



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

PERMIT MODIFICATION APPROVAL

October 25, 2013

EQT PRODUCTION COMPANY
POST OFFICE BOX 280
BRIDGEPORT, WV 26330

Re: Permit Modification Approval for API Number 1706250 , Well #: 514318

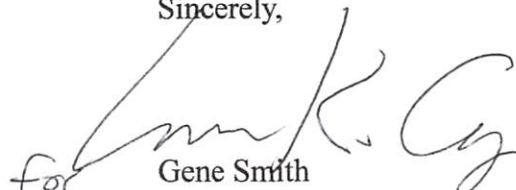
Extend Freshwater Casing

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

for 
Gene Smith
Regulatory/Compliance Manager
Office of Oil and Gas



October 24, 2013

Mr. Gene Smith
West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304

Re: Modification of 47-017-06251, 06250, 06249, 06248

Dear Mr. Smith,

Attached in this email are modifications to the above wells. EQT is modifying the fresh water casing because of red rock issues. Mr Adam Scarr spoke with you today concerning this and has asked that the modifications be issued immediately because we are currently drilling these wells.

The CPT 11 Pad has a current permitted casing depth of 804'. We have a proposed casing depth of 1030'. The Ground elevation for this pad is 1111'.

If you have any questions or need additional information, please do not hesitate to contact me at (304) 848-0076.

Sincerely,

Vicki Roark
Permitting Supervisor-WV

Enc.

Received

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Office of Oil and Gas
WV Dept. of Environmental Protection

CASING AND TUBING PROGRAM

20)

<u>TYPE</u>	<u>Size</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft.</u>	<u>FOOTAGE: for Drilling</u>	<u>INTERVALS: Left in Well</u>	<u>CEMENT: Fill-up (Cu.Fl.)</u>
Conductor	20	New	MC-50	81	40	40	38 C.T.S.
Fresh Water	13 3/8	New	MC-50	54	1,030	1,030	893 C.T.S.
Coal	-	New	-	-	-	-	-
Intermediate	9 5/8	New	MC-50	40	5,242	5,242	2058 C.T.S.
Production	5 1/2	New	P-110	20	14,600	14,600	See Note 1
Tubing	2 3/8		J-55	4.6			will be set 100' less than TD
Liners							

<u>TYPE</u>	<u>Size</u>	<u>Wellbore Diameter</u>	<u>Wall Thickness</u>	<u>Burst Pressure</u>	<u>Cement Type</u>	<u>Cement Yield</u>
Conductor	20	24	0.635	-	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,480	1	1.21
Coal	-	-	-	-	-	-
Intermediate	9 5/8	12 3/8	0.395	3,590	1	1.21
Production	5 1/2	8 1/2	0.361	12,640	-	1.27/1.88
Tubing						
Liners						

Packers

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

Note 1: EQT plans to bring the TOC on the production casing cement job 1,000' above kick off point, which is at least 500' above the shallowest production zone, to avoid communication.

