

8,217' B.H.

3,695' T.H.

**OLD CROW N LEASE
UTICA UNIT - 484.05 AC ±
WELL 21HU
TUG HILL OPERATING**

T.H. LATITUDE 39°47'30"
B.H. LATITUDE 39°50'00"

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

NAD'83 S.P.C.(FT)	N. 468,186.96	E. 1,613,503.81
NAD'83 GEO.	LAT-(N) 39.778560	LONG-(W) 80.763147
NAD'83 UTM (M)	N. 4,403,206.82	E. 520,282.83

LANDING POINT/ILP

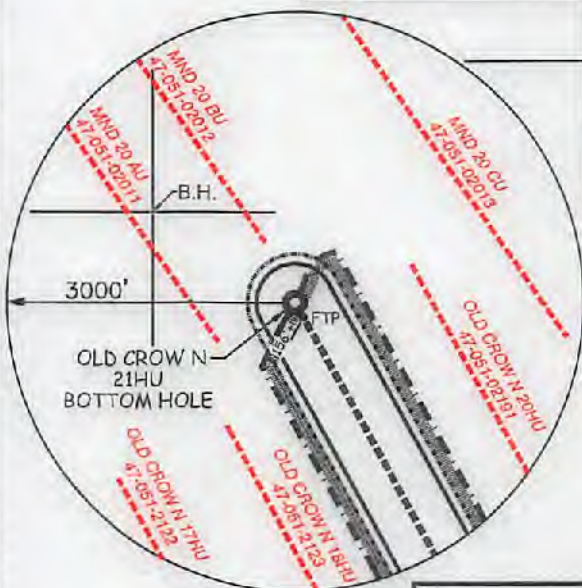
NAD'83 S.P.C.(FT)	N. 469,683.5	E. 1,615,938.1
NAD'83 GEO.	LAT-(N) 39.782762	LONG-(W) 80.754569
NAD'83 UTM (M)	N. 4,403,675.1	E. 521,016.2

BOTTOM HOLE

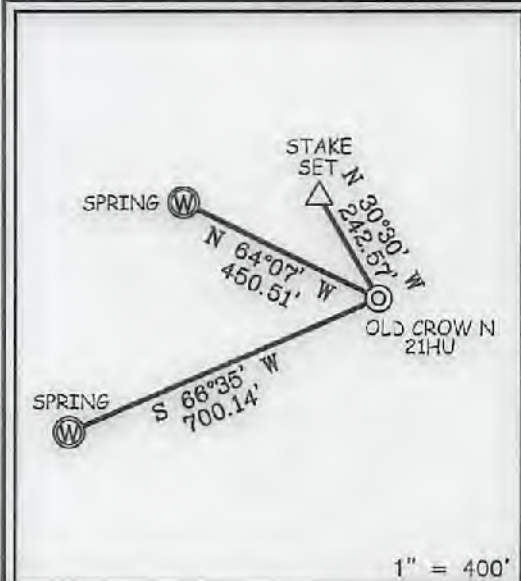
NAD'83 S.P.C.(FT)	N. 481,866.1	E. 1,609,172.2
NAD'83 GEO.	LAT-(N) 39.815942	LONG-(W) 80.779251
NAD'83 UTM (M)	N. 4,407,352.2	E. 518,893.6

T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°45'00"
4,775' T.H.
6,335' B.H.

MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
5-9-4.3	HARRY E. JR. & MICHELA KARR	1.471
5-9-4.5	DYLAN AULENBACHER	0.991
5-9-4.7	FRANCIS D. BARR, ET UX	0.481
5-9-4.9	THOMAS MIDCAP, ET UX	0.375
5-9-4.11	GARY PORTER	1.00
5-9-4.12	SAMUEL L. & DEBRA N. CANTERBURY	0.650
5-9-4.13	SAMUEL LEE CANTERBURY, ET UX	0.9284
5-9-4.16	SAMUEL L. & DEBRA N. CANTERBURY	0.517
5-9-13	KAREN M. KAZEMKA (N.K.A. KAREN M. WILSON)	3.69
5-9-14	DENNIS P. CADMUS	136 POLES
5-9-15	DENNIS P. CADMUS	3.85
5-9-16	SHEENA ROSE	1.65
5-9-17	DENNIS P. CADMUS	28.063
5-9-28	WILLIAM N. & DELORES E. MCDONOUGH - LIFE	4.01
5-9-29	JAMES M. & ROBERTA L. STERN	3.1777
5-9-30	MATTHEW B. GRIFFITH	2.708
5-9-30.1	DAVID JR. & MELISSA LOVE	2.518
5-9-30.3	MATTHEW B. GRIFFITH	0.82
5-9-32	MILLARD JUNIOR BONNETTE, ET UX	2.321
5-9-32.3	RUBY M. HENRY ESTATE	0.532
5-9-32.4	DAVID D. & CHRISTINE S. DANIELS	1.025
5-9-32.5	GARNET D. MIDCAP	270x390'
5-9-32.8	TIMOTHY O. HOYT, ET UX	0.711
5-9-32.10	TIMOTHY O. HOYT, ET UX	0.588
5-9-32.11	TIMOTHY O. HOYT, ET UX	1.717
5-9-32.12	JOHN DRAKE ALBAUGH	1.09
5-9-33.1	KEITH D. & BEVERLY A. DANIELS	1.00
5-9-33.2	KEITH D. & BEVERLY A. DANIELS	1.534
5-9-33.4	DAVID D. & CHRISTINE S. DANIELS	1.025
5-9-36	FRANK T. & ANNA M. WALKER	1.35
5-9-37	FRANK T. & ANNA M. WALKER	10.837
5-9-38	SHIRLEY A. HILL ESTATE	3.331
5-9-38.10	ROBERT S. COWGILL	0.920
5-9-40	SHIRLEY A. HILL ESTATE	3.92
5-10-4.2	JACK E. RECTOR	2.887
5-10-4.3	ANTHONY A. & KAREN L. ANKROM	5.697
5-10-4.7	LINDA BECHFOLD, ET AL	2.110
5-10-4.8	SAMUEL FRANKLIN	1.8908
5-10-4.9	JAMES E. KAREN M. WILSON	0.8692
5-10-4.10	SHEENA ROSE	0.803
5-10-4.11	JASON E. BONNETTE	1.50
5-10-11	JOSEPH LEE CROW	LOT
5-10-19	BRADLEY L. & CONNIE L. HUBBARD	3.209
5-10-20	LOUIS AULENBAUCHER	3.554
5-10-21	LOUIS AULENBAUCHER	3.667



REFERENCES



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 & TOP MARK SCALE ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF PROPOSED OLD CROW N-21HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF EXISTING WELLS:
 - BRYAN N 13HU (47-051-02030),
 - BRYAN N 14HU (47-051-02031),
 - OLD CROW N-17HU (47-051-02122),
 - OLD CROW N-18HU (47-051-02123),
 - OLD CROW N-20HU (47-051-02191),
 - MND20 AU (47-051-02011),
 - MND20 BU (47-051-02012),
 - MND20 CU (47-051-02013) &
 - MND20 DU (47-051-02014).
- THE ASSESSMENT OF THE 1/10 ACRE LOT, OWNED BY JASON J. STEED AND DESCRIBED AS THE SECOND PARCEL IN DEED BOOK 843 PAGE 319 AND CORRECTIVE DEED 843 PAGE 300, IS NOT CURRENTLY ACCOUNTED FOR WITHIN THE 135.61 ACRE ASSESSMENT OF SURFACE TAX MAP 5-9-13.2
- THIS PLAT WAS CREATED FOR REVISED BOREHOLE PERMIT.
- MINIMUM OFFSET SPACING REQUIREMENTS EXEMPTED BY WAIVER WITH THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS AND OFFSET LEASEHOLDER AGREEMENTS AS PROVIDED BY TUG HILL OPERATING.



