



west virginia department of environmental protection

Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

PERMIT MODIFICATION APPROVAL  
Horizontal 6A / Horizontal 6A Well - 1

EQT PRODUCTION COMPANY  
120 PROFESSIONAL PLACE  
BUILDING II  
BRIDGEPORT, WV 26330

Re: Permit Modification Approval for WV 512501  
47-085-10086-00-00

Adding Additional Lease

EQT PRODUCTION COMPANY

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.

If there are any questions, please feel free to contact me at (304) 926- 0450.



James A. Martin  
Chief

Operator's Well Number: WV 512501  
Farm Name: RAY, RICHARD L. & SHERYL A.  
U.S. WELL NUMBER: 47-085-10086-00-00  
Horizontal 6A / Horizontal 6A Well - 1  
Date Issued: 12/30/2016

Promoting a healthy environment.

01/13/2017



June 8, 2016

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

Re: Modification of 47-085-10086

Dear Mr. Smith,

Please accept the attached updates for the above referenced permit. Upon inspection of our plat, we noted the curve geometry crossed into 1 additional lease, #106136. Enclosed is an updated WW-6A1, WW-6B, mylar plat and rec plan reflecting corrections to update the permit.

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

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vicki Roark'.

Vicki Roark  
Permitting Supervisor-WV

Enc.

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STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

1) Well Operator: EQT Production Company 306686 Ritchie Union Oxford  
Operator ID County District Quadrangle

2) Operator's Well Number: 512501 Well Pad Name: OXF122

3) Farm Name/Surface Owner: Richard L. & Sheryl A. Ray Public Road Access: Co. Rt. 22/3

4) Elevation, current ground: 1111.0 Elevation, proposed post-construction: 1111.0

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 Thickness and Expected Pressure(s):  
Marcellus, 6493', 54', 2190 PSI.

8) Proposed Total Vertical Depth: 6493

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17333

11) Proposed Horizontal Leg Length: 10058

12) Approximate Fresh Water Strata Depths: 246

13) Method to Determine Fresh Water Depths: From offset wells

14) Approximate Saltwater Depths: None reported

15) Approximate Coal Seam Depths: 939

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? Yes \_\_\_\_\_ No

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

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18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	20	New	A-500	78.6	40	40	44.84 ft <sup>3</sup> / CTS
Fresh Water	13 3/8	New	J-55	54.5	385	385	486 ft <sup>3</sup> / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2995	2995	1272.38 ft <sup>3</sup> / CTS
Production	5 1/2	New	P-110	20	17330	17330	500' above top producing zone
Tubing	2 3/8		J-55	4.7		May not be run, if run set 40' above top perf or 80° inclination	
Liners							

<b>TYPE</b>	<b>Size (in)</b>	<b>Wellbore Diameter (in)</b>	<b>Wall Thickness (in)</b>	<b>Burst Pressure (psi)</b>	<b>Anticipated Max. Internal Pressure (psi)</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
Conductor	20	24	.375	1378	1102	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	Class A	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	3950	3160	Class A	1.20
Production	5 1/2	8 1/2	.361	12640	10112	Class H/H	1.1/1.84
Tubing	2 3/8	NA	.19	7700			
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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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. Drill the vertical to an approximate depth of 4971'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

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 anticipated internal casing pressure is expected to be approximately 10000 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): no additional disturbance

22) Area to be disturbed for well pad only, less access road (acres): no additional disturbance

23) Describe centralizer placement for each casing string:

- Surface: Bow spring centralizers – One centralizer at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One centralizer at the shoe and one spaced every 500'.
- Production: One solid body centralizer spaced every joint from production casing shoe to KOP

24) Describe all cement additives associated with each cement type:

Conductor: Class A no additives  
Surface (Class A Cement): 0-3% Calcium Chloride. Used to speed the setting of cement slurries  
Intermediate (Class A Cement): 0-3% Calcium Chloride. Used to speed the setting of cement slurries.  
Production:  
Lead (Class H Cement): 0.2% CD-20 (dispersant makes cement easier to mix). .15% SuperFL-300 (fluid loss/lengthens thickening time) .15% SEC-10 (fluid loss) 50:50 POZ (extender)  
Tail (Class H Cement): 0.2% Super CR-1 (Retarder). Lengthens thickening time. .3% Super FL-200 (fluid loss) .2% SEC-10 (Fluid loss). .2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation. 60 % Calcium Carbonate. Acid solubility.

25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.  
Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.  
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.

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\*Note: Attach additional sheets as needed.

