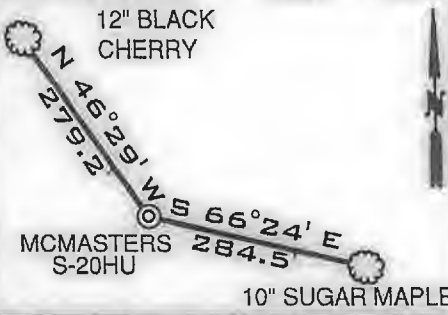


MCMASTERS S-20HU UTICA UNIT - 553.1085± ACRES TUG HILL OPERATING

TOP HOLE LATITUDE: 39°47'30"
BOTTOM HOLE LATITUDE: 39°45'00"

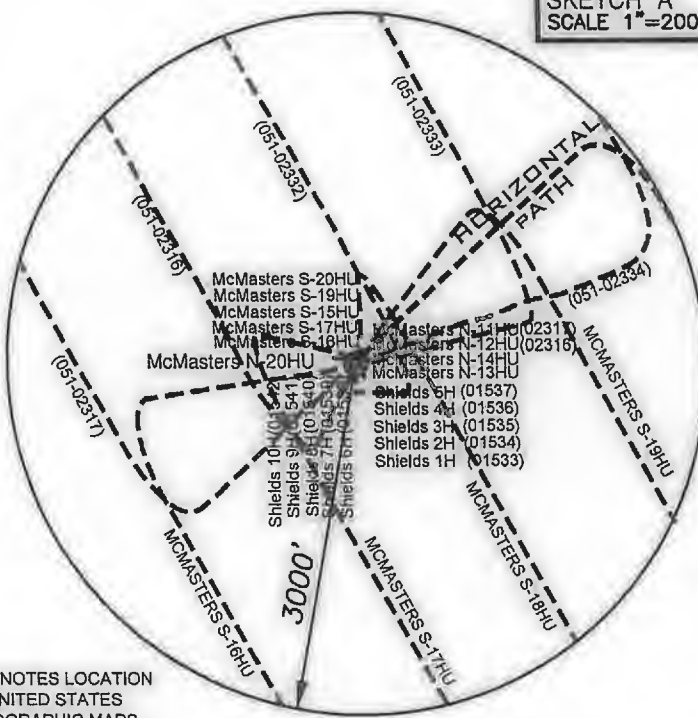
REFERENCES SCALE 1"=300'



LINE	BEARING	DISTANCE
L1	N 74°22' W	1451.07'
L2	S 40°35' W	1372.98'
L3	N 47°51' E	2,589.94'

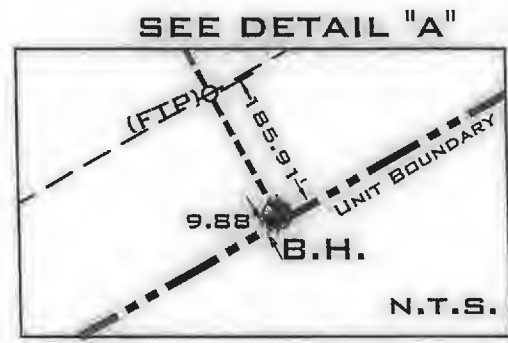
LEGEND

- LEASE TRACTS
- SURFACE TRACTS
- WELL LATERAL
- POINT PLEASANT LEGS
- UNIT BOUNDARY
- LEASE # (SEE 6A1 FORM)
- 400' BORE PATH OFFSET
- 500' WELL BORE OFFSET
- (FTP) PROPOSED FIRST TAKE POINT
- (LTP) PROPOSED LAST TAKE POINT



02/10/2023

SURFACE HOLE	
UTM. NAD83, ZONE 17 IN METERS	
N)	4,401,175.17
E)	518,211.90
LANDING POINT 1	
UTM. NAD83, ZONE 17 IN METERS	
N)	4,401,568.86
E)	519,010.80
BOTTOM HOLE	
UTM. NAD83, ZONE 17 IN METERS	
N)	4,399,961.42
E)	519,921.60



