



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

Earl Ray Tomblin, Governor
Randy C. Huffman, 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 514101
47-017-06770-00-00

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: 514101
Farm Name: HART, RONALD & JEFFERY
U.S. WELL NUMBER: 47-017-06770-00-00
Horizontal 6A / Horizontal 6A Well - 1
Date Issued: 1/12/2017

Promoting a healthy environment.

01/20/2017



October 20, 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 47-01706770
Dear Mr. Smith,

Enclosed is an updated 6A1 form, and mylar plat. Lease number 117513 has been added to both forms, due to the close proximity of the lease to the top hole.

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.

Received
Office of Oil & Gas
OCT 20 2016

**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 J. Roark
 Its: Permitting Supervisor

Received
Office of Oil & Gas

OCT 20 2016

Lease No.	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
107453	<u>Mona R. Cumberledge, et al (current royalty owner)</u>		...	
	S. E. Gaston, et al (original lessor)	A. D. Wells		LB 22/420
	A. D. Wells	Fisher Oil Company/O.D. Harrington		LB 24/16
	Fisher Oil Company/O.D. Harrington	The Philadelphia Company of WV		LB 24/64
	The Philadelphia Company of WV	Pittsburgh & West Virginia Gas Company		45/102
	The Philadelphia Company of WV	Pittsburgh & West Virginia Gas Company		LB 32/253
	Pittsburgh & West Virginia Gas Company	Equitable Gas Company		DB 121/257
	Equitable Gas Company	Equitrans, Inc		LB 154/475
	Equitrans, Inc	Equitrans, L.P.		329/645
	Equitrans, L.P.	Equitable Production-Eastern States, Inc		LB 192/19
	Equitable Production-Eastern States, Inc	EQT Production Company		DB 281/346
114449	<u>Glenn H. Shive, et al (current royalty owner)</u>		...	
	F.E. Gaston, et ux (original lessor)	The Philadelphia Company of WV		LB 32/463
	The Philadelphia Company of WV	Pittsburgh & WV Gas Company		LB 32/253
	Pittsburgh & WV Gas Company	Equitable Gas Company		DB 121/257
	Equitable Gas Company	Equitrans, Inc		LB 154/475
	Equitrans, Inc	Equitrans, L.P.		329/645
	Equitrans, L.P.	Equitable Production-Eastern States, Inc		LB 192/19
	Equitable Production-Eastern States, Inc	EQT Production Company		DB 281/346
114447	<u>C. Burke Morris & S.A. Smith, et al (current royalty owner)</u>		...	
	Jane Woofter (original lessor)	The Philadelphia Company of WV		LB 32/468
	The Philadelphia Company of WV	Pittsburgh & WV Gas Company		LB 32/253
	Pittsburgh & WV Gas Company	Equitable Gas Company		DB 121/257
	Equitable Gas Company	Equitrans, Inc		LB 154/475
	Equitrans, Inc	Equitrans, L.P.		329/645
	Equitrans, L.P.	Equitable Production-Eastern States, Inc		LB 192/19
	Equitable Production-Eastern States, Inc	EQT Production Company		DB 281/346
117513	<u>WBM Heirs Properties, LLC, et al (current royalty owner)</u>		...	
	W. Brent Maxwell, ey ux (original lessor)	Pittsburgh & West Virginia Gas		DB 37/48
	Pittsburgh & WV Gas Company	Equitable Gas Company		DB 121/257
	Equitable Gas Company	Equitrans, Inc		LB 154/475
	Equitrans, Inc	Equitrans, L.P.		329/645
	Equitrans, L.P.	Equitable Production-Eastern States, Inc		LB 192/19
	Equitable Production-Eastern States, Inc	EQT Production Company		DB 281/346

*** 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

Received
Office of Oil & Gas

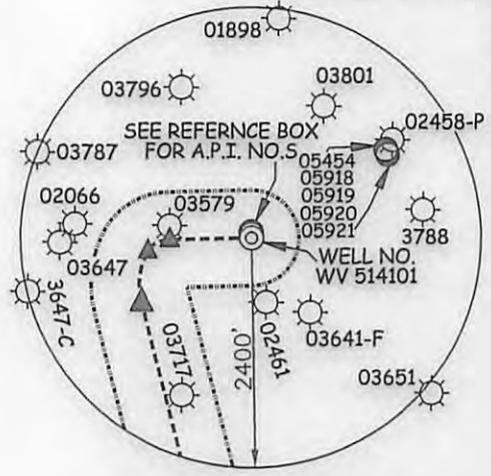
OCT 20 2016

01/20/2017

OXF160
WV 514101
EQT PRODUCTION COMPANY

TH 2,136'
 BH 2,055'
 LATITUDE 39°12'30"

LONGITUDE 80°47'30"



