

KEITH STERN N LEASE
UTICA UNIT - 266.15 AC±
WELL 13HU
TUG HILL OPERATING

B.H.
A.D.

T.H. LATITUDE 39°47'30"
B.H. LATITUDE 39°47'30"

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

NAD'83 S.P.C.(FT)	N. 466,532.98	E. 1,633,422.22
NAD'83 GEO.	LAT-(N) 39.774767	LONG-(W) 80.692204
NAD'83 UTM (M)	N. 4,402,804.35	E. 526,359.50

LANDING POINT

NAD'83 S.P.C.(FT)	N. 465,117.3	E. 1,632,725.0
NAD'83 GEO.	LAT-(N) 39.770855	LONG-(W) 80.694618
NAD'83 UTM (M)	N. 4,402,369.5	E. 526,154.3

BOTTOM HOLE

NAD'83 S.P.C.(FT)	N. 470,982.3	E. 1,629,526.2
NAD'83 GEO.	LAT-(N) 39.786838	LONG-(W) 80.706277
NAD'83 UTM (M)	N. 4,404,140.0	E. 525,149.9

T.H. LONGITUDE 80°40'00"
B.H. LONGITUDE 80°40'00"
1,767' T.H. A.D.
6,156' T.H. A.D.

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
9-10-12	RAY A. WHETZAL, JR., ET AL	36.31
9-11-3	RAY A. WHETZAL, JR., ET AL	33.33
9-13-14	MARGARET K. FOX - LIFE	3.00
9-13-22	TRICYCLE LLC	47.25
9-14-1.2	KENNETH N. & TERESA A. SMERTNECK	1.02
9-14-2	MICHAEL L. ALVAREZ	0.75
9-14-3	MICHAEL L. ALVAREZ	NORTH P/O 3 PCLS
9-14-4	MICHAEL L. ALVAREZ	3 PCLS & 1/8 AC.
9-14-5	MICHAEL L. ALVAREZ	209 X 60 PCL
9-14-6	MICHAEL L. ALVAREZ	120 X 200 PCL
9-14-7	JOHN T. ERAZMUS, III	0.25
9-14-8	JOHNNY C. HOLCOMB & JOHNNY C. HOLCOMB, II	2/5 AC.
9-14-9	JOHN E. DUFFY ET UX	2/5 AC.
9-14-10	ROBERT I. DUFFY - LIFE	25/100 AC.
9-14-20.1	WILLIAM K. STERN, ET UX	1.321
9-14-20.2	WILLIAM K. STERN, ET UX	1.525
9-14-20.3	WILLIAM K. STERN, ET UX	0.831
9-14-28	CHARLES R. SCHELLHASE ET UX	3.029
9-14-43	GEORGE R. TAYLOR, ET UX	10.98
9-14-46.1	MARHA JANE FAZZARO	1.512

T.H.
A.D.

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF KEITH STERN N-13HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF THE FOLLOWING: KEITH STERN N-14HU (47-051-02252), KEITH STERN N-15HU (47-051-02241), KEITH STERN N-16HU (47-051-02242), PROPOSED KEITH STERN S-17HU, KEITH STERN S-18HU (47-051-02243), KEITH STERN S-19HU (47-051-02244), PROPOSED KNOB CREEK N-12HU & 13HU, PROPOSED KNOB CREEK S-15HU & 16HU, HEAVEN HILL 2W-12HU (47-051-01952), HEAVEN HILL 2W-13HU (47-051-01957), HEAVEN HILL 2-7HU (47-051-01911), HEAVEN HILL 2-8HU (47-051-01912).
- AS-DRILLED DATA PROVIDED BY TUG HILL OPERATING, LLC.
- PLAT UPDATED TO SHOW AS-DRILLED PATH.

AS DRILLED COORDINATES FOR WELL NO. 13HU

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

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NAD'83 GEO.	LAT-(N) 39.774767	LONG-(W) 80.692204
NAD'83 UTM (M)	N. 4,402,804.35	E. 526,359.50