- NOTES**
- BORE PATH BASED ON GRID NORTH.
 - NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
 - OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2019. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
 - WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
 - ALL DEEP WELLS SHOWN ON THIS PLAT.
 - BOUNDARIES ALONG ROADWAYS ARE BASED UPON MEMORANDUM BY DICKIE, MCCAMEY & CHILCOTE, P.C. FILE 0058304.0401147

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 62°12' E	100.44'	197.73'	101.55'
C2	S 87°17' E	120.17'	237.45'	121.49'
C3	S 65°36' E	117.09'	430.51'	117.46'
C4	S 52°32' E	139.92'	732.82'	140.13'
C5	S 41°59' E	210.63'	1192.62'	210.90'
C6	S 32°50' E	287.05'	1849.88'	287.34'

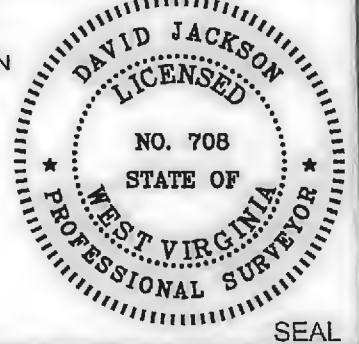
FILE NUMBER _____
 DRAWING NUMBER: MCMASTERS_S-20HU_REV2
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

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

David L Jackson

P.S. 708

JACKSON SURVEYING INC.
 P.O. Box 1460
 Clarksburg, WV 26302
 304-623-5851



WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET, SE
 CHARLESTON, WV 25304

DATE: JANUARY 06, 2023
 OPERATORS WELL NO. MCMASTERS S-20HU
 API WELL NO. 47-051-02489
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION X STORAGE DEEP X SHALLOW

LOCATION ELEVATION 1207.50' WATERSHED (HUC 10) FISH CREEK (HUC-10)
 DISTRICT FRANKLIN COUNTY MARSHALL
 QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 FORM

SURFACE OWNER ROBERT L. SHIELDS, ET AL ACREAGE 104.11
 OIL & GAS ROYALTY OWNER ROBERT L. SHIELDS, ET AL LEASE ACREAGE 104.11
 PROPOSED WORK: DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY)
 PLUG & ABANDON CLEAN OUT & REPLUG

TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TVD: 11,462' TMD: 18,308'
 WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DARREN BROWN, CT CORP
 ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107 ADDRESS 5098 WASHINGTON STREET WEST, SUITE 407 CHARLESTON, WV 25313-1561

form ww6

(TH) 11,447'