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

NAD'27 S.P.C.(FT)	N. 250,870.75	E. 1,631,717.49
NAD'27 GEO.	LAT-(N) 39.181476	LONG-(W) 80.799201
NAD'83 UTM (M)	N. 4,336,944.23	E. 517,357.99
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 250,196.35	E. 1,630,573.44
NAD'27 GEO.	LAT-(N) 39.179579	LONG-(W) 80.803202
NAD'83 UTM (M)	N. 4,336,732.96	E. 517,012.89
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 245,689.87	E. 1,631,723.63
NAD'27 GEO.	LAT-(N) 39.167253	LONG-(W) 80.798915
NAD'83 UTM (M)	N. 4,335,365.94	E. 517,386.20

NOTES ON SURVEY

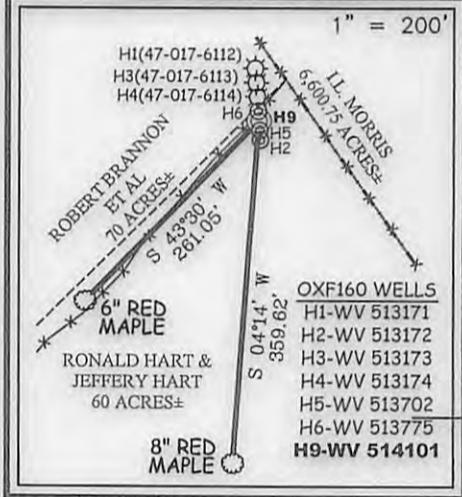
1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.

ROYALTY OWNERS

GLENN H. SHIVE ET AL	53 AC.±	LEASE NO. 114449
C. BURKE MORRIS & S.A. SMITH ET AL	28 AC.±	LEASE NO. 114447
WBM HEIRS PROPERTIES, LLC ET AL	1891.25 AC.±	LEASE NO. 117513

A	ROBERT BRANNON ET AL	70 ACRES±	SW TM-09-19
B	RONALD HART & JEFFERY HART	60 ACRES±	SW TM-09-20
C	ILL. MORRIS	6,600.75 ACRES±	SW TM-10-02
D	ROBERT BRANNON ET AL	25.1 ACRES±	SW TM-13-18
E	RONALD HART & JEFFERY HART	46 ACRES±	SW TM-13-12
F	RONALD HART & JEFFERY HART	45 ACRES±	SW TM-09-21
G	MARIA HRUSCOV	57.5 ACRES±	SW TM-10-01
H	WILLIAM ARMENTROUT ET AL	44.35 ACRES±	SW TM-14-02
I	MICHAEL & SUSAN ZORN	52.5 ACRES±	SW TM-14-01
J	MICHAEL & SUSAN ZORN	47.5 ACRES±	SW TM-14-1.1
K	WILLIAM ARMENTROUT ET AL	16.8 ACRES±	SW TM-14-04
L	EDWARD & GINA BASSETT	41 ACRES±	SW TM-13-39
M	MARIAN ZORN	34.78 ACRES±	SW TM-13-40
N	WILLIAM ARMENTROUT ET AL	76 ACRES±	SW TM-13-41

REFERENCES



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.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE MARCH 24, 20 16
 REVISED OCTOBER 20, 20 16
 OPERATORS WELL NO. WV 514101
 API WELL NO. 47 - 017 - 06770
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 7310P514101R2
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE SEE NOTE 2

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 1,220' WATERSHED UPPER RUN OF MIDDLE FORK OF SOUTH FORK HUGHES RIVER
 DISTRICT SOUTHWEST COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5'

SURFACE OWNER RONALD HART & JEFFERY HART ACREAGE 60±
 ROYALTY OWNER MONA R. CUMBERLEDGE ET AL ACREAGE 206±

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 6,603'

