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

December 08, 2015

EQT PRODUCTION COMPANY
120 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330

Re: Permit Modification Approval for API Number 8510137, Well #: 513761

Added Sub-Surface Easement, Updated Lease Information, Changed Bottom Hole

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, Taylor Brewer For

Gene Smith
Assistant Chief of Permitting
Office of Oil and Gas

October 27, 2015

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

Re: Modification of 47-085-10137

Dear Mr. Smith,

Enclosed is an updated WW-6B, schematics, WW-6A1, rec plan, SSE and mylar plat, signed by the inspector. EQT would like to revise the landing point & bottom hole. The top hole has not changed. Since this well was already drilled an as drilled plat is included.

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

Sincerely,

Vicki Roark
Permitting Supervisor-WV

Enc.

Received

OCT 28 2015

Office of Oil and Gas
WV Dept. of Environmental Protection

WW - 6B
(9/13)

4708510137

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION

1) Well Operator: EQT Production Company | 306686 Operator ID | 085 County | 4 District | 526 Quadrangle

2) Operator's Well Number: 513761 Well Pad Name OXF163

3) Farm Name/Surface Owner : Pierce Public Road Access: CR 7/18

4) Elevation, current ground: 1,175.0 Elevation, proposed post-construction: 1,158.5

5) Well Type: (a) Gas • Oil _____ Underground Storage _____

Other _____

(b) If Gas: Shallow • Deep _____

Horizontal •

6) Existing Pad? Yes or No: yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):

Target formation is Marcellus at a depth of 6560' with the anticipated thickness to be 53 feet and anticipated target pressure of 2190 PSI

8) Proposed Total Vertical Depth: 6,560

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth 15,325

11) Proposed Horizontal Leg Length 8,075

12) Approximate Fresh Water Strata Depths: 176, 453, 517

13) Method to Determine Fresh Water Depth: By offset wells

14) Approximate Saltwater Depths: 1,156

15) Approximate Coal Seam Depths: No Coal Seams Present

16) Approximate Depth to Possible Void (coal mine, karst, other): None reported

17) Does proposed well location contain coal seams directly overlying or adjacent to an active mine?

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

Douglas Newlon
6-17-2015

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OCT 28 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

WW - 6B
(3/13)

4708510137

CASING AND TUBING PROGRAM

18)

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	1,055	1,055	914 C.T.S.
Coal	-	-	-	-	-	-	-
Intermediate	9 5/8	New	MC-50	40	3,036	3,036	1,184 C.T.S.
Production	5 1/2	New	P-110	20	15,325	15,325	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run. if run will be set 100 less than TD
Liners							

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	24	0.375	-	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,480	* See Note 2	1.21
Coal	-	-	-	-	-	-
Intermediate	9 5/8	12 3/8	0.395	3,590	* See Note 2	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.
Note 2: Reference Variance 2014-17.

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Office of Oil and Gas
WV Dept. of Environmental Protection

WW - 6B

(3/13)

4708510137

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and complete a new horizontal well in the Marcellus formation. The vertical drill to go down to an approximate depth of 4703'. Then kick off the horizontal leg into the Marcellus formation using a slick water frac.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum internal casing pressure is expected to average approximately 8500 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 24.6

22) Area to be disturbed for well pad only, less access road (acres): 14.6

23) Describe centralizer placement for each casing string.

- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One spaced every 1000' from KOP to Int csg shoe

24) Describe all cement additives associated with each cement type. **Surface (Type 1 Cement):** 0-3% Calcium Chloride Used to speed the setting of cement slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone. **Intermediate (Type 1 Cement):** 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.

Production:

Lead (Type 1 Cement): 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time. 0.3% CFR (dispersant). Makes cement easier to mix.

Tail (Type H Cement): 0.25-0.40% Lignosulfonate (Retarder). Lengthens thickening time. 0.2-0.3% CFR (dispersant). This is to make the cement easier to mix. 60 % Calcuim Carbonate. Acid solubility. 0.4-0.6% Halad (fluid loss). Reduces amount of water lost to formation.

25) Proposed borehole conditioning procedures. **Surface:** Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. To ensure that there is no fill, short trip two stands with no circulation. If there is fill, bring compressors back on and circulate hole clean. A constant rate of higher than expected cuttings volume likely indicates washouts that will not clean up. **Intermediate:** Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. If foam drilling, to enhance hole cleaning use a soap sweep or increase injection rate & foam concentration. **Production:** Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

Received

*Note: Attach additional sheets as needed.

