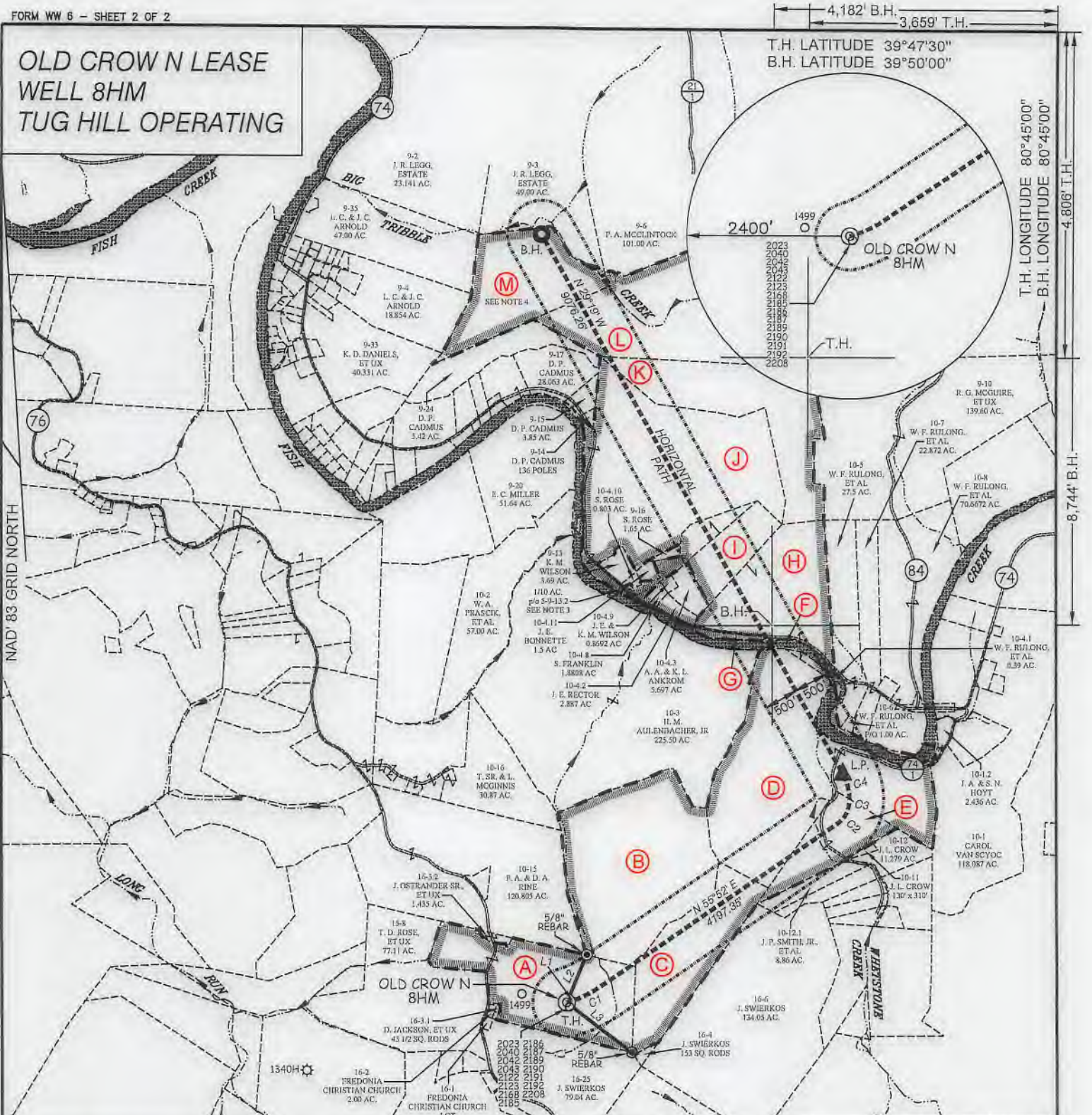


**OLD CROW N LEASE
WELL 8HM
TUG HILL OPERATING**



CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	413.67'	1974.04'	N 61°30' E	412.91'
C2	203.86'	404.74'	N 40°39' E	201.71'
C3	298.33'	523.74'	N 07°45' E	294.31'
C4	296.02'	786.56'	N 18°42' W	294.27'

