



west virginia department of environmental protection

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

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

Monday, December 18, 2023
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit Modification Approval for Serafin Ortiz MSH 5H
47-051-02504-00-00

Lateral Extension

SWN PRODUCTION COMPANY, LLC

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

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

A blue ink signature of James A. Martin, written in a cursive style.

James A. Martin
Chief

Operator's Well Number: Serafin Ortiz MSH 5H
Farm Name: Frank J & Lori A Longwell
U.S. WELL NUMBER: 47-051-02504-00-00
Horizontal 6A New Drill
Date Modification Issued: 12/18/2023

Promoting a healthy environment.

12/22/2023

Expedited
LK# 1076440
7/5/23
\$ 7,300.00

API NO. 47-051 - 02504
OPERATOR WELL NO. Serafin Ortiz MSH 5H
Well Pad Name: Serafin Ortiz

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

1) Well Operator: SWN Production Co., LLC / 494512924 / 051-Marshall / 13-Union / 486-Moundsville
Operator ID County District Quadrangle

2) Operator's Well Number: Serafin Ortiz MSH 5H / Well Pad Name: Serafin Ortiz

3) Farm Name/Surface Owner: Frank & Lori Longwell Public Road Access: Grand View Road

4) Elevation, current ground: 1279' Elevation, proposed post-construction: 1279'

5) Well Type (a) Gas Oil Underground Storage
Other

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Up-Dip well to the North, Target Top TVD- 6245', Target Base TVD- 6304', Anticipated Thickness- 59', Associated Pressure- 4097

8) Proposed Total Vertical Depth: 6294'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 24576'

11) Proposed Horizontal Leg Length: 18,818.21

12) Approximate Fresh Water Strata Depths: 414'

13) Method to Determine Fresh Water Depths: Salinity Profile

14) Approximate Saltwater Depths: 1168' Salinity Profile

15) Approximate Coal Seam Depths: 763'

16) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of.

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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WV Department of
Environmental Protection

Strader Gower
10/31/2023

12/22/2023

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft./CTS)
Conductor	20"	New	J-55	94#	136'	136' ✓	CTS
Fresh Water	13 3/8"	New	J-55	54.4#	793'	793' ✓	913 sx/CTS ✓
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	2087'	2087' ✓	802 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	24576'	24576' ✓	Tail 4569sx/ 100' Inside Intermediate
Tubing							
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.20/30% Excess
Fresh Water	13 3/8"	17.5"	0.380	2730	633	Class A	1.20/30% Excess
Coal	See	Surface	Casing				
Intermediate	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/40% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360 ✓	10500	Class A	1.19/5% Excess
Tubing							
Liners							

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PACKERS

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Environmental Protection

Kind:				
Sizes:				
Depths Set:				

Srader Gower
10/31/2023

WW-6B
(10/14)

API NO. 47-051 -
OPERATOR WELL NO. Serafin Ortiz MSH 5H
Well Pad Name: Serafin Ortiz

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

Drill and stimulate any potential zones between and including the Benson to Marcellus. **If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface or run external casing packer/cementing stage tool above void interval and perform 2 stage cementing operation dependent upon depth of void. Run casing not less than 20' below void nor more than 75' below void. (*If freshwater is encountered deeper than anticipated it must be protected, set casing 50' below and cts.)

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

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. In some instances, additional toe prep may be performed by pumping additional water in the toe of the well prior to perforating and pumping Stage 1 to ensure that the toe guns/toe sleeves are fully open prior to pumping stage 1. The well is produced through surface facilities consisting of high pressure production units, horizontal separation units, water and oil storage tanks. Max press and anticipated max rate- 12,500 psi @ 100 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 8.2

22) Area to be disturbed for well pad only, less access road (acres): 6.6

23) Describe centralizer placement for each casing string:

All casing strings will be ran with a centralizer at a minimum of 1 per every 3 joints of casing.

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

See Attachment ***

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Environmental Protection

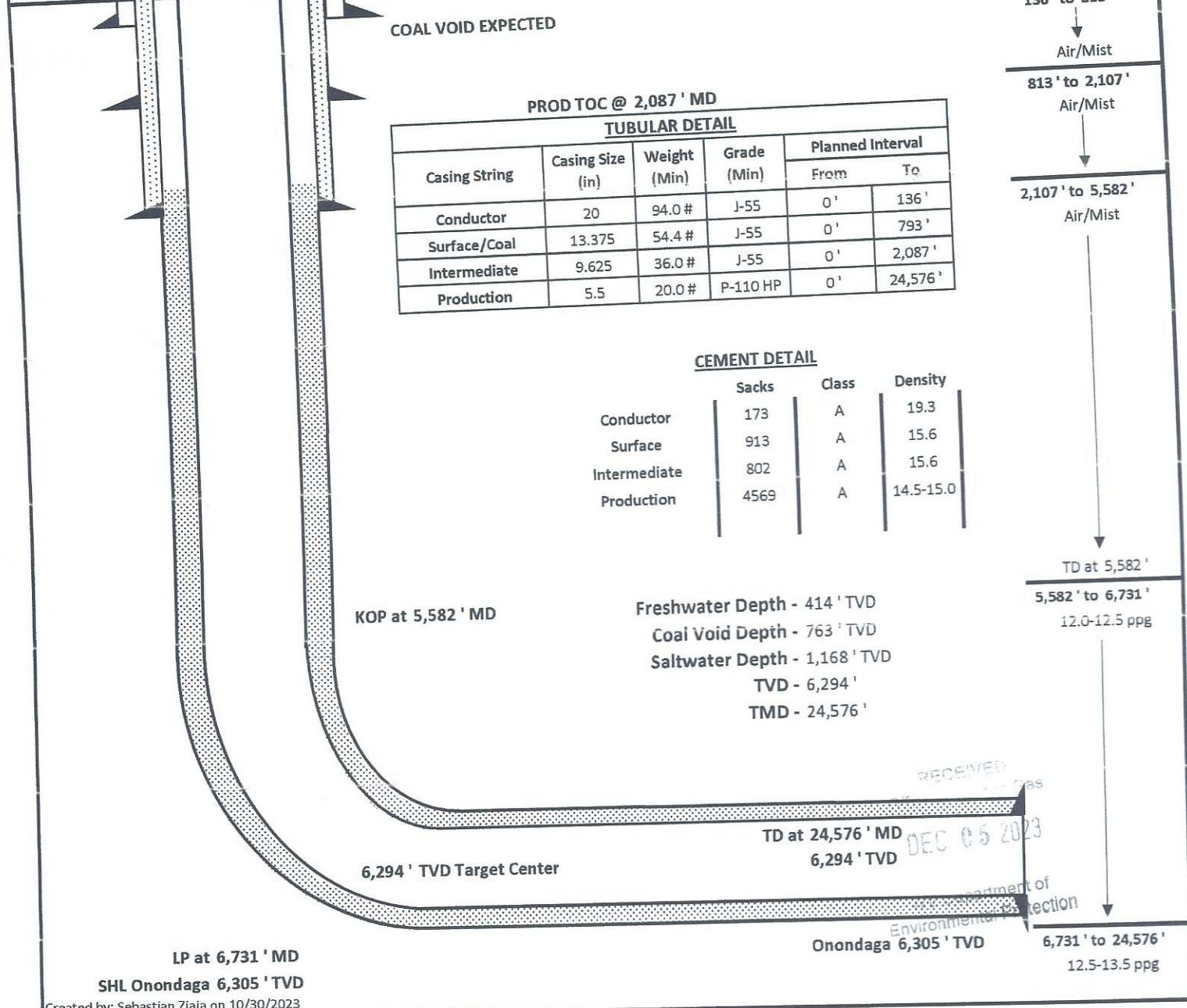
25) Proposed borehole conditioning procedures:

All boreholes will be conditioned with circulation and rotation for a minimum of one bottoms up and continuing until operator is satisfied with borehole conditions.

*Note: Attach additional sheets as needed.

4705102504

Southwestern Energy Company		Proposed Drilling Program	
Well: SERAFIN ORTIZ MSH 5	Re-entry Rig: SDC 40	Prospect: Marcellus Shale	SWN Southwestern Energy®
Field: VICTORY FIELD WET	State: WV		
County: MARSHALL			
SHL (NAD83): 39.990728 Latitude	-80.707215 Longitude		
BHL (NAD83): 40.036613 Latitude	-80.730888 Longitude		
KB Elev: 1,305 ft MSL	KB: 26 ft AGL	GL Elev: 1,279 ft MSL	



PROD TOC @ 2,087' MD

TUBULAR DETAIL					
Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	136'
Surface/Coal	13.375	54.4 #	J-55	0'	793'
Intermediate	9.625	36.0 #	J-55	0'	2,087'
Production	5.5	20.0 #	P-110 HP	0'	24,576'

CEMENT DETAIL

	Sacks	Class	Density
Conductor	173	A	19.3
Surface	913	A	15.6
Intermediate	802	A	15.6
Production	4569	A	14.5-15.0

Freshwater Depth - 414' TVD
 Coal Void Depth - 763' TVD
 Saltwater Depth - 1,168' TVD
 TVD - 6,294'
 TMD - 24,576'

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 Department of Environmental Protection
 Onondaga 6,305' TVD

LP at 6,731' MD
 SHL Onondaga 6,305' TVD
 Created by: Sebastian Ziaja on 10/30/2023

Strader Gower
 10/31/2023

12/22/2023

October 30, 2023

Mr. Charles Brewer
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Proposed New Well: Serafin Ortiz MSH 5H

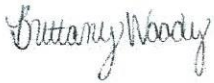
Dear Mr. Brewer:

SWN has reviewed the area of the above mentioned well and discovered no shallow wells within 500' of the lateral. This well is situated on the Ortiz's property, in Union District, Marshall County, West Virginia.

