



west virginia department of environmental protection

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

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
www.dep.wv.gov

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

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

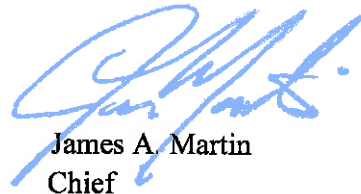
Re: Permit Modification Approval for 516539
47-095-02318-00-00

Extending Lateral Length of Well

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: 516539
Farm Name: PETER, DONNA J.
U.S. WELL NUMBER: 47-095-02318-00-00
Horizontal 6A / Horizontal 6A Well - 1
Date Issued: 1/20/2017

Promoting a healthy environment.

01/27/2017



December 14, 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 47-095-02318

Dear Mr. Smith,

Enclosed is an updated WW-6B, schematics, WW-6A1, mylar plat and rec plan. EQT would like to lengthen the lateral on this well.

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 L'.

Vicki Roark
Permitting Supervisor-WV

Enc.

01/27/2017

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

1) Well Operator: EQT Production Company 306686 Tyler Centerville West Union
Operator ID County District Quadrangle

2) Operator's Well Number: 516539 Well Pad Name: WEU4

3) Farm Name/Surface Owner: Donna J. Peter Public Road Access: WV18

4) Elevation, current ground: 1079 Elevation, proposed post-construction: 1079

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, 6680', 54', 2747 PSI

*DMH
1-3-17*
*JPS
1/3/17*

8) Proposed Total Vertical Depth: 6680

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 11046

11) Proposed Horizontal Leg Length: 3291

12) Approximate Fresh Water Strata Depths: 132, 175, 186, 204

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

14) Approximate Saltwater Depths: 1128, 1219, 1222

15) Approximate Coal Seam Depths: 230, 281, 696

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: _____

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	A-500	78.6	40	40	60 ft ³ / CTS
Fresh Water	13 3/8	New	J-55	54.5	750	750	668 ft ³ / CTS
Coal							
Intermediate	9 5/8	New	A-500	40	2865	2865	1126 ft ³ / CTS
Production	5 1/2	New	P-110	20	11046	11046	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							

DMH 1-3-17 *JPS 1/3/17*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	26	.375	1378	1102	Class A	1.18
Fresh Water	13 3/8	17 1/2	.38	2700	2160	See Variance	1.19
Coal							
Intermediate	9 5/8	12 3/8	.395	3950	3160	Class H	1.07
Production	5 1/2	8 1/2	.361	12640	10112	Class A/H	1.123/2.098
Tubing	2 3/8	NA	.19	7700			
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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 4097'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

DMA
1-3-17

JPS
1/3/17

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, 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 250,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 250,000 pounds of sand per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): no additional

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

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 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 (Type 1 Cement) 0-3% Calcium Chloride. Used to speed the setting of cement slurries
 Intermediate (Class H Cement) 0-3% Calcium Chloride. Used to speed the setting of cement slurries 0.25% flake Loss Circulation Material (LCM) 6% Super FL-300 (fluid loss/lengthens thickening time)
 Production
 Lead (Class A 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.

*Note: Attach additional sheets as needed.

Well 516539(WEU4H12)

