

WOODFORD LEASE WELL 1HM 531.3379± ACRES

(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

SEE DETAIL "A"

SEE DETAIL "B"

SEE DETAIL "C"

SEE DETAIL "D"

SEE DETAIL "E"

SEE DETAIL "F"

SEE DETAIL "G"

SEE DETAIL "H"

SEE DETAIL "I"

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SEE DETAIL "AO"

SEE DETAIL "AP"

SEE DETAIL "AQ"

SEE DETAIL "AR"

REFERENCES
SCALE 1"=400'
20" BLACK CHERRY
WOODFORD 1HM
18" SUGER MAPLE

WOODFORD 1HM (02113)
WOODFORD 1HM (02152)
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WOODFORD 1HM (02170)

NOTE: PERMITTED COORDINATES ARE ON PAGE 2.

SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,406,022.20
E) 516,090.43
LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,405,958.58
E) 515,536.91
BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,404,059.16
E) 516,637.03

DETAIL SKETCH "A" SCALE 1"=100'

WOODFORD 1HM (02152)
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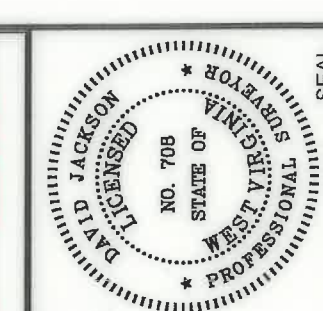
CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 79°37' V	25.48'	61.79'	25.50'
C2	N 64°13' V	46.12'	254.10'	46.19'
C3	N 75°56' V	73.18'	201.85'	73.69'
C4	N 74°09' V	52.33'	97.02'	52.99'

- BORE PATH BASED ON GRID NORTH.
- NO WATER WELLS WITHIN 250' OF WELL. NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
- OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2017. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
- WELL LOCATION REFERENCES ARE BASED UPON THE "MAGNETIC MERIDIAN."

LINE	BEARING	DISTANCE
L1	N 12°25' W	1743.55'
L2	N 49°24' E	2417.44'
L3	N 70°39' W	47.35'
L4	N 70°16' W	1374.50'

LEGEND

- LEASSED TRACTS
- SURFACE TRACTS
- UNIT BOUNDARY
- LEASE # (SEE GA1 FORM)



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 Jackson

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

P.S. 708

FILE NUMBER _____

DRAWING NUMBER WOODFORD_WP_1HM

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

PROVEN SOURCE OF ELEVATION SUBMETER MAPPING

GRADE GPS

WOODFORD LEASE WELL 1HM 531.3379± ACRES

DATE: JULY 20, 2020

OPERATORS WELL NO. Woodford 1HM

API WELL NO. 47-051-02113

STATE COUNTY PERMIT

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL

(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X

LOCATION ELEVATION 1234.05' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 Form

SURFACE OWNER CNX RPC, LLC ACREAGE 155.7119

OIL & GAS ROYALTY OWNER HG ENERGY II APPALACHIA LC (TRACT 5-7-43) LEASE ACREAGE 155.7119

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION

PERFORMATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY) **ASDRILLED**

TARGET FORMATION MARCELLUS

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

ESTIMATED DEPTH TMD: 6,435' TMD: 14,644'