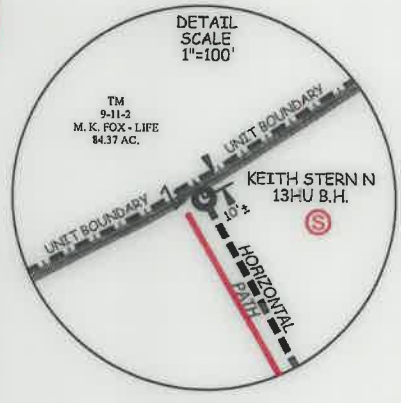
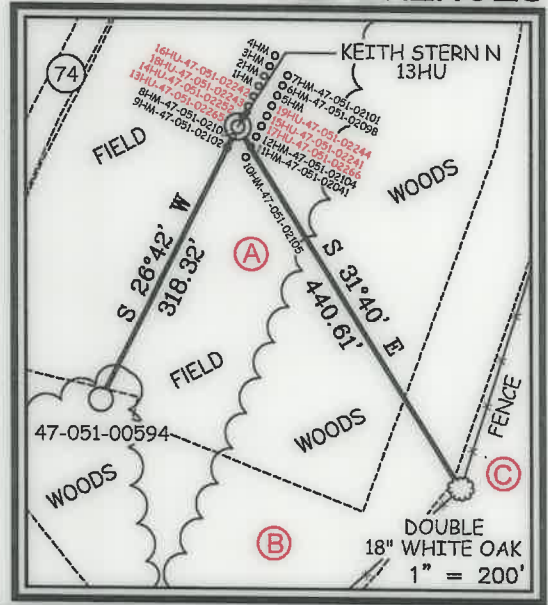
LANDING POINT

NAD'83 S.P.C.(FT)	N. 465,144.7	E. 1,632,726.0
NAD'83 GEO.	LAT-(N) 39.770931	LONG-(W) 80.694608
NAD'83 UTM (M)	N. 4,402,377.9	E. 526,155.1

BOTTOM HOLE

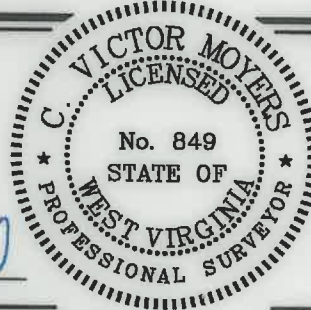
NAD'83 S.P.C.(FT)	N. 470,974.0	E. 1,629,517.7
NAD'83 GEO.	LAT-(N) 39.786815	LONG-(W) 80.706307
NAD'83 UTM (M)	N. 4,404,137.5	E. 525,147.3

REFERENCES



12 Yashorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5034
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3922
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slsw.com

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.



P.S. 849 *C. Victor Moyers*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE JULY 9, 20 20
REVISED _____

OPERATORS WELL NO. KEITH STERN N-13HU
API WELL NO. 47 - 051 - 2265
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500
FILE NO. 8811P13HUAD.dwg
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)
SCALE 1" = 2000'

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

WELL TYPE: OIL ___ GAS X INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP X SHALLOW ___

LOCATION: ELEVATION 744.65' WATERSHED FISH CREEK (HUC 10)
DISTRICT MEADE COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER TH EXPLORATION, LLC ACREAGE 10.05±
ROYALTY OWNER ISAAC CROW, ET AL - SEE WW-6A1 ACREAGE 10.05±