If you have any questions or desire additional information, please me at 304-884-1613.

Thank you.

Sincerely,



Brittany Woody
Staff Regulatory Specialist
Southwestern Energy Production Company, LLC

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Office of Oil and Gas

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WV Department of
Environmental Protection

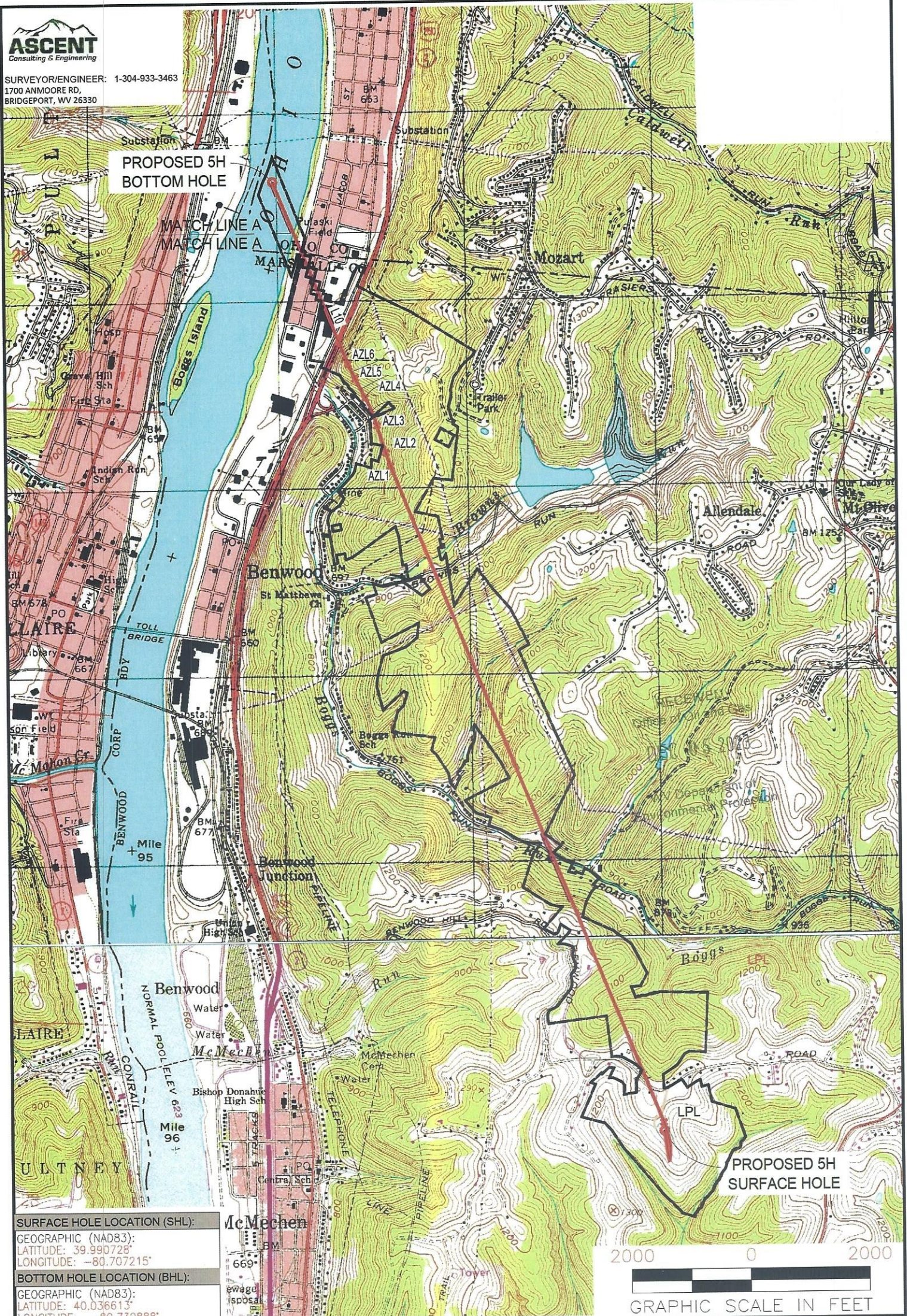


The Right People doing the Right Things,
wisely investing the cash flow from our
underlying Assets, will create Value+®

12/22/2023



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



SURFACE HOLE LOCATION (SHL):
 GEOGRAPHIC (NAD83):
 LATITUDE: 39.990728°
 LONGITUDE: -80.707215°
BOTTOM HOLE LOCATION (BHL):
 GEOGRAPHIC (NAD83):
 LATITUDE: 40.036613°
 LONGITUDE: -80.730888°

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 INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:
 ● PROPOSED SURFACE HOLE / BOTTOM HOLE
 ● EXISTING / PRODUCING WELLHEAD
 — PUBLIC ROAD
 — ACCESS ROAD TO PREV. SITE
 — LEASE BOUNDARY
 — PROPOSED PATH
 ○ FLOOD PLAN

12/22/2023

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: SERAFIN ORTIZ MSH	WELL # 5H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201	COUNTY - CODE MARSHALL - 51	DISTRICT; UNION	
SURFACE OWNER: FRANK J. & LORI A. LONGWELL	USGS 7 1/2 QUADRANGLE MAP NAME MOUNDSVILLE, WV		

LATITUDE: 40°00'00"

SURFACE HOLE 11,358'

LATITUDE: 40°02'30"

BOTTOM HOLE 6,314'



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

SURFACE HOLE LOCATION (SHL):

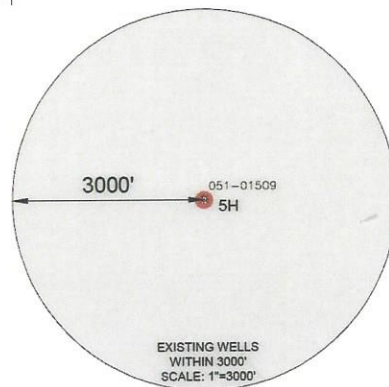
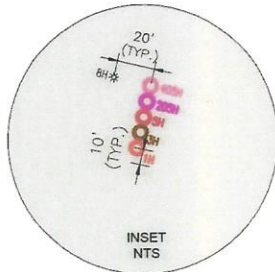
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,426,769.118
EASTING: 524,995,416

LANDING POINT (LPL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,426,815.533
EASTING: 524,991,539

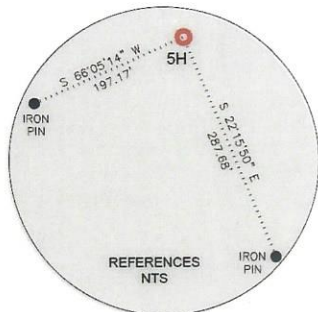
BOTTOM HOLE LOCATION (BHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,431,855.581
EASTING: 522,959,073



LONGITUDE: 80°42'30" BOTTOM HOLE 1,840'

LONGITUDE: 80°40'00" SURFACE HOLE 3,377'



LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 28°25'31" W	319.14'	SHL TO MONUMENT	IRON ROD
L2	N 00°11'52" E	664.59'	SHL TO MONUMENT	IRON ROD

LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 04°46'29" W	152.81'	1223.46'	SHL TO LPL
L4	N 21°57'43" W	1244.35'	1244.35'	LPL TO AZL1
L5	N 19°28'52" W	247.86'	247.92'	AZL1 TO AZL2
L6	N 17°00'01" W	499.74'	499.74'	AZL2 TO AZL3
L7	N 22°16'28" W	527.57'	528.27'	AZL3 TO AZL4
L8	N 27°33'05" W	384.24'	384.24'	AZL4 TO AZL5
L9	N 24°45'16" W	282.66'	282.65'	AZL5 TO AZL6
L10	N 21°57'43" W	3448.31'	3448.31'	AZL6 TO BHL

WELL RESTRICTIONS

1. NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
2. NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
3. NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
4. PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
5. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
6. 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

1. TIES TO WELLS AND CORNERS ARE BASED ON UTM, NAD83 DATUM, ZONE 17, US FT.
2. WELL LAT./LONG ESTABLISHED BY DIRECT GPS NAD '83.
3. BOUNDARIES SHOWN ARE TAKEN FROM TAX MAPS, DEEDS, AND FIELD SURVEY. THIS DRAWING IS NOT REPRESENTATIVE OF A FULL BOUNDARY SURVEY.
4. SURFACE OWNER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF OHIO COUNTY IN OCTOBER OF 2021.
5. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP.

