

BOTTOM HOLE 7531' TOP HOLE 2806'

CRANDS UNIT 8H

SCALE: 1" = 2000' LATITUDE: 39°30'00" (TOP HOLE)
SCALE: 1" = 2000' LATITUDE: 39°27'30" (BOTTOM HOLE)

State Plane Coordinate
West Virginia North

Top Hole Location	Landing Point Location	Bottom Hole Location
NAD 27 Feet N: 354907.661 E: 1773553.652	NAD 27 Feet N: 353436.987 E: 1772130.534	NAD 27 Feet N: 344810.046 E: 1780607.078
UTM Zone 17 (SPCS83) Meters N: 4368960.669 E: 560041.310	UTM Zone 17 (SPCS83) Meters N: 4368905.379 E: 559615.197	UTM Zone 17 (SPCS83) Meters N: 4368840.204 E: 562241.522
NAD 27 N 39.4716549 W 80.3021532	NAD 27 N 39.4675823 W 80.3071473	NAD 27 N 39.4441026 W 80.2768594

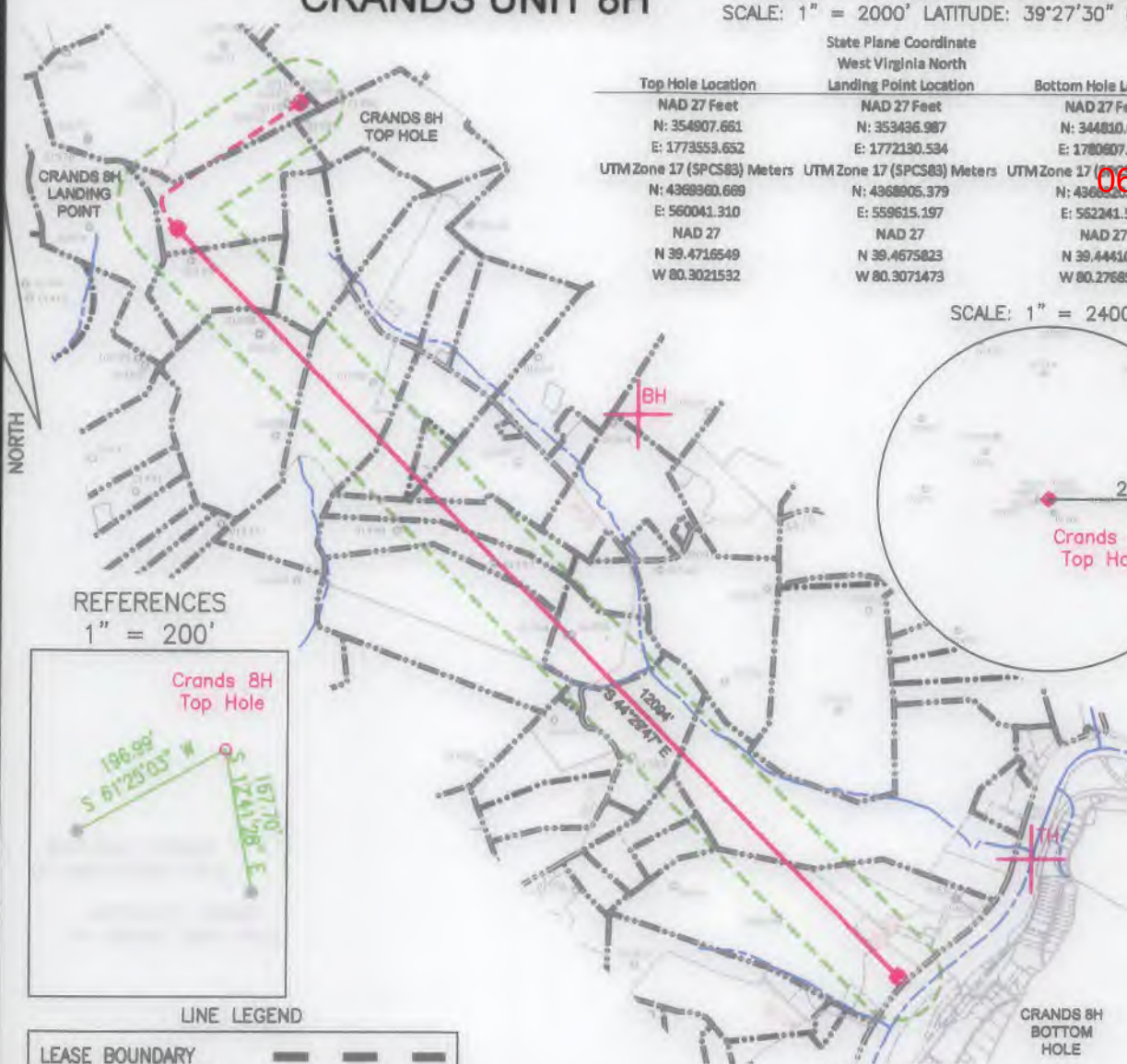
06/07/2019

SCALE: 1" = 2400'



SCALE: 1" = 2000' LONGITUDE: 80°17'30" (TOP HOLE)
SCALE: 1" = 2000' LONGITUDE: 80°15'00" (BOTTOM HOLE)

5153'
10294'
TOP HOLE



REFERENCES
1" = 200'



LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	- - - -
CREEK / STREAM	~~~~~
ROADS	— — — —
PROPOSED LATERAL	—————
APPROXIMATE CURVE	- · - · -
500' LATERAL OFFSET	- · - · -
EXISTING GAS WELL	⊕

NOTES ON SURVEY

1. NO DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD 83.