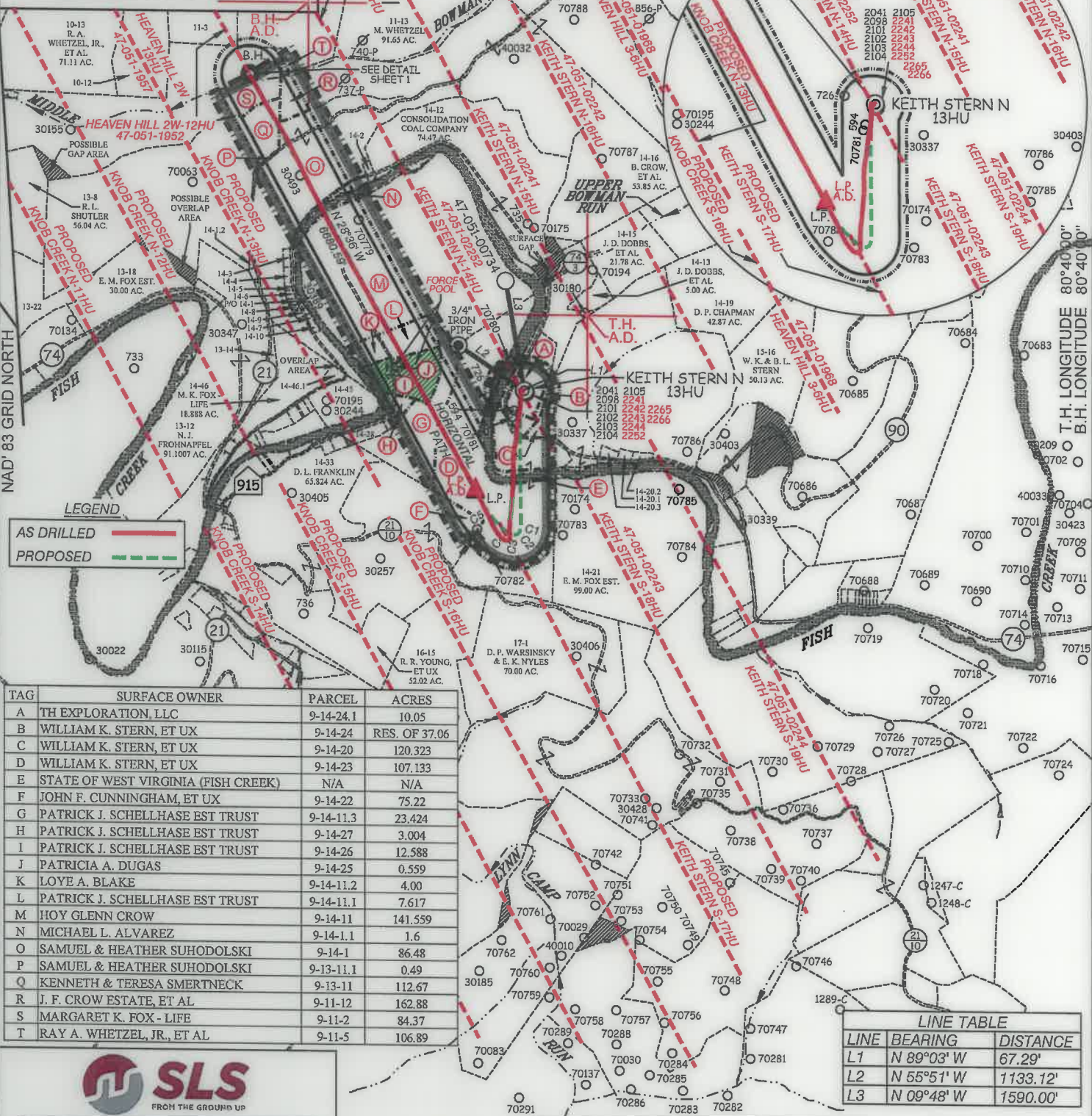
PROPOSED WORK: LEASE NO. SEE WW-6A1
DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD
FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION POINT PLEASANT
ESTIMATED DEPTH TVD: 11,368' / TMD: 18,800'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5400 D BIG TYLER ROAD
FORT WORTH, TX 76107 CHARLESTON, WV 25313

COUNTY NAME PERMIT

10/21/2022

**KEITH STERN N LEASE
UTICA UNIT - 266.15 AC ±
WELL 13HU
TUG HILL OPERATING**



TAG	SURFACE OWNER	PARCEL	ACRES
A	TH EXPLORATION LLC	9-14-24.1	10.05
B	WILLIAM K. STERN, ET UX	9-14-24	RES. OF 37.06
C	WILLIAM K. STERN, ET UX	9-14-20	120.323
D	WILLIAM K. STERN, ET UX	9-14-23	107.133
E	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
F	JOHN F. CUNNINGHAM, ET UX	9-14-22	75.22
G	PATRICK J. SCHELLHASE EST TRUST	9-14-11.3	23.424
H	PATRICK J. SCHELLHASE EST TRUST	9-14-27	3.004
I	PATRICK J. SCHELLHASE EST TRUST	9-14-26	12.588
J	PATRICIA A. DUGAS	9-14-25	0.559
K	LOYE A. BLAKE	9-14-11.2	4.00
L	PATRICK J. SCHELLHASE EST TRUST	9-14-11.1	7.617
M	HOY GLENN CROW	9-14-11	141.559
N	MICHAEL L. ALVAREZ	9-14-1.1	1.6
O	SAMUEL & HEATHER SUHODOLSKI	9-14-1	86.48
P	SAMUEL & HEATHER SUHODOLSKI	9-13-11.1	0.49
Q	KENNETH & TERESA SMERTNECK	9-13-11	112.67
R	J. F. CROW ESTATE, ET AL	9-11-12	162.88
S	MARGARET K. FOX - LIFE	9-11-2	84.37
T	RAY A. WHETZEL, JR., ET AL	9-11-5	106.89

