	4-R10-22.1
N40	KYLE CHAD J & E A	4-R10-22
O41	NEWLAND DARRELL L	4-R10-22.3
P42	BROST RICHARD	4-R10-24.1
Q43	WILSON CINDY L P & DANIEL-TOD	4-R10-26
R44	ERNEST RICHARD H JR & A L	4-R10-27
S45	MCCRACKEN ROBERT W	4-R10-25
T46	LASH MARTHA J	4-R10-24
U47	BEABOUT EARL T JR & L L	4-R10-23
V48	BURTRAND GARY E & T L	4-R10-23.1
W49	MCLAUGHLIN HENRY J III	4-R10-29.1
X50	JOHNSON STEVEN L & D T	4-R7-36.1
Y51	PAVELICH HUNTER M	4-R7-35
Z52	CASTILOW CHET	4-R7-34.1
A53	MEREDITH DONALD R II AND J K	4-R8-69.3
B54	MARY ANN HESS REALTY LLC C/O HANNIG & ASSOCIATES PLLC	4-R8-52
C55	MARY ANN HESS REALTY LLC C/O HANNIG & ASSOCIATES PLLC	4-R11-11
D56	PENN HOLDING LIMITED LIABILITY COMPANY	4-R11-6.3
E57	GOLDEN CHRISTOPHER SCOTT BRANDACE LYNN	4-R11-2.13
F58	DEFELICE LESLIE PAUL	4-R11-2.7
G59	DOYLE DANIEL T	4-R11-2.2
H60	SCHAFER ROY ALVIN JR & CAROLYN MARY SCHAFER	4-R11-2.10
I61	DOYLE MATTHEW M & CHRISTINE M	4-R11-2.5
J62	MULL ELLEN CLARICE ET AL	4-R11-1
K63	WOLFE AARON T & MICHELLE R	4-R14A-53.6
L64	CONSTANTIN THOMAS E & ELIZABETH K	4-R14A-53.5
M65	PETRI JOSEPH L JR	4-R14A-53.1
N66	PETRI JOSEPH L JR	4-R14A-139
O67	PETRI JOSEPH L JR	4-R14A-139.1
P68	PETRI JOSEPH L JR	4-R14A-53.8
Q69	HEARNE WILLIAM H III & C N	4-R14A-53.4
R70	KENNEN ROBERT D & DELILAH L KENNEN - TOD	4-R14A-53.7
S71	HEARNE WILLIAM H III & C N	4-R14A-169
T72	HEARNE WILLIAM H III & C N	4-R14A-163
U73	FAMILY 9/7/11 IRREVOCABLE TRUST	4-R14A-189
V74	FAMILY 9/7/11 IRREVOCABLE TRUST	4-R14A-186
W75	FAMILY 9/7/11 IRREVOCABLE TRUST	4-R14A-185
X76	KIDD JOHN M	4-R14A-185.1
Y77	KIDD JOHN M	4-R14A-184
Z78	KIDD JOHN M & BONNIE L	4-R14A-183. 1
A79	KIDD JOHN M	4-R14A-181
B80	KIDD JOHN M	4-R14A-181.1
C81	JOSEPH ELIAS	4-R14E-6
D82	SUNSHINE STATE INV GROUP LLC	4-R14A-53
E83	ADAMS JAMES C & MELISSA S	4-R14E-1
F84	HUPP SARA	4-R13-1.14
G85	GRIMES THOMAS B TRUSTEE THE ARCHIE TODD HUPP IV	4-R13-1.15
H86	MULL ELLEN CLARICE ET AL	4-R10-44.1
I87	PRATHER TYLER D	4-R10-44.2
J88	PRATHER TYLER D	4-R10-44
K89	MYERS WILBERT E III	4-R10-2
L90	PRATHER TYLER D	4-R10-3
M91	WADDELL DONALD L & D J	4-R10-4

09/26/2025

REVISIONS:	COMPANY:		
	OPERATOR'S	ROTH OHI	
	WELL #:	406H	
	DISTRICT:	COUNTY:	STATE:
	RICHLAND	OHIO	WV
			DATE: 05-21-2025
			XXXXX
			DRAWN BY: TMF
			SCALE: N/A
			DRAWING NO: ACE-2598
			WELL LOCATION PLAT 9



