



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 1706249 , Well #: 514317

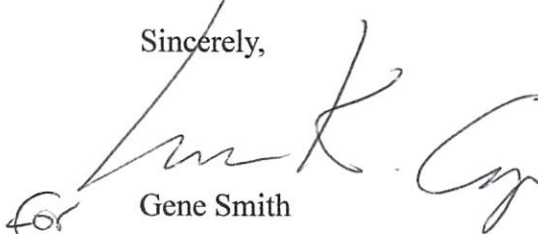
Extend Freshwater Casing

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

OCT 24 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

CASING AND TUBING PROGRAM

20)

TYPE	Size	New or Used	Grade	Weight per ft.	FOOTAGE: for Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu.Ft.)
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	15,747	15,747	See Note 1
Tubing	2 3/8		J-55	4.6			will be set 100' less than TD
Liners							

UKC
10.25.13

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield
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	-	1.27/1.86
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.

Received

OCT 24 2013

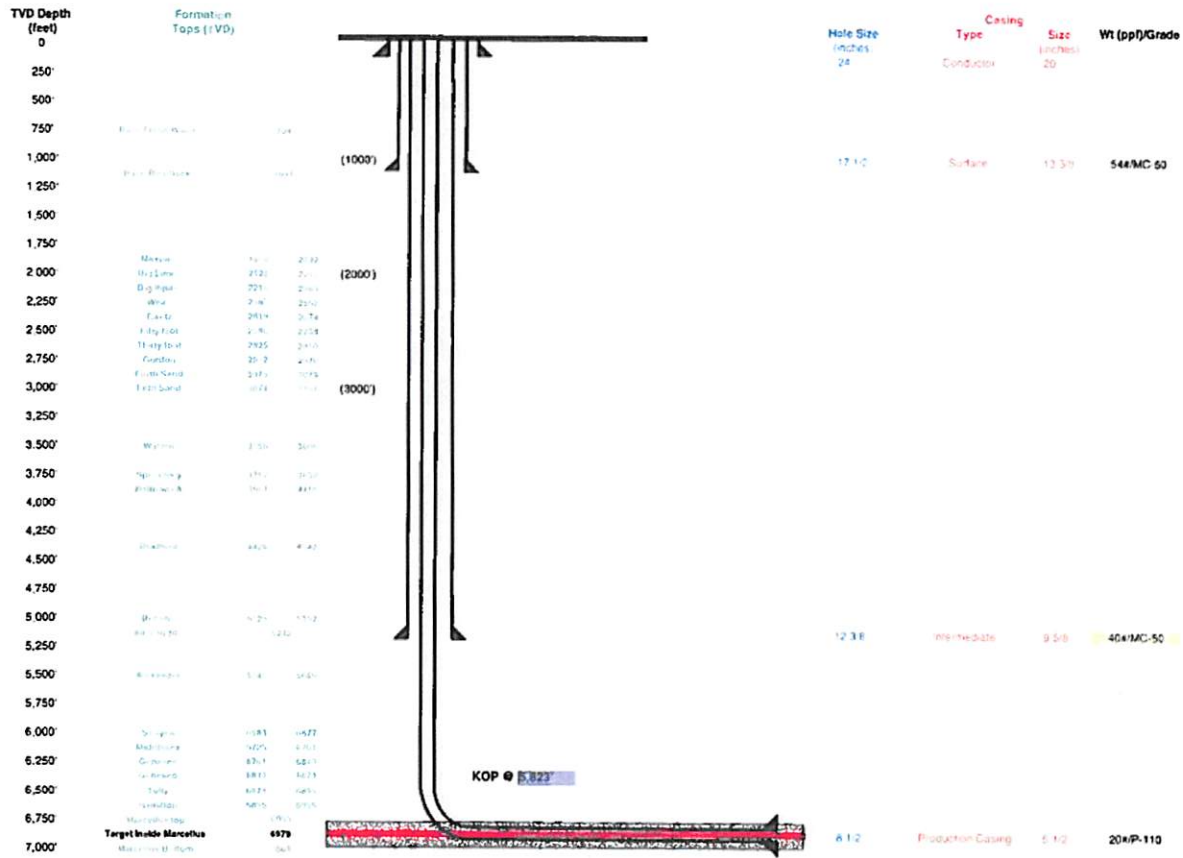
Office of Oil and Gas
WV Dept. of Environmental Protection