085-10086

WW-6A1  
(5/13)

Operator's Well No. 512501

**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
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see attachment

**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: Victoria J Roark  
 Its: Permitting Supervisor

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Page 1 of 2  
WV Department of Environmental Protection  
01/13/2017

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
/ 105953	<b><u>Haught Family Trust, et al (current royalty owner)</u></b>		***	
	William Adams, et ux (original lessor)	The Philadelphia Company of West Virginia		LB29/244
	The Philadelphia Company of West Virginia	Pittsburgh and West Virginia Gas Company		LB55/362
	Pittsburgh and West Virginia Gas Company	Equitable Gas Company		LB126/473
	Equitable Gas Company	Equitrans, Inc.		LB201/253
	Equitrans, Inc.	Equitable Production-Eastern States, Inc.		LB234/830
	Equitable Production-Eastern States, Inc.	Equitable Production Company		DB281/346 Doddridge
	Equitable Production Company	EQT Production Company		DB281/346 Doddridge
/ 106136	<b><u>Adele McDougal, et al (current royalty owner)</u></b>		***	
	Thomas Watson, R. A. Watson and M. G. Zinn (original lessor)	The Philadelphia Co. of West Virginia		LB30/161
	The Philadelphia Co. of West Virginia	Pittsburgh & West Virginia Gas Co.		LB55/362
	Pittsburgh & West Virginia Gas Co.	Equitable Gas Company		DB126/473
	Equitable Gas Company	Equitrans, Inc.		LB201/253
	Equitrans, Inc.	Equitable Production-Eastern States, Inc.		LB192/19
	Equitable Production-Eastern States, Inc.	Equitable Production Company		CB6/443
	Equitable Production Company	EQT Production Company		CB6/443
/ 118210	<b><u>Bonnie L. Brown, et al (current royalty owner)</u></b>		***	
	J. E. Pierce, L. L. Pierce & Felsie Pierce (original lessor)	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
	Equitrans, Inc.	Equitable Production Company		LB 192/19
	Equitable Production Company	EQT Production Co.		DB 281/346 Doddridge
/ 985161	<b><u>Jack W. Byers, et al (current royalty owner)</u></b>		***	
	Shirley S. Riddle, et al (original lessor)	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
/ 1005925	<b><u>Ilene Beckett, et al (current royalty owner)</u></b>		min pd 1/8th	
	Delphia G. Taylor and George H. Taylor (original lessor)	Hope Natural Gas Company		LB81/263
	Hope Natural Gas Company	Consolidated Gas Supply Corp.		LB151/436
	Consolidated Gas Supply Corp.	Consolidated Gas Transmission Corp.		LB169/756
	Consolidated Gas Transmission Corp.	CNG Development Co.		LB176/601
	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
	/ 1005950	<b><u>Mary J. Smith, et al (current royalty owner)</u></b>		***
James E. Spurgeon, et al (original lessor)		Claron Dawson and C. Crane		LB127/239
Claron Dawson and C. Crane		Sancho Oil and Gas Corp.		LB232/172
Sancho Oil and Gas Corp.		Stephen D. Ward		LB232/174
Stephen D. Ward		Antero Resources Appalachian Corp.		LB256/22
Antero Resources Appalachian Corp.		EQT Production Company		DB282/379
/ 710486	<b><u>Jane L. Garrison, et al (current royalty owner)</u></b>		***	
	Lewis Garrison, et ux (original lessor)	Carnegie Natural Gas Company		LB42/4
	Carnegie Natural Gas Company	Carnegie Production Company		LB228/859
	Carnegie Production Company/USX	Equitable Resources Inc.		See attached
	Equitable Resources Inc.	Equitable Production Co.		DB274/471
	Equitable Production Co.	EQT Production Company		DB281/348 Doddridge

\*\*\* We will pay one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced, or marketed before deducting the amount to be paid to or set aside for the owner of the oil or gas in place, on all such oil or gas to be extracted, produced, or marketed from the well.

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PURCHASE AND SALE AGREEMENT

PURCHASE AND SALE AGREEMENT, dated as of May 27, 1999 (this "Agreement"), by and between USX CORPORATION, a Delaware corporation, ("USX") and EQUITABLE RESOURCES, INC., a Pennsylvania corporation (hereinafter referred to as "Buyer").

WHEREAS, USX owns directly or indirectly all of the outstanding capital stock or other evidence of an equity interest of the following companies (each a "Carnegie Company" and collectively the "Carnegie Companies"), which are involved in one or more of the production, gathering, transportation, treatment, distribution and sale of natural gas: (i) Carnegie Natural Gas Company, a Pennsylvania corporation, ("Carnegie"), (ii) Carnegie Interstate Pipeline Company, a Delaware corporation, ("CIPCO"), (iii) Carnegie Production Company, a Pennsylvania corporation, ("CPC"), (iv) Carnegie Natural Gas Sales, Inc., a Delaware corporation, ("CNGS") and (v) Carnegie Gas Storage, LLC, a Delaware limited liability company, ("CGS"); and

WHEREAS, USX desires to sell to Buyer and Buyer desires either for itself and/or one or more designated subsidiaries to purchase from USX one hundred percent (100%) of the capital stock and other evidence of equity interest in the Carnegie Companies;

NOW, THEREFORE, for and in consideration of the premises and the representations, warranties, covenants and agreements herein set forth and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE I  
DEFINITIONS

Unless otherwise specifically stated in the text of this Agreement, the following terms shall have the following meanings:

Section 1.1 The "1935 Act" shall mean the Public Utility Holding Company Act of 1935, as amended.