OCT 28 2015

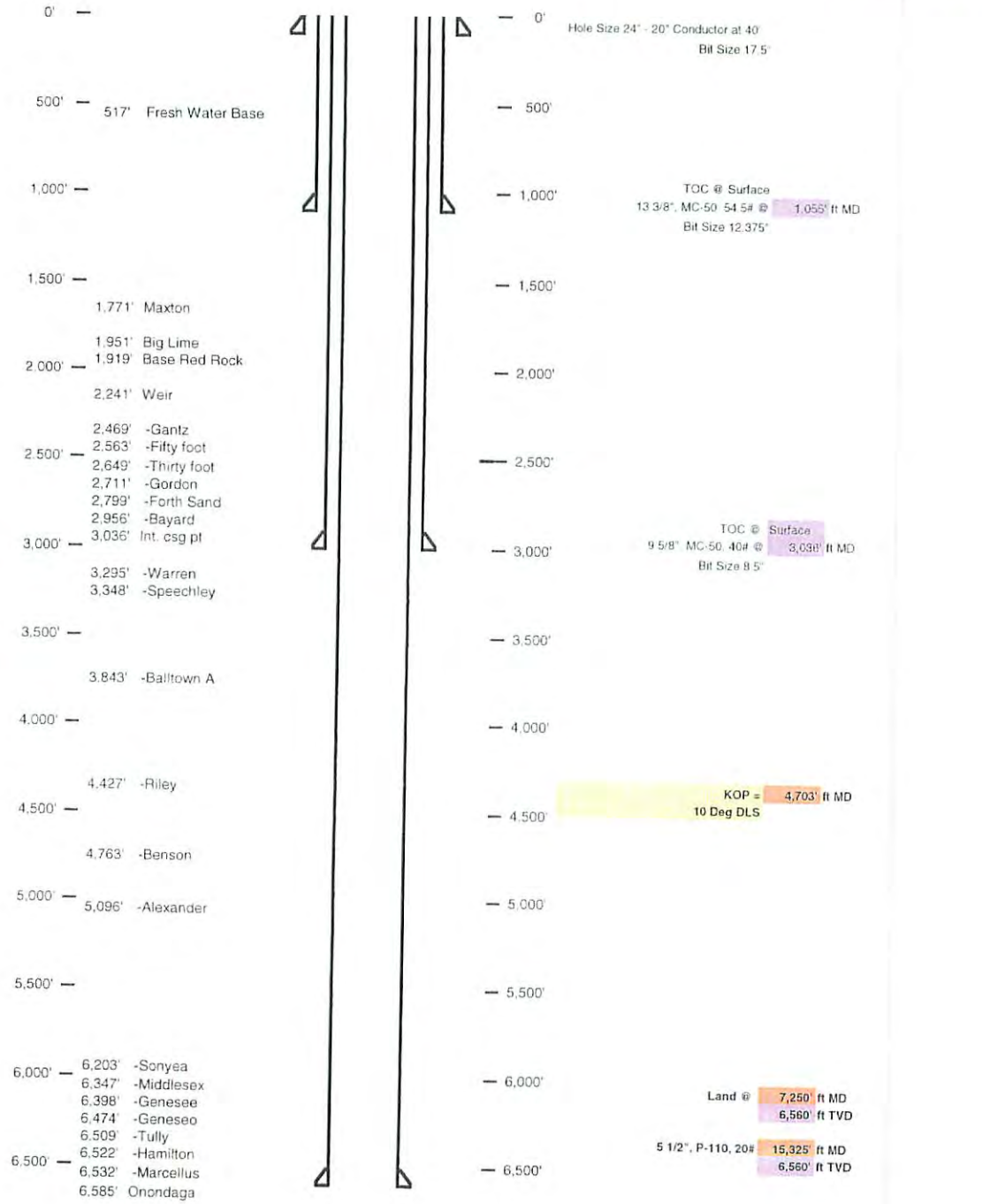
Office of Oil and Gas
WV Dept. of Environmental Protection

4708510137

Well Schematic
EQT Production

Well Name	513761 (CXF163H6)
County	Ritchie
State	West Virgina

Elevation KB:	1172
Target	Marcellus
Prospect	
Azimuth	162
Vertical Section	8252



Hole Size 24" - 20" Conductor at 40'
Bit Size 17.5"