4. WELL ELEVATION ESTABLISHED BY RTK GPS NAVD 88.
5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN OCTOBER 2018 AND FILES PROVIDED BY XTO ENERGY INC.
6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP AND SURVEYED LOCATIONS OF WELLS WITHIN 500' OF WELL BORE.



2402 PENNSYLVANIA 66 DELMONT, PA 15626
(724) 757 - 2417 www.jonesconsultant.com

SHEET 1 OF 2

FILE #: JC2018-78
DRAWING #: CRANDS UNIT 8H WELL
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: RTK 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.

Signed: *[Signature]*
R.P.E.: _____ P.S.: 2165



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: 11/12/2018
OPERATOR'S WELL #: CRANDS UNIT 8H
API WELL #: 47 049 02486
STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: LOWER WEST FORK RIVER (0502000206) ELEVATION: 1,221' (EXISTING FINISH GRADE)
COUNTY/DISTRICT: MARION / LINCOLN QUADRANGLE: SHINNSTON 7.5'
SURFACE OWNER: ROCHESTER & PITTSBURGH COAL COMPANY ACREAGE: 55±
OIL & GAS ROYALTY OWNER: LOUIS A. FERRARI ET UX ACREAGE: 792.9±

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,563' (TVD), 20,202' (TMD)