PLUG & ABANDON CLEAN OUT & REPLUG

WOODFORD LEASE WELL 1HM 531.3379± ACRES

(+)DENOTES LOCATION
ON UNITED STATES
TOPOGRAPHIC MAPS

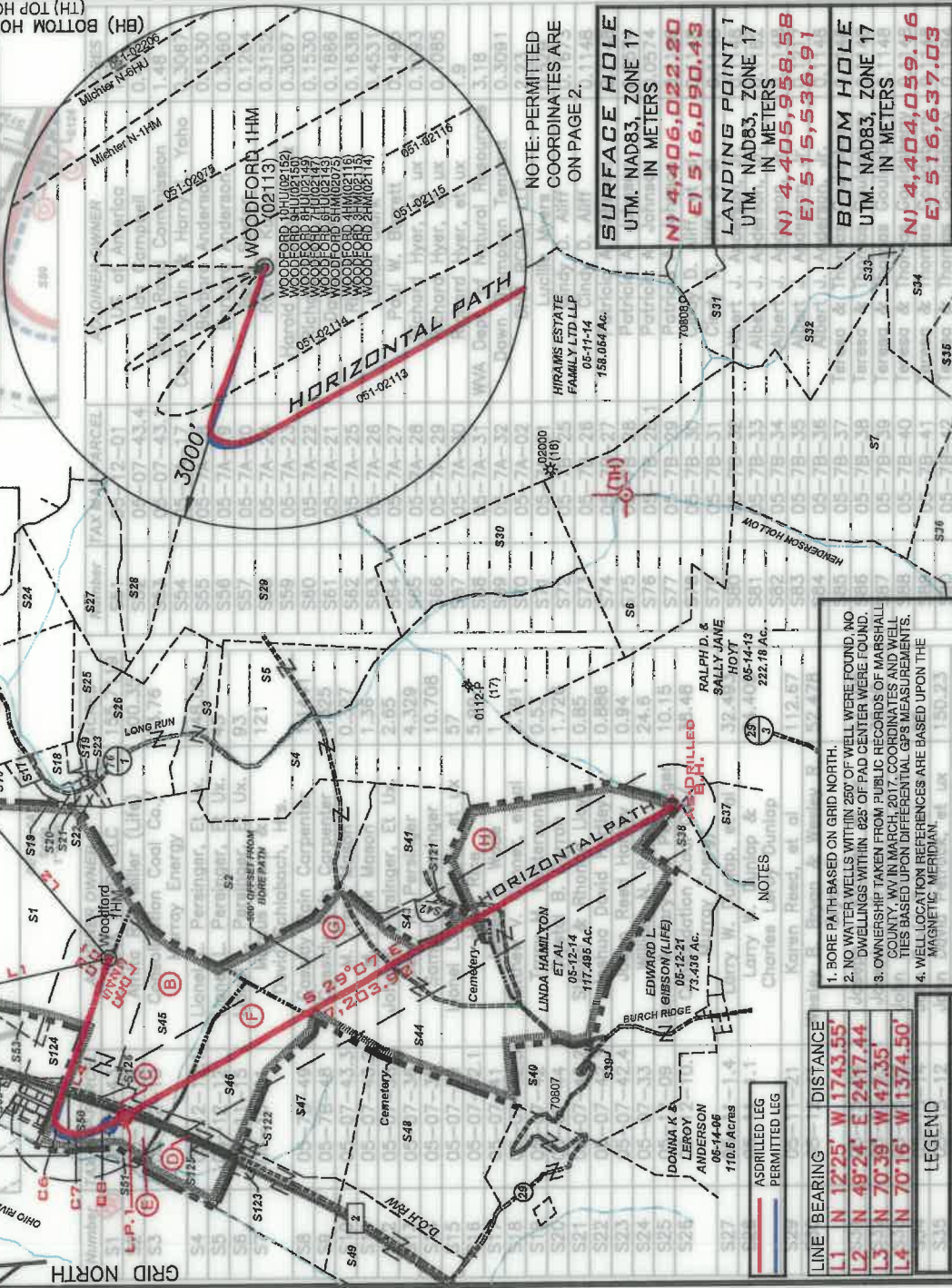
DETAIL
SKETCH "A"
SCALE 1"=100'

REFERENCES
SCALE 1"=400'
20" BLACK
CHERRY
S 71°51'E
324.9'
WOODFORD 1HM
18" SUGER
MAPLE

(BH) BOTTOM HOLE LONGITUDE:
80°47'30"

(TH) TOP HOLE LONGITUDE:
80°47'30"

GRID NORTH



NOTE: PERMITTED
COORDINATES ARE
ON PAGE 2.

SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,406,022.20
E) 516,090.43

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,405,958.58
E) 515,536.91

BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,404,059.16
E) 516,637.03

LINE	BEARING	DISTANCE
L1	N 12°25' W	1743.55'
L2	N 49°24' E	2417.44'
L3	N 70°39' W	47.35'
L4	N 70°16' W	1374.50'

LEGEND	
	LEASE TRACTS
	SURFACE TRACTS
	UNIT BOUNDARY
	LEASE # (SEE 6A1 FORM)

1. BORE PATH BASED ON GRID NORTH.
2. NO WATER WELLS WITHIN 250' OF WELL WERE FOUND. NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
3. OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV. COORDINATE POINTS ARE BASED ON THE NAD 83 MAGNETIC MERIDIAN.
4. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.