TOC @ Surface
13 3/8", MC-50, 54.5# @ 1,055' ft MD
Bit Size 12.375"

TOC @ Surface
9 5/8", MC-50, 40# @ 3,036' ft MD
Bit Size 8.5"

KOP = 4,703' ft MD
10 Deg DLS

Land @ 7,250' ft MD
6,560' ft TVD

5 1/2", P-110, 20# 15,325' ft MD
6,560' ft TVD

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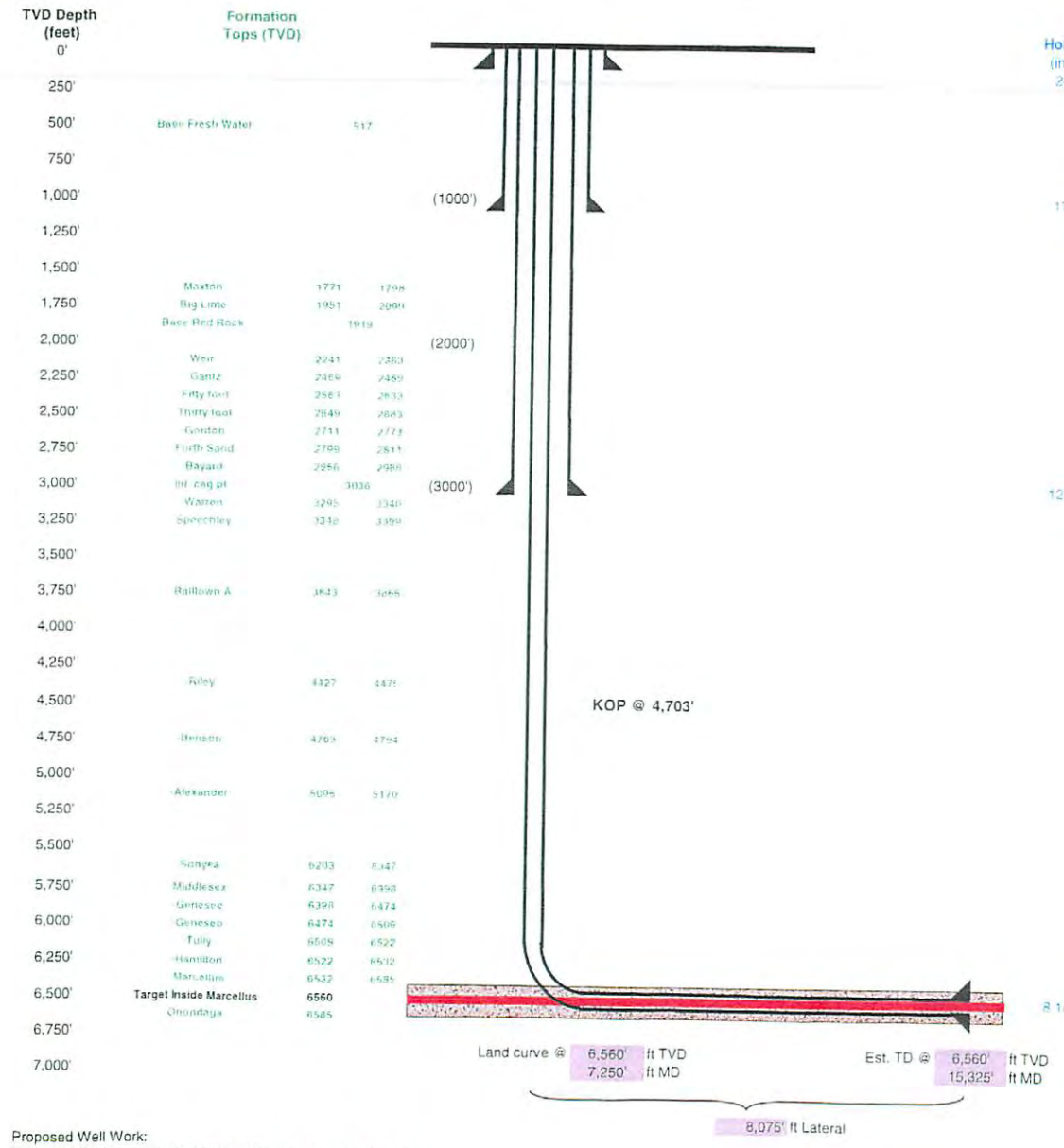
OCT 28 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

4708510137

Well 513761 (OXF163H6)
EQT Production
Oxford
Ritchie West Virgina

Azimuth 162
Vertical Section 8252



Hole Size (inches)	Casing Type	Size (inches)	Wt (ppf)/Grade
24	Conductor	20	81#/MC-50
17 1/2	Surface	13 3/8	54#/MC-50
12 3/8	Intermediate	9 5/8	40#/MC-50
8 1/2	Production Casing	5 1/2	20#/P-110

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 4703'.
Then kick off the horizontal leg into the Marcellus formation using a slick water frac.