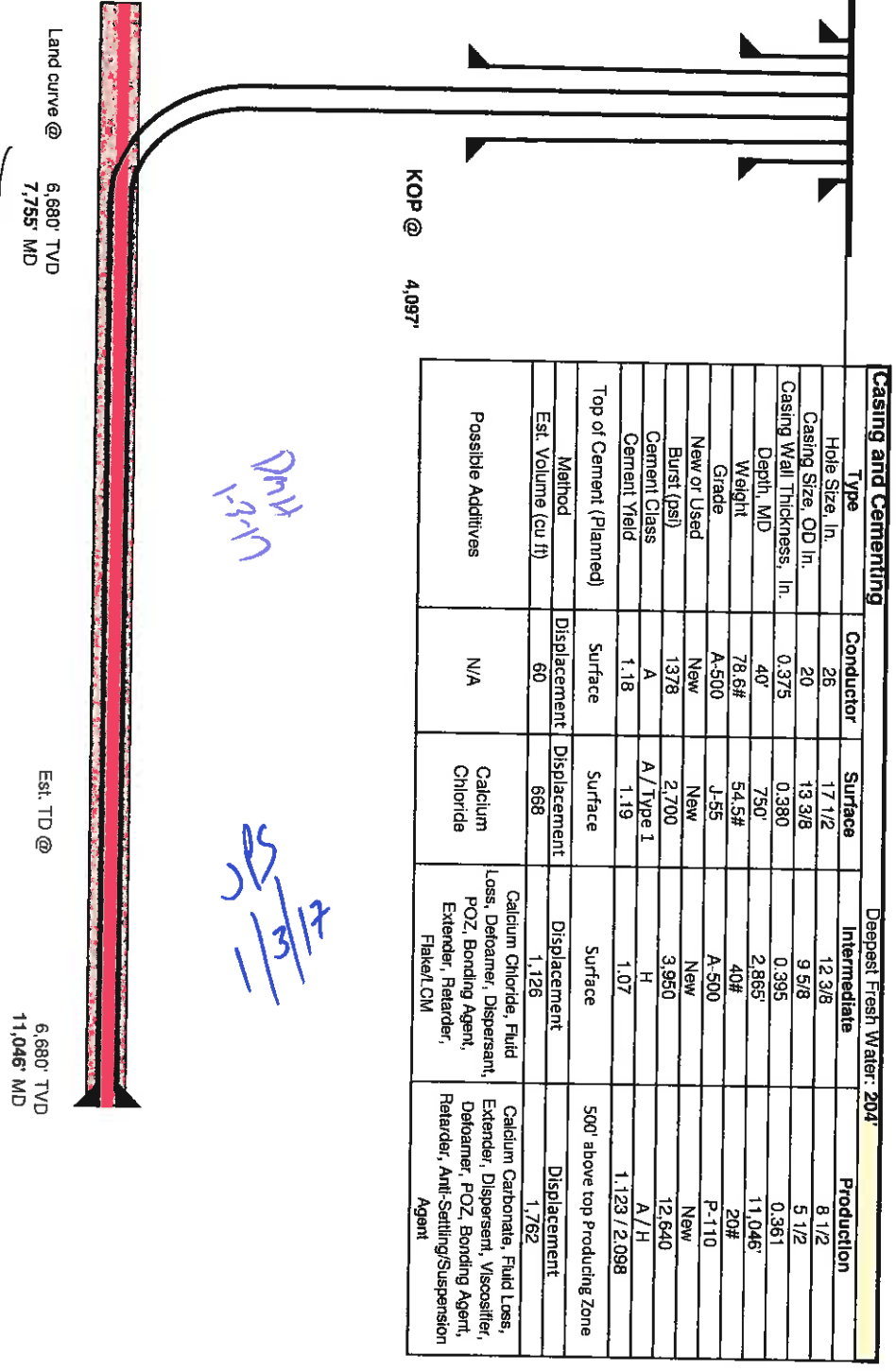
EQT Production
West Union Quad
Tyler County, WV

Azimuth 155
 Vertical Section 4630

Note: Diagram is not to scale

8
 7
 6
 5
 4
 3
 2
 1
 0

Formations	Top TVD	Base TVD
Conductor	40	
Base Fresh Water	204	
Surface Casing	750	
Base Red Rock	1101	
Maxton	1838	2037
Big Lime	2111	2395
Weir	2403	2450
Gantz	2490	2507
Fifty foot	2604	2659
Thirty foot	2690	2744
Gordon	2770	2815
Intermediate Casings	2965	
Forth Sand	2841	2903
Bayard	3011	3148
Warren	3374	3440
Speechley	3460	3574
Balltown A	3976	4088
Riley	4574	4864
Benson	4995	5058
Alexander	5242	5324
Sonyea	6323	6449
Middlesex	6449	6496
Genesee	6496	6570
Genesee	6570	6605
Tully	6605	6626
Harrilton	6626	6649
Marcellus	6649	6702
Production Casing	11046	MD
Onondaga	6702	



Casing and Cementing		Deepest Fresh Water: 204'		Production	
Type	Conductor	Surface	Intermediate	Production	
Hole Size, In.	26	17 1/2	12 3/8	8 1/2	
Casing Size, OD In.	20	13 3/8	9 5/8	5 1/2	
Casing Wall Thickness, In.	0.375	0.380	0.395	0.361	
Depth, MD	40'	750'	2,865'	11,046'	
Weight	78.6#	54.5#	40#	20#	
Grade	A-500	J-55	A-500	P-110	
New or Used	New	New	New	New	
Burst (psi)	1378	2,700	3,950	12,640	
Cement Class	A	A / Type I	H	A / H	
Cement Yield	1.18	1.19	1.07	1.123 / 2.098	
Top of Cement (Planned)	Surface	Surface	Surface	500' above top Producing Zone	
Method	Surface	Surface	Surface	Displacement	
Est. Volume (cu ft)	60	668	1,126	1,762	
Possible Additives	N/A	Calcium Chloride	Calcium Chloride, Fluid Loss, Defoamer, Dispersant, POZ, Bonding Agent, Extender, Retarder, Flake/CM	Calcium Carbonate, Fluid Loss, Extender, Dispersant, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent	

DMT 1-9-17
SBC 1/13/17

Proposed Well Work:
 Drill and complete a new horizontal well in the Marcellus formation.
 Drill the vertical to an approximate depth of 4097'.
 Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

3,291' Lateral

Land curve @
 6,680' TVD
 7,755' MD

Est. TD @
 6,680' TVD
 11,046' MD



4709502318

November 15, 2016

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

Re: Casing plan on Wells (WEU4)

Dear Mr. Smith,

EQT is requesting the 13 3/8" surface casing to be set at 750' KB, 50' below the workable coal at 700' KB. We will set the 9-5/8" intermediate string at 2865' KB, 50' below the base of the Gordon formation.