5.13 No Third-Party Rights. Nothing in this Agreement, expressed or implied, shall or is intended to confer upon any Person other than the parties hereto or their respective successors or assigns.

IN WITNESS WHEREOF, the parties have executed, delivered and entered into this agreement as of the day and year first above written.

USX Corporation

By: V. G. Beghini  
Typed Name: V. G. Beghini  
Title: Vice Chairman - Marathon Group

Equitable Resources, Inc.

By: David L. Porges  
Typed Name: David L. Porges  
Title: Senior Vice President and Chief Financial Officer

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01/13/2017



May 20, 2016

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

Re: OXF122, 512501, 47-08510086

Dear Mr. Martin,

EQT Production Company is submitting an application for a new well work permit for the above well number. 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.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Vicki L'.

Vicki Roark  
Permitting Supervisor-WV

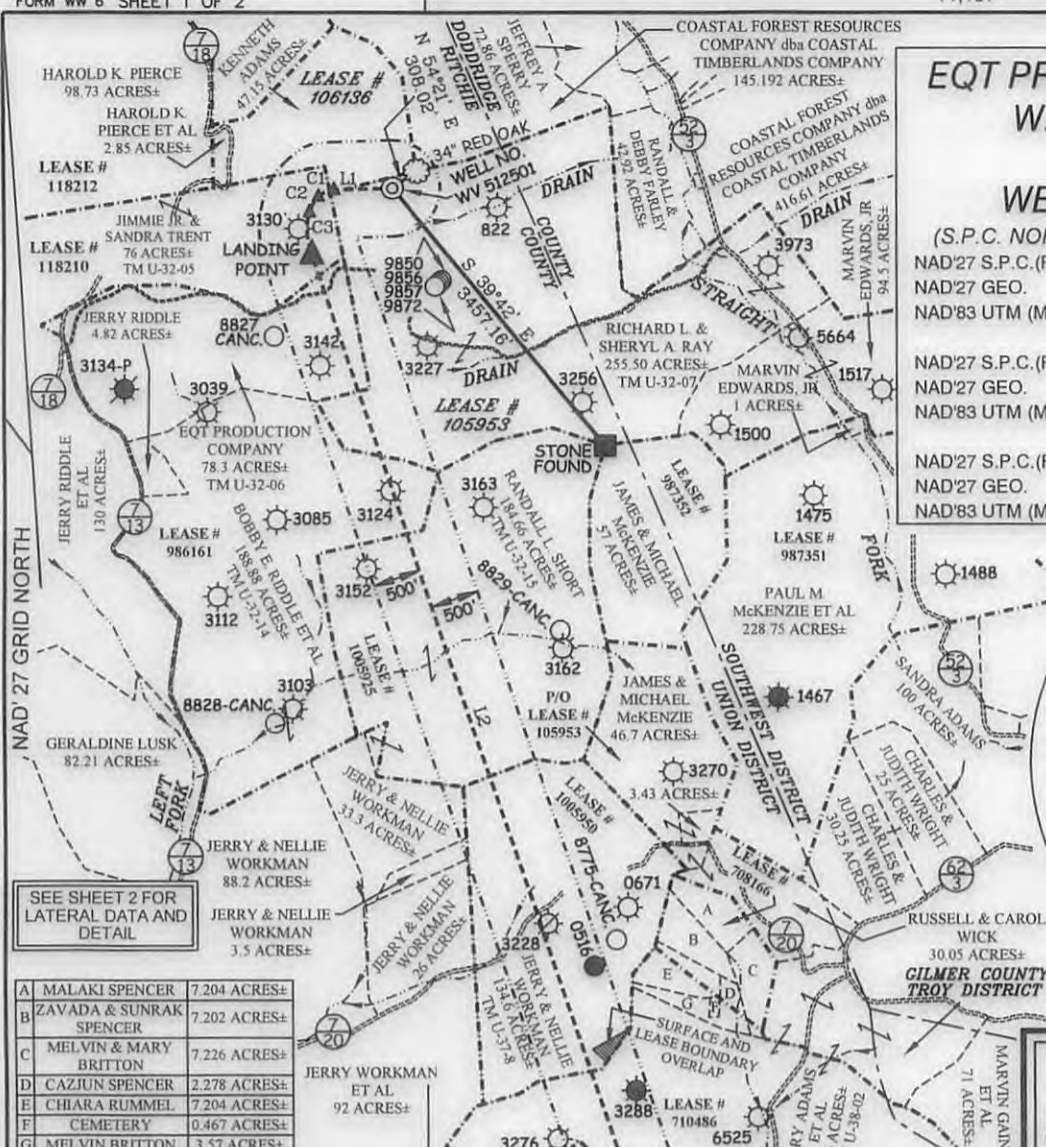
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**EQT PRODUCTION COMPANY  
W.M. ADAMS LEASE  
402 ACRES±  
WELL NO. WV 512501**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)  
 NAD'27 S.P.C.(FT) N. 233,083.81 E. 1,622,439.81  
 NAD'27 GEO. LAT-(N) 39.132273 LONG-(W) 80.830996  
 NAD'83 UTM (M) N. 4,331,478.34 E. 514,622.03  
**LANDING POINT**  
 NAD'27 S.P.C.(FT) N. 232,389.96 E. 1,621,603.24  
 NAD'27 GEO. LAT-(N) 39.130334 LONG-(W) 80.833908  
 NAD'83 UTM (M) N. 4,331,262.70 E. 514,370.70  
**BOTTOM HOLE**  
 NAD'27 S.P.C.(FT) N. 222,798.45 E. 1,624,883.96  
 NAD'27 GEO. LAT-(N) 39.104135 LONG-(W) 80.821847  
 NAD'83 UTM (M) N. 4,328,357.42 E. 515,418.91