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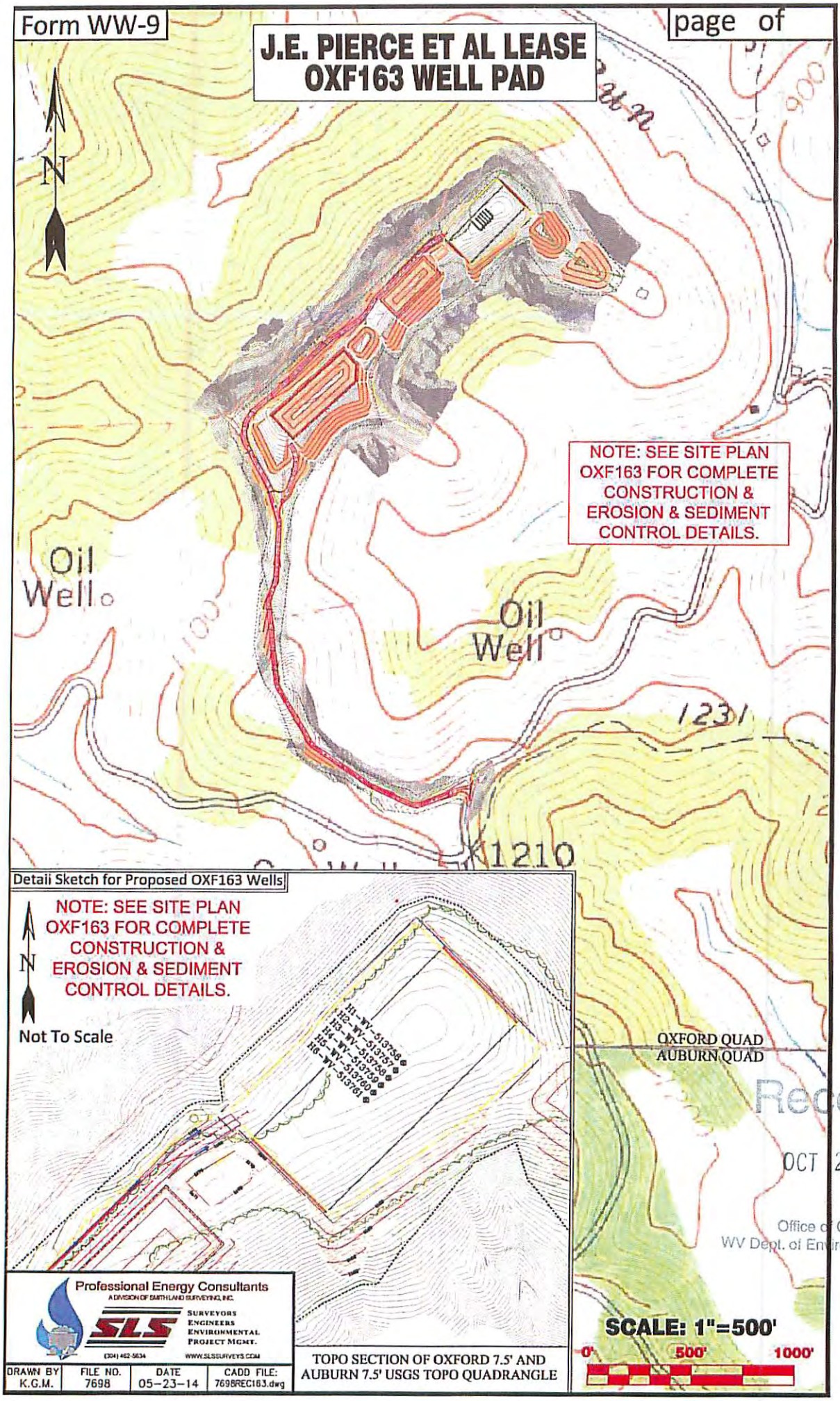
WV Dept. of Environmental Protection