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.

Michael R. Hyman 10-31-2023

P.S. 983



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 SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)

OPERATOR'S WELL #: SERAFIN ORTIZ MSH 5H
API WELL #: 47 STATE 51 COUNTY 02504 PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: UPPER OHIO-WHEELING ELEVATION: 1278.65

DISTRICT: UNION COUNTY: MARSHALL QUADRANGLE: MOUNDSVILLE 7.5', WV

SURFACE OWNER: FRANK J. & LORI A. LONGWELL ACREAGE: ±44.949

OIL & GAS ROYALTY OWNER: SERAFIN T. ORTIZ, AS TRUSTEE OF THE SERAFIN T. ORTIZ TRUST AGREEMENT DATED JULY 31, 1996 ACREAGE: ±44.949

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) _____

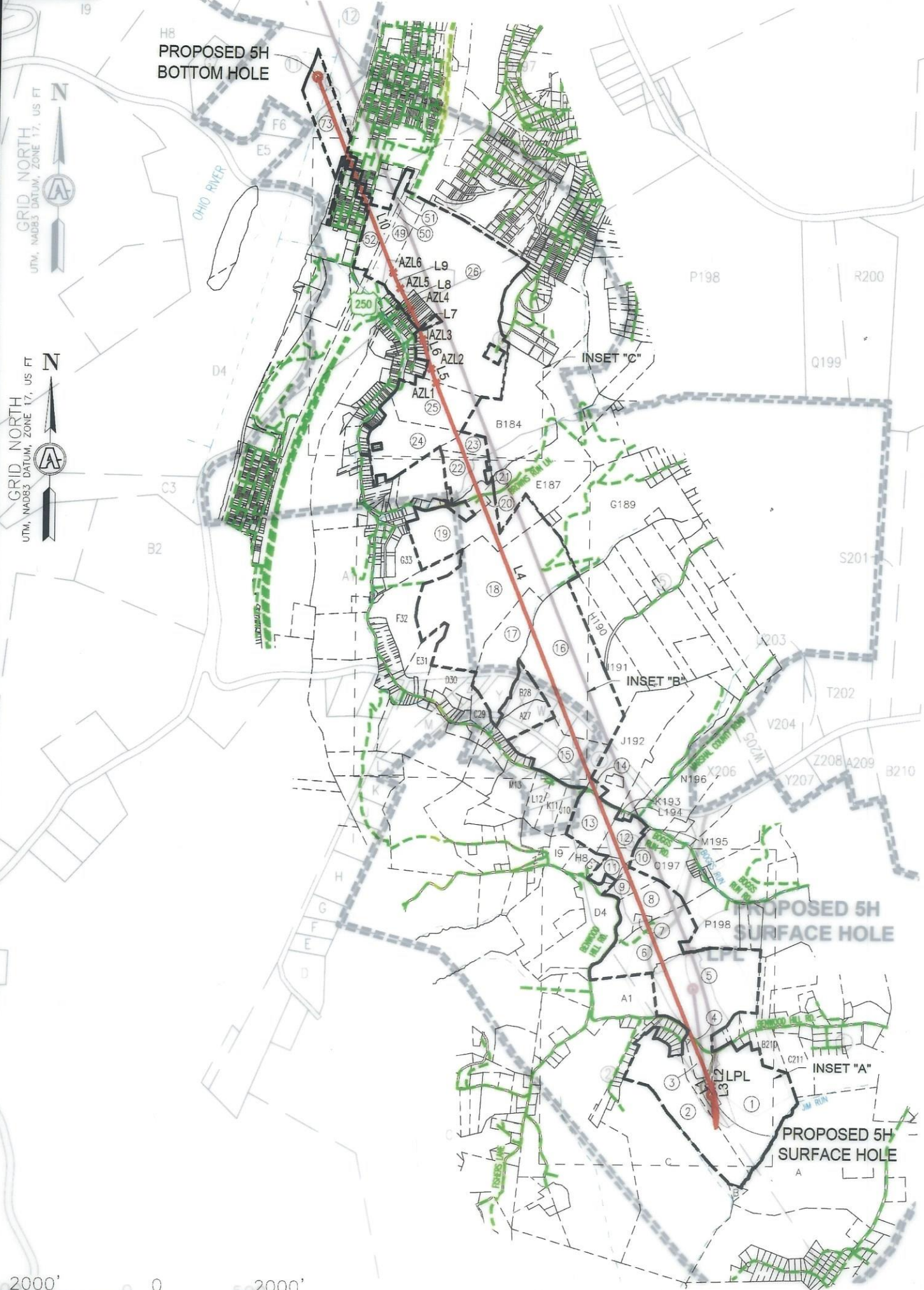
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,294 TMD 24,576 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, 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:
● PROPOSED SURFACE HOLE / BOTTOM HOLE	DATE: 10/31/2023
⊙ EXISTING / PRODUCING WELLHEAD	FILE NO:
⊙ EXISTING WATER WELL	DRAWN BY: TMF
⊙ EXISTING SPRING	SCALE: 1" = 2000'
— SURVEYED BOUNDARY	DRAWING NO: ACE-3048
— DRILLING UNIT	WELL LOCATION PLAT 1
— LEASE BOUNDARY	
— PROPOSED PATH	



SURVEYOR/ENGINEER: 11-304-933-3463
 1700 ANMOORE RD,
 BRIDGEPORT, WV 26330



12/22/2023

REVISIONS: 4705102504

COMPANY:

SWN
 Production Company, LLC

SWN *Service*
 Production Company™

OPERATOR'S: SERAFIN ORTIZ MSH
 WELL #: 5H

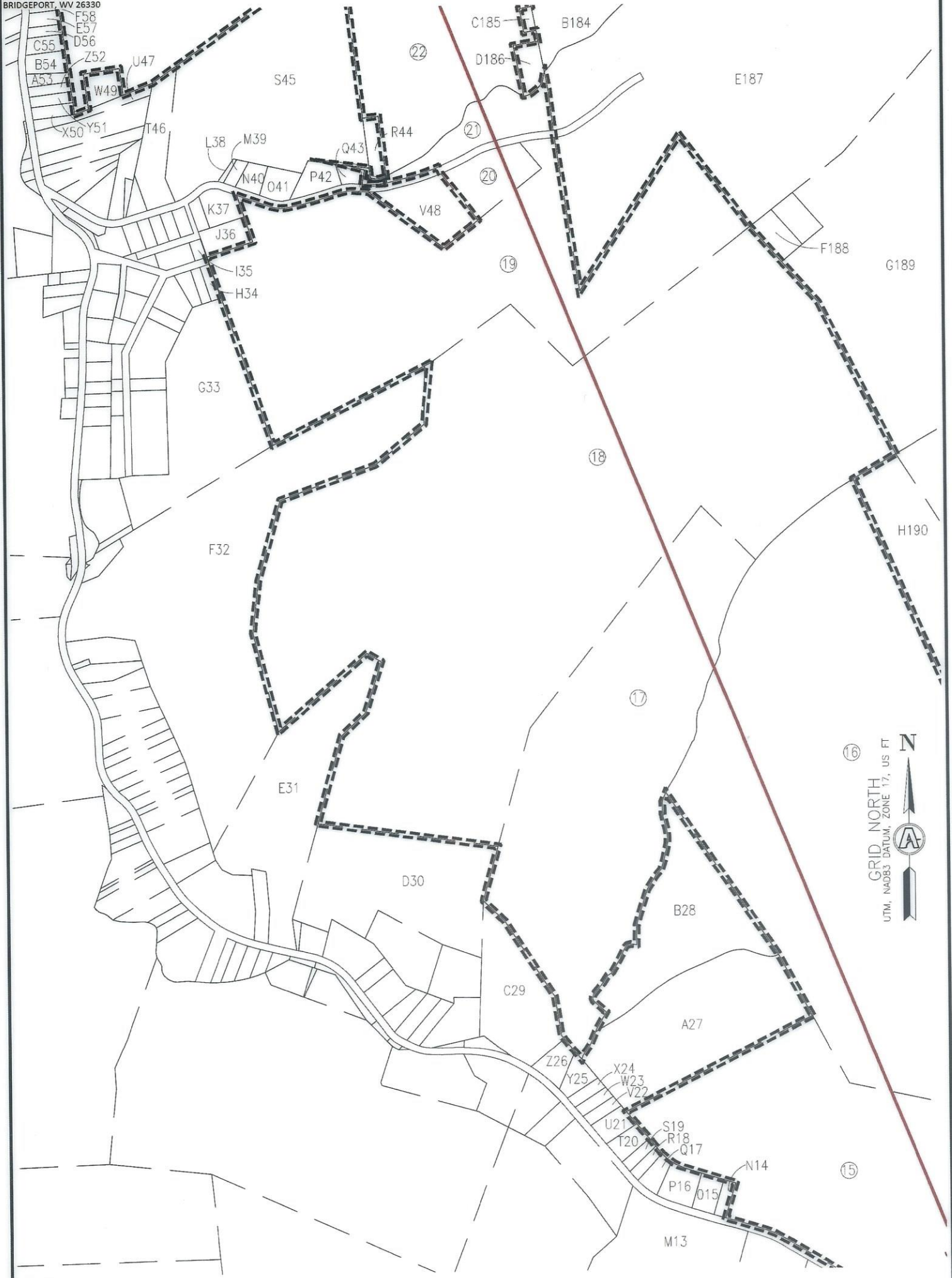
DATE: 10/31/2023

DISTRICT: UNION COUNTY: MARSHALL STATE: WV

DRAWN BY: TMF
 SCALE: 1"=2000'
 DRAWING NO: ACE-3048
 WELL LOCATION PLAT 2



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



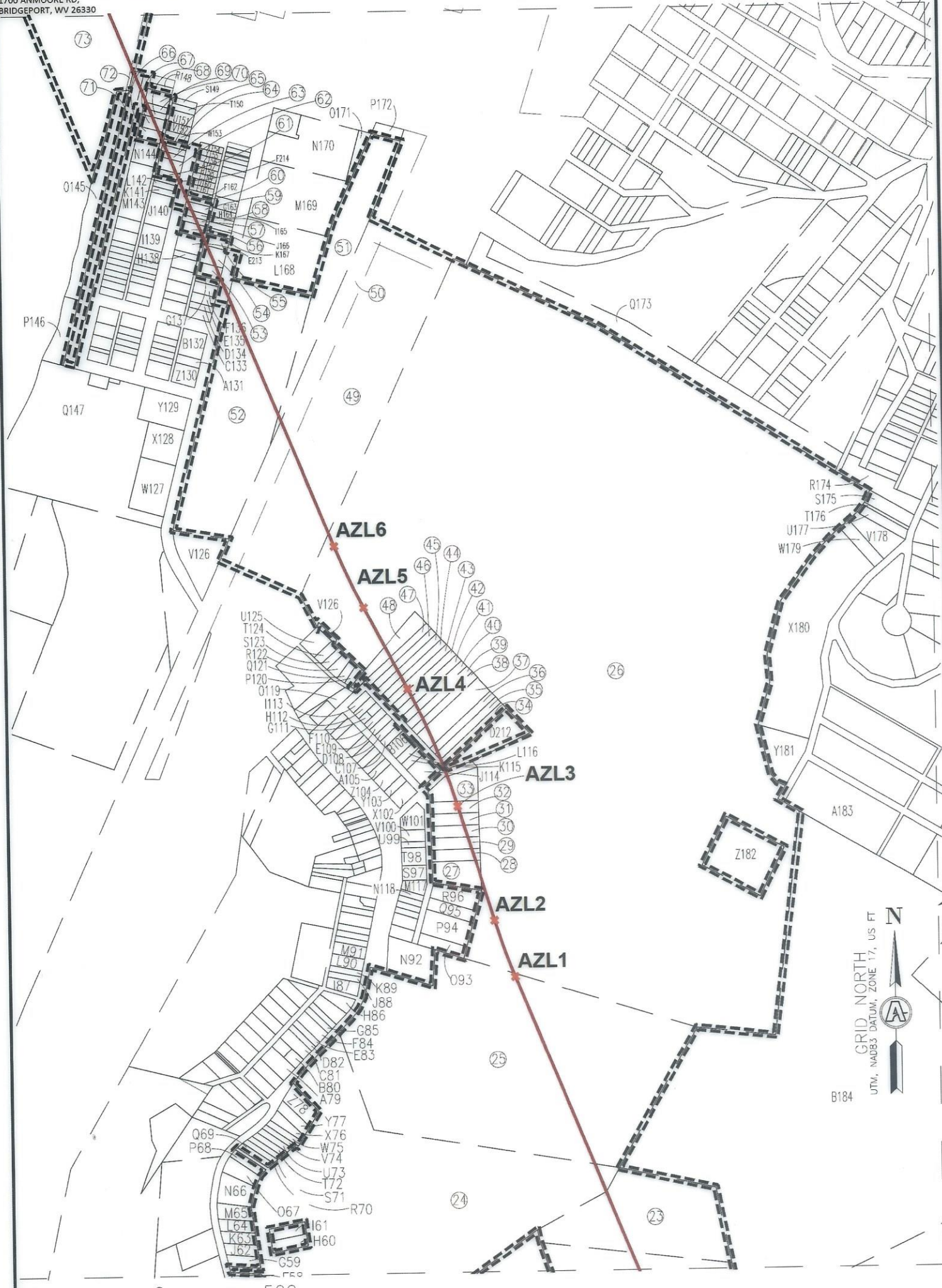
INSET "B"

12/22/2023

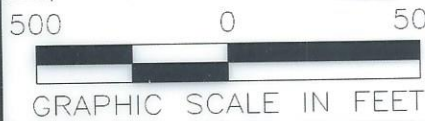
REVISIONS: 	COMPANY: <div style="display: flex; justify-content: space-around; align-items: center;"> </div>		DATE: 10/31/2023
	OPERATOR'S SERAFIN ORTIZ MSH		DRAWN BY: TMF
	WELL #: 5H		SCALE: 1"=500'
	DISTRICT: UNION	COUNTY: MARSHALL	STATE: WV
			DRAWING NO: ACE-3048 WELL LOCATION PLAT 4



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



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



INSET "C"

12/22/2023

REVISIONS: 	COMPANY: 		DATE: 10/31/2023 DRAWN BY: TMF SCALE: 1" = 500' DRAWING NO: ACE-3048 WELL LOCATION PLAT 5
	OPERATOR'S SERAFIN ORTIZ MSH		
	WELL #: 5H		
	DISTRICT: UNION	COUNTY: MARSHALL	



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

WELL BORE TRACTS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	LONGWELL FRANK J & LORI A (S) SERAFIN T. ORTIZ, AS TRUSTEE OF THE SERAFIN T. ORTIZ TRUST AGREEMENT DATED JULY 31, 1996 (R)	13-6-49
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	HAUGHT GEORGE ET UX	13-6-51.1
3	WOODBURN SARA J & RICHARD A	13-6-49.2
4	HAUGHT GEORGE WILLIAM II & SHEILA A	13-6-49.3
5	VAN SCYOC PATRICK A & FAITH M	13-6-17
6	STEELE RICHARD P	13-6-14
7	FOSTER THOMAS M ET AL	13-5-38.1
8	HARMON DAVID L ET UX	13-5-38
9	STEVEY JORDAN M	13-5-39
10	STEVEY JORDAN M	13-5-39.4
11	HERCULES GRANT II	13-5-39.1
12	OHIO COUNTY COAL RESOURCES INC	13-5-34
13	OHIO COUNTY COAL RESOURCES INC	13-5-33.1
14	OHIO COUNTY COAL RESOURCES INC	13-5-32.2
15	OHIO COUNTY COAL RESOURCES INC	13-5-8
16	OHIO COUNTY COAL RESOURCES INC	13-5-9.1
17	OHIO COUNTY COAL RESOURCES INC	13-5-5
18	OHIO COUNTY COAL RESOURCES INC	13-5-2
19	OHIO COUNTY COAL RESOURCES INC	13-1-46
20	OHIO COUNTY COAL RESOURCES INC	13-1-46.2
21	OHIO COUNTY COAL RESOURCES INC	13-1-87
22	OHIO COUNTY COAL RESOURCES INC	13-1-42
23	OHIO COUNTY COAL RESOURCES INC	13-1-42.1
24	OHIO COUNTY COAL RESOURCES INC	1-5-1
25	MORRIS CLARA BEUCKE EST	1-3-20
26	MARKOWICZ JOHN F JR ET AL	13-1-1.3
27	BLAKELY JOSEPH	1-3-67
28	BLAKELY JOSEPH	1-3-17
29	BLAKELY JOSEPH	1-3-16
30	GUTHRIE ANDREW L & HERCULES NATASHA C	1-3-15
31	JAMES TIMOTHY M	1-3-14
32	DAVIS BAILEY JR & TORRIE DEBENI	1-3-13