SEE SHEET 2 FOR LATERAL DATA AND DETAIL

A	MALAKI SPENCER	7,204 ACRES±
B	ZAVADA & SUNRAK SPENCER	7,202 ACRES±
C	MELVIN & MARY BRITTON	7,226 ACRES±
D	CAZIJUN SPENCER	2,278 ACRES±
E	CHIARA RUMMEL	7,204 ACRES±
F	CEMETERY	0.467 ACRES±
G	MELVIN BRITTON	3.57 ACRES±

**LEGEND**

LEASE LINE: - - - - -  
 SURFACE LINE: - - - - -  
 WELL LATERAL: - - - - -  
 OFFSET LINE: - - - - -  
 TIE LINE: - - - - -  
 CREEK: ~~~~~  
 ROAD: - - - - -  
 FENCE LINE: - - - - -  
 COUNTY ROUTE: - - - - -  
 PROPOSED WELL: (Symbol)  
 EXISTING WELL: (Symbol)  
 PERMITTED WELL: (Symbol)  
 RITCHIE COUNTY UNION DISTRICT TAX MAP-PARCEL: (Symbol)  
 TM U-00-00

**ROYALTY OWNERS**

ADELE McDOUGAL ET AL.	63 AC.±	LEASE NO. 106136
BONNIE L. BROWN ET AL.	84.50 AC.±	LEASE NO. 118210
JACK W. BYERS, ET AL.	272 AC.±	LEASE NO. 986161
ILENE BECKETT ET AL.	183.16 AC.±	LEASE NO. 1005925
MARY J. SMITH ET AL.	134 AC.±	LEASE NO. 1005950
JANE L. GARRISON ET AL.	246 AC.±	LEASE NO. 710486

**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.

**REFERENCES**

ADAMS APPROXIMATE SURFACE AND LEASE BOUNDARY

RAY N 54°21' E 308.02'

34" RED OAK

EXISTING A.P.I #'S  
 H1- 09856H-CANC.  
 H2- 10087H(09872H-CANC.)  
 H3- 09857H-CANC.  
 H5- 10086H(09850H-CANC.)  
 H6- 10085H  
 H8- 10195H

OXF122 WELLS  
 H1-WV 512426  
 H2-WV 512427  
 H3-WV 512428  
 H4-WV 512500  
**H5-WV 512501**  
 H6-WV 513762  
 H7-WV 514081  
 H8-WV 514082

1" = 200'



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*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE NOVEMBER 18, 20 09  
 REVISED 11/18/13, 12/12/13, 11/05/14, 07/10/15 & 05/23/16  
 OPERATORS WELL NO. WV 512501  
 API WELL NO. 47 - 085 - 10086  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 6811P512501R5  
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY 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 1,111'(PAD ELEVATION) WATERSHED STRAIGHT FORK  
 DISTRICT UNION COUNTY RITCHIE QUADRANGLE OXFORD 7.5'