Form WW-9

page of

J.E. PIERCE ET AL LEASE
OXF163 WELL PAD



Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING, INC.
SLS
SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.
(304) 462-5634
WWW.SLSSURVEYS.COM

DRAWN BY	FILE NO.	DATE	CADD FILE:
K.G.M.	7698	05-23-14	7698REC163.dwg

TOPO SECTION OF OXFORD 7.5' AND AUBURN 7.5' USGS TOPO QUADRANGLE

Received
OCT 28 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

FORM WW 6

2,721'

LATITUDE 39°10'00"

LONGITUDE 80°05'00"

NAD '27 GRID NORTH

AS DRILLED COORDINATES FOR WELL NO. WV 513761

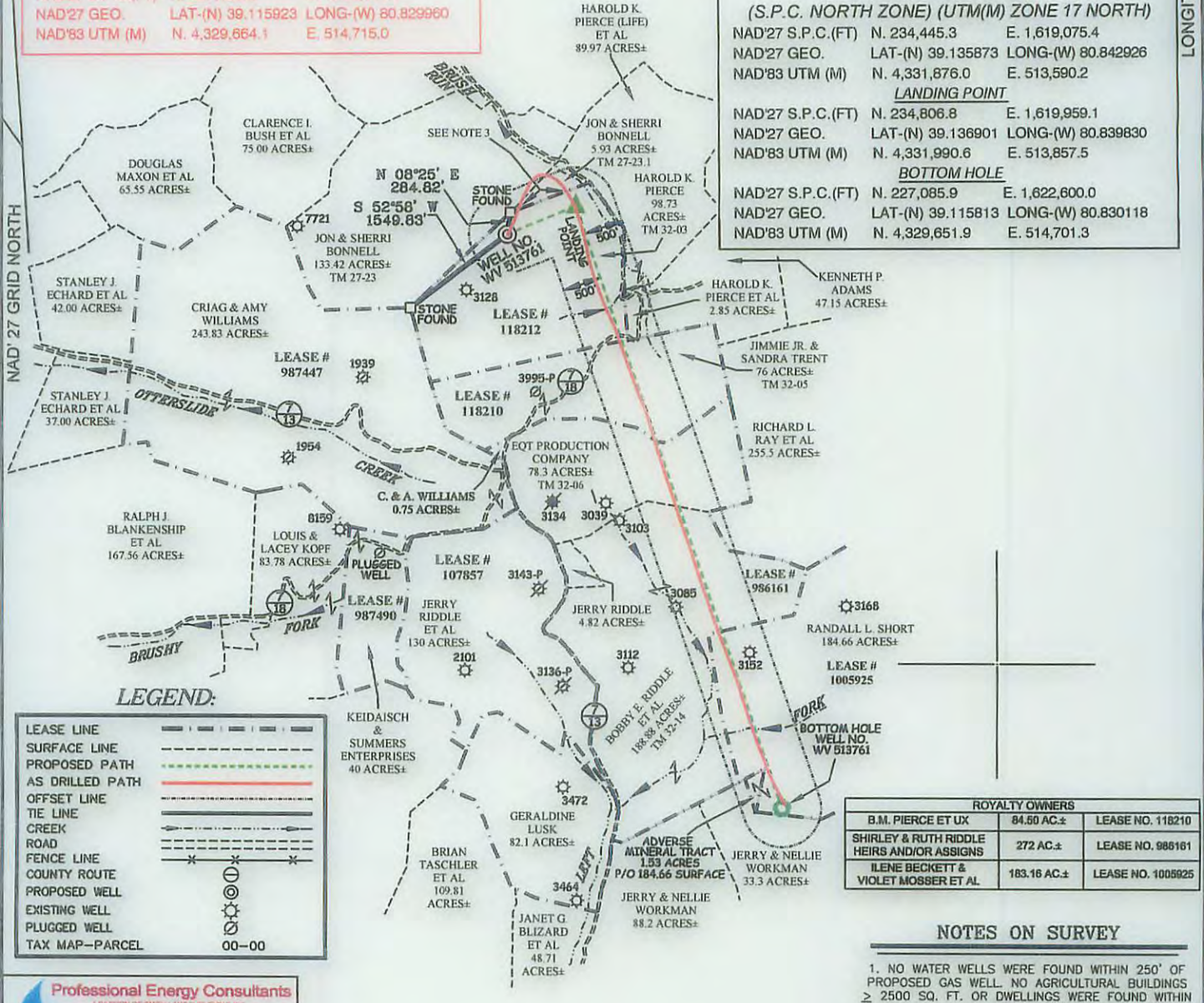
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 234,445.3	E. 1,619,075.4
NAD'27 GEO.	LAT-(N) 39.135873	LONG-(W) 80.842926
NAD'83 UTM (M)	N. 4,331,876.0	E. 513,590.2
	BOTTOM HOLE	
NAD'27 S.P.C.(FT)	N. 227,125.2	E. 1,622,645.6
NAD'27 GEO.	LAT-(N) 39.115923	LONG-(W) 80.829960
NAD'83 UTM (M)	N. 4,329,664.1	E. 514,715.0