SURVEYOR/ENGINEER:
1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER (S)	TAX PARCEL
N92	ASSARO ANTHONY L & S L	4-R10-43.4
O93	ASSARO ANTHONY L & S L	4-R10-43.3
P94	NORTH FORK LANDFILL INC	4-R10-43.1
Q95	NORTH FORK LANDFILL INC C/O SUSAN SARKIS	4-R10-41
R96	NORTH FORK LANDFILL INC C/O SUSAN SARKIS	4-R10-41.1
S97	NORTH FORK LANDFILL INC C/O SUSAN SARKIS	4-R10-39.1
T98	IAFRATE DAVID A	4-R10-39
U99	MCCARDLE STANLEY M JR & M	4-R10-36
V100	MCCARDLE STANLEY M JR & M	4-R10-35
W101	BREIDING JOSHUA D & SARAH N	4-R10-20
X102	SARKIS SJ; ROHRIG RF; ROHRIG JR; ROHRIG RF TTEE	4-R10-19
Y103	NORTH FORK LANDFILL INC	4-R10-43
Z104	MCGLAUGHLIN DENNIS & S	4-R7-30
A105	CLEARVIEW VOL FIRE DEPT INC	2-CV6-34.1
B106	PLANET HOME LENDING LLC	2-CV6-28
C107	BOPP VICTOR V III & DIANN	2-CV6-28.3
D108	JOSEPH BRADLEY R & JANETTE L	2-CV6-27.1
E109	JOSEPH BRADLEY R & JANETTE L	2-CV6-27
F110	JOSEPH BRADLEY R & JANETTE L	2-CV6-27.2
G111	LAING MARGARET T	2-CV6-26
H112	KIRKSEY MARK R WEATHERSON NANCY (RES'V L/E)	2-CV6-25
I113	CONTRAGUERRO MICHAEL J JR & BRITTANY LEIGH CONTRAGUERRO	2-CV6-24
J114	STEWART GREGORY L & JODI A	2-CV6-23
K115	SAVAGE CHARLES J & RACHEL M	2-CV6-22
L116	DAGRAVA TIMOTHY & MEGAN	2-CV6-21
M117	BOLES ROBERT E III & TIFFANY M	2-CV6-10.1
N118	FRY KATHY L	2-CV6-11
O119	FRY KATHY L	2-CV6-12
P120	GARRISON NICOLE L	2-CV6-13
Q121	MEDOVIC MICHAEL & CATHERINE H	2-CV7A-17
R122	MAIDENS CATHERINE - TOD	2-CV7A-27
S123	MAIDENS CATHERINE - TOD	2-CV7A-27.1
T124	VALENTINE TRAVIS & ELIZABETH	2-CV7A-31
U125	GIBSON ROBERT H & D L	2-CV7A-4
V126	ROWND DENISE & THOMPSON DANIEL, III	4-R7-12
W127	BIEGA CONNIE SUE & FRANK PAUL	4-R7-12.10
X128	CITY OF WHEELING	4-R7L-105
Y129	CITY OF WHEELING	4-R7L-100
Z130	MACFARLAND DARIN P & K L	4-R7L-99
A131	CITY OF WHEELING	4-R7G-25
B132	MACFARLAND DARIN P & KIMBERLY	4-R7G-24
C133	PAYTON SHARON S ET AL	4-R7G-23
D134	PAYTON SHARON S ET AL	4-R7G-20
E135	ROBINSON RICHARD J	4-R7G-19
F136	VELEGOL DAVID & CAROLYN	4-R7G-18
G137	GUZZI COREY A & BRITTANY N	4-R7-11
H138	GUZZI COREY A & BRITTANY N	4-R7-10
I139	BOURNE JOHN & LETHA	4-R7L-56.8
J140	WEST VIRGINIA STATE ROAD COMM	4-R7L-56.7
K141	MORGAN WILBUR W	4-R7L-56.6
L142	FAZZOLARI FRANK SAMUEL ESTATE	4-R7L-56.5
M143	WEST VIRGINIA STATE ROAD COMM	4-R7L-56.4
N144	FLUHARTY MICHAEL L & BRENDA K	4-R7L-56
O145	WEST VIRGINIA STATE ROAD COMM	4-R7L-56.3
P146	WEST VIRGINIA STATE ROAD COMM	4-R7L-56.2
Q147	DOUGHERTY GEORGE H & THELMA T	4-R7L-56.1
R148	JONES SHANNON M WILDS	4-R7-16.1