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26031 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3862
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5295
slsvv.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. 677 Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE FEBRUARY 28, 20 20
REVISED AUGUST 3, 2020 & FEBRUARY 11, 2022
OPERATORS WELL NO. OLD CROW N-21HU
API WELL NO. 47-051-02335
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 8796P21HUR2.dwg
OLD CROW NORTH 21HU REV4
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 INJECTION LIQUID WASTE IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1,264.99' WATERSHED TRIBUTARY OF FISH CREEK (HUC-10)
DISTRICT FRANKLIN COUNTY MARSHALL QUADRANGLE POWHATAN POINT 7.5'

SURFACE OWNER DONNA VIVIAN YOHO (TOD) GARY LANCE YOHO ACREAGE 71.205±
ROYALTY OWNER DONNA VIVIAN YOHO, ET AL - SEE ADDITIONAL SHEETS ACREAGE 02/25/2022

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE 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: 11,520' / TMD: 27,839'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DARREN BROWN
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS CT CORPORATION
FORT WORTH, TX 76107 ADDRESS 5098 WASHINGTON ST. W STE. 407
CHARLESTON, WV 25313-1561

COUNTY NAME PERMIT

**OLD CROW N LEASE
UTICA UNIT - 484.05 AC±
WELL 21HU
TUG HILL OPERATING**

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 75°57' E	225.35'
L2	N 59°48' W	1236.06'
L3	S 60°03' E	333.02'
L4	N 76°56' E	499.85'

MND 20 AU
47-051-02011

MND 20 BU
47-051-02012

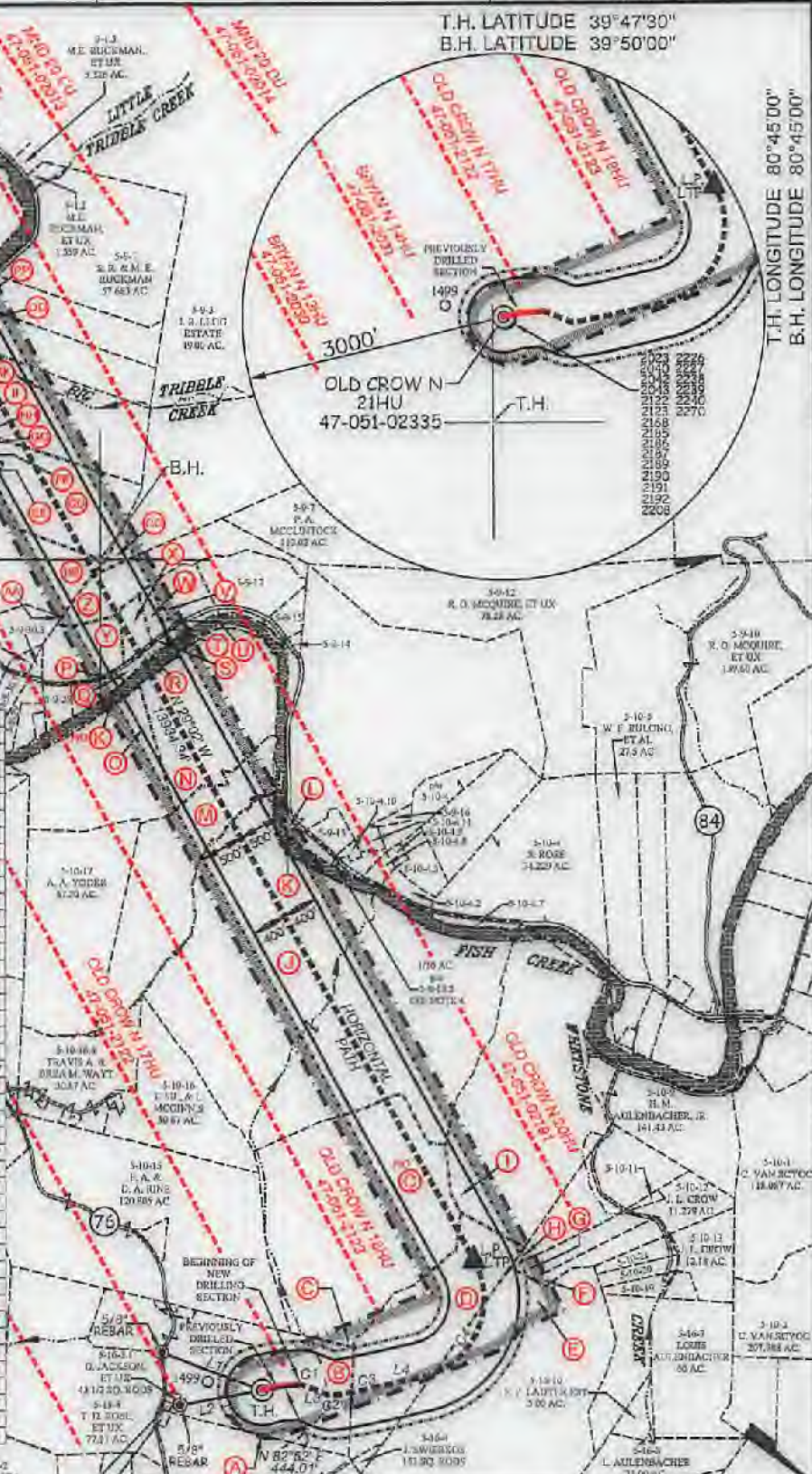
T.H. LATITUDE 39°47'30"
B.H. LATITUDE 39°50'00"