EQT PRODUCTION COMPANY J.E. PIERCE ET AL LEASE 108 (98.73±) ACRES± WELL NO. WV 513761 (OXF163 H6)

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 234,445.3	E. 1,619,075.4
NAD'27 GEO.	LAT-(N) 39.135873	LONG-(W) 80.842926
NAD'83 UTM (M)	N. 4,331,876.0	E. 513,590.2
	LANDING POINT	
NAD'27 S.P.C.(FT)	N. 234,806.8	E. 1,619,959.1
NAD'27 GEO.	LAT-(N) 39.136901	LONG-(W) 80.839830
NAD'83 UTM (M)	N. 4,331,990.6	E. 513,857.5
	BOTTOM HOLE	
NAD'27 S.P.C.(FT)	N. 227,085.9	E. 1,622,600.0
NAD'27 GEO.	LAT-(N) 39.115813	LONG-(W) 80.830118
NAD'83 UTM (M)	N. 4,329,651.9	E. 514,701.3



LEGEND:

LEASE LINE	
SURFACE LINE	
PROPOSED PATH	
AS DRILLED PATH	
OFFSET LINE	
TIE LINE	
CREEK	
ROAD	
FENCE LINE	
COUNTY ROUTE	
PROPOSED WELL	
EXISTING WELL	
PLUGGED WELL	
TAX MAP–PARCEL	00–00

ROYALTY OWNERS		
B.M. PIERCE ET UX	84.50 AC.±	LEASE NO. 118210
SHIRLEY & RUTH RIDDLE HEIRS AND/OR ASSIGNS	272 AC.±	LEASE NO. 986161
ILENE BECKETT & VIOLET MOSSER ET AL	183.16 AC.±	LEASE NO. 1005925

NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. AS DRILLED INFORMATION PROVIDED BY EQT.
3. NONPRODUCTIVE SUBSURFACE RIGHT OF WAY.

Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING INC.
SLS
SURVEYORS ENGINEERS ENVIRONMENTAL PROJECT MGMT.
(304) 462-5634 WWW.SLSSURVEYS.COM

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. 849 C. Victor Moyers

C. VICTOR MOYERS LICENSED No. 849 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

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

DATE JUNE 3 , 20 14

REVISED 08/22/14,10/27/14,10/31/14,12/05/14, 04/14/15, 05/19/15, 06/08/15, 06/15/15 & 06/17/15

OPERATORS WELL NO. WV 513761

API WELL NO. 47 – 085 – 10137H

STATE – COUNTY – PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500

FILE NO. 7698AD513761R

SCALE 1" = 2000'

HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION :

ELEVATION 1,158.4'(ACTUAL) WATERSHED BRUSH RUN OF MIDDLE FORK

DISTRICT UNION COUNTY RITCHIE QUADRANGLE OXFORD 7.5'

SURFACE OWNER HAROLD K. PIERCE ACREAGE 98.73±

ROYALTY OWNER J.E. PIERCE ET AL ACREAGE 108± (98.73±)

PROPOSED WORK : LEASE NO. 118212

DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X 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 6495'

COUNTY NAME

PERMIT

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

EQT
Where energy meets innovation.SM

EQT Production Company
2400 Zenith Ridge Rd.
Suite 200
Canonsburg, PA 15317
www.eqt.com

Todd Klaner
Manager, Permitting
tklaner@eqt.com

October 26, 2015

WV DEP Reviewer

RE: EQT Production Company
PAD ID – OXF163
Well# - 513761
Ritchie County

Dear Reviewer,

This well indicated by this permit application contains a Subsurface Easement Agreement for non-productive portions of the well bore. Attached is a recorded copy of the Subsurface Use Agreement which gives EQT the right to drill below the surface of the tract 27/23 shown on the well plat.