TAG	SURFACE OWNER	PARCEL	ACRES
A	DONNA VIVIAN YOHO (TOD) GARY LANCE YOHO	5-16-3	71.205
B	JOHN SWIERKOS	5-10-14	100.00
C	JOHN SWIERKOS	5-16-5	52.07
D	HERBERT M. AULENBACHER, JR.	5-10-9	141.43
E	LOUIS DELBERT VAN SCYOC	5-10-10	24.50
F	STATE OF WEST VIRGINIA (FISH CREEK)	N/A	N/A
G	LINDA BECHTOLD, ET AL	5-10-4.7	2.110
H	SHBENA ROSE	5-10-4	74.229
I	SHEENA ROSE	5-10-4.12	20.07
J	JASON J. STEED	5-9-13.2	135.61
K	ROBERT G. MCGUIRE	5-9-12	78.28
L	PATRICIA A. McCLINTOCK	5-9-7	110.02
M	LLOYD C. & JUDITH C. ARNOLD	5-9-41	93.00

LINE	BEARING	DISTANCE
L1	N 70°57' E	172.83'
L2	N 22°46' E	761.72'
L3	S 52°54' E	1204.10'

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(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'83 S.P.C. (FT) N. 468,154.90 E. 1,613,539.62
 NAD'83 GEO. LAT-(N) 39.778474 LONG-(W) 80.763018
 NAD'83 UTM (M) N. 4,403,197.27 E. 520,293.90

LANDING POINT
 NAD'83 S.P.C. (FT) N. 471,486.8 E. 1,617,617.0
 NAD'83 GEO. LAT-(N) 39.787776 LONG-(W) 80.748677
 NAD'83 UTM (M) N. 4,404,233.1 E. 521,519.1

BOTTOM HOLE
 NAD'83 S.P.C. (FT) N. 479,400.7 E. 1,613,173.0
 NAD'83 GEO. LAT-(N) 39.809330 LONG-(W) 80.764886
 NAD'83 UTM (M) N. 4,406,621.5 E. 520,125.0



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

P.S. *C. Victor Moyers*
849

SCALE 1" = 2000' FILE NO. 8796P8HM.dwg
 OLD CROW NORTH 8HM REV1
 DATE MAY 28, 20 19
 REVISED _____, 20
 OPERATORS WELL NO. OLD CROW N-8HM
 API WELL NO. 47
 NO. STATE COUNTY PERMIT

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

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- TAX MAP-PARCEL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE WW-6A1)

COUNTY NAME PERMIT

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

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

**OLD CROW N LEASE
WELL 8HM
TUG HILL OPERATING**

4,182' B.H. 3,659' T.H.

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. 468,154.90	E. 1,613,539.62
NAD'83 GEO.	LAT-(N) 39.778474	LONG-(W) 80.763018
NAD'83 UTM (M)	N. 4,403,197.27	E. 520,293.90
<u>LANDING POINT</u>		
NAD'83 S.P.C.(FT)	N. 471,486.8	E. 1,617,617.0
NAD'83 GEO.	LAT-(N) 39.787776	LONG-(W) 80.748677
NAD'83 UTM (M)	N. 4,404,233.1	E. 521,519.1
<u>BOTTOM HOLE</u>		
NAD'83 S.P.C.(FT)	N. 479,400.7	E. 1,613,173.0
NAD'83 GEO.	LAT-(N) 39.809330	LONG-(W) 80.764886
NAD'83 UTM (M)	N. 4,406,621.5	E. 520,125.0