CURVE	CHORD	BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 79°37' V	25.49'	61.79'	23.56'	270.18'
C2	N 64°15' V	46.18'	254.10'	46.18'	504.84'
C3	N 75°56' V	75.18'	201.85'	75.52'	305.57'
C4	N 74°09' V	52.33'	97.82'	97.82'	143.49'

FILE NUMBER 05-12-13
DRAWING NUMBER WOODFORD_WP_1HM
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

P.S. 708
David L Jackson
JACKSON SURVEYING INC.
P.O. Box 1480
Clarksburg, WV 26302
304-923-8851



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

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

LOCATION ELEVATION 1234.05' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER
DISTRICT FRANKLIN COUNTY MARSHALL
QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 Form

SURFACE OWNER CNX RCPC, LLC
OIL & GAS ROYALTY OWNER HG ENERGY II APPALACHIA LC (TRACT 5-7-43)
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY) **ASDRILLED**

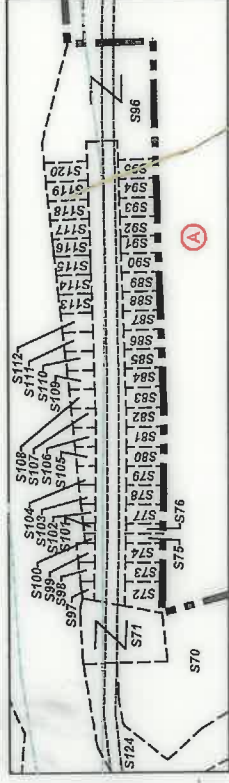
TARGET FORMATION MARCELLUS
WELL OPERATOR TUG HILL OPERATING, LLC
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500
FORT WORTH, TX 76107

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

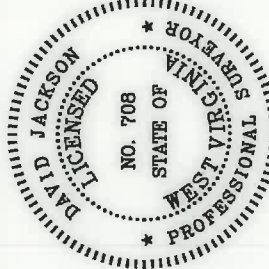
ACREAGE 155.7119
LEASE ACREAGE 155.7119
FRAC PLUG OFF OLD FORMATION