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

Sincerely

Vicki Roark
Permitting Supervisor-WV

DMH
1-3-17
JPS
1/3/17

Enc.

01/27/2017



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
dep.wv.gov

**BEFORE THE OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF WEST VIRGINIA**

IN THE MATTER OF A VARIANCE FROM) ORDER NO. 2014 - 17
REGULATION 35 CSR § 4-11.4/11.5/14.1)
AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE)
THE OPERATIONAL)
REGULATIONS OF CEMENTING OIL)
AND GAS WELLS)

REPORT OF THE OFFICE

Nabors Completion & Production Services Co. requests approval of a different cement blend for use in cementing surface and coal protection casing of oil and gas wells.

FINDINGS OF FACT

- 1.) Nabors Completion & Production Services Co. proposes the following cement blend:
 - 2% Calcium Chloride (Accelerator)
 - 0.25 % Super Flake (Lost Circulation)
 - 94% Type "1" Cement
 - 5.20 % Water
- 2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.

Promoting a healthy environment.

01/27/2017

CONCLUSIONS OF LAW

Pursuant to Articles 6 and 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter embraced in said notice, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.h.8 the Chief of the Office of Oil and Gas may approve different cement blends upon the well operator providing satisfactory proof that different cement types are adequate.

ORDER

It is ordered that Nabors Completion & Production Services Co. may use the cement blend listed in Findings of Fact No.1 for the cementing of surface and coal protection casing of oil and gas wells in the State as may be requested by oil and gas operators. The waiting time on the cement blend shall be 8 hours. The cement blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the cement slurries meet the minimum weight specifications. A sample shall be collected and, if after 8 hours the cement is not set up, additional time will be required. Nabors Completion & Production Services Co. shall keep a record of cement blend jobs in which the cement blend approved under this order is to be used and made available to the Office of Oil and Gas upon request.

Dated this, the 18th day of March, 2014.

IN THE NAME OF THE STATE OF WEST VIRGINIA

OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OF THE STATE OF WEST VIRGINIA



James Martin, Chief
Office of Oil and Gas

01/27/2017



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
dep.wv.gov

March 18, 2014

Nabors Completion & Production Services Company
1380 Route 286 Hwy E #121
Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Madam,

This agency is approving a variance request for the cement blend listed below to be used on surface and coal protection strings for the drilling of oil and gas wells in the state of West Virginia. The variance cannot be used without requesting its use on a permit application and approval by this agency:

- Type 1 (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

If you have any questions regarding this matter feel free to contact me at 304-926-0499, ext. 1653.

Sincerely,

James Peterson
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

01/27/2017

**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
See Attached				

**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 Roark
 Its: Permitting Supervisor

WW-6A1 attachment

Operator's Well No.