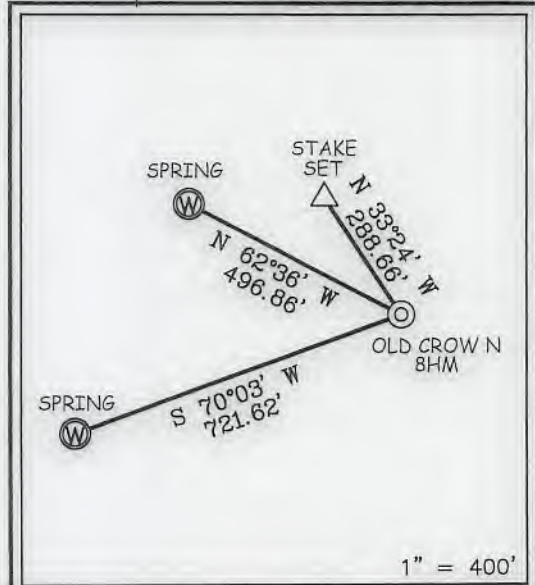
T.H. LONGITUDE 80°45'00"
B.H. LONGITUDE 80°45'00"



NOTES ON SURVEY

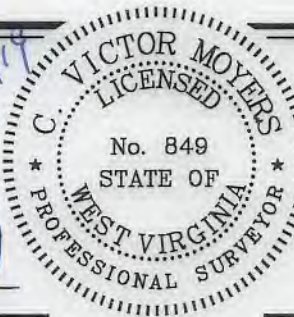
1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
3. THE ASSESSMENT OF THE 1/10 ACRE LOT, OWNED BY JASON J. STEED AND DESCRIBED AS THE SECOND PARCEL IN DEED BOOK 643 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
4. TAX MAPS AND TAX ASSESSMENTS FOR PARCELS 5-9-4, 5-9-35 AND 5-9-41 DO NOT APPEAR TO CORRECTLY DEPICT PARCEL BOUNDARIES AND/OR ACREAGES AS DESCRIBED IN THEIR RESPECTIVE DEEDS.

REFERENCES



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.

Victor Moyers
6/15/19



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE MAY 28, 20 19
REVISED _____, 20 ____
OPERATORS WELL NO. OLD CROW N-8HM
API WELL NO. 47 - 51 - 02240
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8796P8HM.dwg
OLD CROW NORTH 8HM REV1
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 _____ SHALLOW X

LOCATION: GROUND = 1,288.00' ELEVATION PROPOSED = 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 ACREAGE 71.205±

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 MARCELLUS
ESTIMATED DEPTH TVD: 6,731' / TMD: 18,211'