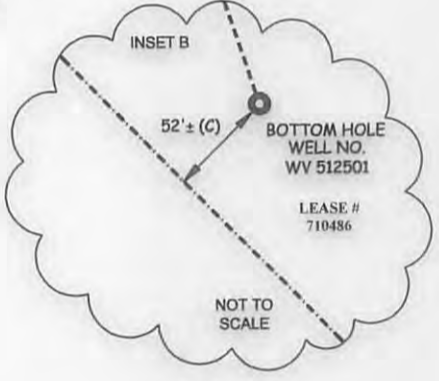
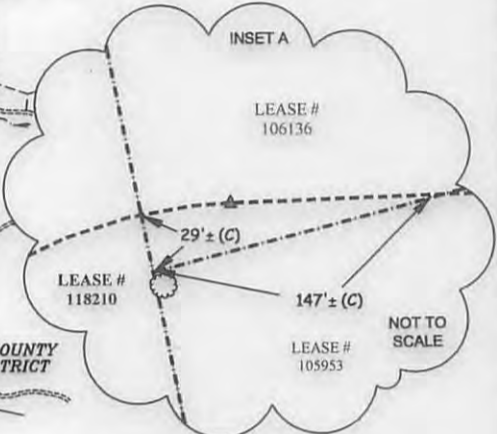
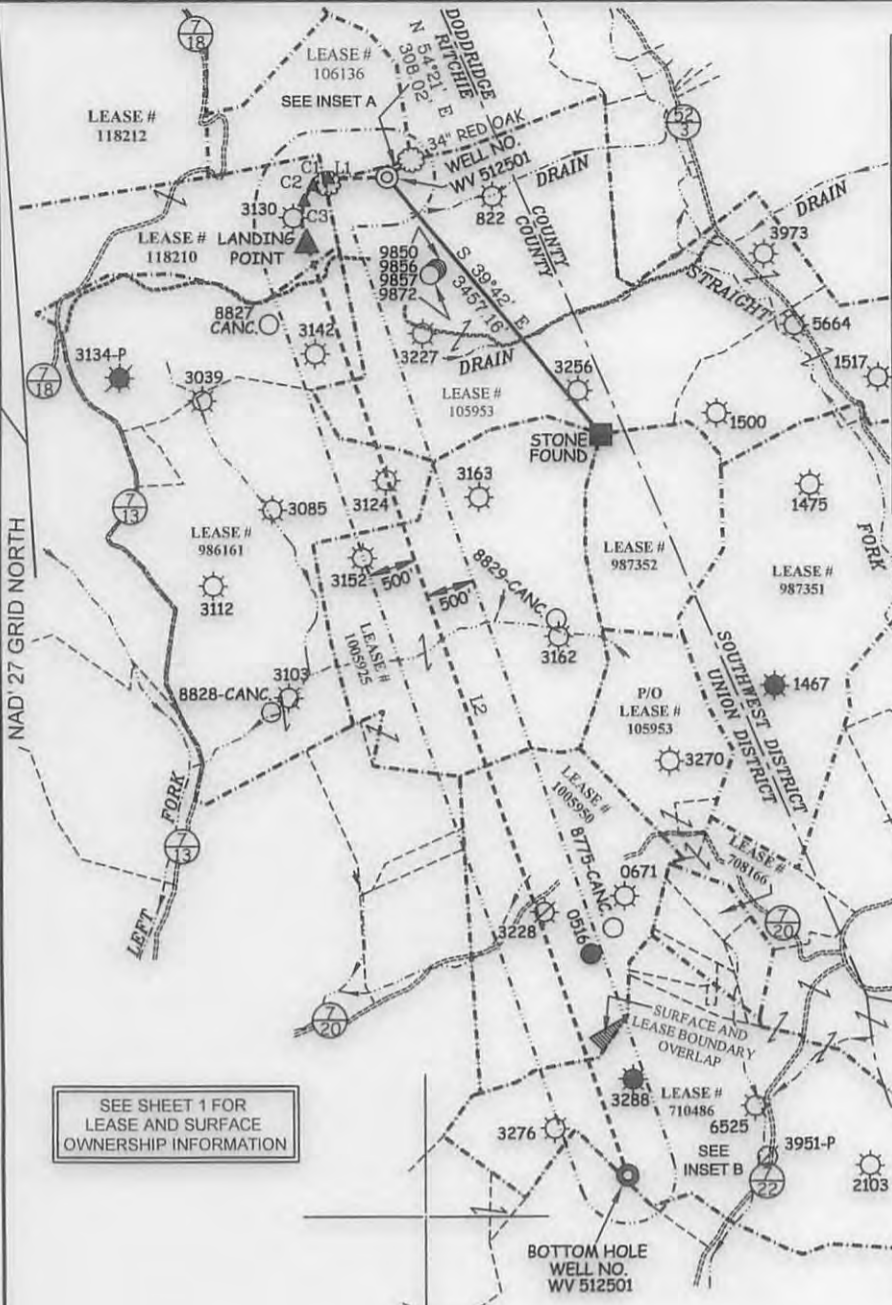
SURFACE OWNER RICHARD L. & SHERYL A. RAY ACREAGE 255.50±  
 ROYALTY OWNER HAUGHT FAMILY TRUST ET AL ACREAGE 402± **01/13/2017**