T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°45'00"

NAD 83 GRID NORTH

6,335' B.H.

TAG	SURFACE OWNER	PARCEL	ACRES
A	JOHN SWIERKOS	5-16-25	79.04
R	DONNA VIVIAN YOHO - TOD	5-16-3	71.205
C	JOHN SWIERKOS	5-16-14	100.00
D	JOHN SWIERKOS	5-16-5	52.07
E	JOHN SWIERKOS	5-16-6	124.03
F	LOUIS AULENBAUCHER	5-10-22	6.404
G	JOHN PAUL SMITH, JR. ET AL	5-10-12.1	8.86
H	LOUIS DELBERT VAN SCYOC	5-10-10	24.30
J	HERBERT M. AULENBAUCHER, JR.	5-10-9	141.43
I	HERBERT M. AULENBAUCHER, JR.	5-10-3	225.50
K	FISH CREEK-WV DIVISION OF NATURAL RESOURCES	N/A	N/A
L	JASON J. STEED	5-9-13.2	135.61
M	WILLIAM A. FRASCIC, ET AL	5-10-2	52.00
N	EDWIN C. MILLER	5-9-20	51.64
O	EDWIN C. MILLER	5-10-1	49.95
P	JOHN F. KAZEMKA	5-9-27	4.82
Q	EDWIN C. MILLER	5-9-26	1.00
R	JUSTIN D. KAZEMKA	5-9-33	0.30
S	JUSTIN D. KAZEMKA	5-9-31	100 PCL
T	MARK S. STOCKLASK	5-9-17.1	1.187
U	MALCOMB H. BROWN SE, ET AL	5-9-18	1330.9097
V	DENNIS P. CADMUS	5-9-43	5.42
W	MARK STEPHEN STOCKLASK	5-9-40	2.38
X	DELBERT E. & LINDA K. MYERS	5-9-23	7.00
Y	DELBERT E. & LINDA K. MYERS	5-9-25	14.49
Z	DENNIS P. CADMUS	5-9-24	21AC 49P
AA	DENNIS P. CADMUS	5-9-39	9.50
BB	KRITH D. DANIELS, ET UX	5-9-33	40.331
CC	LLOYD C. & JUDITH C. ARNOLD	5-9-11	93.00
DD	LLOYD C. & JUDITH C. ARNOLD	5-9-4	18.854
EE	SAMUEL L. CANTERBURY, ET UX	5-9-4.19	2.078
FF	SAMUEL L. CANTERBURY, ET UX	5-9-4.17	0.500
GG	PAUL G. BROWN	5-9-4.18	0.657
HH	PAUL G. BROWN	5-9-4.15	0.500
II	PAUL G. BROWN	5-9-4.14	0.500
JJ	DEBORAH S. MIDCAP	5-9-4.10	0.819
KK	LLOYD C. & JUDITH C. ARNOLD	5-9-35	47.00
LL	THOMAS MIDCAP, ET UX	5-9-4.8	0.376
MM	LLOYD C. ARNOLD	5-9-35.1	0.641
NN	JAMES R. & DEDE E. LEGG (LIFE)	5-9-2	23.141
OO	KENNETH E. WHITE, ET UX	5-9-2.2	0.359
PP	JEFFREY L. LEGG ESTATE	5-9-2.1	70.5
QQ	EDWIN C. MILLER	5-8-7	180.31