TRACT	SURFACE OWNER (S)	TAX PARCEL
33	BRAYEC DAVID M	1-3-12
34	NICE DAVID C	1-3-9
35	NICE DAVID C	1-3-8
36	NICE DAVID C	1-3-7
37	DEGARMO LINSEY E ET UX	1-3-6
38	DEGARMO LINSEY E ET UX	1-3-5
39	BIRKHIMER JERRY A & SUNNY R	1-3-4
40	BIRKHIMER JERRY A & SUNNY R	1-3-3
41	BIRKHIMER JERRY A & SUNNY R	1-3-2
42	BIRKHIMER JERRY A & SUNNY R	1-3-1.6
43	BIRKHIMER JERRY A & SUNNY R	1-3-1.5
44	BIRKHIMER JERRY A & SUNNY R	1-3-1.4
45	BIRKHIMER JERRY A & SUNNY R	1-3-1.3
46	BIRKHIMER JERRY A & SUNNY R	1-3-1.2
47	WILLIAMS PATRICIA J	1-3-1.1
48	WILLIAMS PATRICIA J	1-3-1
49	W VA DEPT OF HIGHWAYS	U.S. 250
50	CSX TRANSPORTATION INC	RAILROAD
51	BAM LLC	1-2-160
52	FERNS MICHAEL D SR & LINDA K	1-2-156.1
53	JBW SUPPLY LLC	1-2-48
54	JOHNSON BOILER WORKS INC	1-2-49
55	JOHNSON BOILER WORKS INC	1-2-50
56	OHIO VALLEY RECOVERY INC	1-2-89
57	SCHAFAER ANN H	1-2-88
58	SCHAFAER ANN H	1-2-87
59	GLENZ ALICE JEAN	1-2-86
60	SENGEWALT RONALD S ET UX	1-2-85
61	BARANSKI PHILIP W	1-2-122
62	ROSE ROBERT G & KAREN S	1-2-123
63	ROSE ROBERT G & KAREN S	1-2-124
64	KURI JOHN & LINDA	1-2-125
65	WILEY CORNELEUS JR & PEGGY	1-2-126
66	ALBUS CHARLES W ET UX	1-2-136
67	ALBUS CHARLES W ET AL	1-2-135
68	VILKOSKI ZACHARY J	1-2-134
69	VILKOSKI ZACHARY J	1-2-133
70	PELHAM BEVERLY A	1-2-132
71	BELLAIRE HARBOR SERVICE LLC	1-2-162
72	BIEGA EDWARD ESTATE	10-W88-370
73	STATE OF WEST VIRGINIA	OHIO RIVER

12/22/2023

REVISIONS:	COMPANY:			
	OPERATOR'S		SERAFIN ORTIZ MSH	
	WELL #:		5H	
	DISTRICT:	COUNTY:	STATE:	DATE:
UNION	MARSHALL	WV	10/31/2023	
			DRAWN BY: TMF	
			SCALE: N/A	
			DRAWING NO: ACE-3048	
			WELL LOCATION PLAT 6	



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

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	KELLER BRIAN J & COOK DAVID J & ALICE M - TOD	13-6-50
B	HAUGHT GEORGE ET UX	13-6-50.1
C	LIPINSKI ERIC R & LORIE A	13-6-51
D	KOONTZ CARL E	13-6B-31
E	KOONTZ CARL E	13-6B-30
F	KOONTZ CARL E	13-6B-29
G	MERINAR & KOONTZ CO	13-6B-28
H	CARNEY DANIEL P ET UX	13-6B-27
I	CARNEY DANIEL P ET UX	13-6B-26
J	CARNEY DANIEL P ET UX	13-6B-25
K	BAKER JAMES F	13-6B-24
L	BAKER JAMES F	13-6B-23.1
M	RICH JOSEPH A ET UX ESTS	13-6B-23
N	HAUGHT GEORGE & MARY	13-6B-19
O	JAMES ROBERT A JR & WENDY L	13-6B-18
P	JONES DAKOTA M & ELISHA GLENDENING	13-6B-15
Q	SIMMONS MICHAEL J	13-6B-14
R	MCDADE ROBERT D	13-6B-11
S	HAUGHT GEORGE ET UX	13-6B-10
T	HAUGHT GEORGE ET UX	13-6B-9
U	HAUGHT GEORGE W ET UX	13-6B-12
V	HAUGHT GEORGE W ET UX	13-6B-13
W	CAMPBELL WILLIAM IV & HAYLEE MOORE	13-6B-16
X	HULL GAYLER D E	13-6B-17
Y	JONES ALEXA M	13-6B-20
Z	LEDBETTER WILLIAM R ET UX	13-6B-21
A1	STEELE RICHARD P	13-6-13
B2	FISHER DANIEL	13-6-12
C3	KLIMA KATHLEEN M	13-6-11
D4	BOZENSKA JAMES H	13-6-10.1
E5	CLARK ROY V III & DONNA J	13-5-39.2
F6	CLARK ROY V III & DONNA J	13-5-39.3
G7	OLIVER BRIAN M & JOELLE L FLANAGAN	13-5-40.1
H8	DOYLE TERRY D - TOD	13-5-40
I9	STENDA JAY JOHN & KIMBERLY ANN	13-5-41
J10	OHIO COUNTY COAL RESOURCES INC	13-5-33
K11	CONSOLIDATION COAL COMPANY MURRAY ENERGY C/O LAND DEPT	13-5-42
L12	OHIO COUNTY COAL RESOURCES INC	13-5-43
M13	OHIO COUNTY COAL RESOURCES INC	13-5-44
N14	OHIO COUNTY COAL RESOURCES INC	13-5A-35
O15	CONSOLIDATION COAL COMPANY MURRAY ENERGY C/O LAND DEPT	13-5A-34
P16	OHIO COUNTY COAL RESOURCES INC	13-5A-33
Q17	OHIO COUNTY COAL RESOURCES INC	13-5A-32
R18	OHIO COUNTY COAL RESOURCES INC	13-5A-31
S19	BOMMER JOSEPH	13-5A-30
T20	TONE TERYL LYNN	13-5A-29
U21	OHIO COUNTY COAL RESOURCES INC	13-5A-28
V22	CONSOLIDATION COAL COMPANY MURRAY ENERGY C/O LAND DEPT	13-5A-27
W23	OHIO COUNTY COAL RESOURCES INC	13-5A-26
X24	OHIO COUNTY COAL RESOURCES INC	13-5A-25
Y25	OHIO COUNTY COAL RESOURCES INC	13-5A-24
Z26	OHIO COUNTY COAL RESOURCES INC	13-5A-23
A27	OHIO COUNTY COAL RESOURCES INC	13-5-7
B28	OHIO COUNTY COAL RESOURCES INC	13-5-6
C29	OHIO COUNTY COAL RESOURCES INC	13-5A-22
D30	OKEL IRENE J - TOD	13-5-4
E31	OKEL IRENE J - TOD	13-5-3
F32	OHIO COUNTY COAL RESOURCES INC	13-5-1

*HIGHLIGHTED PARCELS MAY BE IMPACTED DURING DRILLING

TRACT	SURFACE OWNER	TAX PARCEL
G33	OHIO COUNTY COAL RESOURCES INC	13-1D-51
H34	SALISBURY DAVID W & CHRISTINA	13-1D-45
I35	MORRIS MARY V EST	13-1D-43
J36	UNKNOWN	13-1D-44
K37	MOORE DONALD R ET UX	13-1D-7
L38	NORMAN MARGARET EST	13-1D-6
M39	NORMAN MARGARET EST	13-1D-5
N40	HINDMAN NANCY - LIFE	13-1D-4
O41	CLUTTER MELISSA S	13-1D-3
P42	OHIO COUNTY COAL RESOURCES INC	13-1D-2
Q43	OHIO COUNTY COAL RESOURCES INC	13-1D-60
R44	CONSOLIDATION COAL COMPANY MURRAY ENERGY C/O LAND DEPT	13-1D-1
S45	OHIO COUNTY COAL RESOURCES INC	13-1-43
T46	OHIO COUNTY COAL RESOURCES INC	13-1-44
U47	VESSELS CARLA M	1-5-31
V48	OHIO COUNTY COAL RESOURCES INC	13-1-46.1
W49	AMOS DOROTHE M & GEORGE R	1-5-2
X50	VESSELS CARLA M	1-5-30
Y51	AMOS DOROTHE M & GEORGE R	1-5-29
Z52	VESSELS CARLA M	1-5-28
A53	VESSELS CARLA M	1-5-27
B54	OHIO COUNTY COAL RESOURCES INC	1-5-26
C55	MATHENY WILLIAM E & PRISCILLA	1-5-25
D56	VESSELS CARLA M	1-5-24.1
E57	VESSELS CARLA M	1-5-24
F58	VESSELS CARLA M	1-5-23
G59	MCCALLISTER DEBORAH S	1-5-22
H60	KUCA EDWARD M JR & GERALDINE	1-5-3
I61	KUCA EDWARD M JR & GERALDINE	1-5-4
J62	MCCALLISTER DEBORAH S	1-5-21
K63	HISSAM LOUIS B ET UX	1-5-20
L64	PARSONS SCOTT A	1-5-19
M65	MORRIS BRIAN N ET UX	1-5-18
N66	MORRIS BRIAN N & VIRGINIA E	1-5-17
O67	MORRIS BRIAN N & VIRGINIA E	1-5-16
P68	KUCA EDWARD M JR & GERALDINE	1-5-15
Q69	BENWOOD CITY OF	1-5-14
R70	BENWOOD CITY OF	1-5-13
S71	BENWOOD CITY OF	1-5-12
T72	BENWOOD CITY OF	1-5-11
U73	BENWOOD CITY OF	1-5-10
V74	BENWOOD CITY OF	1-5-9
W75	BENWOOD CITY OF	1-5-8
X76	BENWOOD CITY OF	1-5-7
Y77	BENWOOD CITY OF	1-5-6
Z78	BENWOOD CITY OF	1-5-5
A79	WAYT RODNEY J JR	1-4-85
B80	PORTER ADELHEIDE C	1-4-83
C81	YANKOVICH PHYLLIS H	1-4-82
D82	HORBATAK MICHELLE LYNN	1-4-81
E83	AMOS ANTHONY JAY	1-4-80
F84	BROFCHICK KATHRYN L	1-4-79
G85	DEANGELO ELGHALIA	1-4-78
H86	MELE CURTIS M & DANA M	1-4-75
I87	BAIER CYNTHIA L	1-4-74
J88	DOTSON MICHAEL S	1-4-73
K89	PREBEG FRANK JAY	1-4-72
L90	LUFFT JOHN MICHAEL	1-4-71
M91	SKVARKA AMANDA L & ROBERT A	1-4-70
N92	MORRIS CLARA BEUCKE EST	1-3-19
O93	SCHLOSSER BRANDY A & WILLIAM C	1-3-65.1
P94	SCHLOSSER BRANDY A & WILLIAM C	1-3-65