10/25/2013

4701706249

Well 514317 (CPT11H2)
 EQT Production
 Center Point
 Doddridge West Virgins

Admth 198.87
 Vertical Section 7478



Proposed Well Work:
 Drill and complete a new horizontal well in the Marcellus formation.
 The vertical drill to go down to an approximate depth of 5823'.
 Then kick off the horizontal leg into the Marcellus formation using a slick water frac.

Land curve @ 5,979' R TVD
 8,658' R MD
 Est. TO @ 6,979' R TVD
 15,247' R MD
 5,500' R Lateral

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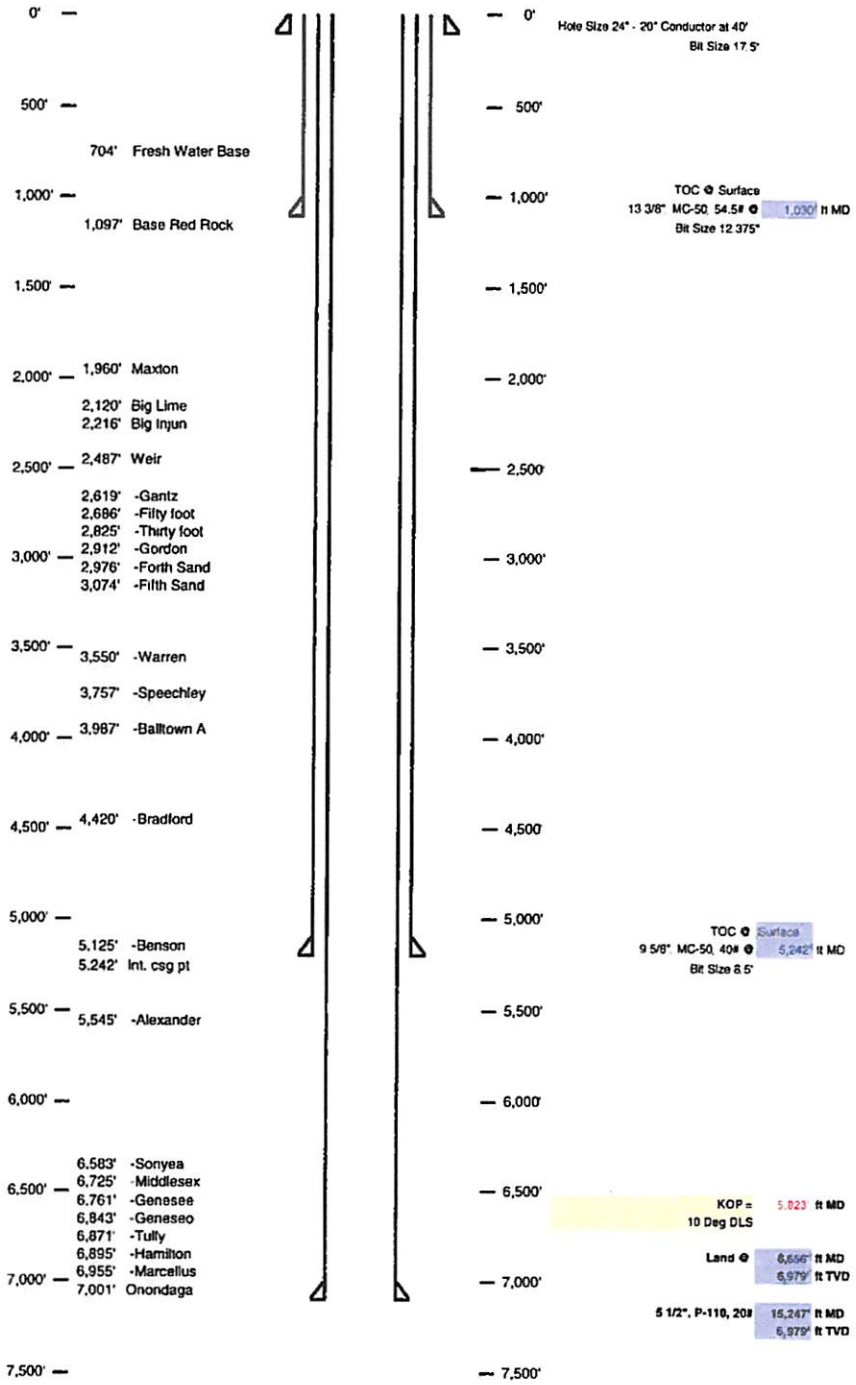
Office of Oil and Gas
 WV Dept. of Environmental Protection

