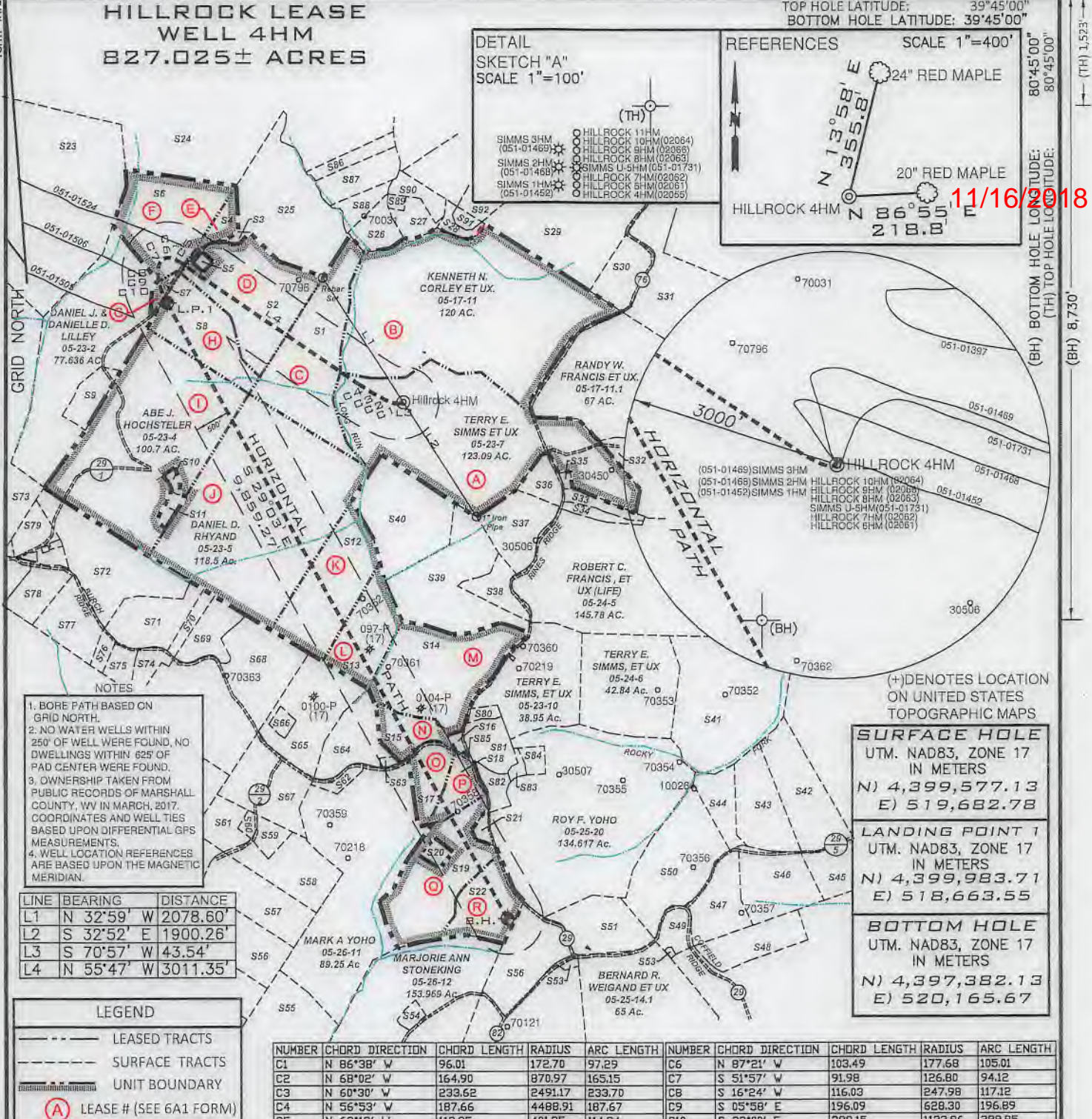
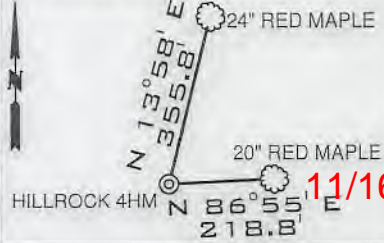


HILLROCK LEASE WELL 4HM 827.025± ACRES

DETAIL
SKETCH "A"
SCALE 1"=100'

REFERENCES
SCALE 1"=400'

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



- NOTES
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 IN MARCH, 2017. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
 4. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.