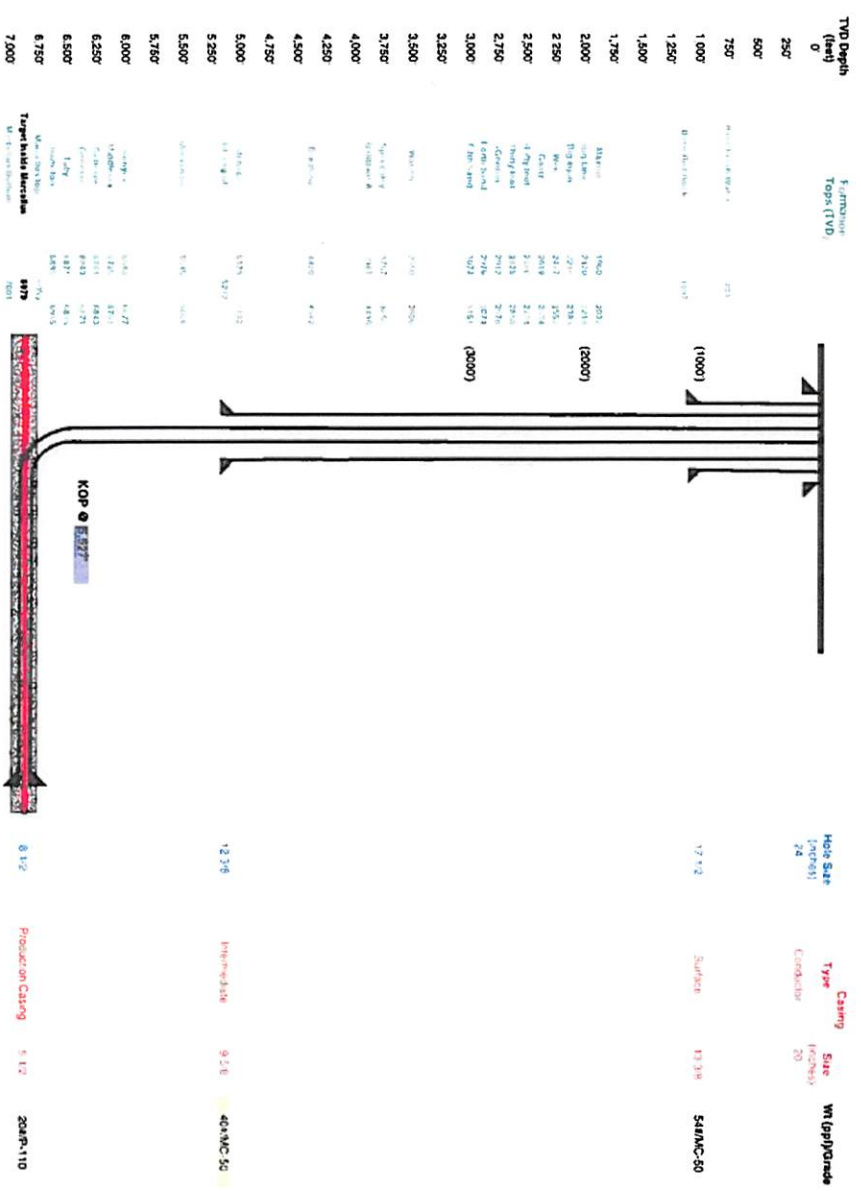
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OCT 24 113

Office of Oil and Gas
WV Dept. of Environmental Protection

4701706250

Well: 514318 (PPT11H3)
 EGT Production
 Center Point
 Doddridge
 West Virginia
 Admin: 18847
 Vertical Section: 7131



Proposed Well Work:
 Drill and complete a new horizontal well in the Marcellus formation.
 The vertical well to go down to an approximate depth of 5527
 Then kick off the horizontal leg into the Marcellus using a slick water frac.

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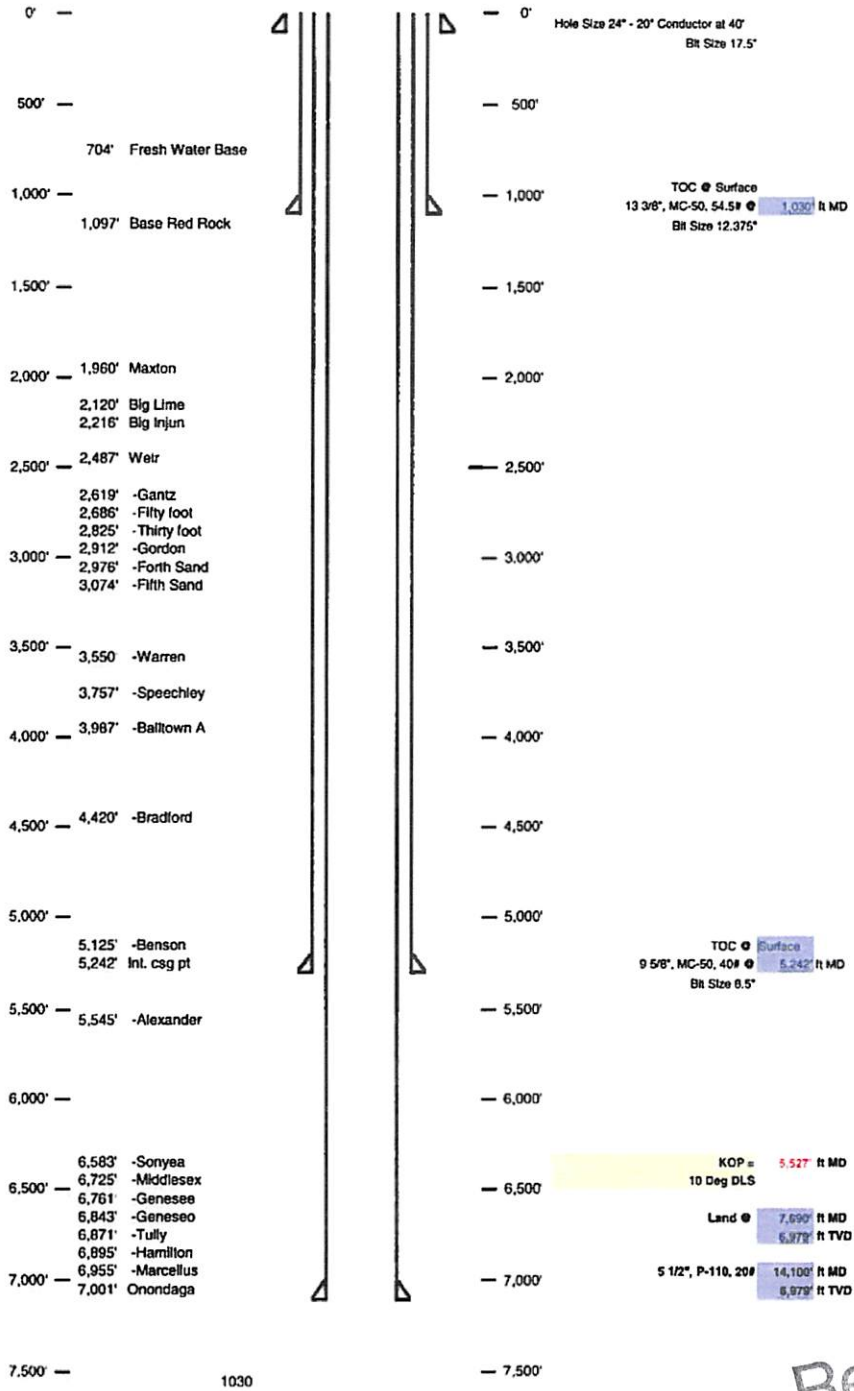
10/25/2013