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

01/20/2017

COUNTY NAME PERMIT

OXF160
WV 514101
EQT PRODUCTION COMPANY

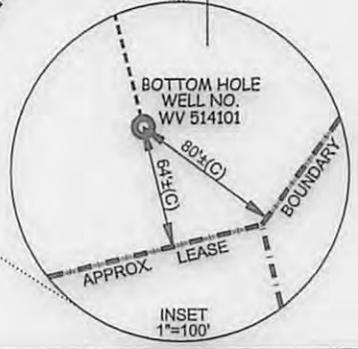
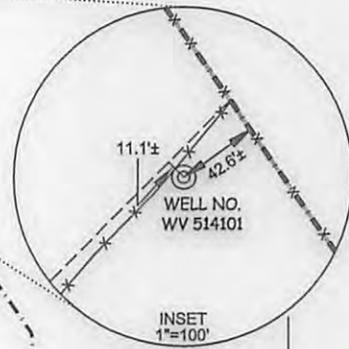
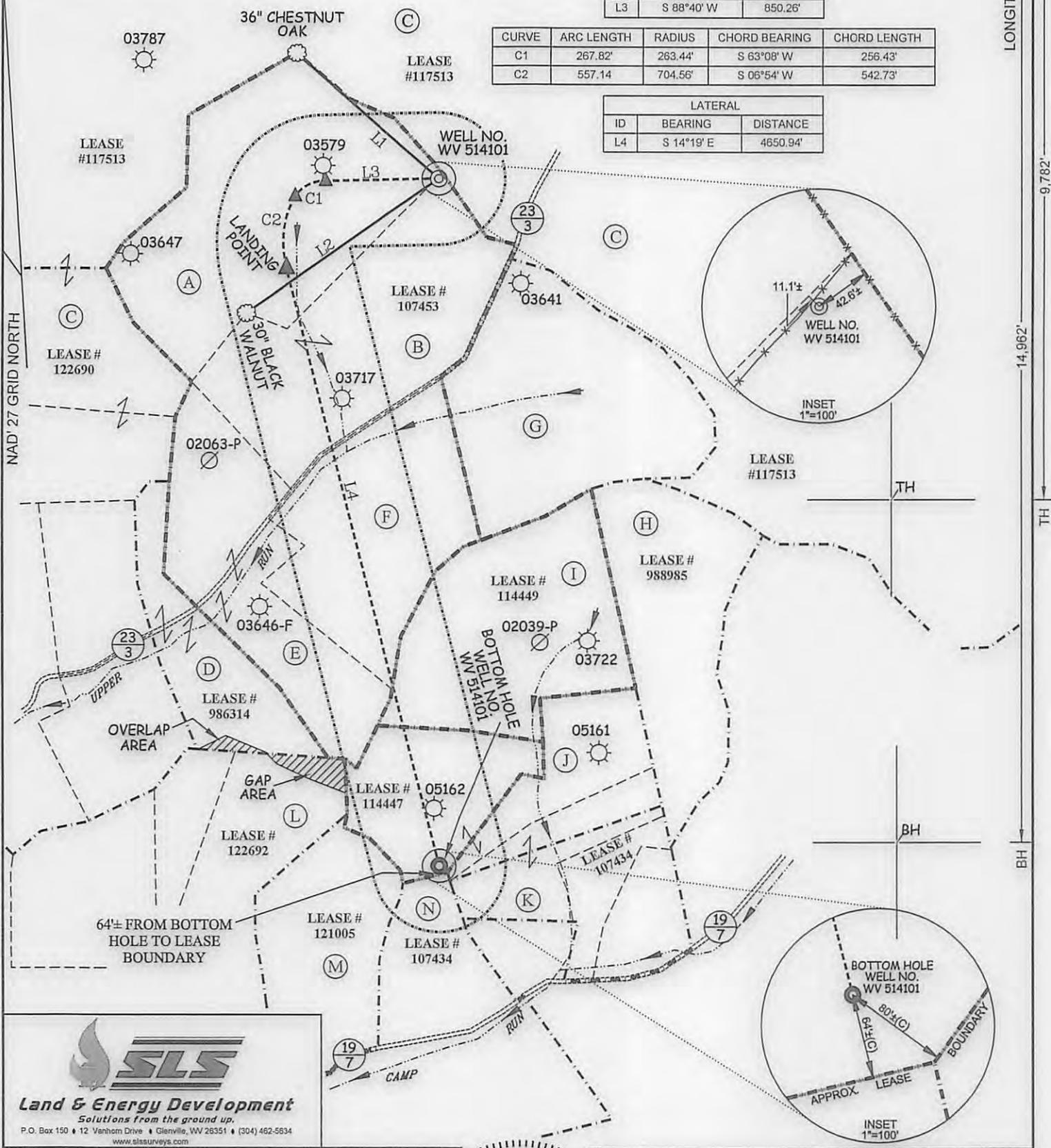
WELL TIES		
ID	BEARING	DISTANCE
L1	N 48°32' W	1423.46'
L2	S 54°59' W	1767.59'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	S 88°40' W	850.26'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	267.82'	263.44'	S 63°08' W	256.43'
C2	557.14	704.56'	S 06°54' W	542.73'

LATERAL		
ID	BEARING	DISTANCE
L4	S 14°19' E	4650.94'

BH 2,055'
 LATITUDE 39°12'30"
 LONGITUDE 80°47'30"



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

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)		
NAD'27 S.P.C.(FT)	N. 250,870.75	E. 1,631,717.49
NAD'27 GEO.	LAT-(N) 39.181476	LONG-(W) 80.799201
NAD'83 UTM (M)	N. 4,336,944.23	E. 517,357.99
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 250,196.35	E. 1,630,573.44
NAD'27 GEO.	LAT-(N) 39.179579	LONG-(W) 80.803202
NAD'83 UTM (M)	N. 4,336,732.96	E. 517,012.89
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 245,689.87	E. 1,631,723.63
NAD'27 GEO.	LAT-(N) 39.167253	LONG-(W) 80.798915
NAD'83 UTM (M)	N. 4,335,365.94	E. 517,386.20

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

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

LEGEND

- LEASE LINE
- SURFACE LINE
- WELL LATERAL
- OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SOUTH WEST DISTRICT TAX MAP-PARCEL

SCALE 1" = 1000'

DATE MARCH 24, 20 16

REVISED OCTOBER 20, 20 16

OPERATORS WELL NO. WV 514101

API WELL NO. 47

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 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280

BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT
 9,782'
 14,962'
 2,136'
 2,055'
 80°47'30"
 39°12'30"

01/20/2017