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 6,461'

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 PRODUCTION COMPANY**  
**W.M. ADAMS LEASE**  
**402 ACRES±**  
**WELL NO. WV 512501**  
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 NAD'83 UTM (M) N. 4,331,262.70 E. 514,370.70  
**BOTTOM HOLE**  
 NAD'27 S.P.C.(FT) N. 222,798.45 E. 1,624,883.96  
 NAD'27 GEO. LAT-(N) 39.104135 LONG-(W) 80.821847  
 NAD'83 UTM (M) N. 4,328,357.42 E. 515,418.91



SEE SHEET 1 FOR LEASE AND SURFACE OWNERSHIP INFORMATION

BUILD OUT DATA		
ID	BEARING	DISTANCE
L1	N 88°04' W	606.00'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	180.29'	240.14'	S 66°39'17" W	176.08'
C2	185.83'	373.18'	S 29°55'13" W	183.92'
C3	451.80'	736.10'	S 02°53'53" W	444.75'

LATERAL		
ID	BEARING	DISTANCE
L2	S 18°53' E	10,137.07'

FILE NO. 6811P512501R5

P.O. Box 150 • 12 Vanhorn Drive • Glenville, WV 26351 • (304) 462-5634  
 www.slsurveys.com

C.V.M. 5-23-16

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

**LEGEND**

LEASE LINE	-----
SURFACE LINE	-----
WELL LATERAL	-----
OFFSET LINE	-----
TIE LINE	-----
CREEK	-----
ROAD	-----
FENCE LINE	-----
COUNTY ROUTE	⊖
PROPOSED WELL	⊙
EXISTING WELL	⊛
PERMITTED WELL	○

SCALE 1" = 2000'  
 DATE NOVEMBER 18, 20 09  
 REVISED 11/18/13, 12/12/13, 11/05/14, 07/10/15 & 05/23/16  
 OPERATORS WELL NO. WV 512501  
 API WELL NO. 47 — 085 — 10084  
 STATE COUNTY PERMIT

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

01/13/2017

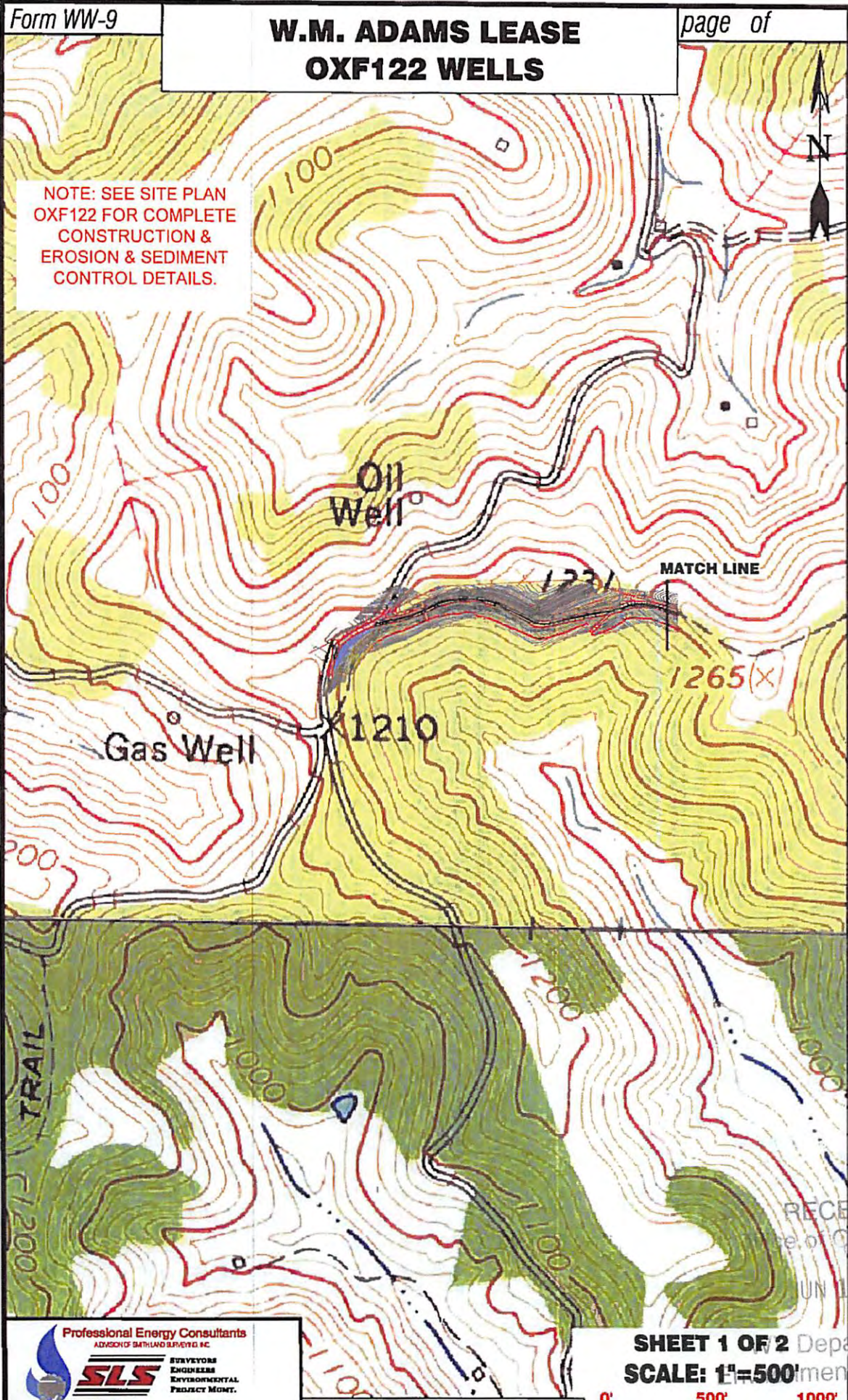
WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY  
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280  
 BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