4701706250

Well Schematic
EQT Production

Well Name 514313 (CPT1143)
County DeWitt
State West Virginia

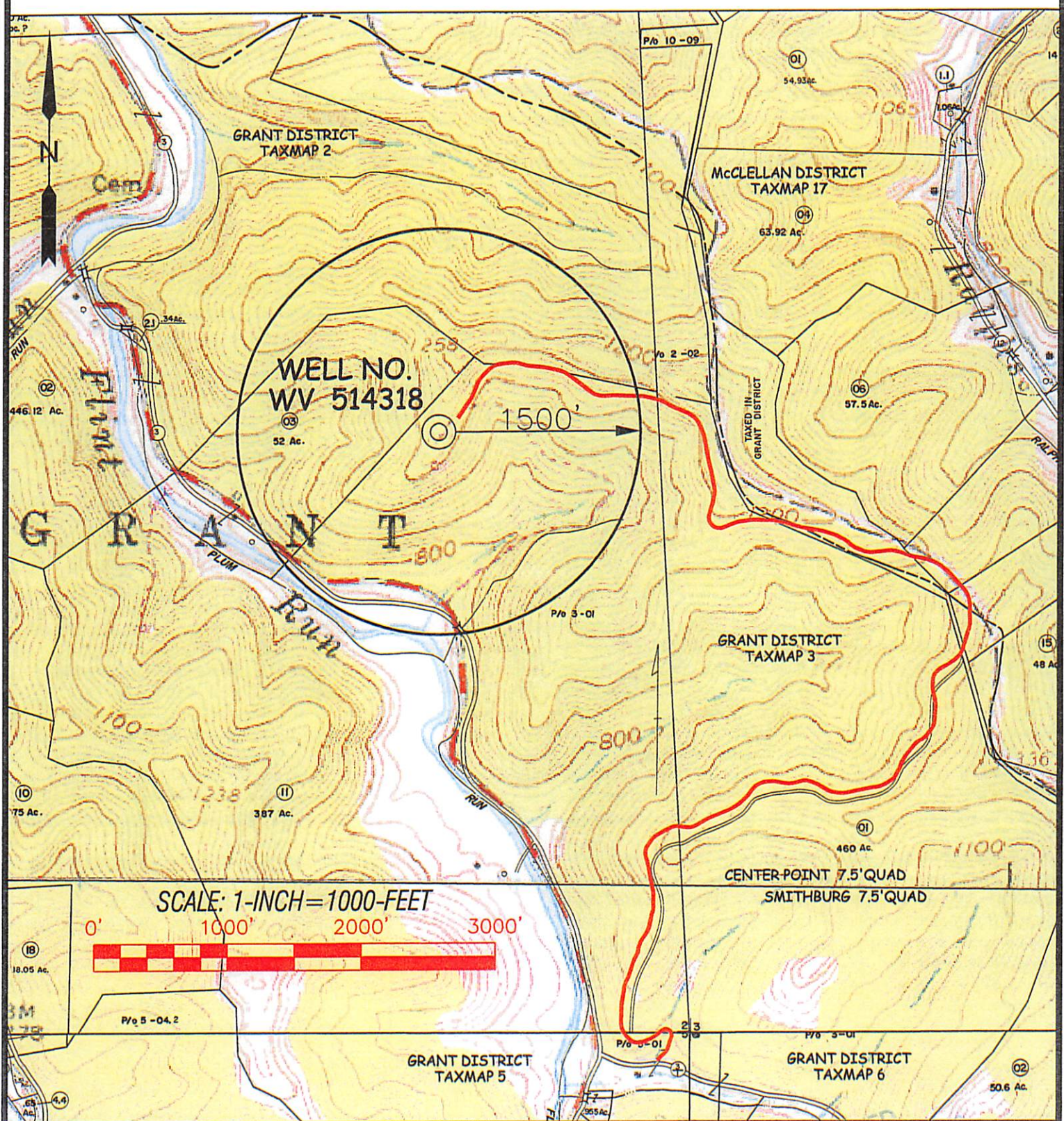
Elevation KB: 1121
Target Marcellus
Prospect
Azimuth 165.87
Vertical Section 7101



