

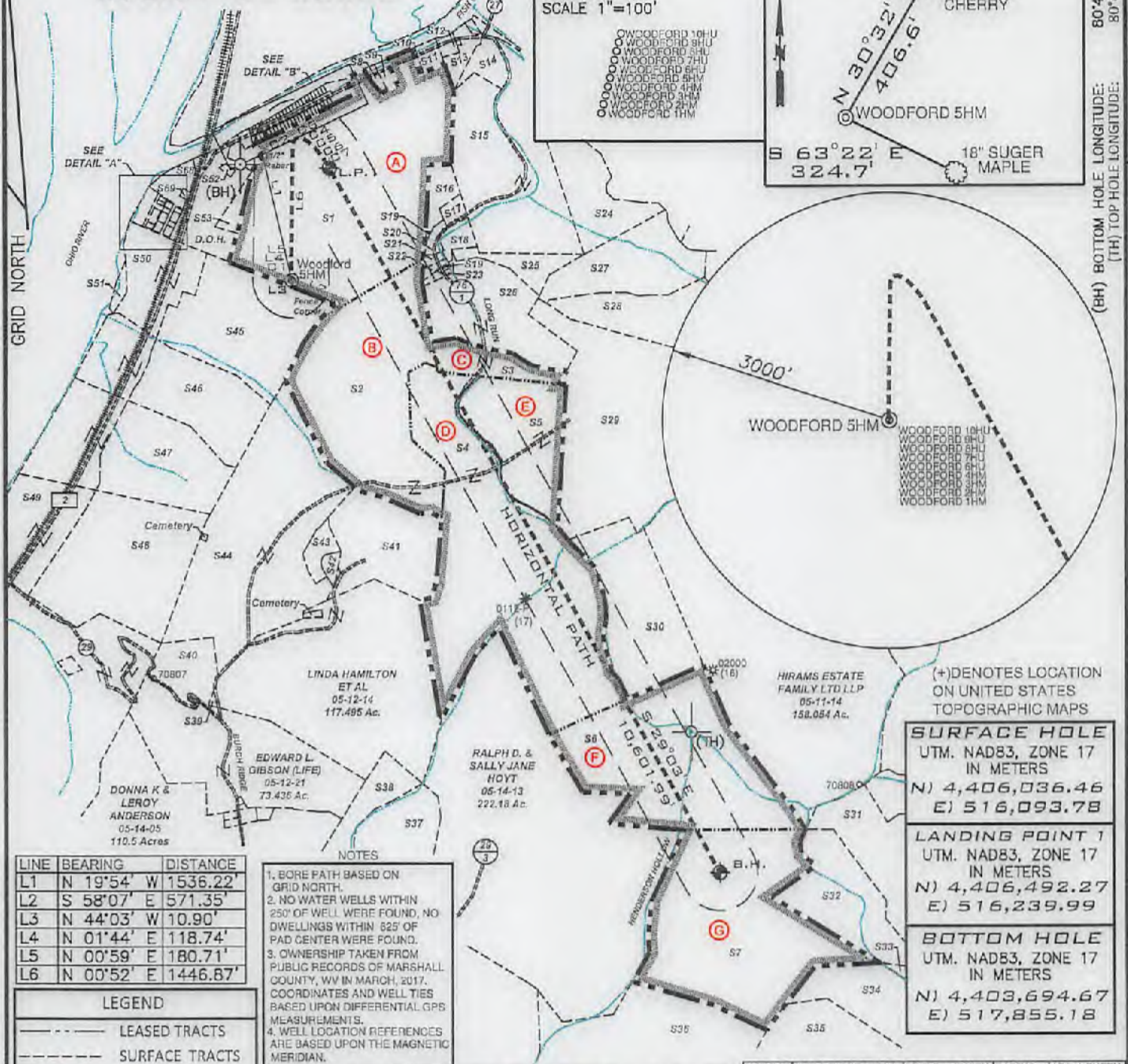
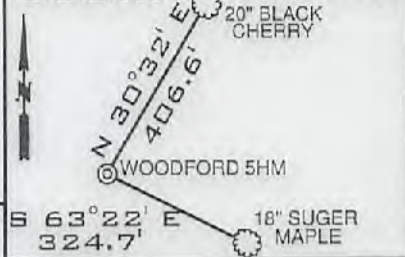
# WOODFORD LEASE WELL 5HM 676.9119± ACRES

DETAIL  
SKETCH "A"  
SCALE 1"=100'

REFERENCES

SCALE 1"=400'

TOP HOLE LATITUDE: 39°50'00"  
BOTTOM HOLE LATITUDE: 39°47'30"



LINE	BEARING	DISTANCE
L1	N 19°54' W	1536.22'
L2	S 58°07' E	571.35'
L3	N 44°03' W	10.90'
L4	N 01°44' E	118.74'
L5	N 00°59' E	180.71'
L6	N 00°52' E	1446.87'

**LEGEND**

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

- NOTES**
- BORE PATH BASED ON GRID NORTH.
  - NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 525' 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.