LINE	BEARING	DISTANCE
L1	N 32°59' W	2078.60'
L2	S 32°52' E	1900.26'
L3	S 70°57' W	43.54'
L4	N 55°47' W	3011.35'

LEGEND

- LEASED TRACTS
- SURFACE TRACTS
- UNIT BOUNDARY
- (A) LEASE # (SEE 6A1 FORM)

NUMBER	CHORD DIRECTION	CHORD LENGTH	RADIUS	ARC LENGTH	NUMBER	CHORD DIRECTION	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 86°38' W	96.01	172.70	97.29	C6	N 87°21' W	103.49	177.68	105.01
C2	N 68°02' W	164.90	870.97	165.15	C7	S 51°57' W	91.98	126.80	94.12
C3	N 60°30' W	233.62	2491.17	233.70	C8	S 16°24' W	116.03	247.96	117.12
C4	N 56°53' W	187.66	4488.91	187.67	C9	S 05°58' E	196.09	628.30	196.89
C5	N 63°13' W	113.85	401.35	114.24	C10	S 22°00' E	288.15	1123.96	288.95

(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,399,577.13
E) 519,682.78

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,399,983.71
E) 518,663.55

BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,397,382.13
E) 520,165.67

FILE NUMBER _____

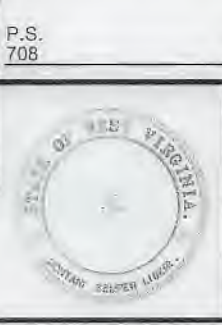
DRAWING NUMBER HILLROCK_4HM_REV_1

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

JACKSON SURVEYING INC.
P.O. Box 1460
Clarksburg, WV 26302
304-623-5951



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

DATE: JUNE 4, 2018
REVISED DATE: AUGUST 23, 2018
OPERATORS WELL NO. HILLROCK 4HM
API WELL NO. 47-051-02055
STATE WV COUNTY MARSHALL PERMIT

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

LOCATION ELEVATION 1219.50' WATERSHED (HUC 10) FISH CREEK
DISTRICT FRANKLIN COUNTY MARSHALL
QUADRANGLE NEW MARTINSVILLE 7.5' LEASE NUMBER SEE WW-6A1 Form

SURFACE OWNER TERRY E. & DEBORAH SIMMS ACREAGE 123.09
OIL & GAS ROYALTY OWNER TERRY E. & DEBORAH L. SIMMS, ET AL - SEE WW-6A1 FORM LEASE ACREAGE 319.91
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY)
 PLUG & ABANDON CLEAN OUT & REPLUG

TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD 6,616' TMD: 18,408'
WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER
CT CORPORATION SYSTEM
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5400 D BIG TYLER ROAD
FORT WORTH, TX 76107 CHARLESTON, WV 25313

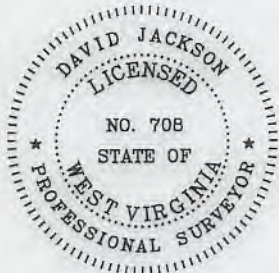
COUNTY NAME
PERMIT

PG 2 OF 2 HILLROCK LEASE
WELL 4HM
827.025± ACRES

11/16/2018

Number	TAX MAP-PARCEL	ADJOINER OWNER	ACRES
S1	05-23-06	James A. Channing, et al	48.0
S2	05-18-21	Curtis E. & Michelle J. Hall	43.119
S3	05-18-21.3	T.H. Exploration, LLC	0.811
S4	05-18-21.1	Rodney & Rhonda Jackson	5.47
S5	05-18-21.2	David P. Lassan, et ux (Life)	1.0
S6	05-18-22	Rodney & Rhonda Jackson	30.345
S7	05-23-2.1	William L. Janice M. Wayne	2.364
S8	05-23-03	Abe J. Hochstetler	50.0
S9	05-23-2.2	Jessica N. & Andrew L. Jones	7.636
S10	05-23-4.2	James S. & Jeanne B. Hall	1.169
S11	05-23-4.1	James S. & Jeanne B. Hall	2.1575
S12	05-23-08	Carl David & Suzanne L. Guseman	29.5
S13	05-23-9.3	Linda D. Greathouse	17.5
S14	05-23-11.1	John H. & Sonya D. Holliday	46.482
S15	05-23-11.4	Evelyn L. Hudson	10.879
S16	05-23-11.2	Evelyn Hudson	1.154
S17	05-23-11.3	Colin R. Yoho	11.29
S18	05-23-11.5	Roy F. Yoho	9.25
S19	05-25-18	Joseph Johnson, et ux (Life)	37.746
S20	05-25-18.1	Pamela Joan Ferrell, et vir	2.491
S21	05-25-19	Joseph Johnson, et ux (Life)	1.973
S22	05-25-17	Emily Jones Irrevocable Trust	22.79
S23	05-18-24	Duane Brunn	102.0
S24	05-18-23	Blaine E. Channing, et al	110.0
S25	05-18-20	Wayne E. Channing, et al	75.6
S26	05-18-31	Kenneth E. Rastall	6.94
S27	05-18-32	Kenneth E. Rastall	5.335
S28	05-17-12	James A. & Jill C. Corley	3.33
S29	05-17-10	James A. Corley, et al	92.61
S30	05-17-9.3	James A. Corley, et ux	12.478
S31	05-17-9.4	Vicki L. Bowen	60.3
S32	05-24-01	Linda L. Hendrickson	175.0
S33	05-24-5.1	James D. Watkins, et ux	4.6
S34	05-24-5.2	James D. Watkins, et ux	3.151
S35	05-23-7.1	H.J. Weigand, et ux	0.549
S36	05-23-7.2	H.J. Weigand, et ux	6.354
S37	05-24-5.5	H.J. Weigand, et ux	17.194
S38	05-24-5.3	Thomas V. Tuttle, et ux	8.543
S39	05-24-5.4	Thomas V. Tuttle, et ux	38.224
S40	05-23-8.1	William & Virginia Roupe	34.0
S41	05-23-04	Abe J. Hochstetler	100.7235
S42	05-25-1.3	Michael E. & Annie A. Chapman	26.2
S43	05-25-1.2	William Jr. & Andrea J. Dubiel	20.1
S44	05-25-1.1	Ryan A. & Jacqueline E. Layman	9.79
S45	05-25-13.3	William M. Sr. & Cynthia A. Ferda	17.21
S46	05-25-1.5	Ryan J. Bratton	21.35
S47	05-25-13	Nicholas J. & Debra L. Klug	16.014
S48	05-25-12.1	Kent & Betty Mason	15.0
S49	05-25-13.2	David A. Klug	5.89