*HIGHLIGHTED PARCELS MAY BE IMPACTED DURING DRILLING

12/22/2023

REVISIONS:	COMPANY:						
	OPERATOR'S			SERAFIN ORTIZ MSH		DATE: 10/31/2023	
	WELL #:			5H		DRAWN BY: TMF	
	DISTRICT:			COUNTY:	STATE:	SCALE: N/A	
	UNION			MARSHALL	WV	DRAWING NO: ACE-3048	
						WELL LOCATION PLAT 7	



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

TRACT	SURFACE OWNER	TAX PARCEL
Q95	PASQUINO RALPH P JR & PATRICIA A	1-3-18
R96	SCHLOSSER CHARLES I & NANCY A	1-3-66
S97	WATKINS JOHN - TOD	1-3-28
T98	MILLHOUSE RICHARD & VIRGINIA	1-3-29
U99	BLAKELY JOSEPH	1-3-30
V100	CUDA PROPERTIES LLC	1-3-31
W101	BANFIELD DAVID W & CHERYL A	1-3-32
X102	ORUM JAMES R	1-3-33
Y103	HARBATAK MICHELLE	1-3-34
Z104	WARD GARRY L	1-3-35
A105	TELLITOCCHI JOSEPH JR ET UX	1-3-36
B106	ROSE ROBERT M & SHARON L RICHARDSON	1-3-47
C107	VESSELS CARLA M	1-3-48
D108	R & W HOLDINGS LLC	1-3-49
E109	VESSELS CARLA M	1-3-50
F110	KUTROVAC GEORGE N	1-3-51
G111	LIDDLE JOSEPH E ET UX	1-3-53
H112	ANTILL KAREN BULLARD & RENEE	1-3-54
I113	ANTILL KAREN SUE	1-3-55
J114	CANESTRARO CHARLOTTE J & JOSEPH R	1-3-44
K115	WEST VIRGINIA STATE OF	1-3-45
L116	ROSE ROBERT M & SHARON L RICHARDSON	1-3-46
M117	MATTHEWS JAMES A III	1-3-27
N118	UNKNOWN	
O119	AUTH LARRY GEORGE	1-3-63
P120	CALDWELL ALEXANDER	1-3-56
Q121	CALDWELL ALEXANDER	1-3-57
R122	CALDWELL ALEXANDER	1-3-57.1
S123	RICHMOND BRENDA L	1-3-58
T124	POGGI JAMES & CRYSTAL	1-3-59
U125	POGGI JAMES & CRYSTAL L	1-3-60
V126	ZACCHEUS PROPERTIES LLC - 2009	1-3-59.1
W127	ARC DBPPROP001 LLC	1-2-155.3
X128	WALGREEN CO	1-2-155.5
Y129	247 HIMROD STREET LLC	1-2-155.4
Z130	VISNIC GARY G ET UX	1-2-40
A131	VISNIC GARY G OR TAMMY E	1-2-41
B132	FERNS INVESTMENTS LLC	1-2-42
C133	YEAGER MICHAEL P	1-2-43
D134	PORCH THOMAS A ET AL	1-2-44
E135	BENWOOD CITY OF	1-2-45
F136	JOHNSON BOILER WORKS INC	1-2-46
G137	JBW SUPPLY LLC	1-2-47
H138	JOHNSON BOILER WORKS INC	1-2-91
I139	YATES ROSE E	1-2-117
J140	YATES ROSE E	1-2-118
K141	MEADE JAMES R ET UX	1-2-119
L142	SCARBERRY SAMUEL L	1-2-120
M143	YATES ROSE E	1-2-138
N144	IOLA CLUB INC	1-2-137
O145	BELLAIRE HARBOR SERVICE LLC	1-2-164
P146	BELLAIRE HARBOR SERVICE LLC	1-2-159
Q147	ZEMEX FABI BENWOOD LLC	1-2-155
R148	KAUFMAN SCOTT A - TOD	10-W88-26
S149	YARNEVIC EDWARD F & KIM N	1-2-131
T150	LINABARGER VIRGINIA LEE	1-2-130
U151	SZYMIALIS CARMELLA ET AL	1-2-129
V152	HUYNH HAI ET AL	1-2-128
W153	WOODFORD JODY L	1-2-127
X154	JOHNSTON MARIGENE ETAL	1-2-76
Y155	THOMPSON BRANDON C	1-2-77
Z156	STARKEY RUSSELL P	1-2-78

*HIGHLIGHTED PARCELS MAY BE IMPACTED DURING DRILLING

TRACT	SURFACE OWNER	TAX PARCEL
A157	WINESBURG NANCY & JAMES	1-2-79
B158	OLSON JACQUELINE R - LIFE	1-2-80
C159	FEDERAL HOME LOAN MORTGAGE CORP	1-2-81
D160	TOM 5 LLC	1-2-82
E161	KUCA ELAINE R	1-2-83
F162	NYOMO RICHARD J ET UX	1-2-84
G163	JBW SUPPLY LLC	1-2-54
H164	JBW SUPPLY LLC	1-2-53
I165	JBW SUPPLY LLC	1-2-52.1
J166	JBW SUPPLY LLC	1-2-52
K167	JOHNSON BOILER WORKS INC	1-2-51
L168	BT-NEWYO LLC	1-2-157.2
M169	BENWOOD CITY OF	1-2-157.1
N170	ACQUISITIONS LLC	1-2-157
O171	BAM LLC	1-2-157.3
P172	BENWOOD CITY OF	1-2-163
Q173	MARKOWICZ JOHN F JR ET AL	13-1A-1
R174	FALES CHRISTOPHER J & JOLYN Y	13-1A-71
S175	HUGUS DARLENE J	13-1C-38
T176	HUGUS DARLENE J	13-1C-39
U177	ANDERSON AMANDA	13-1C-40
V178	STUBBS MEREDITH & PAUL	13-1C-41
W179	STUBBS MEREDITH & PAUL	13-1C-42
X180	MARKOWICZ JOHN F JR ET AL	13-1-1.3
Y181	SCOTT IRENE R	13-1C-48
Z182	MESSHAM ROWAN L & DEBORAH S	13-1-1
A183	MARKOWICZ JOHN JR ET UX	13-1-1.2
B184	OHIO COUNTY COAL RESOURCES INC	13-1-1.1
C185	TOMASSO RAYMOND R & PEGGY A REVOCABLE TRUST AGREEMENT	13-1-41
D186	TOMASSO RAYMOND R & PEGGY A REVOCABLE TRUST AGREEMENT	13-1-40
E187	OHIO COUNTY COAL RESOURCES INC	13-1-2
F188	OHIO COUNTY COAL RESOURCES INC	13-1-47
G189	OHIO COUNTY COAL RESOURCES INC	13-1-49
H190	OHIO COUNTY COAL RESOURCES INC	13-5-9.2
I191	OHIO COUNTY COAL RESOURCES INC	13-5-9
J192	OHIO COUNTY COAL RESOURCES INC	13-5-32.1
K193	OHIO COUNTY COAL RESOURCES INC	13-5-34.2
L194	OHIO COUNTY COAL RESOURCES INC	13-5-34.3
M195	OHIO COUNTY COAL RESOURCES INC	13-5-34.1
N196	OHIO COUNTY COAL RESOURCES INC	13-5-30
O197	OHIO COUNTY COAL RESOURCES INC	13-5-35
P198	WOOD JOHN W ET UX	13-6-16
Q199	LOMBARD DENISE L	13-6-16.1
R200	LOMBARD DENISE L	13-6-24
S201	SCHERICH LEIGH ANN & SETH ANTHONY RENZELLA	13-6-23.17
T202	RITCHIE TIFFANY R & JOSEPH M NELSON	13-6-22
U203	DEFIBAUGH RONALD L	13-6-21
V204	HUTCHISON JAMES A & HOLLY M	13-6-20
W205	TOLER MARGARET - LIFE	13-6-19
X206	WILT VINCENT E	13-6-18
Y207	NIXON MADISON M	13-6-49.1
Z208	NIXON MADISON M	13-6-48
A209	VANDYNE ZACHARY D	13-6-47
B210	CRALL MICHAEL D & LISA DAWN	13-6-46
C211	O'NEAL CYNTHIA	13-6-45
D212	NICE DAVID C & ELEANOR R	1-3-10
E213	OHIO VALLEY RECOVERY INC	1-2-90
F214	MORRIS JERRY J & NANCY L & CRAWFORD BEVERLY ELAINE	1-2-121

*HIGHLIGHTED PARCELS MAY BE IMPACTED DURING DRILLING

12/22/2023

REVISIONS:	COMPANY:			DATE: 10/31/2023
	OPERATOR'S	SERAFIN ORTIZ MSH		DRAWN BY: TMF
	WELL #:	5H		SCALE: N/A
	DISTRICT:	COUNTY:	STATE:	DRAWING NO: ACE-3048
	UNION	MARSHALL	WV	WELL LOCATION PLAT 8

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
See Exhibit "A"				

*Horizontal well unit utilization - Subject to unitization filing with the West Virginia Oil and Gas Conservation Commission.