NUMBER	CHORD DIRECTION	CHORD LENGTH	RADIUS	ARC LENGTH
C5	S 53°17' E	130.39	469.94	130.81
C6	S 41°19' E	170.21	1045.52	170.40
C7	S 32°54' E	218.02	1569.00	218.20

NUMBER	CHORD DIRECTION	CHORD LENGTH	RADIUS	ARC LENGTH
C1	N 21°09' W	15.61	19.50	16.06
C2	N 11°06' E	85.48	205.01	86.11
C3	N 51°15' E	68.51	72.50	71.36
C4	S 77°29' E	86.09	137.27	87.57

(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

<b>SURFACE HOLE</b>	UTM. NAD83, ZONE 17 IN METERS
N)	4,406,036.46
E)	516,093.78
<b>LANDING POINT 1</b>	UTM. NAD83, ZONE 17 IN METERS
N)	4,406,492.27
E)	516,239.99
<b>BOTTOM HOLE</b>	UTM. NAD83, ZONE 17 IN METERS
N)	4,403,694.67
E)	517,855.18

FILE NUMBER \_\_\_\_\_

DRAWING NUMBER WOODFORD\_WP\_5HM

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

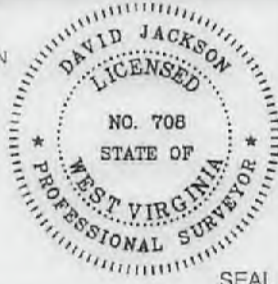
PROVEN SOURCE OF ELEVATION SUBMETER MAPPING  
GRADE GPS

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  
304-623-5851



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

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

LOCATION ELEVATION 1233.51' 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 ROPC, LLC ACREAGE 155.7119

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

PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_  
PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE (SPECIFY) \_\_\_\_\_

TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD 6,490' TMD: 17,874'

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

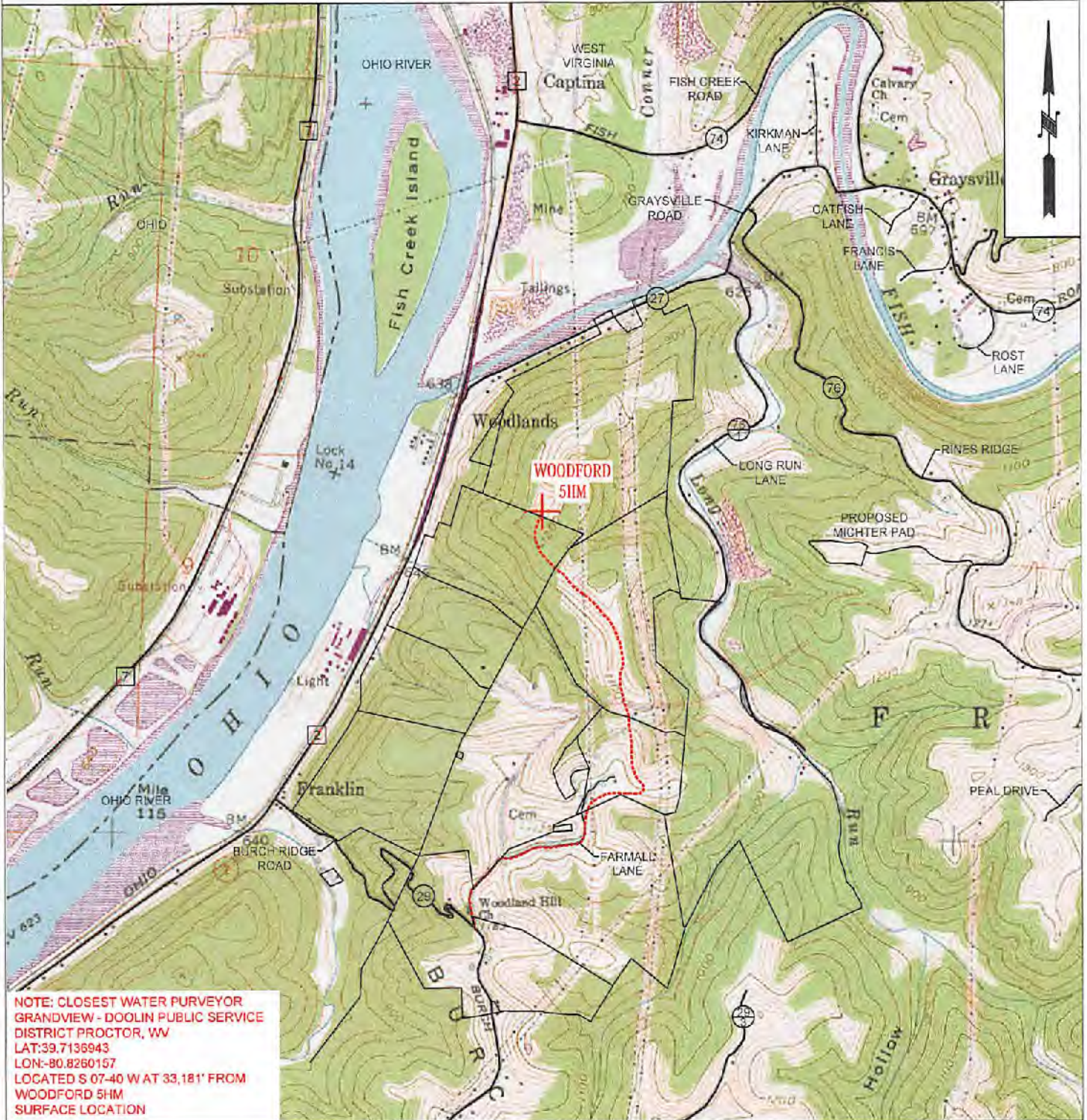
JUL 16 2018

4705-020752  
SUPPLEMENT PG 52

WW-9

WV Department of  
Environmental Protection

# PROPOSED WOODFORD 5HM



NOTE: CLOSEST WATER PURVEYOR  
GRANDVIEW - DOOLIN PUBLIC SERVICE  
DISTRICT PROCTOR, WV  
LAT:39.7136943  
LON:-80.8260157  
LOCATED S 07-40 W AT 33,181' FROM  
WOODFORD 5HM  
SURFACE LOCATION



**TUG HILL**  
OPERATING

OPERATOR	494510851	TOPO SECTION	LEASE NAME
TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317		POWHATAN POINT 7.5'	WOODFORD
SCALE:		DATE:	
1" = 2000'		DATE: 07-04-2018	