

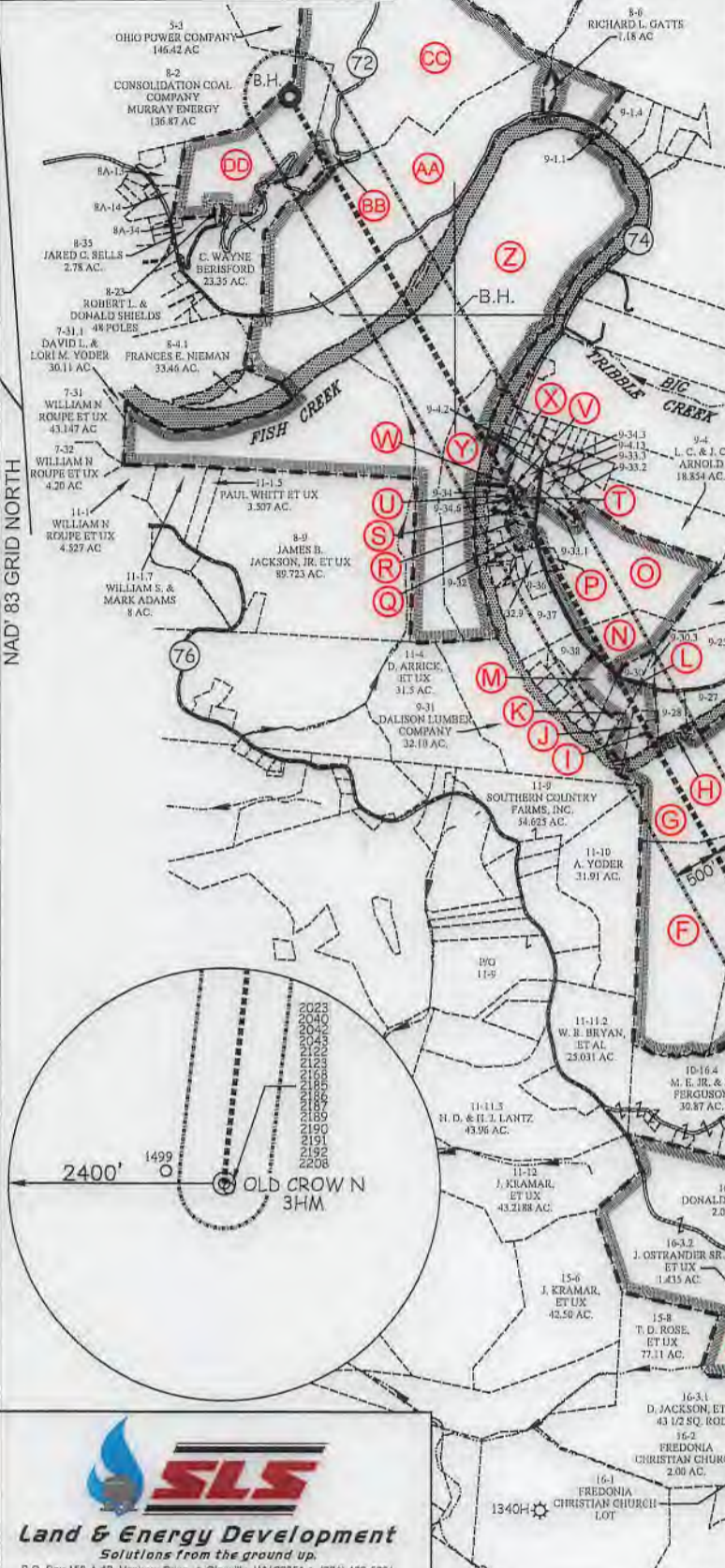
10,456' B.H.

3,691' T.H.