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10/25/2013

J.D. McREYNOLDS LEASE WELL NO. WV 514318



Professional Energy Consultants
A DIVISION OF EARTH LAND SURVEYING

SLS

ENGINEERS
Product Dept.
222 West 17th St.
P.O. Box 100
Cincinnati, OH 45201
(513) 482-2824

ENGINEERS
Environmental
18000 Office Building Road
Shelbyville, OH 43157
(513) 471-9911

HOOPER, ESTIMOTE, COMPANY

DRAWN BY: K.D.W. FILE NO.: 7749 DATE: 03/13/13 CADD FILE: 7746WS514318.dwg

TOPO SECTION OF:
CENTER POINT, WV 7.5' QUAD.

COUNTY	DISTRICT	TAX MAP-PARCEL NO.
DODDRIDGE	GRANT	3 - 01

OPERATOR:
EQT PRODUCTION COMPANY
115 PROFESSIONAL PLACE
P.O. BOX 280
BRIDGEPORT, WV 26330

RECEIVED
WV Department of Environmental Protection
APR 1 2013

10/25/2013

EQT PRODUCTION COMPANY J.D. McREYNOLDS LEASE 1500± ACRES WELL NO. WV 514318

WELL NO. WV 514318
STATE PLANE COORDINATES
NORTH ZONE (NAD'27)
N. 324,444.0
E. 1,654,140.6

LAT=(N) 39.384324
LONG=(W) 80.723643

UTM (NAD'83)(METERS)
N. 4,359,472.5
E. 523,815.3

LANDING POINT
WELL NO. WV 514318
STATE PLANE COORDINATES
NORTH ZONE (NAD'27)
N. 323,591.3
E. 1,653,247.2

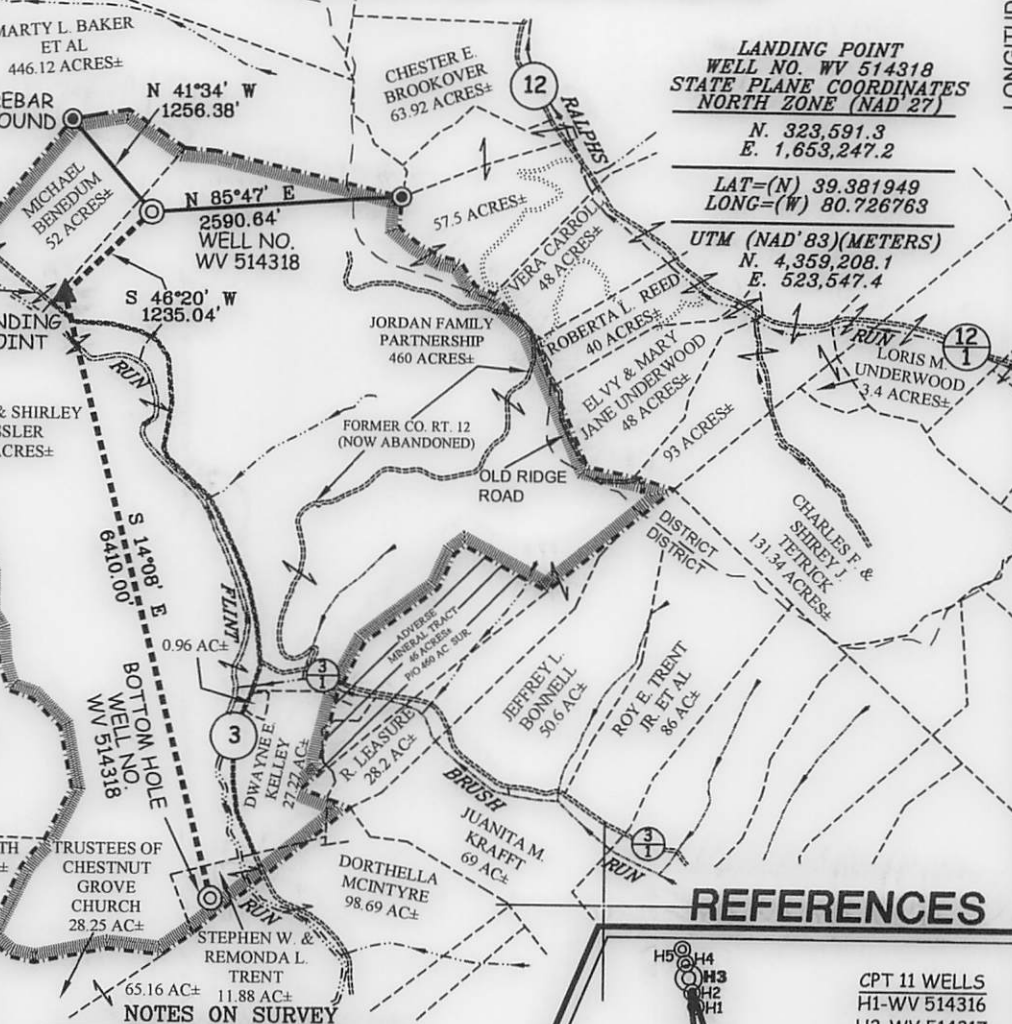
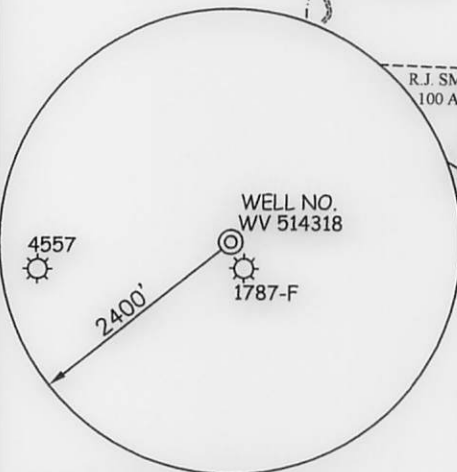
LAT=(N) 39.381949
LONG=(W) 80.726763

UTM (NAD'83)(METERS)
N. 4,359,208.1
E. 523,547.4

BOTTOM HOLE
WELL NO. WV 514318
STATE PLANE COORDINATES
NORTH ZONE (NAD'27)
N. 317,375.2
E. 1,654,812.0

LAT=(N) 39.364943
LONG=(W) 80.720928

UTM (NAD'83)(METERS)
N. 4,357,322.4
E. 524,055.8



REFERENCES

- CPT 11 WELLS
- H1-WV 514316
- H2-WV 514317
- H3-WV 514318**
- H4-WV 514319
- H5-WV 514320

- NOTES ON SURVEY**
1. TIES TO WELLS, CORNERS, AND REFERENCES ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
 2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 280 PAGE 695, DEED BOOK 223 PAGE 430, DEED BOOK 282 PAGE 406 & DEED BOOK 175 PAGE 633.
 3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN JULY, 2012.
 4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK).



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. 677
Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE MARCH 15, 20 13
 OPERATORS WELL NO. WV 514318
 API WELL NO. 47-17-06250
 STATE H6A COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7749P514318R
 PROVEN SOURCE OF ELEVATION 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 LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1,130' (GROUND) 1,111' (PROPOSED) WATERSHED FLINT RUN OF McELROY CREEK
 DISTRICT GRANT COUNTY DODDRIDGE QUADRANGLE CENTER POINT 7.5'

SURFACE OWNER JORDAN FAMILY PARTNERSHIP ACREAGE 460±
 ROYALTY OWNER J.D. McREYNOLDS HEIRS/ASSIGNS ACREAGE 1500±

PROPOSED WORK: 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 _____

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

10/25/2013