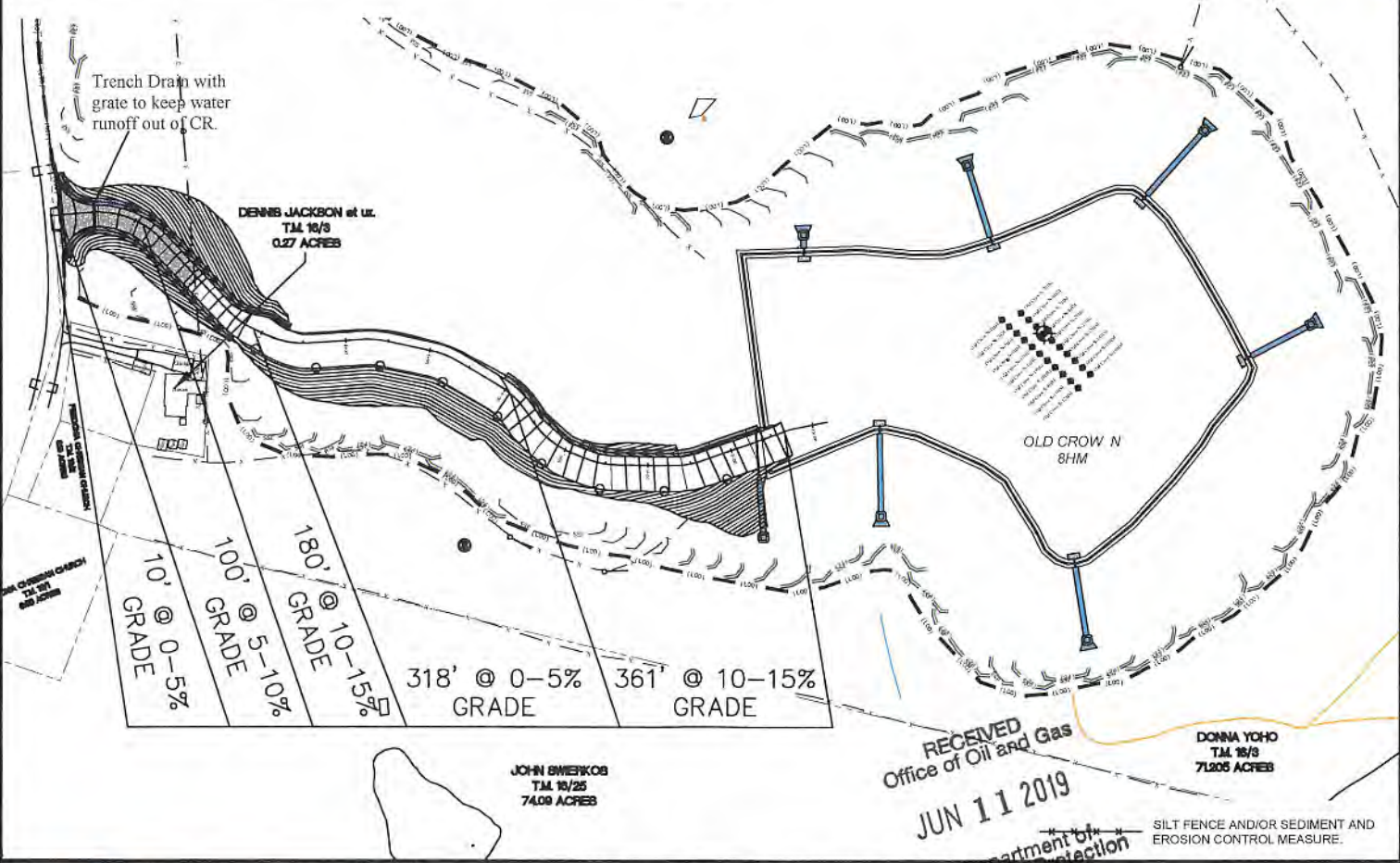
COUNTY NAME PERMIT

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

PROPOSED OLD CROW N - 8HM

NOTES:

1. Ⓞ - DENOTES INSTALL 18" PVC CULVERT AND APPLY APPROPRIATE SEDIMENT OUTLET CONTROL (RIP RAP SPLASH PAD)
2. DRAWING NOT TO SCALE
3. REFERENCE IS HEREBY MADE TO THE WW D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.
4. INSTALL CULVERTS AS SHOWN ON RECLAMATION PLAN OR AS FIELD CONDITIONS REQUIRE.
5. ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WW D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.
6. TEMPORARILY SEED AND MULCH ALL SLOPS UPON CONSTRUCTION OF LOCATION.
7. ALL CUT AND FILL SLOPES ARE 2H : 1V SLOPE.
8. ALL TREES 6-INCHES AND ABOVE ARE TO BE CUT AND STACKED. BRUSH SLASHINGS ARE TO BE UTILIZED DOWN SLOPE OF SITE AND STRUCTURES TO ACT AS A CONTROL BARRIER IF AVAILABLE.
9. SEE OLD CROW N SITE PLAN PREPARED BY KELLEY SURVEYING, FOR COMPLETE CONSTRUCTION & EROSION AND SEDIMENT CONTROL DETAILS.