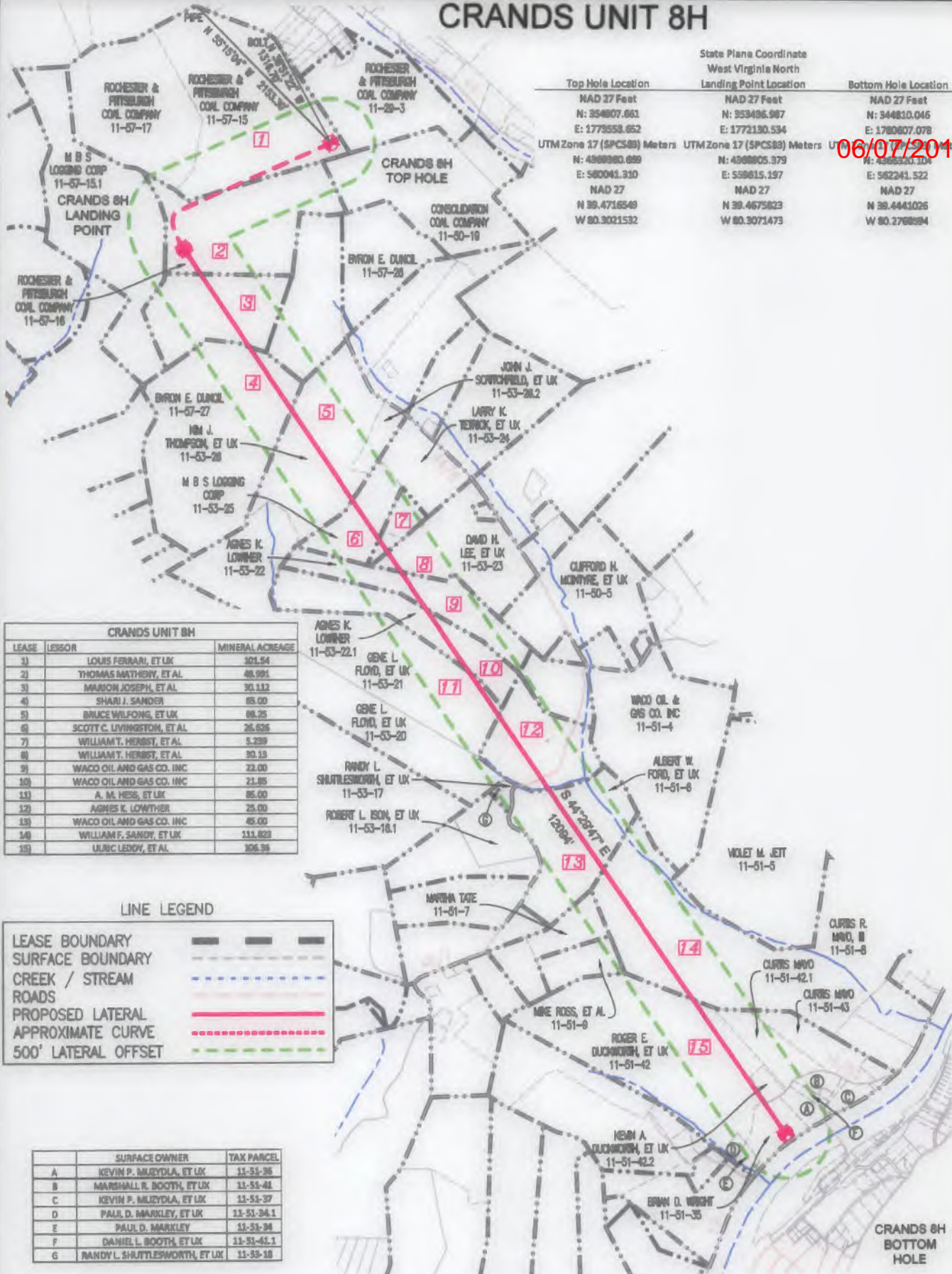
WELL OPERATOR: XTO ENERGY INC. DESIGNATED AGENT: GARY BEALL
Address: 190 THORN HILL ROAD Address: P.O. BOX 1008
City: WARRENDALE State: PA Zip Code: 15086 City: JANE LEW State: WV Zip Code: 26378

CRANDS UNIT 8H

State Plane Coordinate
West Virginia North

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E: 580041.310	E: 559815.197	E: 562241.522
NAD 27	NAD 27	NAD 27
N 39.4716549	N 39.4675823	N 39.4441026
W 80.3021532	W 80.3071473	W 80.2768994