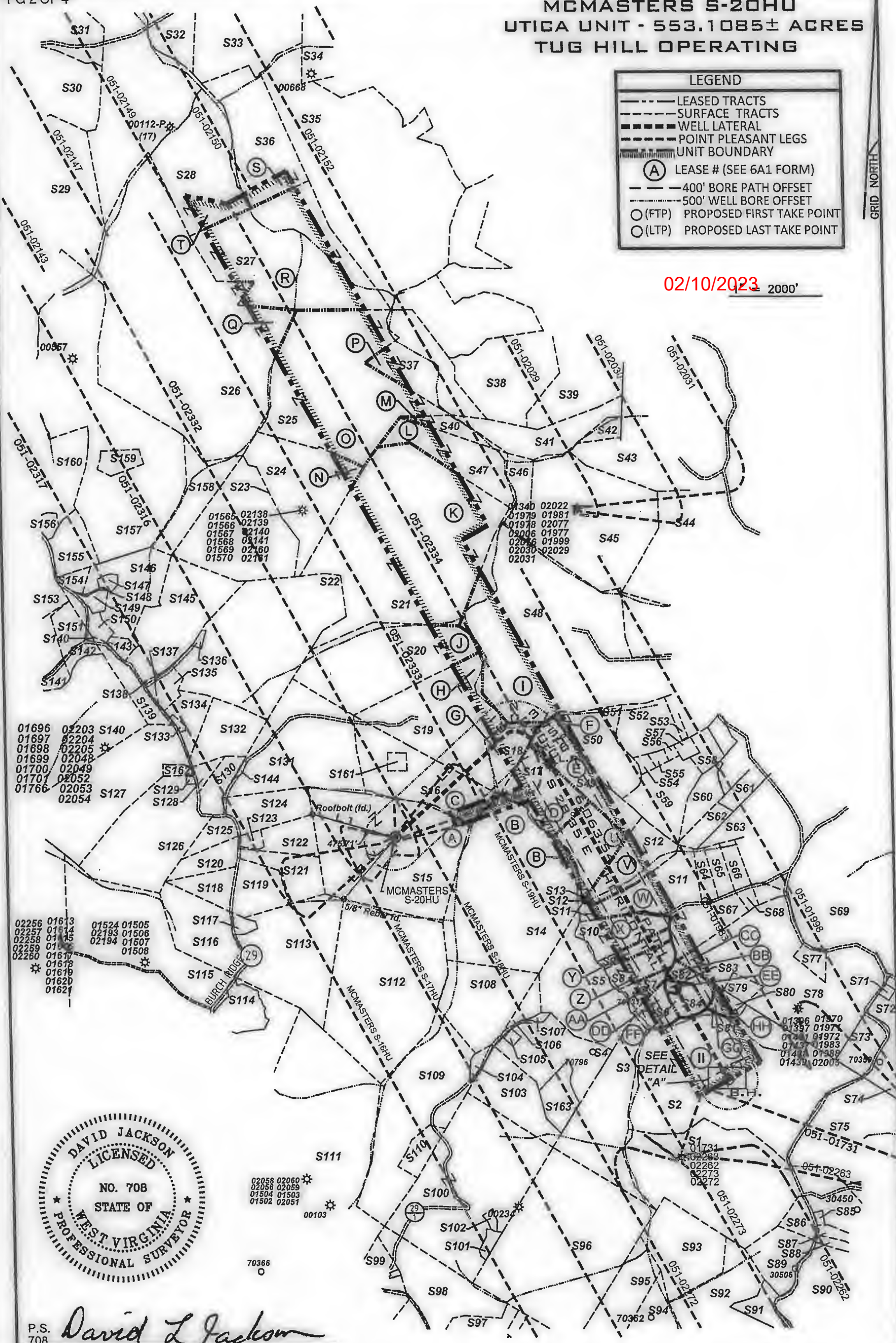
(BH) BOTTOM HOLE LONGITUDE: 80°45'00"
(TH) TOP HOLE LONGITUDE: 80°45'00"
(BH) 264'

MCMASTERS S-20HU UTICA UNIT - 553.1085± ACRES TUG HILL OPERATING

LEGEND

- LEASE TRACTS
- SURFACE TRACTS
- WELL LATERAL
- POINT PLEASANT LEGS
- UNIT BOUNDARY
- (A) LEASE # (SEE 6A1 FORM)
- 400' BORE PATH OFFSET
- 500' WELL BORE OFFSET
- (FTP) PROPOSED FIRST TAKE POINT
- (LTP) PROPOSED LAST TAKE POINT

02/10/2023 2000'



P.S. 708 *David L Jackson*



TUG HILL OPERATING

OPERATOR'S
WELL #: MCMASTERS S-20HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47-051-02481