EQT Production understands that the WVDEP will issue the permit in the normal process subject to the completeness of the requirements of the Office of Oil and Gas and does not take a position with regards to the property rights under this agreement.

EQT Production agrees that the WVDEP's issuance of the permit is in no way an affirmance or validation of EQT Production's claimed rights.

Regards,

Todd Klaner
Manager, Permitting
EQT Production Company

Received
OCT 28 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

Instrument 20150000882 Book Page 333 549

20150000882
Filed for Record in
RITCHIE COUNTY, WV
TRACIE D. MCDONALD, COUNTY CLERK
02-12-2015 At 08:33 am.
RW/EASEMENT 11.00
Book 333 Page 549 - 552

SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT

This SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT ("Agreement") is made the 14th day of January, 2015, between **Jon Mathew Bonnell and Sherri Bonnell**, his wife, (hereinafter "Grantor" whether one or more), whose address is 9 Crystal Lake Road West Union, WV 26456 and **EQT PRODUCTION COMPANY**, (hereinafter "EQT"), whose corporate headquarters are located at 625 Liberty Avenue, Suite 1700, Pittsburgh, PA, 15222.

Property. Grantor owns that certain tract of land located in Union District, Ritchie County, West Virginia containing 133.42 acres, more or less, and conveyed to Grantor in Deed Book 268, at page 129. Map 27 Parcel 23

1. **Subsurface.** For purposes of this Agreement, the subsurface shall be limited to the subsurface region and underground lying below the deepest economically mineable and merchantable coal seam.

2. **Grant.** In consideration of Ten Dollars and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Grantor grants to EQT a non-exclusive, perpetual right of way and subsurface easement within and underlying the Land for the purpose of locating and maintaining a total of three wellbores (513759/513760/513761) for the production of hydrocarbons by EQT from EQT's adjacent mineral tracts and leases. This right of way and easement shall run with the land and shall remain in force and effect until released and relinquished by EQT back to the Grantor, in writing.

3. **Wellbores.** Upon completion of any wellbore within the subsurface underlying the Land (the "Subsurface Land"), the subsurface easement in the area of the wellbore and the one hundred (100') feet on each side of the wellbore that parallels it shall become an *exclusive* right of way and easement in that area. The wellbore locations are generally described in the plat(s) filed with the West Virginia Department of Environmental Protection (the "DEP") for well(s): If an as-built plat is not available from the DEP for a wellbore located within the Subsurface Land, any third-party with the right to operate within the Subsurface Land may contact EQT's land department for a copy of such as-built plat. After the date of this Agreement, EQT shall provide notice of additional wellbores located within the remaining Subsurface Land by filing an amendment, affidavit or other appropriate document.

4. **No Surface Operations**. This Agreement does not grant EQT the right to conduct any operations on the surface of the Land. No surface operations shall be conducted on the Land by EQT unless the parties enter into a separate agreement.

5. **Miscellaneous Provisions**

(a) This instrument may be executed in one or more counterparts, each of which will be deemed to be an original copy of this instrument and all of which will be deemed to comprise one single instrument.

(b) The parties agree that this Agreement shall be filed of record together with all exhibits thereto.

(c) For no additional consideration, Grantor shall execute such further documents as may be reasonably requested by EQT from time to time to effectuate the intent of this Agreement.

Received

OCT 28 2015

Office of Oil and Gas
WV Dept. of Environmental Protection

IN WITNESS WHEREOF, effective as of the date first above written. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors, assigns, heirs and administers and executors.

[NAME OF GRANTOR]

Jon Mathew Bonnell

Sherri Bonnell

EQT PRODUCTION COMPANY

Name: John W. Damato

Title: Attorney-In-Fact

Received

OCT 28 2015

Office of Oil and Gas
WV Dept. of Environmental Protection

STATE/COMMONWEALTH OF West Virginia;
COUNTY OF Doddridge:

Before me, Kimberly Harness a Notary Public, on this day personally appeared Jon Mathew Bonnell and Sherri Bonnell known to me and acknowledged to me that he/she executed the instrument for the purposes and consideration therein expressed as his/her free act and deed. Given under my hand and seal of office this 14th day of January, 2015.