*Potentially Impacted Parcels - Parcels that may be impacted during drilling.

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

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

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

RECEIVED
Office of Oil and Gas

DEC 05 2023

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

Well Operator: SWN Production Company, LLC
 By: *Arthur M. Smith*
 Its: Rotational Landman

EXHIBIT "A"
Serafin Ortiz MSH 5H

Marshall County and Ohio County, West Virginia
Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC., Operator

Tract #	Tax Parcel	Lease Number	Lessor	Lessee	Royalty	Book/Page	% Interest Not Leased by SWN
1	13-6-49	725464/000	Serafin T. Ortiz and Martha G. Ortiz, husband and wife	Chesapeake Appalachia, L.L.C.	14.00%	683/84	0.00%
2	13-6-51.1	732654/000	George Hought and Mary Hought, husband and wife	SWN Production Company, LLC	17.00%	33/110	0.00%
3	13-6-49.2	727552/000	Sara J. Woodburn, f/k/a Sara J. Hanson, and Richard Woodburn, wife and husband	Chesapeake Appalachia, L.L.C.	18.75%	705/462	0.00%
4	13-6-49.3	727552/000	Sara J. Woodburn, f/k/a Sara J. Hanson, and Richard Woodburn, wife and husband	SWN Production Company, LLC	18.75%	33/110	0.00%
5	13-6-17	725364/000	Patrick A. Van Scyoc and Faith M. Van Scyoc, husband and wife	Chesapeake Appalachia, LLC	12.50%	681/443	0.00%
6	13-6-14	726112/000	Richard Paul Steele and Barbara A. Steele, husband and wife	SWN Production Company, LLC	12.50%	33/110	0.00%
7	13-5-38.1	726913/000	Thomas M. Foster and Dana L. Foster, f/k/a Dana L. Williams, husband and wife	Chesapeake Appalachia, L.L.C.	12.50%	699/430	0.00%
8	13-5-38	784404/000	David J. Harmon and Linda J. Harmon, his wife	SWN Production Company, LLC	18.75%	33/110	0.00%
9	13-5-39	727550/000	Letha Belle Wenzel, widow	Chesapeake Appalachia, L.L.C.	12.50%	710/410	0.00%
				SWN Production Company, LLC		33/110	0.00%

RECEIVED
Office of Clean Air and Gas
DEC 05 2023
Department of Environmental Protection

12/22/2023

EXHIBIT "A"
Serafin Ortiz MSH 5H

Marshall County and Ohio County, West Virginia
Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC., Operator

/ 10	13-5-39.4	727549/000	Michael J. Fitzpatrick and Susan M. Fitzpatrick, his wife	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	12.50%	705/456	0.00%
/ 11	13-5-39.1	727549/000	Michael J. Fitzpatrick and Susan M. Fitzpatrick, his wife	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	12.50%	705/456	0.00%
/ 12	13-5-34	784404/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/153	0.00%
/ 13	13-5-33.1	784404/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/153	0.00%
/ 14	13-5-32.2	784404/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/153	0.00%
/ 15	13-5-8	784402/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/144	0.00%
/ 16	13-5-9.1	784404/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/153	0.00%
/ 17	13-5-5	784402/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/144	0.00%
/ 18	13-5-2	784402/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/144	0.00%
/ 19	13-1-46	784402/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/144	0.00%
/ 20	13-1-46.2	N/A	SWN Production Company, LLC	Chesapeake Appalachia, L.L.C.	Fee	N/A	1128/370	0.00%
/ 21	13-1-87	784402/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/144	0.00%
/ 22	13-1-42	N/A	SWN Production Company, LLC	Chesapeake Appalachia, L.L.C.	Fee	N/A	1128/370	0.00%
/ 23	13-1-42.1	784402/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/144	0.00%
/ 24	1-5-1	784402/000	CNX Gas Company LLC, a Virginia limited liability company	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	18.00%	1156/144	0.00%
/ 25	1-3-20	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	Chesapeake Appalachia, L.L.C.	N/A	N/A	N/A	100.00%

Department of Environmental Protection
Oil and Gas
2023

12/22/2023

EXHIBIT "A"
Serafin Ortiz MSH 5H

Marshall County and Ohio County, West Virginia
Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC., Operator

✓ 26	13-1-13	751435/001	John Markowicz, and Martina Markowicz, husband and wife	TH Exploration, LLC	TH Exploration, LLC	18.00%	926/193	0.00%
				TH Exploration, LLC	SWN Production Company, LLC		48/263	
✓ 27	1-3-67	Pending	Marilyn J. Snyder, a/k/a Marilyn M. Snyder, and William S. Snyder, wife and husband	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1123/174	0.00%
				SWN Production Company, LLC	SWN Production Company, LLC		1165/148	
✓ 28	1-3-17	Pending	Marilyn M. Snyder, a/k/a Marilyn J. Snyder, a married woman dealing in her sole and separate property	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1167/339	0.00%
			Joseph Blakely	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1147/516	0.00%
✓ 29	1-3-16	784586/000	Joseph Blakely	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1147/516	0.00%
✓ 30	1-3-15	N/A	Royalty Owner (subject to unitization filing dated November 13, 2023)	N/A	N/A	N/A	N/A	100.00%
✓ 31	1-3-14	785047/000	Timothy M. James, single	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1154/66	0.00%
✓ 32	1-3-13	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	N/A	100.00%
✓ 33	1-3-12	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	N/A	100.00%
✓ 34	1-3-9	784265/000	David C. Nice and Eleanore R. Nice, a/k/a Eleanor Nice, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1138/468	0.00%
✓ 35	1-3-8	784265/000	David C. Nice and Eleanore R. Nice, a/k/a Eleanor Nice, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1138/468	0.00%
✓ 36	1-3-7	784265/000	David C. Nice and Eleanore R. Nice, a/k/a Eleanor Nice, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1138/468	0.00%
✓ 37	1-3-6	784273/000	Linsey E. DeGarmo and Elizabeth DeGarmo, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1137/282	0.00%
✓ 38	1-3-5	784273/000	Linsey E. DeGarmo and Elizabeth DeGarmo, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1137/282	0.00%
✓ 39	1-3-4	783815/000	Jerry A. Birkhimer and Sunny R. Birkhimer, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1140/204	0.00%
✓ 40	1-3-3	783815/000	Jerry A. Birkhimer and Sunny R. Birkhimer, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1140/204	0.00%
✓ 41	1-3-2	783815/000	Jerry A. Birkhimer and Sunny R. Birkhimer, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1140/204	0.00%
✓ 42	1-3-1.6	783815/000	Jerry A. Birkhimer and Sunny R. Birkhimer, husband and wife	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	1140/204	0.00%

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EXHIBIT "A"

Serafin Ortiz MSH 5H

Marshall County and Ohio County, West Virginia

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC., Operator

✓ 43	1-3-1.5	783815/000	Jerry A. Birkhimer and Sunny R. Birkhimer, husband and wife	SWN Production Company, LLC	18.00%	1140/204	0.00%
✓ 44	1-3-1.4	783815/000	Jerry A. Birkhimer and Sunny R. Birkhimer, husband and wife	SWN Production Company, LLC	18.00%	1140/204	0.00%
✓ 45	1-3-1.3	783815/000	Jerry A. Birkhimer and Sunny R. Birkhimer, husband and wife	SWN Production Company, LLC	18.00%	1140/204	0.00%
✓ 46	1-3-1.2	783815/000	Jerry A. Birkhimer and Sunny R. Birkhimer, husband and wife	SWN Production Company, LLC	18.00%	1140/204	0.00%
✓ 47	1-3-1.1	784296/000	Patricia J. Yates, f/k/a Patricia J. Williams, and Michael J. Yates, wife and husband	SWN Production Company, LLC	18.00%	1138/307	0.00%
✓ 48	1-3-1	784296/000	Patricia J. Yates, f/k/a Patricia J. Williams, and Michael J. Yates, wife and husband	SWN Production Company, LLC	18.00%	1138/307	0.00%
✓ 49	U.S. 250	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ 50	RAILROAD	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ 51	1-2-160	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ 52	1-2-156.1	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ 53	1-2-48	784508/000	JBW Supply, LLC, by David M. West, President	SWN Production Company, LLC	18.00%	1139/217	0.00%
✓ 54	1-2-49	784523/000	Johnson Boiler Works, Inc., by David M. West, President	SWN Production Company, LLC	18.00%	1140/570	0.00%
✓ 55	1-2-50	784523/000	Johnson Boiler Works, Inc., by David M. West, President	SWN Production Company, LLC	18.00%	1140/570	0.00%
✓ 56	1-2-89	784704/000	Ohio Valley Recovery, Inc.	SWN Production Company, LLC	18.00%	1151/514	0.00%
✓ 57	1-2-88	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ 58	1-2-87	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ 59	1-2-86	Pending	Alice Jean Glenz	SWN Production Company, LLC	18.00%	1172/578	0.00%
✓ 60	1-2-85	Pending	Ronald S. Sengewalt and Mary E. Sengewalt, husband and wife, as joint tenants with right of survivorship	SWN Production Company, LLC	18.00%	1168/124	0.00%
✓ 61	1-2-122	785060/000	Phillip Baranski, single	SWN Production Company, LLC	18.00%	1154/72	0.00%
✓ 62	1-2-123	785055/000	Robert G. Rose and Karen S. Rose, husband and wife	SWN Production Company, LLC	18.00%	1158/445	0.00%