**OLD CROW N LEASE  
WELL 3HM  
TUG HILL OPERATING**

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

TAG	SURFACE OWNER	PARCEL	ACRES
A	DONNA VIVIAN YOHO (TOD) GARY LANCE YOHO	5-16-3	71.205
B	PAUL ANDREW & DEBRA A. RINE	5-10-15	120.805
C	JOHN SWIERKOS	5-10-14	100.00
D	HERBERT M. AULENBACHER, JR.	5-10-3	225.50
E	WILLIAM A. PRASCIK, ET AL	5-10-2	52.00
F	ALVIN A. YODER	5-10-17	57.28
G	EDWIN C. MILLER	5-10-1	49.96
H	STATE OF WEST VIRGINIA ( FISH CREEK)	N/A	N/A
I	JAMES E. & HARLEY J. MCDONOUGH	5-9-29.1	1.026
J	JAMES E. & HARLEY J. MCDONOUGH	5-9-29.2	2.807
K	JAMES M. & ROBERTA L. STERN	5-9-29	3.1777
L	DAVID JR. & MELISSA LOVE	5-9-30.1	2.518
M	SHIRLEY A. HILL ESTATE	5-9-40	368'x425'
N	DENNIS P. CADMUS	5-9-39	9.5
O	KEITH D. DANIELS, ET UX	5-9-33	40.331
P	DAVID D. & CHRISTINE S. DANIELS	5-9-33.4	1.025
Q	TIMOTHY Q. HOYT, ET UX	5-9-32.11	1.717
R	TIMOTHY Q. HOYT, ET UX	T.H. 5-9-32.10	0.588
S	TIMOTHY Q. HOYT, ET UX	5-9-32.8	0.711
T	GARNET D. MIDCAP	5-9-32.5	270'x390'
U	MILLARD BONETTE, ET UX	5-9-34.2	0.76
V	MILLARD BONETTE, JR., ET UX	5-9-34.5	0.444
W	LOUIS D. VAN SCYOC	5-9-34.1	0.556
X	LOUIS D. VAN SCYOC	5-9-34.4	1.042
Y	JAMES EDWARD FRANCIS, JR. ET UX	5-8-8	28.3
Z	EDWIN C. MILLER	5-8-7	180.31
AA	RICHARD L. GATTS - LIFE	5-8-5	98.819
BB	JOHN F. ARRUDA ET UX	5-5-4.1	1.399
CC	GENEVA BASSETT SANCHEZ	5-5-4	133.601
DD	TAMMY L. MITCHELL	5-8-3	35.07

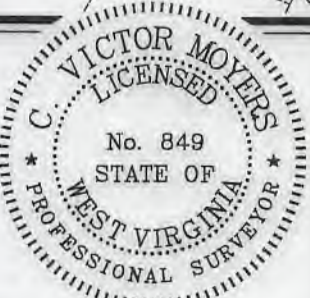


CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	173.22'	14603.19'	N 03°57' E	173.22'
C2	156.67'	13488.40'	N 05°58' E	156.67'
C3	191.76'	612.79'	N 04°30' W	190.98'
C4	324.21'	1169.14'	N 21°34' W	323.17'

LINE	BEARING	DISTANCE
L1	N 63°33' E	1179.33'
L2	S 53°47' E	1229.87'

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(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)		
NAD'83 S.P.C.(FT)	N. 468,155.21	E. 1,613,507.73
NAD'83 GEO.	LAT-(N) 39.778473	LONG-(W) 80.763132
NAD'83 UTM (M)	N. 4,403,197.20	E. 520,284.19
<b>LANDING POINT</b>		
NAD'83 S.P.C.(FT)	N. 470,948.1	E. 1,613,625.0
NAD'83 GEO.	LAT-(N) 39.786144	LONG-(W) 80.762854
NAD'83 UTM (M)	N. 4,404,048.7	E. 520,305.7
<b>BOTTOM HOLE</b>		
NAD'83 S.P.C.(FT)	N. 482,841.4	E. 1,606,945.8
NAD'83 GEO.	LAT-(N) 39.818582	LONG-(W) 80.787226
NAD'83 UTM (M)	N. 4,407,838.0	E. 518,210.3



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

P.S. 849 *C. Victor Moyers*

**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)

SCALE	1" = 2000'	FILE NO.	8796P3HMR1R.dwg
			OLD CROW NORTH 3HM REV1
DATE	JUNE 22		20 18
REVISED	08/23/2018, 1/17/2019, 5/20/2019		
OPERATORS WELL NO.			OLD CROW N-3HM
API WELL NO.	47		
NO.	STATE	COUNTY	PERMIT

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

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

COUNTY NAME  
PERMIT

10,456' B.H.

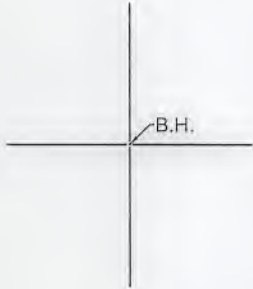
3,691' T.H.