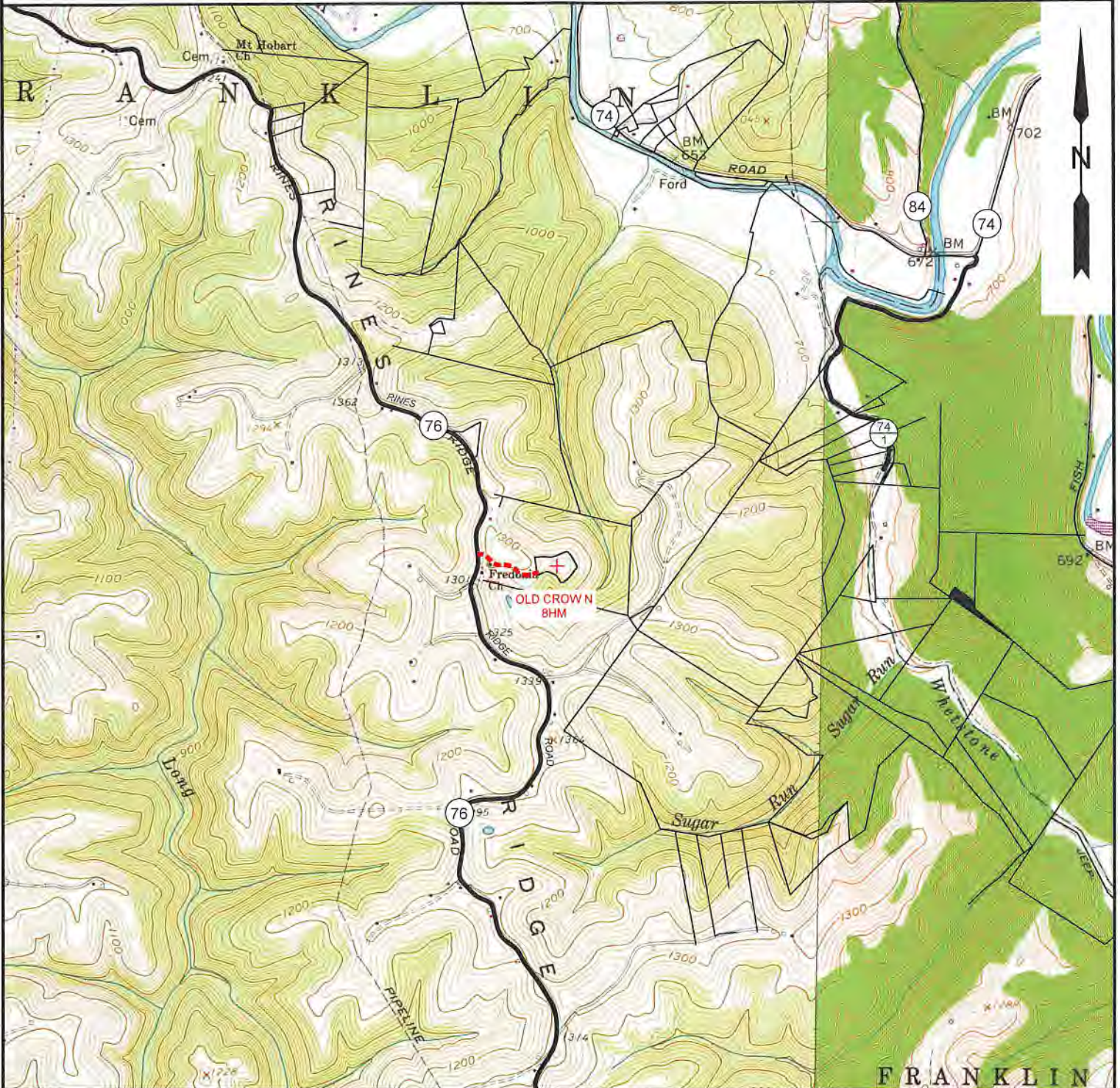


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TOPO SECTION:		OPERATOR:	
POWHATAN POINT 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	FRANKLIN	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8769	05/29/19	NONE

TUG HILL
OPERATING

PROPOSED OLD CROWN - 8HM



NOTE: CLOSEST WATER PURVEYOR
GRANDVIEW - DOOLIN PUBLIC SERVICE DISTRICT
PROCTOR, WV

LAT: 39.7137712
LON: -80.8258327
LOCATED: S 37°39'00" W AT 29,404.13' FROM OLD CROWN PAD LOCATION

RECEIVED
Office of Oil and Gas
JUN 11 2019

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TOPO SECTION:		OPERATOR:	
GLEN EASTON & POWHATAN POINT 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	FRANKLIN	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8796	05/29/19	1" = 2000'

WV Department of Environmental Protection
TUG HILL OPERATING