

#### 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

April 22, 2016

#### WELL WORK PLUGGING PERMIT

#### Plugging

This permit, API Well Number: 47-4700904, issued to CNX GAS COMPANY LLC , is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalities being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

Operator's Well No: 12900

Farm Name: POCAHONTAS LAND

**API Well Number: 47-4700904** 

Permit Type: Plugging
Date Issued: 04/22/2016

### **PERMIT CONDITIONS**

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

#### **CONDITIONS**

- 1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
- 3. Well work activities shall not constitute a hazard to the safety of persons.

WW-4B Rev. 2/01

1) Date	)Date				20	
2) Ope:	rator	's				
Wel	l No.	12900	k.			
3)API	Well	No.	47-	047	- 00904	

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

	APPLICATION FOR A PERM	MIT TO PLUG AND ABANDON				
4)	Well Type: Oil / Gas X / Liquid	d injection / Waste disposal /				
• /		derground storage) Deep/ Shallow X				
5)	Location: Elevation 2662 ft.	Watershed Elkhorn Creek				
5,	District Elkhorn	County McDowell Quadrangle Bramwell				
6)	Well Operator CNX Gas Company UC	7) Designated Agent Anthony Kendziora				
	Address 627 Claypool Hill Mall Road	Address One Dominion Drive				
	Cedar Bluff, VA 24609	Jane Lew, WV 26378				
8)	Oil and Gas Inspector to be notified  Name Brian Ferguson FKF	9) Plugging Contractor  Name_ L&D Well Services				
	Address_708 Manor Drive	Address PO Box 1192				
	Beckley, WV 25801	Vansant, VA 24656				
.0)	Work Order: The work order for the mann see attached plugging procedures	ner of plugging this well is as follows:				
0)		ner of plugging this well is as follows:				
0)		ner of plugging this well is as follows:				
0)		ner of plugging this well is as follows:				
0)		ner of plugging this well is as follows:				
foti	fication must be given to the district oi can commence.	l and gas inspector 24 hours before permitte				
ork	see attached plugging procedures	l and gas inspector 24 hours before permitte				

#### API 47-047-00904 Plugging Procedure

#### Well # 12900



- 1. Verify total depth 4855'.
- 2. Run free-point survey on 4-1/2" casing.
- 3. Run tubing to TD. Set plug of Class A 3% CaCl cement from established TD to approximately 50' below free point or a point at least 100' above the Weir Perforations (4705' 4720').
- 4. Cut 4-1/2" casing at free-point.
- 5. Cement through 4-1/2" csg. while pulling 4-1/2", from top of bottom plug to approximately 100' below the 8-5/8" casing shoe. (Approx. 1207') Pull remaining 4-1/2" out of well.
- Run bond log on 8-5/8" casing.
- 7. Run tubing to previous cement top (1207'). Cement across the 8-5/8" shoe to a minimum of 50' above shoe, bringing cement top to approximately 50' below the 8-5/8" free-point or to surface, whichever is necessary.
- 8. If necessary, cut and pull free 8-5/8" casing.
- 9. Repeat free-point and cutting procedures for 11-3/4" if 8-5/8" is cut and pulled.
- 10. Cement from previous cement top to surface.
- 11. Install 4-1/2" X 4' steel monument with API# and Date.

NOTE: A 100' gel spacer will be placed at approximately half the well depth. Class A 3% CaCl cement will be utilized throughout the entire cementing process.