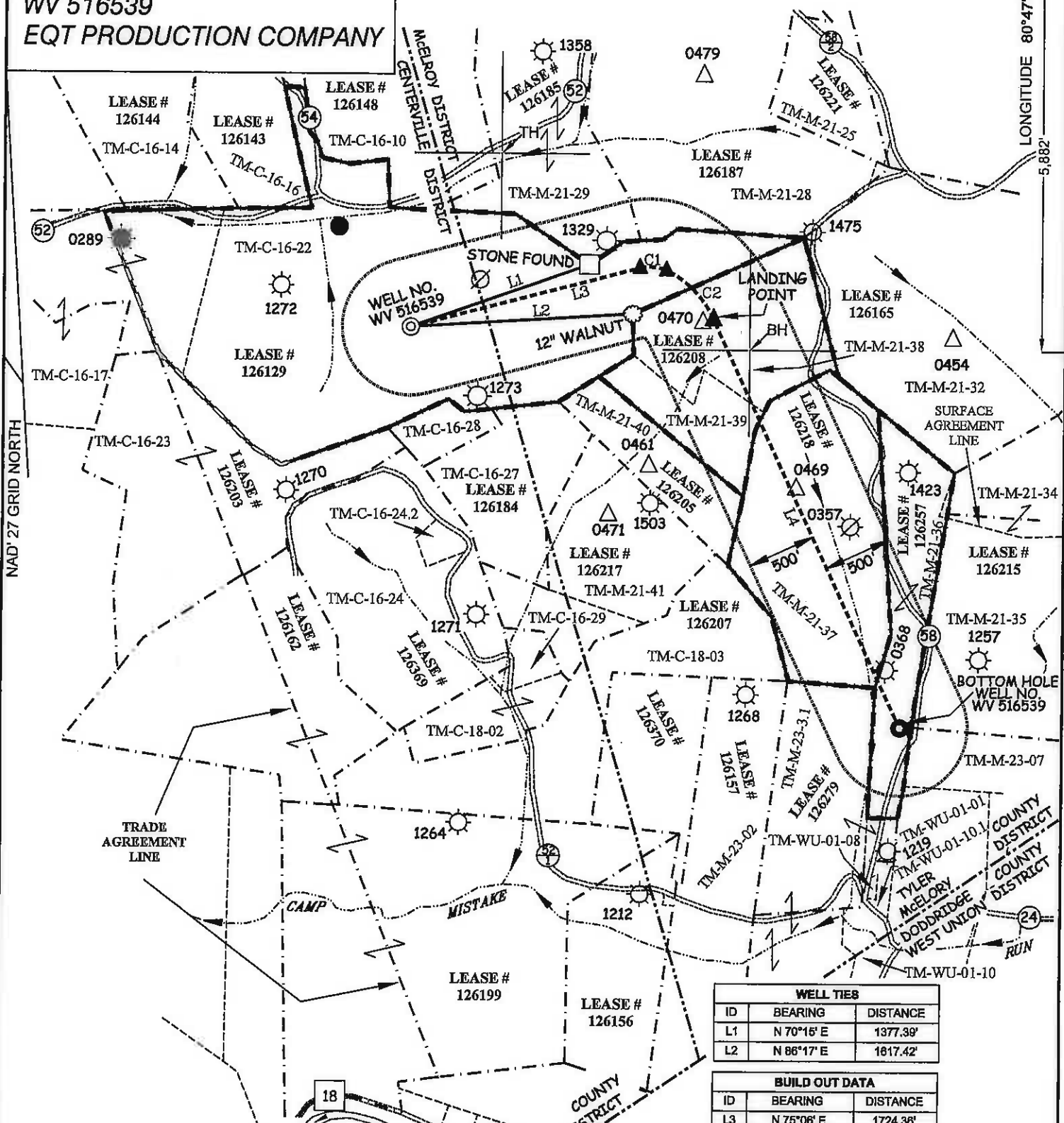
516539

<u>Lease No.</u>	<u>Grantor, Lessor, etc.</u>	<u>Grantee, Lessee, etc.</u>	<u>Royalty</u>	<u>Book/Page</u>
<u>126129</u>	<u>Waco Oil & Gas Co. Inc. et al (current royalty owner)</u> William H. Ash, et ux, et al (original lessor) Equitable Gas Company Equitrans, Inc. Equitrans, LP Equitrans, LP	Equitable Gas Company Equitrans, Inc. Equitrans, LP EQT Production Company EQT Production Company	**	LB191/321 DB 274/471 DB433/777 DB 396/640 OG 440/107
<u>126208</u>	<u>Roxie Davis, et al (current royalty owner)</u> Lucy Davis, et al. (original lessor) Equitable Gas Company Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	Equitable Gas Company Equitrans, Inc. Equitrans, L.P. EQT Production Company	**	DB 197/551 DB 274/471 DB 433/777 DB 396/640
<u>126218</u>	<u>Darren L.Parks, et al (current royalty owner)</u> Carl D. Perkins, et ux (original lessor) Equitable Gas Company Equitrans, Inc./Equitable Gas Company/Equitable Resources, Inc. Equitrans, L.P.	Equitable Gas Company Equitrans, Inc. Equitrans, L.P. EQT Production Company	**	DB 198/396 DB 274/471 DB 433/777 DB 396/640
<u>126257</u>	<u>Thomas E & Richard S Martin (current royalty owner)</u> Daisy Martin and Eli B. Martin (original lessor) M.S. Lantz Columbia Gas Transmission Corp Columbia Natural Resources, Inc Chesapeake Appalachia, LLC Statcoi USA Onshore Properties, Inc Antero Resources Corporation	M.S. Lantz Columbia Gas Transmission Corp Columbua Natural Resources, Inc Chesapeake Appalachia, LLC Statcoi USA Onshore Properties, Inc Antero Resource Corporation EQT Production Company	**	197/259 197/225 291/175 349/536 363/391 544/291 547/702

**We will pay a minimum 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.

WEU4
WV 516539
EQT PRODUCTION COMPANY

8,271'
 4,632'
 LATITUDE 39°22'30" N
 LONGITUDE 80°47'30" W
 5,882'
 3,018'



WELL TIES		
ID	BEARING	DISTANCE
L1	N 70°16' E	1377.39'
L2	N 86°17' E	1817.42'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	N 75°06' E	1724.38'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	197.70'	297.58'	S 85°01'35\"/>	

LATERAL		
ID	BEARING	DISTANCE
L4	S 25°00' E	3291.37'

SLS
Land & Energy Development
 Solutions from the ground up.
 P.O. Box 150 • 12 Vachon Drive • Glenville, WV 26351 • (304) 482-5834
 www.slsurveys.com

VICTOR MOYERS
 LICENSED
 No. 849
 STATE OF
 WEST VIRGINIA
 PROFESSIONAL SURVEYOR
 C.V.M.
 12-13-16

(+) 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
- ABANDONED WELL
- PLUGGED WELL
- STORAGE WELL
- CENTERVILLE DISTRICT TAX MAP-PARCEL C-00-00
- McELROY DISTRICT TAX MAP-PARCEL M-00-00
- WEST UNION DISTRICT TAX MAP-PARCEL WU-00-00