# W.M. ADAMS LEASE OXF122 WELLS

NOTE: SEE SITE PLAN  
OXF122 FOR COMPLETE  
CONSTRUCTION &  
EROSION & SEDIMENT  
CONTROL DETAILS.

085-  
10086



**Professional Energy Consultants**  
ADVISOR OF BATHURST SURVEYING INC.



**SLS**  
SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

TEL: 416-554-1111  
WWW.SLSURV.COM

DRAWN BY K.D.W.	FILE NO. 6811	DATE 03-31-16	CADD FILE: 6811E2PLAN.dwg
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TOPO SECTIONS OF OXFORD 7.5'  
TOPO QUADRANGLE

**SHEET 1 OF 2** Department of  
**SCALE: 1"=500'** Environmental Protection



0' 500' 1000'

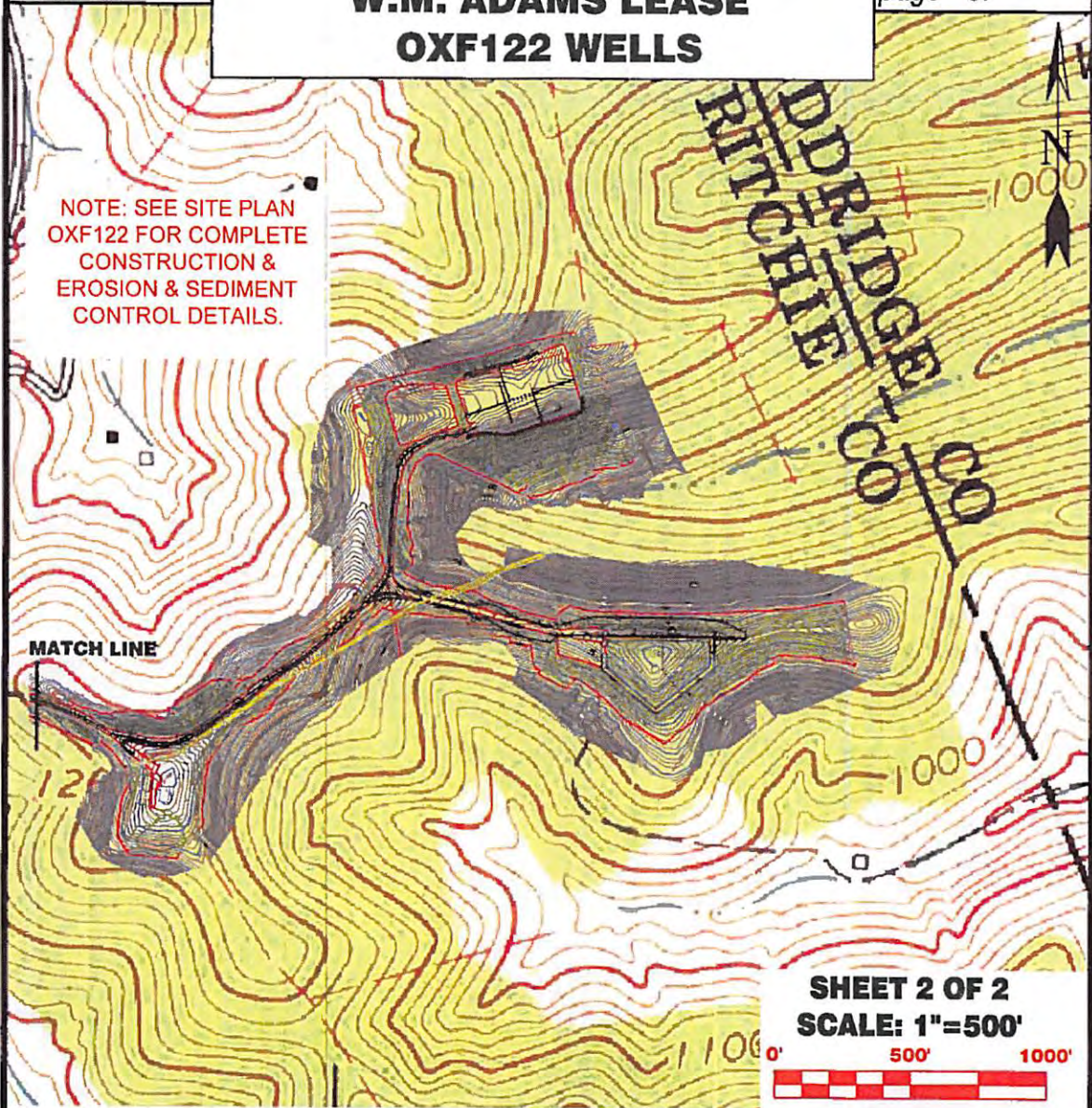
RECEIVED  
Department of Oil and Gas  
JUN 10 2016