Number	TAX MAP-PARCEL	ADJOINER OWNER	ACRES
S50	05-25-01	Michael L. Mason	35.43
S51	05-25-14	Roy F. Yoho	23.0
S52	05-25-16	Emily Jones Irrevocable Trust	23.5
S53	05-25-16.2	Rodney J. Loy	1.087
S54	05-26-12.1	Alvin F. Jr. & Kristen R. Stoneking	2.011
S55	05-26-13	Marjorie Ann Stoneking (Life)	40.0
S56	05-26-10	Robert D. & Bonnie L. Oliver Family Trust	24.94
S57	05-26-09	Robert D. & Bonnie L. Oliver Family Trust	21.75
S58	05-26-08	Richard Joseph Otte, et ux	18.27
S59	05-26-20	Donald Lee Anderson, et al	4.2
S60	05-26-21	Richard Joseph Otte, et ux	1.25
S61	05-26-22	Richard Joseph Otte, et ux	8.3
S62	05-23-12	Mark A. Yoho	3.05
S63	05-23-13.1	James R. & Pamela J. Ferrell	0.7625
S64	05-23-13	Linda D. Greathouse	14.24
S65	05-23-9.2	Linda D. Greathouse	25.58
S66	05-23-9.4	Jackson R. Sr. & Deanna L. Davis	2.087
S67	05-23-9.1	John W. Van Orden	23.376
S68	05-23-14	Dominion Transmission, Inc.	59.5
S69	05-23-15	Virginia Ethel Henry Est.	15.5
S70	05-23-16.1	Donald B. Henry	1.97
S71	05-23-16	Roy Friend Yoho Sr.	18.03
S72	05-23-18	Abe J. Hochstetler	35.382
S73	05-23-01	Patricia Accettolo, et al	146.66
S74	05-23-17.3	William & Katherine Flewelling	5.018
S75	05-23-17	Tammy & Thomas E. Brown	4.62
S76	05-23-17.4	Tammy D. Meadows	2.605
S77	05-23-17.2	Dick Jr. & Carol J. Rowan	14.92
S78	05-23-17.1	Curtis E. Hall, et ux	10.051
S79	05-23-18.1	Mark A. Yoho	7.8
S80	05-25-11.9	Bryan L. Huggins	1.835
S81	05-25-11	Roy F. Yoho	3.445
S82	05-25-20.3	James A. & Jo C. Estep	4.49
S83	05-25-20.2	James M. Zombotti	1.347
S84	05-25-20.1	James M. Zombotti	2.746
S85	05-23-11.6	T.H. Exploration II, LLC & Atinum Marcellus I, LLC	0.094
S86	05-18-30	Jon Schmidt, et al	5.46
S87	05-18-13.10	Carl Berg	10.88
S88	05-18-29	Carl B. Berg	5.319
S89	05-18-32.1	Lori D. Carpenter	1.165
S90	05-18-13.8	Lori D. Carpenter	5.545
S91	05-17-12.1	Williams Ohio Valley Midstream, LLC	1.67
S92	05-17-10.5	Williams Ohio Valley Midstream, LLC	4.24



P.S. 708 *David L Jackson*



TUG HILL
OPERATING

OPERATOR'S
WELL #: Hillrock 4HM
DISTRICT: Franklin
COUNTY: Marshall
STATE: W.V.

WELL PLAT
PAGE 2 OF 2
DATE: 06/04/2018
REVISED DATE:
08/23/2018