(S.P.C. WV NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'27 S.P.C.(FT) N. 318,420.30 E. 1,626,553.29
 NAD'27 GEO. LAT-(N) 39.368714 LONG-(W) 80.820920
 NAD'83 UTM (M) N. 4,357,496.87 E. 515,441.34

LANDING POINT
 NAD'27 S.P.C.(FT) N. 318,487.06 E. 1,628,759.00
 NAD'27 GEO. LAT-(N) 39.368988 LONG-(W) 80.813123
 NAD'83 UTM (M) N. 4,357,528.44 E. 518,112.97

BOTTOM HOLE
 NAD'27 S.P.C.(FT) N. 315,504.06 E. 1,630,149.98
 NAD'27 GEO. LAT-(N) 39.358853 LONG-(W) 80.808050
 NAD'83 UTM (M) N. 4,356,626.75 E. 516,561.90

SCALE 1" = 1000' FILE NO. 7701P516539R2
 DATE OCTOBER 1, 20 15
 REVISED 03/03/16 & 12/13/16
 OPERATORS WELL NO. WV 516539
 API WELL NO. 47 - 095 - 02318
 NO. STATE COUNTY PERMIT

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

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

WEU4
WV 516539
EQT PRODUCTION COMPANY

8,271'

4,632'
 LATITUDE 39°22'30"

LONGITUDE 80°47'30"

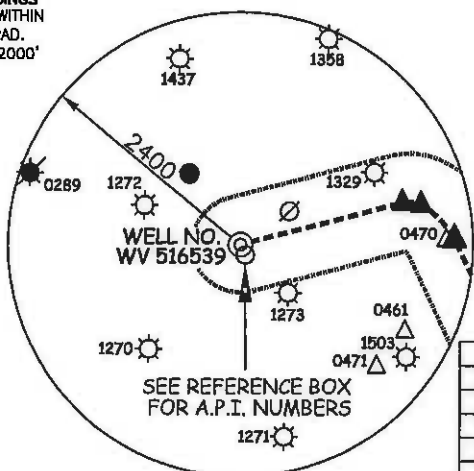
3,018'

(S.P.C. WV NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD'27 S.P.C.(FT) N. 318,420.30 E. 1,626,553.29
 NAD'27 GEO. LAT-(N) 39.366714 LONG-(W) 80.820920
 NAD'83 UTM (M) N. 4,357,496.87 E. 515,441.34
LANDING POINT
 NAD'27 S.P.C.(FT) N. 318,487.06 E. 1,628,759.00
 NAD'27 GEO. LAT-(N) 39.366986 LONG-(W) 80.813123
 NAD'83 UTM (M) N. 4,357,528.44 E. 516,112.97
BOTTOM HOLE
 NAD'27 S.P.C.(FT) N. 315,504.06 E. 1,630,149.88
 NAD'27 GEO. LAT-(N) 39.368853 LONG-(W) 80.808050
 NAD'83 UTM (M) N. 4,358,826.75 E. 516,551.90

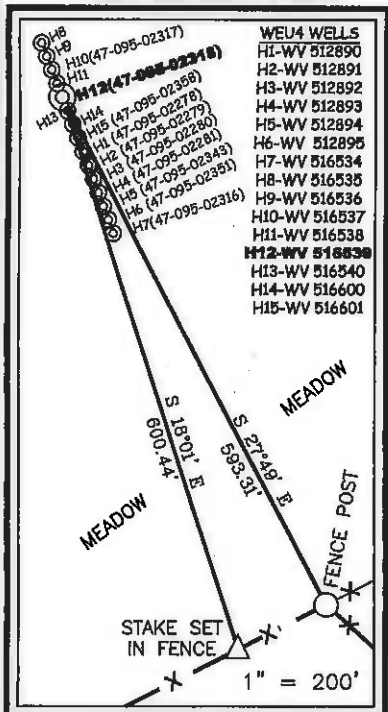
ROYALTY OWNERS		
ROXIE DAVIS ET AL	53 AC.±	LEASE NO. 126208
DARREN L. PARKS ET AL	50 AC.±	LEASE NO. 126218
THOMAS E. & RICHARD S. MARTIN	28 AC.±	LEASE NO. 126257

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. SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'



REFERENCES



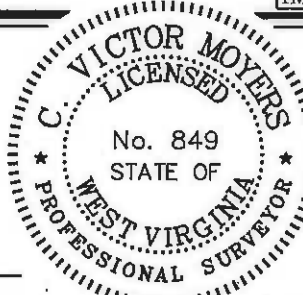
- WEU4 WELLS**
- H1-WV 512890
 - H2-WV 512891
 - H3-WV 512892
 - H4-WV 512893
 - H5-WV 512894
 - H6-WV 512895
 - H7-WV 516534
 - H8-WV 516538
 - H9-WV 516536
 - H10-WV 516537
 - H11-WV 516538
 - H12-WV 516539**
 - H13-WV 516540
 - H14-WV 516600
 - H15-WV 516601