09/26/2025

REVISIONS:	COMPANY:			
	OPERATOR'S		ROTH OHI	DATE: 05-21-2025
	WELL #:		406H	XXXXX
	DISTRICT:	COUNTY:	STATE:	DRAWN BY: TMF
	RICHLAND	OHIO	WV	SCALE: N/A
				DRAWING NO: ACE-2598
				WELL LOCATION PLAT 9



SURVEYOR/ENGINEER:
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1700 ANMOORE RD,
BRIDGEPORT, WV 26330

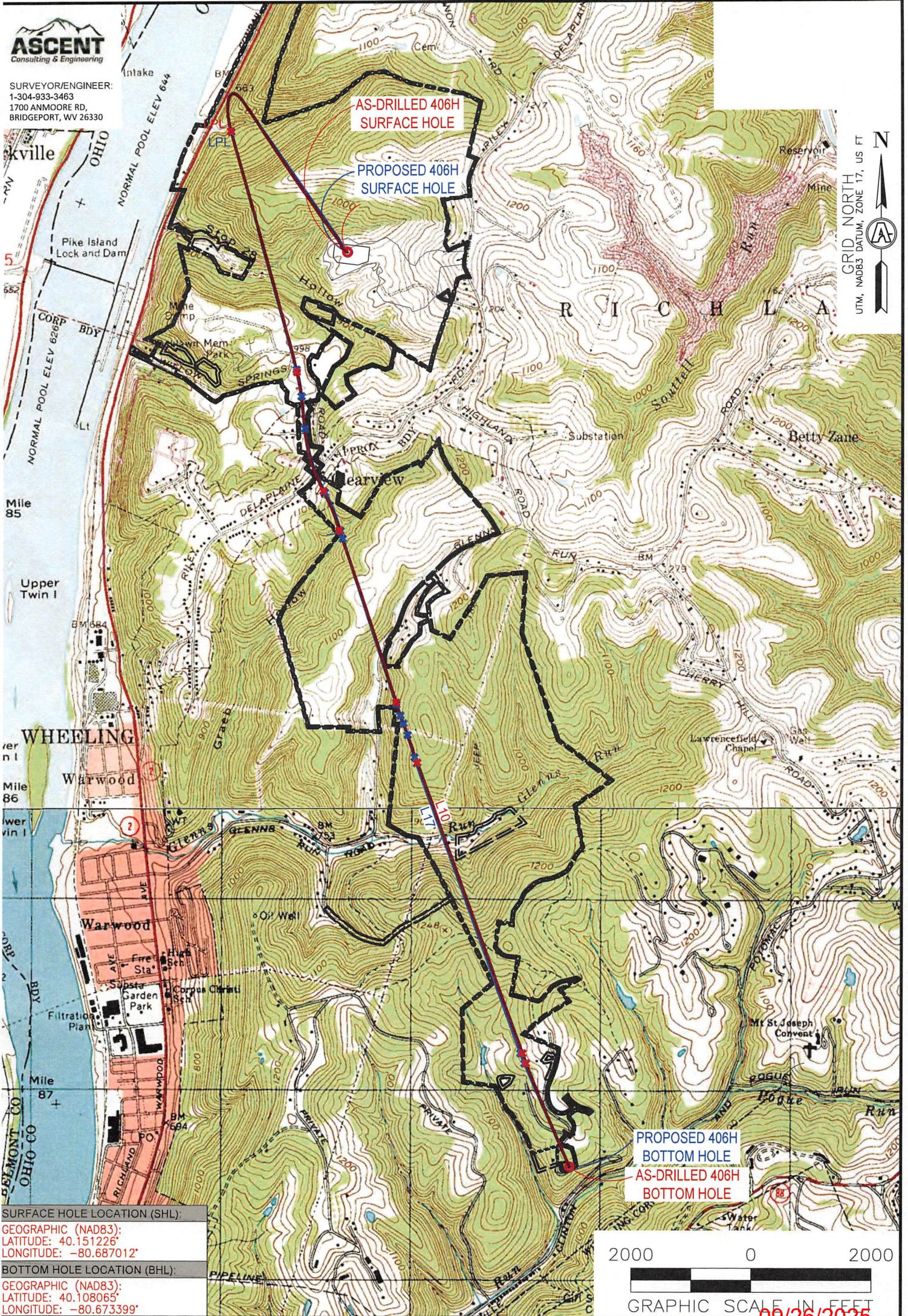
ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER (S)	TAX PARCEL
S149	DEAN LOMAN L & R Z	4-R7-21
T150	LOEW J W JR & ELSIE	4-R7-22
U151	HARTFILE GARY L - TOD	4-R7-16
V152	FLUHARTY MICHAEL L	4-R7-6
W153	WOLFE JAMES R ESTATE	4-R7-7
X154	FLUHARTY MICHAEL L & BRENDA K	4-R7-8
Y155	FLUHARTY MICHAEL L & BRENDA K	4-R7-9.1
Z156	FLUHARTY MICHAEL & BRENDA	4-R7-9
A157	BIEGA FRANKIE P & C S	4-R7-15
B158	STEWART MARK E	4-R7-15.2
C159	STEWART MARK E; GEIGER LEEANN	4-R7-28
D160	HARTFILE GARY L -TOD	4-R7-15.1
E161	UNITED STATES OF AMERICA ARMY CORP OF ENG - PITTS DIV	4-R7-38
F162	UNITED STATES OF AMERICA ARMY CORP OF ENG - PITTS DIV	4-R4-1
G163	TUNNEL RIDGE LLC	4-R4-2.2
H164	TUNNEL RIDGE LLC	4-R4-2
I165	TUNNEL RIDGE LLC	4-R4-2.3
J166	MCCARDLE STANLEY JR & MARYANN	4-R11-3
K167	WITSBERGER MARGUERITE L	4-R11-4.1
L168	WITSBERGER AMY L	4-R11-4
M169	MARY ANN HESS REALTY LLC	4-R11-5
N170	DUFF DEBORAH M	4-R14A-88
O171	COX C NOLAN	4-R14A-42
P172	COX N NOLAN & DEBORAH	4-R14A-41
Q173	COX C NOLAN	4-R14A-53.9