WELL PLAT
PAGE 2 OF 4
DATE: 12/21/2022

form wv6

MCMASTERS S-20HU UTICA UNIT - 553.1085± ACRES TUG HILL OPERATING

Parcels Within Unit Boundary				
Tag	Number	Tax Map - Parcel	Surface Owner	Acres
A	515	05-18-02	ROBERT L. SHIELDS & DONALD SHIELDS	104.11
B	514	05-18-23	XCL MIDSTREAM OPERATING, LLC	110.0
C	516	05-18-03	OLAN V. & PATRICIA E. RUTAN	43.677
D	517	05-18-06	ADAM & JESSE L. ROBINSON	26.0
E	549	05-18-15.3	ADAM & JESSE L. ROBINSON	26.44
F	550	05-18-15.4	DAVID R. ANDERSON	22.34
G	518	05-18-05	TERRY MELOTT	8.14
H	519	05-18-04	OLAN V. & PATRICIA E. RUTAN	65.89
I	548	05-15-10	MARK STANLEY RUCKMAN	153.75
J	520	05-15-11	DIANA HENRY HAYNES & CAROL HENRY	65.29
K	521	05-15-12	JOHN DAVID PETROCK & THOMAS ANDREW PETROCK	150.23
L	547	05-15-14	JOHN DAVID PETROCK & THOMAS ANDREW PETROCK	25.0
M	540	05-15-02	JOHN DAVID PETROCK & THOMAS ANDREW PETROCK	5.0
N	524	05-15-15	ROBERT L. SHIELDS & DONALD SHIELDS	49.0
O	525	05-15-01	MARCUS SHARP	121.0
P	537	05-15-03	MARK S. & LINDA K. RUCKMAN	36.10
Q	526	05-14-03	RALPH D. & SALLY JANE HOYT	222.16
R	527	05-11-15	LIONEL L. PERSINGER, ET UX	93.0
S	536	05-12-11	WESLEY R. BRYAN & WESLEY R. BRYAN II	52.478
T	528	05-12-12.1	LIONEL L. PERSINGER, ET UX	148.09
U	513	05-18-07	ADAM & JESSE L. ROBINSON	24.22
V	512	05-18-16	ADAM & JESSE L. ROBINSON	17.768
W	511	05-18-13	SOUTHERN COUNTRY FARMS, INC.	11.054
X	510	05-18-59	SOUTHERN COUNTRY FARMS, INC.	15.79
Y	39	05-18-30	MARY & DANIEL ROBINSON	5.46
Z	38	05-18-13.10	CARL BERG	10.88
AA	57	05-18-29	CARL G. BERG	5.319
BB	582	05-18-13.8	LORI D. CARPENTER	5.545
CC	578	05-17-10	JAMES A. CORLEY, ET AL	92.61
DD	56	05-18-31	JACOB RASTALL	6.54
EE	583	05-18-32.1	LORI D. CARPENTER	5.545
FF	584	05-18-32	JACOB RASTALL	5.335
GG	581	05-17-12	JAMES A. & JILL C. CORLEY	3.35
HH	580	05-17-12.1	WILLIAMS OHIO VALLEY MIDSTREAM, LLC	1.67
II	52	05-17-11	KENNETH N. CORLEY, ET UX	120.0