OIL & GAS DIVISION



A 12900 47-047-00904

IV-35	DEPT. of	MINES
(Rev 8-81)	•	

State of West Wirginia Department of Mines

Operator's Well No. 12900 Farm Pocahontas Land Co. API No. 47 - 047 - 0904

Date\_

Gil und Gas Bivision

October 24, 1983

WELL OPERATOR'S REPORT

DRILLING, FRACTURING AND/OR STIM	LATING, O	R PHYSICAL	L CHANGE		
WEIL TYPE: Oil / Gas x / Liquid Injection (If "Gas," Production x / Undergrout LOCATION: Elevation: 2662 Watershed El District: Elkhorn County McDo	and Storag	e/ Deep	p/ Sha		
COMPANY Consolidated Gas Supply Corp.					
ADDRESS 445 W. Main St., Clarksburg, WV	Casing	Used in	Left	Cement	
DESIGNATED AGENT L. Joseph Timms, Jr.	Tubing	Drilling		fill up Cu. ft.	
ADDRESS 145 W. Main St., Clarksburg, WV	Size	DITTING	TI WELL	Cu. 10.	
SURFACE OWNER Pocahontas Land Corp., c/o Tom Till	20-16	<b>a</b> h	<b>~1</b> .		
ADDRESS N. & W. Bldgl. Bluefield. WV 24701	17 3/1	24	24		
MINERAL RIGHTS OWNER Pocahontas Land Corp.	1/3-/1/9" 9 5/8	385	385	To surface	
ADDRESS P. O. Box 1517, Bluefield, WV 24701	8 5/8	1100	1107	To surface	•
OIL AND GAS INSPECTOR FOR THIS WORK Rue	7	1107	1107	To surface	
Schoolcraft ADDRESS Heville, W 19,979,	5 1/2				
PERMIT ISSUED September 9, 1983	4 1/2	4855	4855	100 Sks.	
DRILLING COMMENCED September 29, 1983	3	4055	4035	100 5ks	
DRILLING COMPLETED October 12, 1983	2	<del> </del>			
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED CN	Liners used			·	
Depth of completed well 1900 feet 1 Water strata depth: Fresh 186 feet;		Dep	th	feet	
Depth of completed well 1900 feet	Rotary <u>x</u>	_/ Cable	e Tools_	(-)	f
Water strata depth: Fresh 186 feet;	Salt	feet		ITEIR CO.	CEIVER
Coal seam depths: see Garma Ray Tons	Is coal	being min	ed in the	area: No	Will arrel es
OPEN FLOW DATA				APR	T.
Producing formation Wair	Pay	zone dep	th_1698-4	732 feet	<b>≥</b> 2016
Gas: Initial open flow 50 Mcf/d	Oil: Ini	tial open	flow	Bbl 76	aigmen
Final open flow 1510 Mcf/d	Fin	al open f	low	Bbl/d	riguleur it
Time of open flow between init	ial and fi	nal tests	ho	urs	Ê
Static rock pressure \$25 psig(surface	e measurem	ent) afte	T <u>IU hou</u>	ys <del>rs</del> -shut in	9
(If applicable due to multiple completion	)				0904
Second producing formation				feet	•
Gas: Initial open flowMcf/d		tial open	flow	Bbl/d	
Final open flow Mcf/d	Oil: Fir	al open f	low	Bb1/d	
Time of open flow between init					
Static rock pressurepsig(surface	measureme	ent) after	hou	rs shut in	04/22/2016

FORM IV-35 (REVERSE)

6.1 6.1

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated: 1705 - 1720 with 16 holes. Fractured with 500 gals 15° HGL, 6500# 20/10 sand and 102,000 standard C.F. Nitrogen.