01/13/2017

# W.M. ADAMS LEASE OXF122 WELLS

NOTE: SEE SITE PLAN  
OXF122 FOR COMPLETE  
CONSTRUCTION &  
EROSION & SEDIMENT  
CONTROL DETAILS.

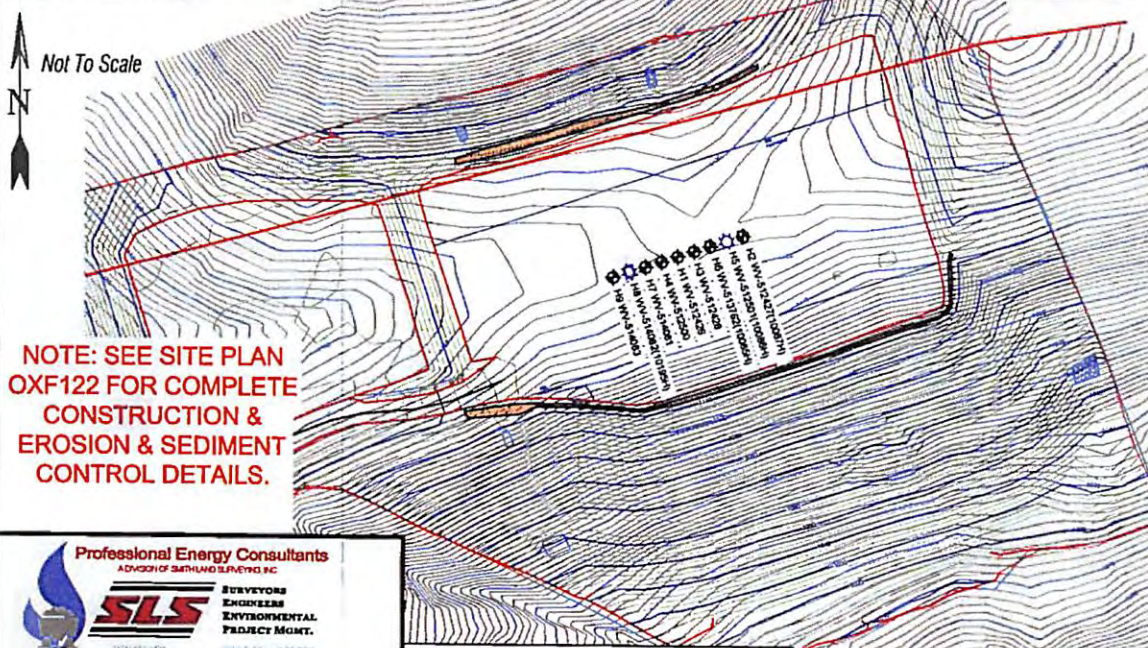
085-  
10086



**SHEET 2 OF 2**  
**SCALE: 1"=500'**



Detail Sketch for Proposed OXF122 Well No.s WV 512426, WV 512427, WV 512428, WV 512500, WV 512501, WV 513762, WV 514081, WV 514082 & WV514083



NOTE: SEE SITE PLAN  
OXF122 FOR COMPLETE  
CONSTRUCTION &  
EROSION & SEDIMENT  
CONTROL DETAILS.

**Professional Energy Consultants**  
A DIVISION OF SARTLAND SURVEYING, INC.

**SLS**  
SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
PROJECT MGMT.

DRAWN BY K.D.W.	FILE NO. 6811	DATE 03-31-16	CADD FILE: 6811REZPLAN.dwg
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TOPO SECTIONS OF OXFORD 7.5'  
TOPO QUADRANGLE

01/13/2017