Adjoining Parcels Ownership Table			
Number	Tax Map - Parcel	Surface Owner	Acres
51	05-23-07	TERRY E. SIMMS, ET UX	123.09
53	05-23-06	JAMES A. CHANNING, ET AL	48.0
54	05-18-21	CURTIS E. & MICHELLE J. HALL	32.569
55	05-18-20	WAYNE E. CHANNING, ET AL	44.47
522	05-19-13	RONA LEE RICE & CHARLES FRANKLIN MCCARDLE	94.925
523	05-14-15	ROBERT L. SHIELDS & DONALD SHIELDS	104.11
529	05-12-14	LINDA HAMILTON, ET AL	117.495
530	05-12-13	LINDA HAMILTON, ET AL	41.887
531	05-12-08	ANITA RAY MILLER-LIFE	100.35
532	05-12-12	LIONEL L. PERSINGER, ET UX	45.0
533	05-11-21	KAREN REED, ET AL	112.67
534	05-11-17	KEVIN CORLEY, ET UX	36.13
535	05-11-14	HIRAMS ESTATE FAMILY, LTD, LLP	158.054
538	05-15-05	MARK S. & LINDA K. RUCKMAN	35.0
539	05-15-06	MARK S. & LINDA K. RUCKMAN	42.5
541	05-15-6.1	MARK S. & LINDA K. RUCKMAN	39.40
542	05-15-07	XCL MIDSTREAM OPERATING, LLC	4.5
543	05-15-08	XCL MIDSTREAM OPERATING, LLC	77.11
544	05-16-23.5	MARSHALL COUNTY COAL RESOURCES, INC	15.09
545	05-15-09	CNX LAND RESOURCES, INC	81.98
546	05-15-13	CNX LAND RESOURCES, INC	11.0
551	05-18-15	NANCY MARIE ANDERSON & DAVID VESPER ANDERSON	2.495
552	05-18-11.1	NANCY MARIE ANDERSON & DAVID VESPER ANDERSON	18.0
553	05-18-11.2	EDWARD LEE BURGE JR.	2.0
554	05-18-10.1	DAVID V. ANDERSON, ET UX	1.65
555	05-18-10.2	DAVID ANDERSON, ET UX	1.377
556	05-18-10	DAVID & NANCY ANDERSON	0.907
557	05-18-12	JOSEPH E. SR. & MELANIE S. BECK	2.270
558	05-18-15.1	JASON BLAIR	5.948
559	05-18-15.5	DARRELL BOLEY	23.547
560	05-18-13.3	ROBERT G. CLOSTERMAN	9.813
561	05-18-14	MICHAEL FINCHAM & KEZIA WINTERS	6.386
562	05-18-17	MICHAEL FINCHAM & KEZIA WINTERS	6.555
563	05-18-13.1	CORY A. HOLT	9.248
564	05-18-34	JODI A. & GARY A. HALL	5.002
565	05-18-13.13	GLENN E. & SANDRA K. WHISLER	5.59
566	05-18-13.6	GLENN EUGENE WHISLER, ET UX	5.384
567	05-18-33	SANDRA & GLENN WHISLER	5.343
568	05-18-48	GLENN E. & SANDRA K. WHISLER	2.11
569	05-17-10.3	JAMES A. & JILL C. CORLEY	37.39
570	05-17-09	LLOYD RICHARD OLIVER, ET UX	61.6
571	05-17-9.1	JERI J. WHITE	1.0
572	05-17-9.2	JERI J. WHITE	7.136
573	05-17-9.3	JAMES A. CORLEY, ET UX	12.478
574	05-17-9.4	VICKI L. BOWEN HRS. JEREMY S. BOWEN -LIFE	60.3
575	05-17-11.1	RANDY W. FRANCIS, ET UX	67.0
576	05-24-01	LINDA L. HENDRICKSON	175.0
577	05-17-10.1	JAMES A. & JILL C. CORLEY	4.51
579	05-17-10.5	WILLIAMS OHIO VALLEY MIDSTREAM, LLC	4.24
585	05-23-7.1	RANDY W. & JESSICA L. FRANCIS	0.549
586	05-23-7.2	FLORELLA LOU WEIGAND	6.354
587	05-24-5.1	JAMES D. WATKINS, ET UX	4.60
588	05-24-5.2	JAMES D. WATKINS, ET UX	3.351
589	05-24-5.5	SONNY & LINDA TAGG	17.194
590	05-24-05	ROBERT C. FRANCIS, ET UX-LIFE	145.78
591	05-24-3.1	T.H. EXPLORATION II, LLC	5.50
592	05-24-5.4	THOMAS V. TUTTLE, ET UX	38.224
593	05-23-8.1	WILLIAM & VIRGINIA ROUPE	34.0
594	05-23-9.3	LINDA D. GREATHOUSE	17.5
595	05-23-08	CARL DAVID & SUZANNE L. GUSEMAN	29.5
596	05-23-05	DANIEL D. RHYAND	118.5
597	05-23-16	ROY FRIEND YOHO SR.	18.03
598	05-23-18	PROCTOR RIDGE, LLC	35.38
599	05-23-18.1	MARK A. YOHO	7.8
5100	05-23-04	PROCTOR RIDGE, LLC	100.7
5101	05-23-4.1	XCL MIDSTREAM OPERATING, LLC	2.16
5102	05-23-4.2	XCL MIDSTREAM OPERATING, LLC	1.17
5103	05-23-03	PROCTOR RIDGE, LLC	50.0
5104	05-23-2.1	WILLIAM L. & JANICE M. WAYNE	2.364
5105	05-18-21.2	DAVID P. LASSAN - LIFE	1.0
5106	05-18-21.1	JASON PALERMO & WENDY MOORE	5.47
5107	05-18-21.3	XCL MIDSTREAM OPERATING, LLC	0.811
5108	05-18-22	JASON PALERMO & WENDY MOORE	30.345
5109	05-23-02	DANIEL J. & DANIELLE D. LILLEY	70
5110	05-23-2.2	JESSICA N. & ANDREW L. JONES	7.636

02/10/2023

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WV Department of
Environmental Protection



P.S. 708 David L Jackson



TUG HILL OPERATING

OPERATOR'S
WELL #: MCMASTERS S-20HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47-051-02467