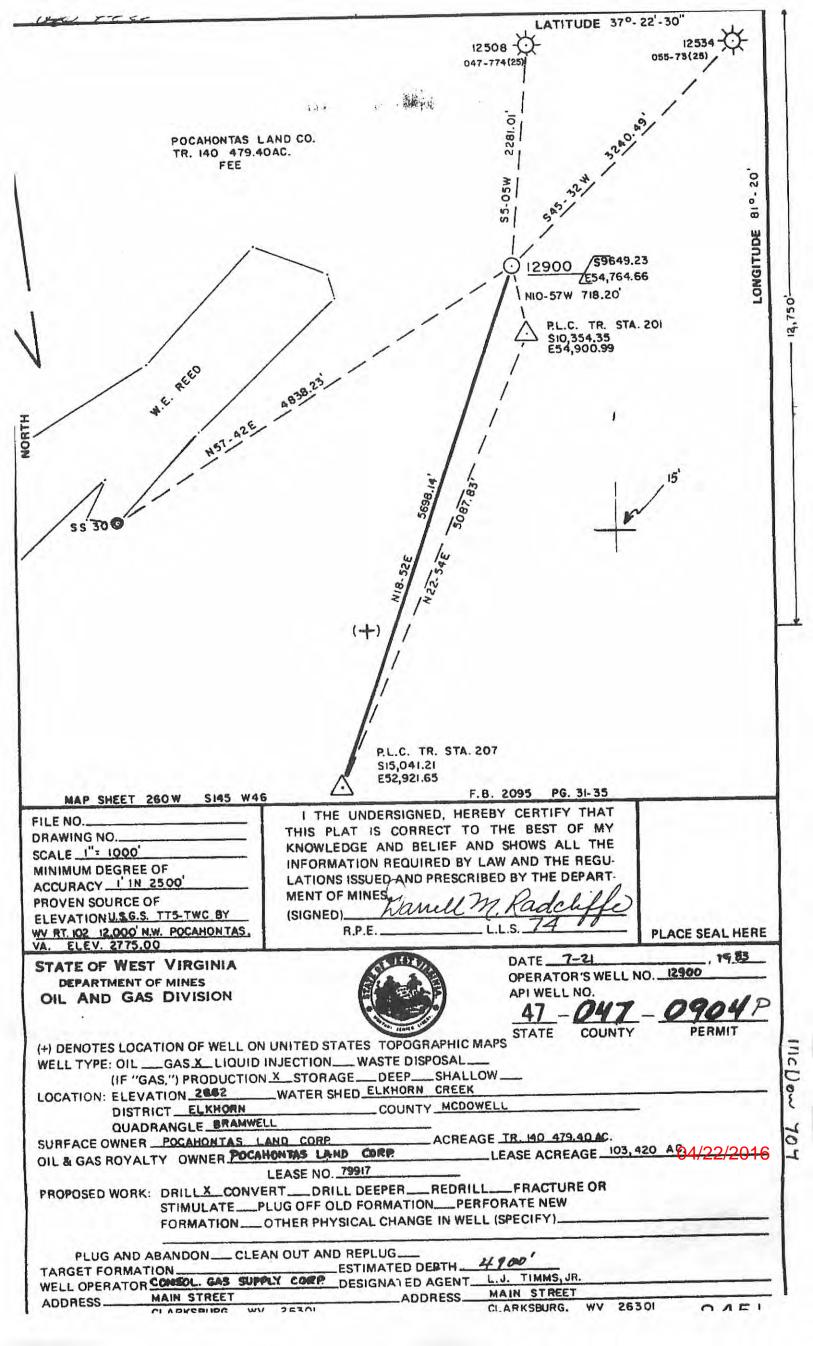
WELL LOG

	<u> </u>			REMARKS
CORMATION COLOR HARD OR SOFT	TOP F	eer	BOTTOM FEET	Including indication of all fresh
	<u> </u>			and salt water, coal, oil and gas
		0	25	
Clay & Sand	Į.	25	27	•
Coal			269	
Sand & Shale	ì	27 259	27k	<b>6 0</b>
Coal	1	27),	270	P 1 1 1
Sand		279	281	
Open Shaft				Oamma Ray Tops
Shale & Sand	1 .	23)	349	######################################
Coal		3119	354	Conl 25 - 27
Shale & Sand	1	3511	F58 .	Coal 269 - 274
Coal	11	158	1132	Coal 279 - 284
Sand & Shale	<b>.</b> .	1:32	รถล	Coal 349 - 354
Coal	1	รุกร	512	Goal ' <b>428 - 432</b>
Sand & Shale	1	512	550	Togl 508 - 512
Red Rock & Shale	1	550	575	Revending 1385 - 1434
Sand & Shale	1	575	950	Hoper Mayon - 2420 - 2549
Red Rock & Shale	l	950	1013	Maxon 2693 - 2780
Sand	1	1013	1021	Lower Haxon 2889 - 2963
Red Rock & Shale		1021	1050	Little Lime 3104 - 3142
Sand & Shale	1	1050	1298	B' ue Monday 31% - 3213
Ravencliff	1	1298	1381	Pi : Lime 3436 - 4429
Shale & Sand	l l	1391	151,7	Weir 4698 - 4732
Red Rock & Chale		1547	1598	Log Total Tenth 4918
		1588	1710	SOC TOWN MINOR
Sand & Shale	1	1710	1753	, ^
Avis Lime	1	1753	2399	
Sand, Chale & Red Rock	1	2399	2494	
Upper Maxton	l		2556	}
Thale	1	2494 2556	2612	1
Red Buck & Chale	1	2612	2760	1
Shale		2760	2775	1
Maxton		2775	3100	
Sand & Shale			3205	
Little Lime	1	3100		1
Sand & Shale	1	3205	3323	
Big Lime		3323	1415	
Red Rock & Shale	1	4415	k432	
Shale & Sand	1	4432	1686	Mes Siv
Red Rock & Shale		4686	4734	T.D.
Sand % Thate		4714	1900	T.D.
KBM 10' above G. L.	•	•	-	

(Attach separate sheets as necessary)

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including



WW-4A		1) Date:
Revised 6-07		2) Operator's Well Number
1101100000		12900
		3) API Well No.: 47
D	EPARTMENT OF ENVIRONM	TTE OF WEST VIRGINIA ENTAL PROTECTION, OFFICE OF OIL AND GAS TION TO PLUG AND ABANDON A WELL
4) Surface Ov (a) Name	wner(s) to be served:	5) (a) Coal Operator
Address	PO Box 1517	Name
Audress	Bluefield, WV 24701-1517	Address
(b) Name		(b) Coal Owner(s) with Declaration
Address	Penn Virginia Oil and Gas Cor	Name same
Address	840 Gessner Suite 800	Address
	Houston TX 77024	Address
(c) Name		Name
Address		Address
Audress		Aduress
18/200	-10-2	
6) Inspector	Brian Ferguson BLF	(c) Coal Lessee with Declaration
Address	708 Manor Drive	Name
	Beckley, WV 25801	Address
Telephone	304-550-6265	
TO THE PE		You should have received this Form and the following documents:
well (2) The The reason However, y Take notic accompany Protection, the Applic	its and the plugging work order; and plat (surveyor's map) showing the well loc a you received these documents is that you have you are not required to take any action at all.  e that under Chapter 22-6 of the West Virginia (ying documents for a permit to plug and abandon with respect to the well at the location describe	e rights regarding the application which are summarized in the instructions on the reverses side.  Code, the undersigned well operator proposes to file or has filed this Notice and Application and a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental d on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, red or certified mail or delivered by hand to the person(s) named above (or by publication in
well (2) The The reason However, y Take notic accompany Protection, the Applic	its and the plugging work order; and plat (surveyor's map) showing the well loc a you received these documents is that you have you are not required to take any action at all.  e that under Chapter 22-6 of the West Virginia (gring documents for a permit to plug and abandon, with respect to the well at the location describe ation, and the plat have been mailed by registe cumstances) on or before the day of mailing or de Well Operate	rights regarding the application which are summarized in the instructions on the reverses side.  Code, the undersigned well operator proposes to file or has filed this Notice and Application and a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental d on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, and or certified mail or delivered by hand to the person(s) named above (or by publication in divery to the Chief.
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Sara M. Micoli, Notary Public
Cecil Twp., Washington County
My Commission Expires March 11, 2019

The Office of Oil and Gas processes your personal information, such as name, address and photic authoric washington of Notaries
regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of
business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our
office will appropriately secure your personal information. If you have any questions about our use of your personal

Notary BWHIGNWEAL

day of \_

information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wy.gov.