TYLER COUNTY		
TM-C-16-10	ELIZABETH ABRUZZINO	109.94 ACRES±
TM-C-16-14	CONRAD COSTILOW	46.17 ACRES±
TM-C-16-16	JEFFERY & ANITA HOOVER	24.84 ACRES±
TM-C-16-17	RICHARD & YVONNE METCALF	61.57 ACRES±
TM-C-16-22	DONNA PETER	113.4 ACRES±
TM-C-16-23	CHRIS BAUM ET AL	56.84 ACRES±
TM-C-16-24	LEONA LORKOVICH ET AL	45.89 ACRES±
TM-C-16-24.2	STONEWALL GAS COMPANY	2 ACRES±
TM-C-16-27	PAUL WEEKLEY (LIFE)	18 ACRES±
TM-C-16-28	PAUL WEEKLEY (LIFE)	5 ACRES±
TM-C-16-29	PAUL WEEKLEY (LIFE)	3.37 ACRES±
TM-C-18-02	KENDRA WYKE ET AL	9.5 ACRES±
TM-C-18-03	ANZANETTA DRAIN HRS	46.88 ACRES±
TM-M-21-25	GARY DAVENPORT	16 ACRES±
TM-M-21-28	BRUCE & SANDRA STONEKING	69.44 ACRES±
TM-M-21-29	BRUCE & SANDRA STONEKING	42.86 ACRES±
TM-M-21-32	ASIA CUMBERLEDGE	75.75 ACRES±
TM-M-21-34	BRUCE BOLAND	35.43 ACRES±
TM-M-21-35	UDORA KEYS	60.6 ACRES±
TM-M-21-36	THOMAS & RICHARD MARTIN	28.99 ACRES±
TM-M-21-37	CARL PERKINS FAMILY TRUST	50.25 ACRES±
TM-M-21-38	EDWARD II & CAROLYN WHITE	40 ACRES±
TM-M-21-39	EDWARD II & CAROLYN WHITE	12.5 ACRES±
TM-M-21-40	EDWARD II & CAROLYN WHITE	16 ACRES±
TM-M-21-41	BRYAN PRATT	23 ACRES±
TM-M-23-02	RICHARD & LISA HENDRICKSON	44.68 ACRES±
TM-M-23-3.1	JAMES & KATHRYN McNULTY	50.18 ACRES±
TM-M-23-07	MYRON & BETTY WHITE	15.15 ACRES±
DODDRIDGE COUNTY		
TM-WU-01-01	MYRON & BETTY WHITE	14.88 ACRES±
TM-WU-01-08	KENDRA (COTTRILL) WYKE	0.5 ACRES±
TM-WU-01-10	JUDITH BAGLEY	10.09 ACRES±
TM-WU-01-10.1	JASON & JENNIFER BAGLEY	1.42 ACRES±

SLS
Land & Energy Development
 Solutions from the ground up.
 P.O. Box 150 • 12 Vanhorn Drive • Glenville, WV 26351 • (304) 462-5634
 www.slsurveys.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*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE OCTOBER 1, 20 15
 REVISED 03/03/16 & 12/13/16
 OPERATORS WELL NO. WV 516539
 API WELL NO. 47-095-02319
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 7701P516539R2
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