WELL PLAT
PAGE 3 OF 4
DATE: 12/21/2022

**MCMASTERS S-20HU
UTICA UNIT - 553.1085± ACRES
TUG HILL OPERATING**

Adjoining Parcels Ownership Table			
Number	Tax Map - Parcel	Surface Owner	Acres
S111	05-23-01	PATRICIA ACCETTOLO, ET AL	146.66
S112	05-18-24	DUANE BRUNN	102.0
S113	05-19-18	MARK E. YOHO, ET UX	55.948
S114	05-22-5.1	WILLIAMS OHIO VALLEY MIDSTREAM, LLC	12.875
S115	05-22-05	CNX RCPC, LLC	134.425
S116	05-19-18.2	PAUL V. & CAROL NEELY	32.672
S117	05-19-18.1	MARK E. YOHO, ET UX	2.57
S118	05-19-25	DAVID E. YOHO & MARK E. YOHO	9.976
S119	05-19-24	DAVID E. YOHO	15.436
S120	05-19-28	ROGER J. & BETH E. JAMES	9.977
S121	05-19-17	MARK A. YOHO	15.263
S122	05-19-16	ROBERT L. SHIELDS & DONALD SHIELDS	11.612
S123	05-19-16.1	ROBERT L. SHIELDS, REBECCA A. SHIELDS & ROBERTA CAMPBELL	2.307
S124	05-19-14	JAMES & SHERRY BEEGLE	18.356
S125	05-19-27	DAVID E. YOHO	7.041
S126	05-19-28	DAVID E. YOHO	56.899
S127	05-19-19	RUSSELL & MARY BLAKE	66.4
S128	05-19-30.1	ERIC R.W. & ASHLEY A. HUGGINS	3.911
S129	05-19-32	JASPER N. BURCH, ET AL - TRUSTEES	0.397
S130	05-19-31	CHARLES F. & DIANA L. HAYNES	8.779
S131	05-18-01	DIANA HENRY HAYNES & CAROL C. HENRY	62.908
S132	05-19-30	ERNIE & TAMMY ANDERSON	19.037
S133	05-19-15	CARLY HERRAN	0.72
S134	05-19-29	ERNIE L. & TAMMY L. ANDERSON	10.961
S135	05-19-12	ERNIE L. ANDERSON, ET UX	5.33
S136	05-14-13.1	DONALD SHIELDS	0.8
S137	05-19-11	ERNIE L. ANDERSON, ET UX	0.08
S138	05-19-10	ERNIE L. ANDERSON, ET UX	0.8125
S139	05-19-09	PENNY ELAINE ASHCRAFT	10.44
S140	05-19-20	WILBERT H. BUNGARD, ET UX	114.989
S141	05-19-20.3	SIDNEY HARMON	3.715
S142	05-19-20.1	JOHN J. EBERT-LIFE	3.848
S143	05-19-7.5	ADAM T. & JESSE L. ROBINSON	2.64
S144	05-18-1.1	CHARLES F. & DIANA L. HAYNES	0.392
S145	05-19-08	CNX RCPC, LLC	40.0
S146	05-14-07	OLAN V. RUTAN, ET UX	32.4801
S147	05-19-7.4	OLAN V. RUTAN, ET UX	1.787
S148	05-19-7.3	OLAN V. RUTAN, ET UX	0.341
S149	05-19-7.2	OLAN RUTAN	2.783
S150	05-19-7.1	ROBERT L. SHIELDS, ET UX	3.399
S151	05-19-20.2	CASANDRA L. HARMON	7.448
S153	05-19-05	MARGIRENE KEEFE	126.03
S154	05-19-06	BELINDA KAY MEADOWS, REBECCA ANN SHIELDS & OLAN V. RUTAN	5.1099
S155	05-14-11	DALE R. GALLAHER & HARRY E. GALLAHER	12.0
S156	05-14-10.4	ADAM T. & JESSE L. ROBINSON	3.343
S157	05-14-12	DALE R. GALLAHER & HARRY E. GALLAHER	135.10
S158	05-14-14	ROBERT L. SHIELDS & DONALD SHIELDS	29.05
S159	05-14-12.1	HENRY WILSON PLUNKERT JR.	5.0
S160	05-14-10	WANDA P. RINE-LIFE	107.372
S161	05-18-3.1	NIKKI L. & JONATHAN STEVENS	2.223