06/07/2019



CRANDS UNIT 8H		
LEASE	LESSOR	MINERAL ACREAGE
31	LOUIS FERRARI, ET UX	301.54
2	THOMAS MATHEW, ET AL	48.991
3	MARION JOSEPH, ET AL	30.132
4	SHARI J. SANDER	85.00
5	BRUCE WILFONG, ET UX	88.25
6	SCOTT C. LIVINGSTON, ET AL	26.625
7	WILLIAM T. HERBST, ET AL	5.239
8	WILLIAM T. HERBST, ET AL	30.15
9	WACO OIL AND GAS CO. INC	22.00
10	WACO OIL AND GAS CO. INC	21.85
11	A. M. HESS, ET UX	85.00
12	AGNES K. LOWMYER	25.00
13	WACO OIL AND GAS CO. INC	45.00
14	WILLIAM F. SANDY, ET UX	111.823
15	ULBIC LEDDY, ET AL	306.36

LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	- - - - -
CREEK / STREAM	~~~~~
ROADS	==
PROPOSED LATERAL	---
APPROXIMATE CURVE
500' LATERAL OFFSET	- - - - -

	SURFACE OWNER	TAX PARCEL
A	KEVIN P. MUZYDLA, ET UX	11-53-36
B	MARSHALL R. BOOTH, ET UX	11-53-41
C	KEVIN P. MUZYDLA, ET UX	11-53-37
D	PAUL D. MARKLEY, ET UX	11-53-34.1
E	PAUL D. MARKLEY	11-53-34
F	DANIEL L. BOOTH, ET UX	11-53-41.1
G	RANDY L. SHUTTLEWORTH, ET UX	11-53-18

NOTES ON SURVEY

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6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP AND SURVEYED LOCATIONS OF WELLS WITHIN 500' OF WELL BORE.

JONES CONSULTANTS, LLC

SURVEYING • MAPPING • LAND • GAS WELL • PIPELINE
2402 PENNSYLVANIA 66 DELMONT, PA 15828
(724) 757 - 2417 www.jonesconsultant.com

SUPPLEMENTAL SURFACE AND LESSOR EXHIBIT CRANDS UNIT 8H

Drawn By:	Date:	LINCOLN DISTRICT	
JRV	11/12/18	MARION COUNTY, WEST VIRGINIA	
Scale:	1" = 1500'	Sheet:	File No.:
APL #	1103362	SHEET 2 OF 2	JC2018-78



XTO ENERGY
190 THORN HILL ROAD
WARRENDALE, PA 15066




0' 1500'