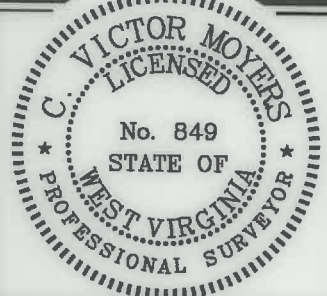
LINE	BEARING	DISTANCE
L1	N 89°03' W	67.29'
L2	N 55°51' W	1133.12'
L3	N 09°48' W	1590.00'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	93.99'	238.95'	S 09°15' W	93.39'
C2	68.32'	74.68'	S 48°09' W	65.96'
C3	82.33'	134.59'	N 80°41' W	81.05'
C4	157.53'	555.74'	N 55°11' W	157.00'
C5	624.15'	1908.94'	N 36°47' W	621.38'

SLS
FROM THE GROUND UP

12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slswv.com

P.S. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

LEGEND

- UNIT BOUNDARY
- LEASED TRACTS INSIDE
- UNIT BOUNDARY
- SURFACE LINE
- PROPOSED UTICA
- WELL LATERAL
- 400' OFFSET LINE
- 500' OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE ADDITIONAL SHEETS)

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SCALE 1" = 2000' FILE NO. 8811P13HUAD.dwg
KEITH STERN N-13HU-REV2

DATE JULY 9, 2020
REVISED _____
OPERATORS WELL NO. KEITH STERN N-13HU
API WELL NO. 47-051-2265
STATE COUNTY PERMIT

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

WELL OPERATOR TUG HILL OPERATING, LLC
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107

DESIGNATED AGENT DIANNA STAMPER
ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

1,767' B.H. A.D.
6,156' T.H. A.D.
80°40'00" T.H. LONGITUDE
80°40'00" B.H. LONGITUDE
COUNTY NAME
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sleww.com

NO.	Lease ID	Tag	Parcel	Grantor, Lessor, Etc.	Deed Book/Page	
1	10*15605	A	9-14-24.1	ISAAC CROW ET UX	74	394
2	10*15605	B	9-14-24	ISAAC CROW ET UX	74	394
3	10*15509	C	9-14-20	WILLIAM K STERN AND BETTY L STERN	718	320
4	10*15812	D	9-14-23	WILLIAM K STERN AND BETTY L STERN, ET AL	687	220
5	10*23458	E	WV - FISH CREEK	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	1019	373
6	10*16479	F	9-14-22	JOHN F CUNNINGHAM AND BERNEICE K CUNNINGHAM	826	88
7	10*23053	G	9-14-11.3	CE YOUNG	63	146
8	10*23053	H	9-14-27	CE YOUNG	63	146
9	10*23053	I	9-14-26	*FORCE POOL* CE YOUNG	63	146
10	10*23053	J	9-14-25	*FORCE POOL* CE YOUNG	63	146
11	10*23053	K	9-14-11.2	CE YOUNG	63	146
12	10*23053	L	9-14-11.1	CE YOUNG	63	146
13	10*23053	M	9-14-11	CE YOUNG	63	146
14	10*19621	N	9-14-1.1	MARY RUTH FROHNAPFEL, ET AL	938	595
15	10*19621	O	9-14-1	MARY RUTH FROHNAPFEL, ET AL	938	595
16	10*18265	P	9-13-11.1	KENNETH NELSON SMERTNECK AND TERESA ANN SMERTNECK	933	103
17	10*18265	Q	9-13-11	KENNETH NELSON SMERTNECK AND TERESA ANN SMERTNECK	933	103
18	10*15510	R	9-11-12	ELAINE PHELPS ET AL	718	326
19	10*47051.243.1	S	9-11-2	MARY A FOX, ET AL	879	332
20	10*15584	T	9-11-5	VICKIE MASON, ET AL	686	239

RECEIVED
Office of Oil and Gas

SEP 30 2022

WV Department of
Environmental Protection

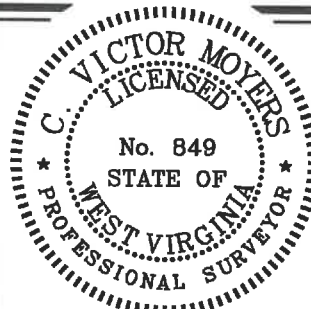
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DATE JULY 9, 20 20

REVISED _____

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API WELL NO. 47 — 051 — 2265
NO. STATE COUNTY PERMIT



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



10/21/2022

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