**OLD CROW N LEASE  
WELL 3HM  
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. 468,155.21	E. 1,613,507.73	
NAD'83 GEO.	LAT-(N) 39.778473	LONG-(W) 80.763132	
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BOTTOM HOLE			
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NAD'83 GEO.	LAT-(N) 39.818532	LONG-(W) 80.787226	
NAD'83 UTM (M)	N. 4,407,638.0	E. 518,210.3	

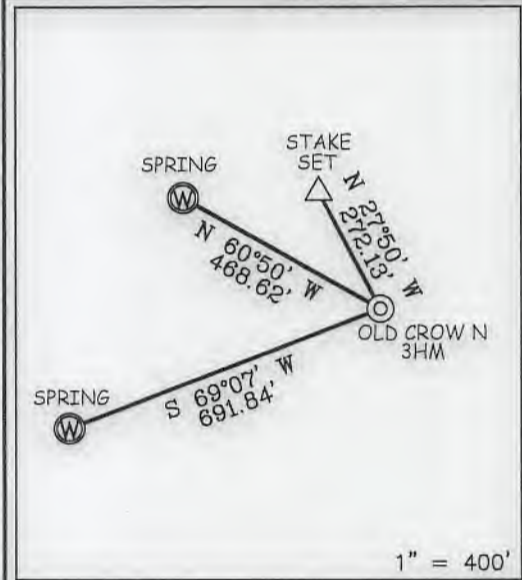
T.H. LONGITUDE 80°45'00"  
B.H. LONGITUDE 80°45'00"  
5,392' B.H.  
4,806' T.H.



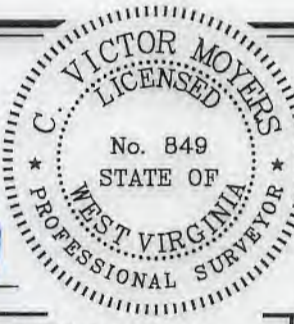
**NOTES ON SURVEY**

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS OR DWELLINGS ≥ 2500 SQ. FT. WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.
3. BASED ON WV DOT COUNTY ROUTE 74 IS A 40' STRIP OF LAND ACQUIRED IN NUMEROUS DEEDS.

**REFERENCES**



MAP/PARCEL	ADJOINING SURFACE OWNER LIST	ACRES
5-8A-13	LETHA I. RUCKMAN	2.993
5-8A-14	BOARD OF EDUCATION	137 SQ RODS
5-8A-34	NORMAN G. JOHNSON ET UX - LIFE	11,123 SQ. FT.
5-9-1.1	FRANK C. CLARK	0.52
5-9-1.4	SHELDON R. RUCKMAN ET AL - LIFE	4.49
5-9-4.2	LINDA J. SIMMONS	0.80
5-9-4.13	SAMUEL LEE CANTERBURY, ET UX	0.9284
5-9-25	DELBERT K. & LINDA K. MYERS	14.49
5-9-27	JOHN F. KAZEMKA	4.02
5-9-28	WILLIAM N. & DOLORES E. MCDONOUGH - LIFE	4.01
5-9-30	MATTHEW B. GRIFFITH	2.708
5-9-30.3	MATTHEW B. GRIFFITH	0.82
5-9-32	SANDRA J. BONNETTE	2.321
5-9-32.9	LIONEL E. HENRY, SR., ET AL	1.269
5-9-33.1	DANIELS FAMILY TRUST	1
5-9-33.2	DANIELS FAMILY TRUST	1.534
5-9-33.3	RALPH EARL DUNLAP - LIFE	0.50
5-9-34	LOUIS D. & PATRICIA L. VAN SCYOC	0.850
5-9-34.3	SANDRA J. BONNETTE	1.988
5-9-34.6	EARL B. SUTER, JR., ET UX	0.085
5-9-36	FRANK T. & ANNA M. WALKER	PARCEL
5-9-37	FRANK T. & ANNA M. WALKER	10.857
5-9-38	SHIRLEY A. HILL EST.	3.331



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
DATE JUNE 22, 20 18  
REVISED 08/23/2018, 1/17/2019, 5/20/2019  
OPERATORS WELL NO.        OLD CROW N-3HM  
API WELL NO. 47 - 51 - 02226  
       STATE        COUNTY        PERMIT

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. C. Victor Moyers  
849

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8796P3HMR1R.dwg  
OLD CROW NORTH 3HM REV1  
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