4701706249

Well Schematic
EQT Production

Well Name 514317 (CP111H2)
County Doddridge
State West Virginia

Elevation KB: 1121
Target Marcellus
Prospect
Azimuth 165.87
Vertical Section 7478



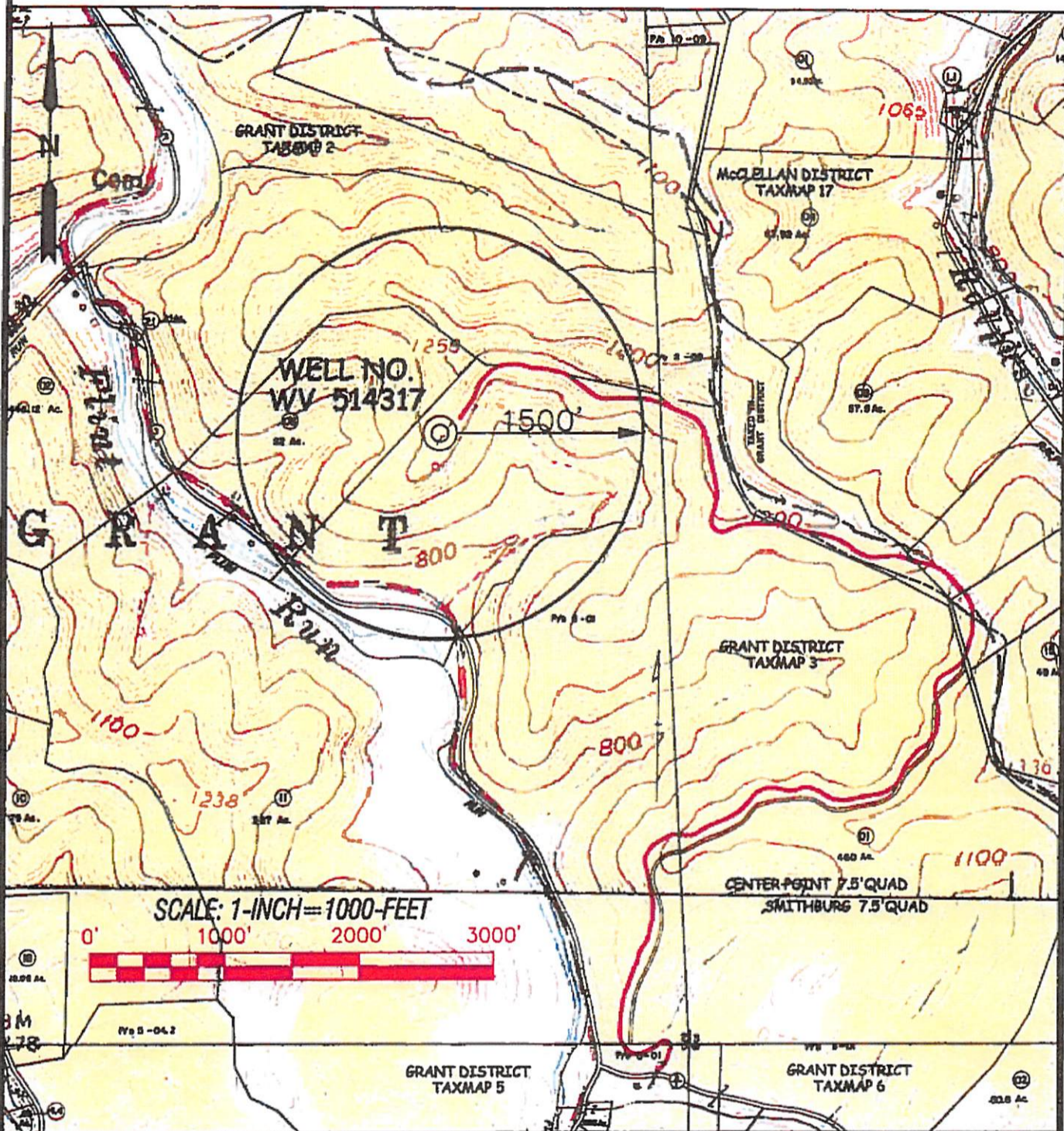
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Office of Oil and Gas
WV Dept. of Environmental Protection