Lease ID	TMF	Tag	Grantor, Lessor, Etc.	Prod Book / Page
10*1411E	5-18-2	A	DONALD SHIELDS, ET AL	665 551
10*14030	5-18-23	B	LOIS V YOHO, ET AL	668 636
10*14109	5-18-3	C	MARSHA M RUTAN, ET AL	940 431
10*17454	5-18-6	D	MARGARET A BONNETT, ET AL	940 429
10*17222	5-18-15.3	E	JAMES W AND DOLLIE M FOSTER	961 413
10*22432	5-18-15.4	F	EDWARD LEE BURGE SR	704 26
10*19140	5-18-5	G	TERREL L MELDITT	813 111
10*19032	5-18-4	H	JAN I ARNOLD MARSHA A ARNOLD, ET AL	741 75
10*19339	5-15-10	I	MARK STANLEY RUCKMAN	746 5
10*19018	5-15-11	J	BENJAMIN FRANKLIN HENRY FREDRICK ALLEN HENRY	741 58
10*19337	5-15-12	K	JACK PETROCK MATTIE PETROCK	741 58
10*19337	5-15-14	L	JACK PETROCK MATTIE PETROCK	798 551
10*19309	5-15-2	M	KAREN I DENNY, ET AL	869 367
10*14116	5-15-15	N	DONALD SHIELDS, ET AL	865 487
10*14042	5-15-1	O	RALPH R TAYLOR, ET AL	806 39
10*19030	5-15-3	P	KATHLEEN R CUSTEAD, ET AL	866 35
10*14067	5-14-13	Q	REVA FRANZE	819 316
10*14911	5-11-15	R	FORREST MILLER, ET AL	665 554
10*19009	5-12-11	S	LAMDYNE BAKER, ET AL	976 617
10*15918	5-13-11.1	T	LIONEL L AND MARY LEE PERSINGER	756 85
10*14503	5-18-7	U	IMA LEE YOHO	756 85
10*14503	5-18-16	V	IMA LEE YOHO	666 489
10*14099	5-18-11	W	SOUTHERN COUNTRY FARMS INC, ET AL	666 489
10*14099	5-18-29	X	SOUTHERN COUNTRY FARMS INC, ET AL	666 489
10*14099	5-18-30	Y	SOUTHERN COUNTRY FARMS INC, ET AL	666 489
10*14099	5-18-13.10	Z	SOUTHERN COUNTRY FARMS INC, ET AL	666 489
10*17431	5-18-29	AA	SOUTHERN COUNTRY FARMS INC	938 448
10*17456	5-18-23.8	BB	LORI D CARPENTER	941 223
10*14095	5-17-10	CC	JAMES A AND JILL C CORLEY, ET AL	666 545
10*17780	5-18-31	DD	KENNETH E RASTALL, ET AL	932 434
10*17456	5-18-32.1	EE	LORI D CARPENTER	941 223
10*17780	5-18-32	FF	KENNETH E RASTALL, ET AL	932 434
10*14134	5-17-13	GG	JAMES A AND JILL C CORLEY	706 130
10*14134	5-17-12.1	HH	JAMES A AND JILL C CORLEY	706 130
10*14138	5-17-11	II	SHARON MDCAP	697 152