SLS
FROM THE GROUND UP

12 Vanora Drive | P.O. Box 150 | Glenville, WV 26031 | 304.463.5634
 102 Kanawha Boulevard, Bay | Charleston, WV 25301 | 304.346.3952
 254 East Beckley Bypass | Beckley, WV 25801 | 304.385.6206
 www.sls.com

P.S. 677 *Gregory A. Smith*

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

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LANDING POINT/ITP

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NAD83 UTM (M)	N. 4,407,352.2	E. 518,893.6



CURVE TABLE

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	20.45'	35.34'	N 88°26' E	20.16'
C2	37.90'	150.34'	N 69°48' E	37.80'
C3	526.33'	9001.13'	N 78°40' E	526.26'
C4	1856.87'	916.51'	N 22°48' E	1440.29'

SCALE 1" = 2000' FILE NO. 8796P21HUR2.dwg
 OLD CROW NORTH 21HU REV4
 DATE FEBRUARY 28, 2020
 REVISED AUGUST 3, 2020 & FEBRUARY 11, 2022
 OPERATORS WELL NO. OLD CROW N-21HU
 API WELL 47 — 051 — 02335
 NO. STATE COUNTY PERMIT

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

(+) 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
- PROPOSED FIRST TAKE POINT
- PROPOSED LAST TAKE POINT
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE ADDITIONAL SHEETS)

02/25/2022

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DARREN BROWN
 ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5098 WASHINGTON ST. W STE. 407
 FORT WORTH, TX 76107 CHARLESTON, WV 25313-1581