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✓ 63	1-2-124	785055/000	Robert G. Rose and Karen S. Rose, husband and wife	SWN Production Company, LLC	18.00%	1158/445	0.00%
✓ 64	1-2-125	Pending	John Kuri, single, and Linda Kuri, single	SWN Production Company, LLC	18.00%	1161/324	0.00%
✓ 65	1-2-126	785062/000	Cornelius Wiley, Jr., widower	SWN Production Company, LLC	18.00%	1153/601	0.00%
✓ 66	1-2-136	784701/000	Melissa Jane Albus, widow	SWN Production Company, LLC	18.00%	1148/494	0.00%
✓ 67	1-2-135	784701/000	Melissa Jane Albus, widow	SWN Production Company, LLC	18.00%	1148/494	0.00%
✓ 68	1-2-134	Pending	Zachary J. Vilkoski, married, dealing in his separate property	SWN Production Company, LLC	18.00%	1159/13	0.00%
✓ 69	1-2-133	Pending	Zachary J. Vilkoski, married, dealing in his separate property	SWN Production Company, LLC	18.00%	1159/13	0.00%
✓ 70	1-2-132	784693/000	Beverly A. Pelham, single	SWN Production Company, LLC	18.00%	1148/512	0.00%
✓ 71	1-2-162	784347/000	Bellaire Harbor Service, LLC	SWN Production Company, LLC	18.00%	1145/600	0.00%
✓ 72	10-W88-370	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ 73	Ohio River	Pending	State of West Virginia, Department of Commerce, Division of Natural Resources	SWN Production Company, LLC	20.00%	1051/59 (Ohio) 1170/693 (Marshall)	0.00%

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✓ U	13-6B-12	733016/001	Judy Penick, a married woman	Chesapeake Appalachia, L.L.C.	18.00%	784/228	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		733016/002	Alyn Robin Burkhardt, a married woman	Chesapeake Appalachia, L.L.C.	18.00%	786/642	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		733016/005	Eleanor Gross, divorced and not remarried	Chesapeake Appalachia, L.L.C.	18.00%	787/7	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		733016/004	Charles E. Borchart, Jr., a married man	Chesapeake Appalachia, L.L.C.	18.00%	786/636	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		733016/003	Jeffrey A. Borchart, a single man	Chesapeake Appalachia, L.L.C.	18.00%	787/1	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
✓ R96	1-3-66	Pending	John F. Markowicz, Jr. and Martina Markowicz, husband and wife	SWN Production Company, LLC	18.00%	1165/148	0.00%
		783240/001	Marilyn J. Snyder a/k/a Marilyn M. Snyder and William S. Snyder, wife and husband	SWN Production Company, LLC	18.00%	1123/176	0.00%
✓ J114	1-3-44	784955/000	Charlotte J. Canestraro, single, and Joseph R. Canestraro, single	SWN Production Company, LLC	18.00%	1158/68	0.00%
✓ E135	1-2-45	Pending	The City of Benwood, by Walter Yates, Mayor	SWN Production Company, LLC	18.00%	1158/119	0.00%
✓ F136	1-2-46	Pending	The City of Benwood, by Walter Yates, Mayor	SWN Production Company, LLC	18.00%	1158/119	0.00%
✓ G137	1-2-47	784512/000	JBW Supply, LLC, by David M. West, President	SWN Production Company, LLC	18.00%	1135/597	0.00%
✓ H138	1-2-91	784523/000	Johnson Boiler Works, Inc., by David M. West, President	SWN Production Company, LLC	18.00%	1140/570	0.00%
✓ J140	1-2-118	784622/000	Rose E. Yates, a widow	SWN Production Company, LLC	18.00%	1145/617	0.00%
✓ K141	1-2-119	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ L142	1-2-120	785053/000	Samuel L. Scarberry and Marj E. Scarberry, husband and wife	SWN Production Company, LLC	18.00%	1154/78	0.00%

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EXHIBIT "A"

Serafin Ortiz MSH 5H

Marshall County and Ohio County, West Virginia

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✓ N144	1-2-137	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ O145	1-2-164	784347/000	Bellaire Harbor Service, LLC	SWN Production Company, LLC	18.00%	1145/600	0.00%
✓ R148	10-W88-26	Pending	Scott Kaufman, divorced	SWN Production Company, LLC	18.00%	1041/82	0.00%
✓ V152	1-2-128	Pending	Hia Huynh and Bich Trinh	SWN Production Company, LLC	18.00%	1162/99	0.00%
✓ W153	1-2-127	Pending	Jody L. Woodford, a single woman	SWN Production Company, LLC	18.00%	1172/428	0.00%
✓ D160	1-2-82	Pending	TOM 5, LLC	SWN Production Company, LLC	18.00%	1160/238	0.00%
✓ E161	1-2-83	783805/000	Elaine R. Kuca, a widow	SWN Production Company, LLC	18.00%	1138/301	0.00%
✓ F162	1-2-84	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ J166	1-2-52	784512/000	JBW Supply, LLC, by David M. West, President	SWN Production Company, LLC	18.00%	1139/597	0.00%
✓ K167	1-2-51	784523/000	Johnson Boiler Works, Inc., by David M. West, President	SWN Production Company, LLC	18.00%	1140/570	0.00%
✓ L168	1-2-157.2	N/A	Royalty Owner (subject to unitization filing dated November 10, 2023)	N/A	N/A	N/A	100.00%
✓ J192	13-5-32.1	784402/000	CNX Gas Company LLC, a Virginia limited liability company	SWN Production Company, LLC	18.00%	1156/144	0.00%
✓ D212	1-3-10	784265/000	David C. Nice and Eleanor R. Nice, husband and wife	SWN Production Company, LLC	18.00%	1138/468	0.00%
✓ E213	1-2-90	784704/000	Ohio Valley Recovery, Inc.	SWN Production Company, LLC	18.00%	1151/514	0.00%
✓ F214	1-2-121	Pending	Nancy L. Morris, a widow	SWN Production Company, LLC	18.00%	1167/324	0.00%
		Pending	Beverly Elaine Crawford, a single woman	SWN Production Company, LLC	18.00%	1167/329	0.00%

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*Potentially Impacted Parcels - Parcels that may be impacted during drilling.
*Horizontal well unit utilization - Subject to unitization filing with the West Virginia Oil and Gas Conservation Commission.

November 15, 2023

Mr. Charles Brewer
WV DEP Office of Oil & Gas
601 57th St., SE
Charleston, WV 25304

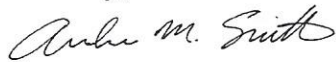
RE: SWN's proposed New Well: Serafin Ortiz MSH 5H in Marshall & Ohio Counties, West Virginia, Drilling under Benwood Hill Road, Boggs Run Road, Browns Run Road, Lincoln Avenue, US 250 (State Route 2), Marshall Street, Alley B, Eoff Street, Alley A, Water Street.

Dear Mr. Brewer:

SWN Production Company, LLC ("SWN") is applying for a drilling permit for the above referenced well. The State of West Virginia has raised some concern as to SWN's right to drill under Benwood Hill Road, Boggs Run Road, Browns Run Road, Lincoln Avenue, US 250 (State Route 2), Marshall Street, Alley B, Eoff Street, Alley A, Water Street. Please be advised that SWN has attempted to lease all mineral owners under said route as it relates to the above-referenced well and unit. In several instances, SWN successfully obtained leases of the acreage underlying the road. Any remaining unleased roadway acreage has been included in SWN's pending forced-pooling (unitization) application which was filed with the WV OGCC on November 10, 2023 for the Serafin Ortiz North B Unit (Docket No. 335-355). We expect that all roadway acreage will be effectively under SWN's operational control following the issuance of an Order by the OGCC after the planned December 14 hearing.

Thank you.

Sincerely,



Andrew M. Smith, RL
Rotational Landman
SWN Production Company, LLC

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The Right People doing the Right Things,
wisely investing the cash flow from our
underlying Assets, will create Value+®

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