02/10/2023

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WV
Environmental Protection



P.S. 708 *David L Jackson*



**TUG HILL
OPERATING**

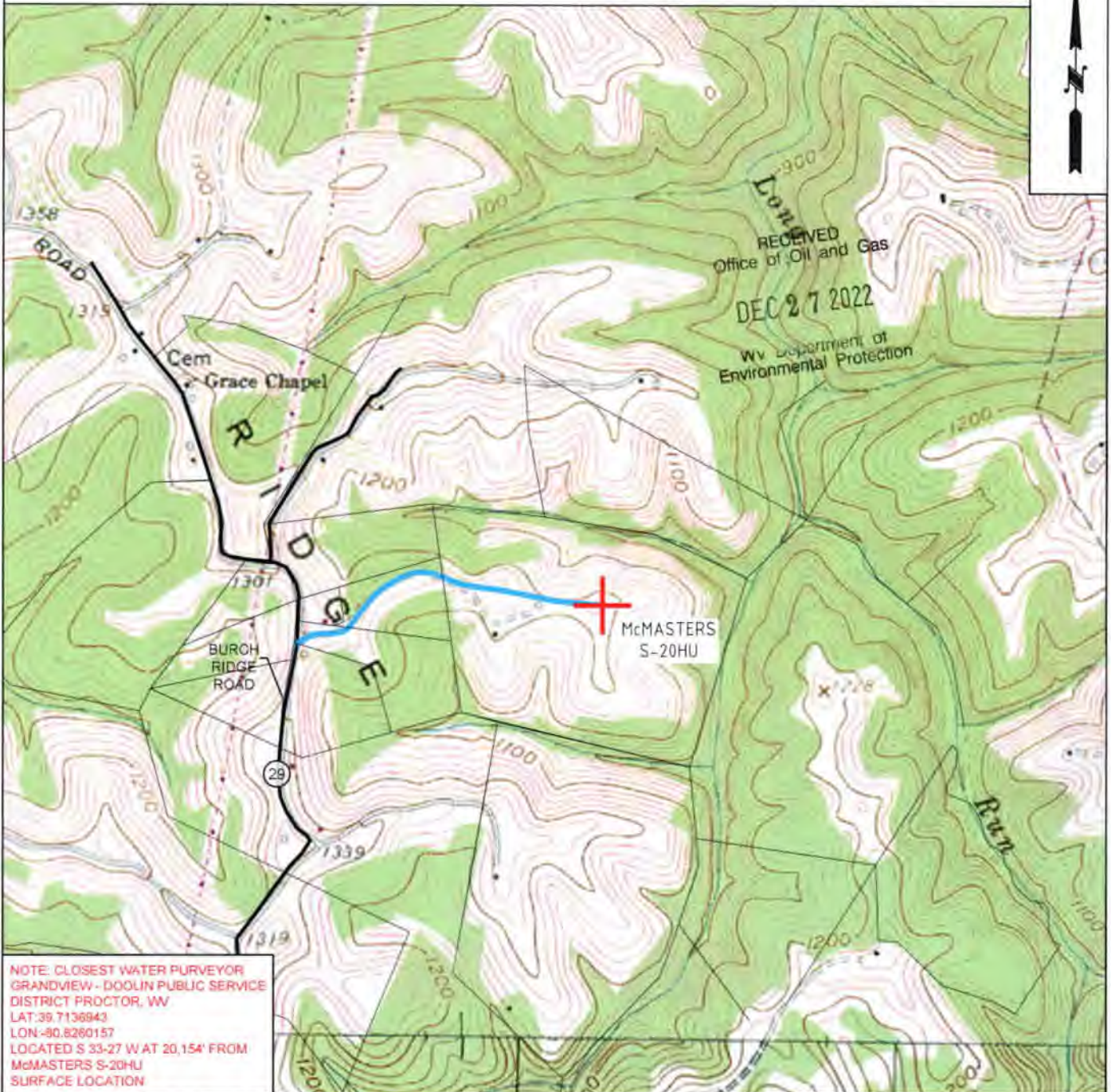
OPERATOR'S
WELL #: MCMASTERS S-20HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47-051-

WELL PLAT
PAGE 4 OF 4
DATE: 12/21/2022

WW-9

PROPOSED McMASTERS S-20HU

SUPPLEMENT PG 2



NOTE: CLOSEST WATER PURVEYOR
GRANDVIEW - DOOLIN PUBLIC SERVICE
DISTRICT PROCTOR, WV
LAT: 39.7136943
LON: -90.8260157
LOCATED S 33-27 W AT 20,154' FROM
McMASTERS S-20HU
SURFACE LOCATION



OPERATOR 494510851
TUG HILL OPERATING, LLC
380 SOUTHPOINTE BLVD
SUITE 200
CANONSBURG, PA 15317

TOPO SECTION
POWHATAN POINT 7.5'
SCALE:
1" = 2000'

LEASE NAME
McMASTERS
DATE:
DATE: 6-4-2020