ESTIMATED DEPTH TMD: 6,435' TMD: 14,644'
CLEAN OUT & REPLUG

**WOODFORD LEASE
WELL 1HM
531.3379± ACRES**



Number	TAX MAP-PARCEL	ADJOINER OWNER	ACRES	ADJOINER OWNER	ACRES
S1	05-07-43	CNX RCPC, LLC	155.7119	US of America	1.68
S2	05-12-08	Amita Rae Miller (Life)	100.35	Iida Campbell	0.403
S3	05-12-10	Consolidation Coal Co./ Murray Energy	13.78	State Road Commission	1.48
S4	05-12-12.1	Lionel L. Persinger, Et Ux.	148.09	Carol Martin & Harry L. Yoho	0.3067
S5	05-12-12	Lionel L. Persinger, Et Ux.	45	Barbara Anderson	0.1530
S6	05-11-15	Lionel L. Persinger, Et Ux.	93	Barbara Anderson	0.3060
S7	05-15-01	Marcus Sharp & David Schlabach, Hrs.	121	Betty Sexton	0.1204
S8	05-7B-49	Cassidy Rain Carpenter	1.1441	Rick A. Kosky	0.3152
S9	05-7B-48	Cassidy Rain Carpenter	1.325	Harold S. Young, et ux	0.3067
S10	05-07-43.3	M. Frank Mason	0.327	Richard Hyer, et ux	0.1530
S11	05-07-43.2	M. Frank Mason	1.36	David A. Beyser	0.1866
S12	05-07-38	John K. Persinger, Et Ux.	2.65	Rick A. Kosky	0.1638
S13	05-07-36	John K. Persinger	4.329	Lance Clark	0.4531
S14	05-07-35	Samuel L. Persinger	10.708	Paul W. Barrett	0.1495
S15	05-07-39	Lionel L. Persinger, et ux	57	Richard Hyer, et ux	0.1093
S16	05-07-42.1	Holly Rice	5.99	Richard Hyer, et ux	0.1085
S17	05-07-41	James A. Wade	1	Richard Hyer, et ux	1.9
S18	05-07-42.5	Matthew V. Conner, et al	3.791	WMA Dept. of Natural Resources	3.18
S19	05-07-42	Tracy M. Kesterson	0.53	Dawn Thompson Tennant	0.3091
S20	05-07-44	Crystal B. Darrah	1.726	CNX RCPC, LLC	2.23
S21	05-07-42.2	Steven & Rhonda Lloyd	0.85	Lucille Myers	0.529
S22	05-07-42.3	Joshua David Hartley	0.886	Cindy D. Aliff	0.1673
S23	05-07-42.4	Jason Reed Hartley	0.94	Cindy D. Aliff	0.1148
S24	05-07-33	William N. Rouppe	24.6	Patricia A. Johnson	0.0574
S25	05-12-09	Lionel & Mary Lee Persinger	10.15	Patricia A. Johnson	0.0574
S26	05-12-10.1	Consolidation Coal Co./ Murray Energy	38.48	Patricia A. Johnson	0.1148
S27	05-11-1.4	Larry W. Dunlap, et al	32.493	Cindy D. Aliff, et al	0.1148
S28	05-11-1.1	Larry W. Dunlap & Charles Leroy Dunlap	34.405	Albert J. Anderson, Jr.	0.1148
S29	05-11-21	Karen Reed, et al	112.87	Albert J. Anderson, Jr.	0.1182
S30	05-12-11	Wesley B. Bryan & Wesley R. Bryan II	52.478	Albert J. Anderson, Jr.	0.1217
S31	05-15-04	Joseph J. Kramer, et ux	41.106	Albert J. Anderson, Jr.	0.1148
S32	05-15-03	Joseph J. Kramer, et ux	36.10	Teresa & Thomas Gouldsberry	0.1148
S33	05-15-02	John David Petrack, et ux	5	Teresa & Thomas Gouldsberry	0.1148
S34	05-15-14	John David Petrack, et ux	25	Teresa & Thomas Gouldsberry	0.1148
S35	05-15-12	John David Petrack, et ux	150.23	Teresa & Thomas Gouldsberry	0.1148
S36	05-15-15	Robert L. Shields, et al	49	Teresa & Thomas Gouldsberry	0.1194
S37	05-14-12	Dale R. Gallagher, et al	135.100	Teresa & Thomas Gouldsberry	0.1148
S38	05-14-10	Wanda P. Rine (Life)	107.372	Daniel D. & Mary E. Robinson	0.1148
S39	05-12-15	Woodland Hills Church of God Trs.	0.375	Daniel D. Robinson, et ux	0.1148
S40	05-12-21.1	Robert W. Jr. & Wendy L. Riggensbach	14.222	Daniel D. Robinson, et ux	0.1148
S41	05-12-13	Linda Hamilton, et al	41.887	Cindy D. Aliff	0.354
S42	05-12-7.1	Raymond K. Miller	1.609	Cindy D. Aliff	0.9471
S43	05-12-7.2	Raymond K. Miller	4.66	Patricia A. Johnson	0.0505
S44	05-12-07	Robert Wm. Riggensbach, et ux	104.231	Patricia A. Johnson	0.0287
S45	05-12-02	CNX RCPC, LLC	60.68	Patricia A. Johnson	0.0296
S46	05-12-03	CNX LAND, LLC	62.30	Patricia A. Johnson	0.0626
S47	05-12-05	CNX LAND, LLC	61.883	Cindy D. Aliff, et al	0.0712
S48	05-12-06	CNX RCPC, LLC	70.81	Cindy D. Aliff, et al	0.0763
S49	05-12-6.2	Consolidation Coal Co./ Murray Energy	25.50	Albert J. Anderson, Jr.	0.0849
S50	05-12-2.1	Consolidation Coal Co./ Murray Energy	22	Albert J. Anderson, Jr.	0.0903
			SURFACE HOLE	Albert J. Anderson, Jr.	0.0970
			UTM. NAD83, ZONE 17	Albert J. Anderson, Jr.	0.0911
			IN METERS	Teresa & Thomas Gouldsberry	0.1067
			N) 4,406,022.22	Teresa & Thomas Gouldsberry	0.1113
			E) 516,090.43	Teresa & Thomas Gouldsberry	0.1159
			LANDING POINT 1	Teresa & Thomas Gouldsberry	0.1199
			UTM. NAD83, ZONE 17	Teresa & Thomas Gouldsberry	0.1240
			IN METERS	Teresa & Thomas Gouldsberry	0.1286
			N) 4,406,011.91	Teresa & Thomas Gouldsberry	0.1331
			E) 515,507.92	Teresa & Thomas Gouldsberry	0.1377
			BOTTOM HOLE	Teresa & Thomas Gouldsberry	0.1418
			UTM. NAD83, ZONE 17	Daniel D. & Mary E. Robinson	0.1458
			IN METERS	Daniel D. & Mary E. Robinson	0.1504
			N) 4,404,058.87	Daniel D. Robinson, et ux	0.1550
			E) 516,635.51	Patricia L. Robinson	1.257
				Raymond K. Miller	0.113
				CNX RCPC, LLC	0.52
				CNX RCPC, LLC	0.93
				State Road Commission	17.62(Calc.)
				CSX Transportation	4.99(Calc.)
				Rt. 2	3.93(Calc.)
				Rt. 2	3.93(Calc.)



P.S. 708
David Jackson



TUG HILL
OPERATING

OPERATOR'S

WELL PLAT

API #: 47-051-02113

WELL #: Woodford 1HM

DISTRICT: Franklin

COUNTY: Marshall

STATE: WV

PAGE 2 OF 2

DATE: 07/20/2020