09/26/2025

REVISIONS:	COMPANY:			
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	WELL #:			XXXXX
	DISTRICT:			DRAWN BY: TMF
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	WV			WELL LOCATION PLAT 9



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1700 ANMOORE RD.
BRIDGEPORT, WV 26330



SURFACE HOLE LOCATION (SHL):

GEOGRAPHIC (NAD83):
LATITUDE: 40.151226°
LONGITUDE: -80.687012°

BOTTOM HOLE LOCATION (BHL):

GEOGRAPHIC (NAD83):
LATITUDE: 40.108065°
LONGITUDE: -80.673399°

NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- LPL LANDING POINT LOCATION
- EXISTING WATER WELL
- EXISTING SPRING

- SURVEYED BOUNDARY
- DRILLING UNIT
- LEASE BOUNDARY
- ASDRILLED PATH
- PROPOSED PATH
- DHP BUFFER

2000 0 2000

GRAPHIC SCALE IN FEET

09/26/2025

WELL OPERATOR:
EXPAND OPERATING, LLC

ADDRESS:
1300 FORT PIERPONT DRIVE, SUITE 201

SURFACE OWNER:
ROTH FARMS, LLC

WELL (FARM) NAME:
ROTH OHI

COUNTY - CODE
OHIO - 069
USGS 7 1/2 QUADRANGLE MAP NAME
TILTONSVILLE 7.5', OH

WELL #
406H

DISTRICT;
RICHLAND

SERIAL #
XXXX