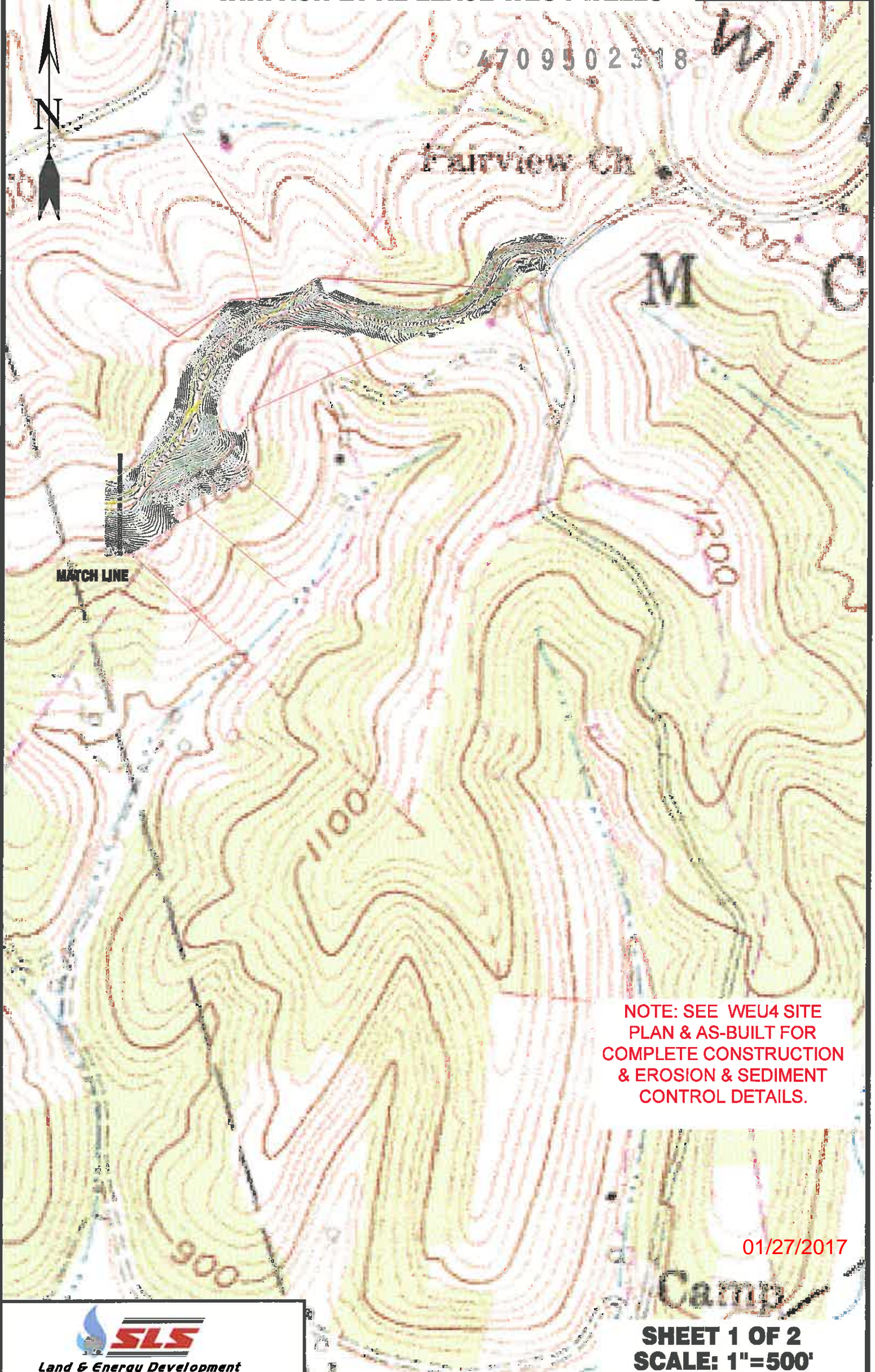
STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: PAD ELEVATION 1,079' WATERSHED TRIBUTARY OF CAMP MISTAKE RUN
 DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5'
 SURFACE OWNER DONNA J. PETER ACREAGE 113.40±
 ROYALTY OWNER WACO OIL AND GAS INC. ET AL ACREAGE 152±
 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 6,680'

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

01/27/201



NOTE: SEE WEU4 SITE
 PLAN & AS-BUILT FOR
 COMPLETE CONSTRUCTION
 & EROSION & SEDIMENT
 CONTROL DETAILS.

01/27/2017

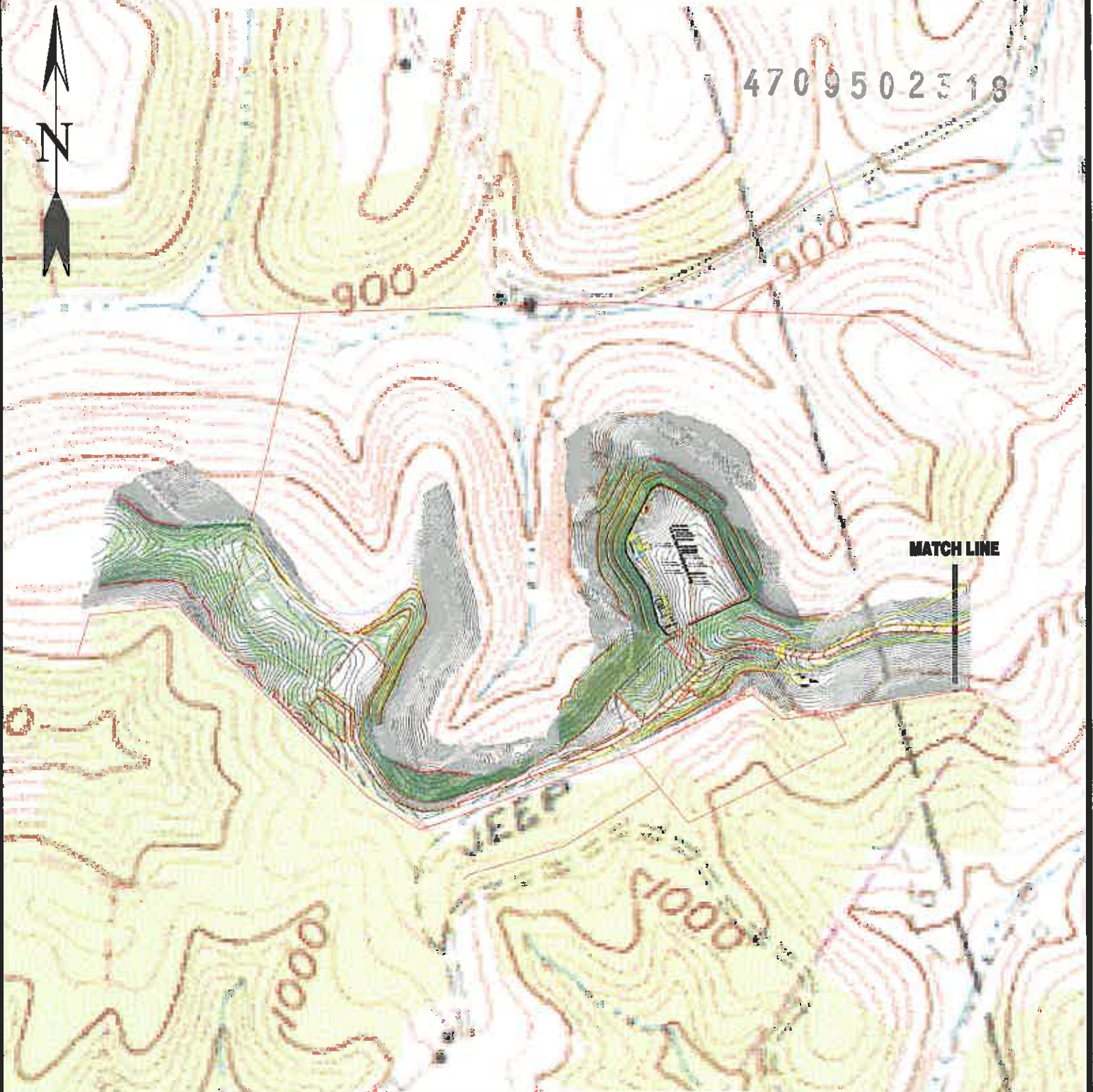
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TOPO SECTIONS OF WEST UNION
 7.5' TOPO QUADRANGLE