**OLD CROW N LEASE
UTICA UNIT - 484.05 AC ±
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No.	Lease ID	Tag	Parcel	Grantor, Lessor, Etc.	Deed Book/Page	
1	10*21468	A	5-16-25	JOHN A SWIERKOS	953	317
2	10*19340	B	5-16-3	DONNA V YOHO	665	407
3	10*14920	C	5-10-14	CHESTNUT HOLDINGS INC	836	119
4	10*14919	D	5-16-5	CHESTNUT HOLDINGS INC	836	117
5	10*21468	E	5-16-6	JOHN A SWIERKOS	953	317
6	10*18396	F	5-10-22	LOUIS AULENBACHER	932	468
7	10*21468	G	5-10-12.1	JOHN A SWIERKOS	953	317
8	10*21468	H	5-10-10	JOHN A SWIERKOS	953	317
9	10*19249	I	5-10-9	HERBERT M AULENBACHER	914	551
10	10*14918	J	5-10-3	CHESTNUT HOLDINGS INC	836	115
11	Q091960000	K	FISH CREEK	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	865	558
12	10*47051.170.0	L	5-9-13.2	JASON J STEED	865	344
13	10*47051.260.0	M	5-10-2	WILLIAM A PRASCIK ET AL	879	302
14	10*47051.127.1	N	5-9-20	EDWIN C MILLER AND KIMBERLY ANN MILLER	885	61
15	10*18970	O	5-10-1	DONALD E BERISFORD	941	287
16	10*17512	P	5-9-27	BONNIE LOU POSTLEWAIT	917	68
17	10*17512	Q	5-9-26	BONNIE LOU POSTLEWAIT	917	68
18	10*17512	R	5-9-22	BONNIE LOU POSTLEWAIT	917	68
19	10*18796	S	5-9-21	DWG OIL & GAS ACQUISITIONS LLC	938	476
20	10*18796	T	5-9-17.1	DWG OIL & GAS ACQUISITIONS LLC	938	476
21	10*18796	U	5-9-18	DWG OIL & GAS ACQUISITIONS LLC	938	476
22	10*18796	V	5-9-42	DWG OIL & GAS ACQUISITIONS LLC	938	476
23	10*18796	W	5-9-19	DWG OIL & GAS ACQUISITIONS LLC	938	476
24	10*17512	X	5-9-23	BONNIE LOU POSTLEWAIT	917	68
25	10*17512	Y	5-9-25	BONNIE LOU POSTLEWAIT	917	68
26	CVX935271	Z	5-9-24	CHARLES W. MILLER	853	59
27	CVX935271	AA	5-9-39	CHARLES W. MILLER	853	59
28	10*27025	BB	5-9-33	STONE HILL MINERALS HOLDINGS LLC	1034	626
29	10*26046	CC	5-9-41	ARNOLD LLOYD C ET UX	915	628
30	CVX939752	DD	5-9-4	LLOYD C ARNOLD AND JUDITH C ARNOLD	915	582
31	CVX936589	EE	5-9-4.19	LLOYD C. ARNOLD AND JUDITH C ARNOLD	863	511
32	CVX936589	FF	5-9-4.17	LLOYD C. ARNOLD AND JUDITH C ARNOLD	863	511
33	CVX936589	GG	5-9-4.18	LLOYD C. ARNOLD AND JUDITH C ARNOLD	863	511
34	CVX936589	HH	5-9-4.15	LLOYD C. ARNOLD AND JUDITH C ARNOLD	863	511
35	CVX936589	II	5-9-4.14	LLOYD C. ARNOLD AND JUDITH C ARNOLD	863	511
36	CVX868468	JJ	5-9-4.10	DEBORAH S. MIDCAP	737	260
37	CVX935273	KK	5-9-35	PAUL PARSONS ET UX	853	430
38	CVX868688	LL	5-9-4.8	THOMAS E. MIDCAP FRED A M MIDCAP	738	482
39	CVX935271	MM	5-9-35.1	CHARLES W. MILLER	853	59
40	Q081124002	NN	5-9-2	JAMES REDMAN LEGG II ET AL	879	580
41	Q080154002	OO	5-9-2.2	KENNETH EUGENE WHITE AND LESLIE A WHITE	879	577
42	Q081123002	PP	5-9-2.1	JEFFREY L LEGG	879	575
43	10*21546	QQ	5-8-7	EDWIN C MILLER AND KIMBERLY ANN MILLER	957	257

FILE NO. 8796P21HUR2.dwg
OLD CROW NORTH 21HU REV4

DATE FEBRUARY 28, 20 20

REVISED AUGUST 3, 2020 & FEBRUARY 11, 2022

OPERATORS WELL NO. OLD CROW N-21HU

API WELL NO. 47 — 051 — 02335
STATE COUNTY PERMIT



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



P.S.
677

Gregory A. Smith

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

DESIGNATED AGENT DARREN BROWN
CT CORPORATION
ADDRESS 5098 WASHINGTON ST. W STE. 407
CHARLESTON, WV 25313-1561

COUNTY NAME

PERMIT