My Commission expires: December 4, 2022

[SEAL]

Official Seal
Notary Public
State of West Virginia
Kimberly Harness
North Central Regional Jail
#1 Lois Lane, Greenwood, WV 26415
My Commission Expires December 4, 2022

Kimberly D. Harness
Notary Public

STATE/COMMONWEALTH OF West Virgina;
COUNTY OF Harrison:

Before me, John Damato, a Notary Public, on this day personally appeared, known to me to be the Attorney-in-fact of **EQT PRODUCTION COMPANY**, subscribed to the foregoing instrument, and acknowledged to me that he/she executed the instrument for the purposes and consideration therein expressed as his/her free act and deed. Given under my hand and seal of office this 20th day of January, 2015.

My Commission expires: June 16, 2016.

[SEAL]

Official Seal
Notary Public
State of West Virginia
Kimberly Harness
North Central Regional Jail
#1 Lois Lane, Greenwood, WV 26415
My Commission Expires December 4, 2022

Notary Public

OFFICIAL SEAL
Commissioner Of West Virginia
REX K BUMGARDNER II
145 Ocello St.
Clarksburg, WV 26301
My Commission Expires June 13, 2016

Prepared by: EQT Production Company, 625 Liberty Avenue, Suite 1700, Pittsburgh, PA 15222

Received

OCT 28 2015

Office of Oil and Gas
WV Dept. of Environmental Protection

Declaration of Consideration of Value

The Grantee hereby declares that the consideration being paid to Grantor for the transfer of real estate is $ 10.00 .

Given under my hand this 9th day of February 2015.

EQT PRODUCTION COMPANY
John W. Damato
Attorney-In-Fact

201500000882
EQT
115 PROFESSIONAL PLACE
PO BOX 280
BRIDGEPORT WV 26330

Received

OCT 28 2015

Office of Oil and Gas
WV Dept. of Environmental Protection

WW-6A1
(5/13)

Operator's Well No. 513761

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Lease 118212			min pd 1/8th	
	J. E. Pierce, L. L. Pierce & Felsie Pierce	Pittsburgh & WV Gas. Co.		LB 45/257
	Pittsburg & WV Gas Co.	Equitable Gas Company		DB 126/473
	Equitable Gas Company	Equitrans, Inc.		LB 201/253
	Equittrans, Inc.	Equitable Production Company		LB 192/19
	Equitable Production Company	EQT Production Co		DB 281/346
			min pd 1/8th	
Lease 118210	B. M. Pierce & G. M. Pierce	Pittsburgh & WV Gas. Co.		LB 45/253
	Pittsburg & WV Gas Co.	Equitable Gas Company		DB 126/473
	Equitable Gas Company	Equitrans, Inc.		LB 201/253
	Equittrans, Inc.	Equitable Production Company		LB 192/19
	Equitable Production Company	EQT Production Co.		DB 281/346
			min pd 1/8th	
Lease 986161	Shirley S. Riddle, et al	E. W. Bowers		LB105/146
	E. W. Bowers	A. W. Bowers & George Bowers		WB65/66
	A. W. Bowers & George Bowers	Rick J. Garret & Desari Garrett		DB251/211
	Rick J. Garret & Desari Garrett	EQT Production Co.		DB251/865
Lease 1005925			min pd 1/8th	
	George H. Taylor, et al	Hope Natural Gas Co.		LB81/263
	Hope Natural Gas Co.	Consolidated Gas Supply Corp.		LB151/436
	Consolidated Gas Supply Corp.	Consolidated Gas Transmission Corp.		LB169/756
	Consolidated Gas Transmission Corp.	CNG Development Co.		LB217/194
	CNG Development Co.	CNG Producing Co.		CB1096/124 (Delaware)
	CNG Producing Co.	Dominion Exploration & Production, Inc.		CB82/07 (Delaware)
	Dominion Exploration & Production, Inc.	Dominion Transmission, Inc.		LB251/621
	Dominion Transmission, Inc.	CONSOL Energy Holdings, LLC		LB251/648
	CONSOL Energy Holdings, LLC	CONSOL Gas Co.		CB6/576
	CONSOL Gas Co.	CNX Gas Co., LLC		CB6/634
	CNX Gas Co., LLC	EQT Production Co.		LB279/333
TM 27/23	Jon & Sherri Bonnell	EQT Production Co.	n/a	Sub Surface(see attache

Upon information and belief, Operator's lease and/or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

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Office of Oil and Gas
WV Dept. of Environmental Protection

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: EQT Production Company

By:

Its: Permitting Supervisor

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Office of Oil and Gas
WV Dept. of Environmental Protection