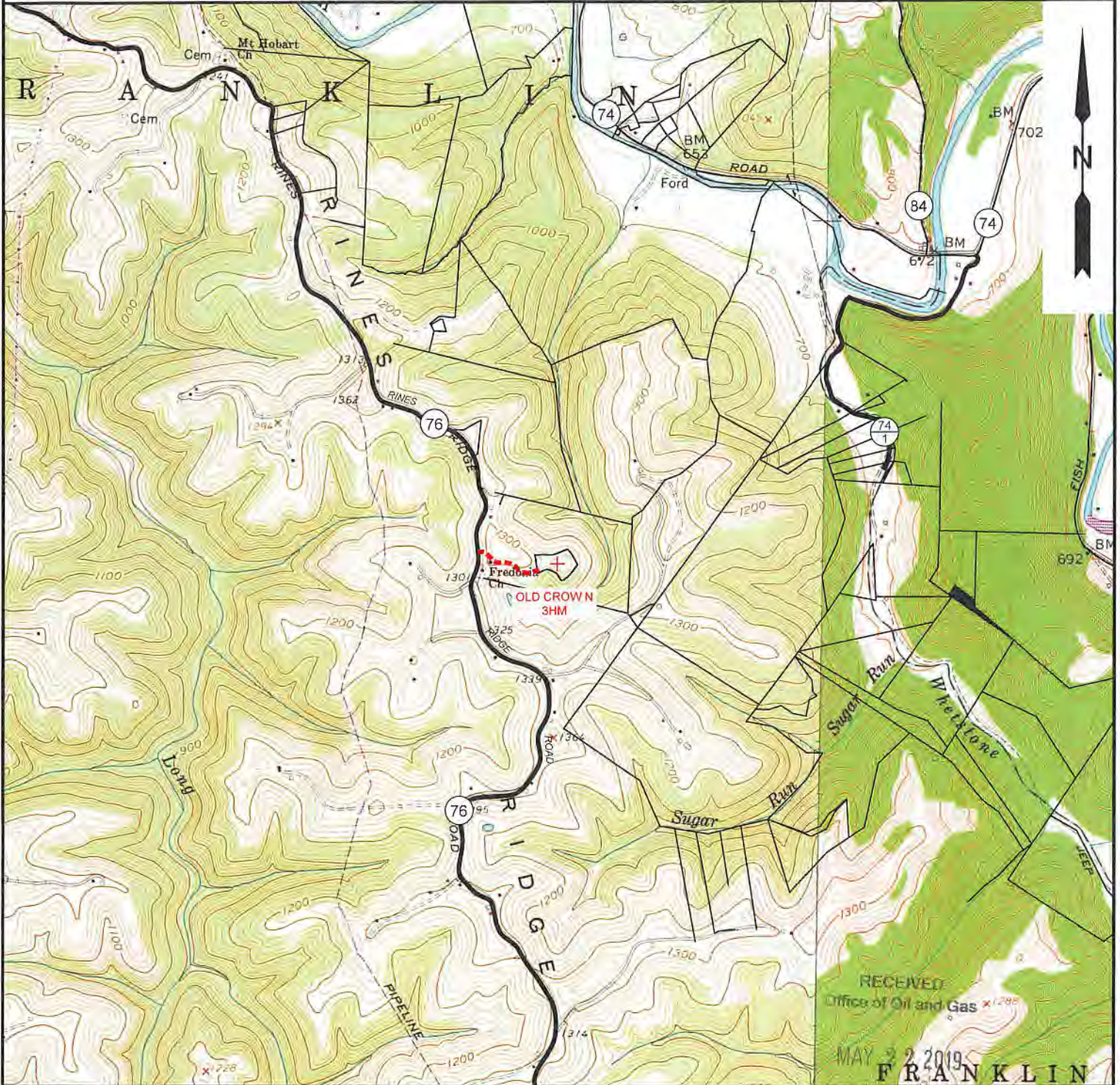
STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

WELL TYPE: OIL  GAS  INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: GROUND = 1,285.80' 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 WWV-6A1  
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 MARCELLUS  
       ESTIMATED DEPTH TVD: 6,689' / TMD: 21,326'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER  
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS CT CORPORATION SYSTEM  
FORT WORTH, TX 76107 ADDRESS 5400 D BIG TYLER ROAD  
       CHARLESTON, WV 25313

COUNTY NAME  
PERMIT

# PROPOSED OLD CROWN - 3HM



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 - 3HM SURFACE LOCATION

RECEIVED  
Office of Oil and Gas

MAY 2 2019  
FRANKLIN

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www.slssurveys.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON & POWHATAN POINT 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	FRANKLIN	380 SOUTHPOINTE BLVD	
DRAWN BY		DATE	SCALE
K.G.M.		06/22/18	1" = 2000'

**TUG HILL**  
OPERATING