10/25/2013

J.D. McREYNOLDS LEASE WELL NO. WV 514317



SCALE: 1-INCH=1000-FEET

0' 1000' 2000' 3000'



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

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

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

DRAWN BY: FILE NO. DATE CADD FILE:
K.D.W. 7749 03/13/13 7749W514317.dwg

RECEIVED
Office of Oil and Gas

JUN 27 2013

WV Department of
Environmental Protection

10/25/2013

LATITUDE 39°25'00"

LONGITUDE 80°42'30"

EQT PRODUCTION COMPANY J.D. McREYNOLDS LEASE 1500± ACRES WELL NO. WV 514317

WELL NO. WV 514317
STATE PLANE COORDINATES
NORTH ZONE (NAD'27)
N. 324,429.5
E. 1,654,144.1

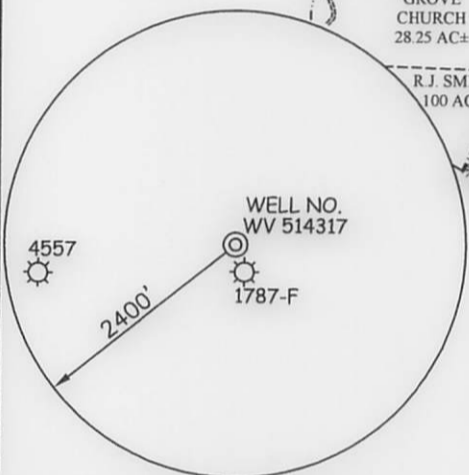
LAT=(N) 39.384284
LONG=(W) 80.723630
UTM (NAD'83)(METERS)
N. 4,359,468.0
E. 523,816.4

LANDING POINT
WELL NO. WV 514317
STATE PLANE COORDINATES
NORTH ZONE (NAD'27)
N. 323,347.2
E. 1,652,277.5

LAT=(N) 39.381243
LONG=(W) 80.730181
UTM (NAD'83)(METERS)
N. 4,359,128.8
E. 523,253.2

BOTTOM HOLE
WELL NO. WV 514317
STATE PLANE COORDINATES
NORTH ZONE (NAD'27)
N. 316,956.6
E. 1,653,886.2

LAT=(N) 39.363759
LONG=(W) 80.724182
UTM (NAD'83)(METERS)
N. 4,357,190.1
E. 523,775.8



RESEARCH INDICATES THAT CO. RT. 3 IN THIS AREA MAY BE PART OF OLD TURNPIKE SYSTEM, TYPICALLY A 60 FOOT WIDE STRIP OF LAND CLAIMED IN FEE BY WVDOH

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).

REFERENCES

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

WOODS

WOODS

47-017-1787-F

1" = 200'

GAS METER

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 514317

API WELL NO. 47-17-06249
STATE COUNTY PERMIT H6A

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7749P514317R
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
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

DESIGNATED AGENT REX C. RAY
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

10/25/2013