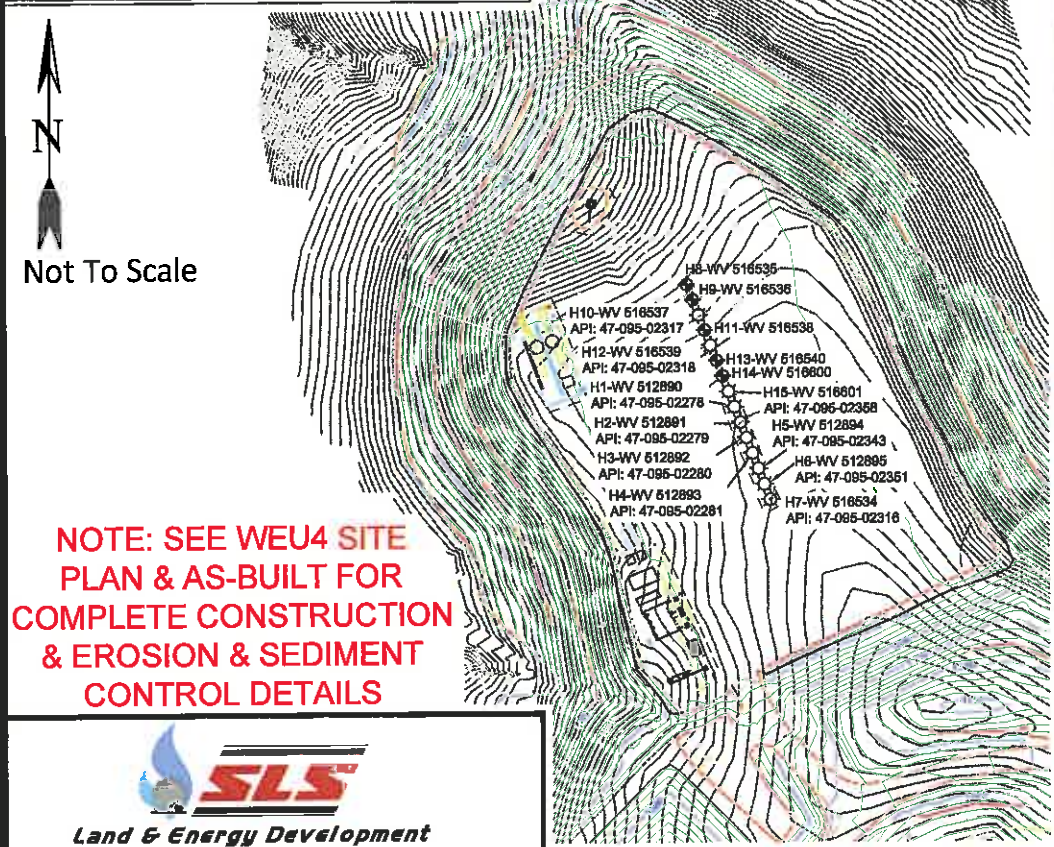


DRAWN BY K.D.W.	FILE NO. 7701	DATE 12-07-16	CADD FILE: 7701RECLANR3.dwg
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SHEET 1 OF 2
SCALE: 1"=500'



Detail Sketch for Proposed WEU4 Wells



NOTE: SEE WEU4 SITE PLAN & AS-BUILT FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.

NOTE: SEE WEU4 SITE PLAN & AS-BUILT FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS

01/27/2017



TOPO SECTIONS OF WEST UNION 7.5' TOPO QUADRANGLE

SHEET 2 OF 2 SCALE: 1"=500'