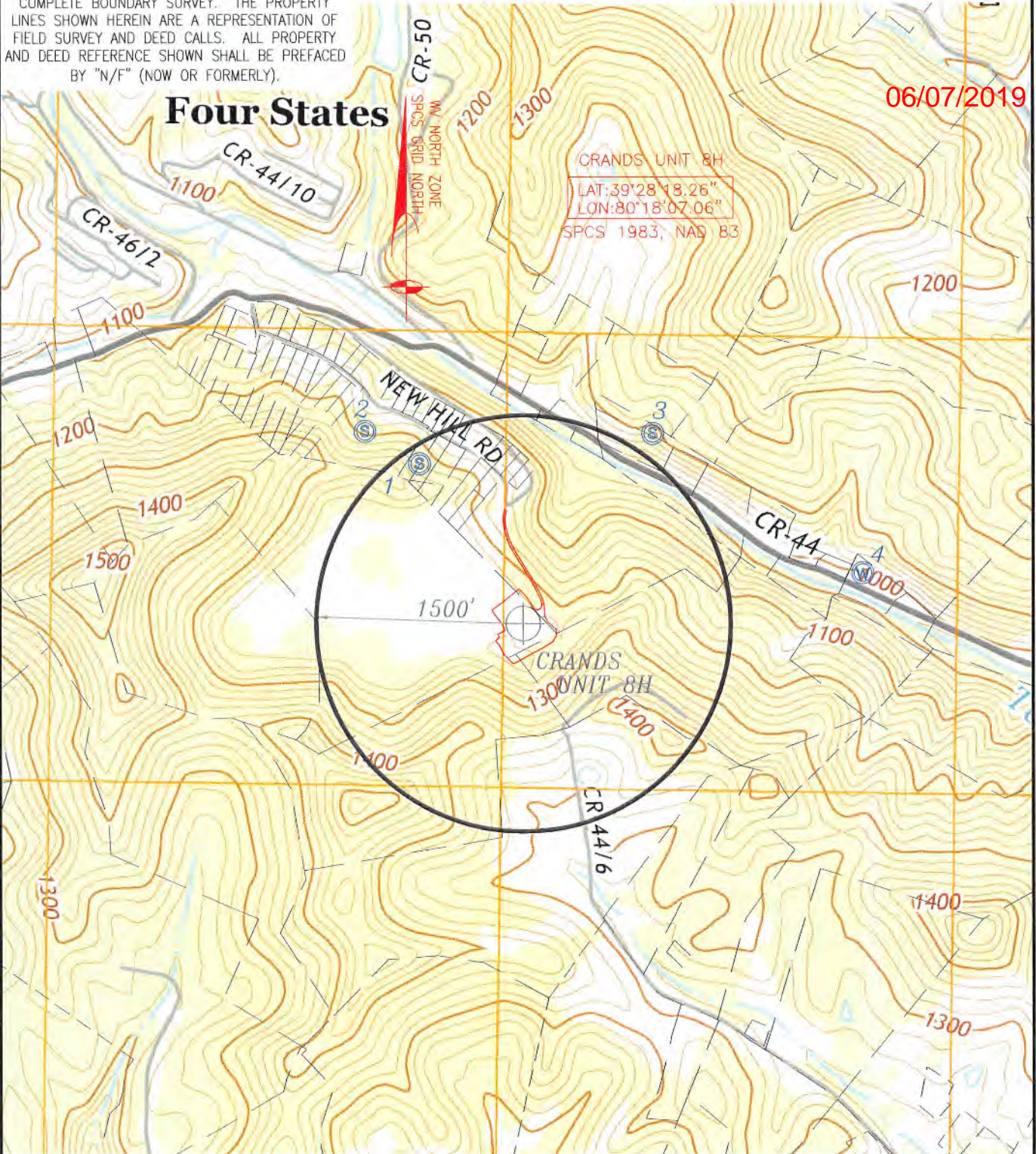


FORM W-9

NOTE: THIS PLAT IS FOR WELL LOCATION PURPOSES ONLY AND DOES NOT REPRESENT A COMPLETE BOUNDARY SURVEY. THE PROPERTY LINES SHOWN HEREIN ARE A REPRESENTATION OF FIELD SURVEY AND DEED CALLS. ALL PROPERTY AND DEED REFERENCE SHOWN SHALL BE PREFACED BY "N/F" (NOW OR FORMERLY).

LEGEND

-  WATER WELL
-  SPRING/POND/STREAM
-  SURFACE BOUNDARY



06/07/2019


POINT	NAME	ADDRESS	CITY	STATE	ZIP CODE	DISTANCE	BEARING	PARCEL I.D.
1	Perry E. Heflin	P.O. Box 155	Four States	WV	26572	1376'	N 32°56'24" W	Tax Map 11-54, Parcel 29
2	Jimmie & Betty Garrett	P.O. Box 54	Four States	WV	26572	1798'	N 39°28'32" W	Tax Map 11-54, Parcel 30
3	Douglas Moyer	78 Dora Lane	Worthington	WV	26591	1664'	N 34°17'48" E	Tax Map 11-29, Parcel 9.2
4	Gary A. Eagle	868 Four States Road	Worthington	WV	26591	2483'	N 81°30'56" E	Tax Map 11-29, Parcel 10

RECEIVED
Office of Oil and Gas
NOV 19 2018
WV Department of
Environmental Protection

CRANDS UNIT 8H WATER OVERALL

LINCOLN DISTRICT, MARION COUNTY, WEST VIRGINIA | 9/12/2018 | JC2018-78 | SHEET 1 OF 2

JONES
CONSULTANTS
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DELMONT, PA 15626
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Shinnston Quad (2014)
Marion County, WV
Scale: 1" = 1000'
0' 1000'


XTO
ENERGY
190 THORN HILL ROAD
WARRENDALE, PA 15086