My Commission Expires

WW-9 (2/15)

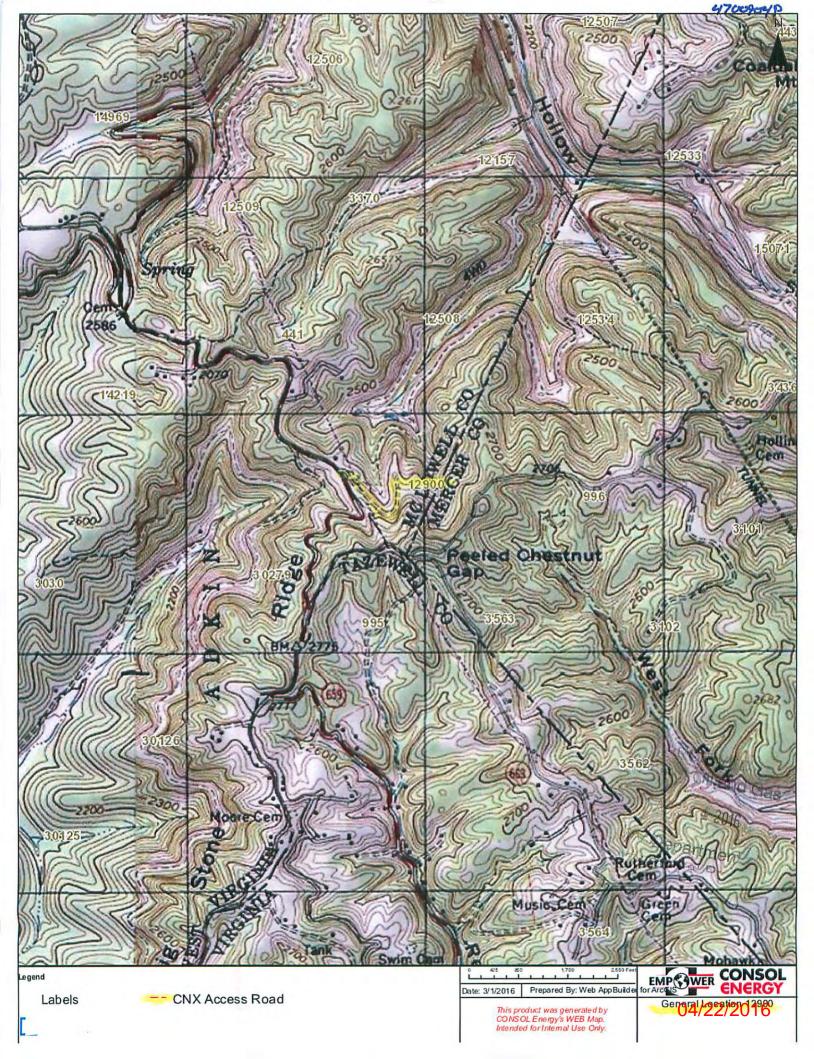
API Number	47 -	047	-	00904	
Ope	rator's	Well No		12900	

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

#### FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX Gas Company LLC	OP Code 494458046
Watershed (HUC 10) 0507020102	
Do you anticipate using more than 5,000 bbls of water to co	
Will a pit be used? Yes No	
If so, please describe anticipated pit waste:	7
Will a synthetic liner be used in the pit? Yes	No If so, what ml.?
Proposed Disposal Method For Treated Pit Waster	s:
Land Application	
Underground Injection (UIC Per Reuse (at API Number	ermit Number2D0550319)
Off Site Disposal (Supply form	
Will closed loop system be used? If so, describe: a pumpe	er truck with a flow back tank will be used in lieu of a pit.
Drilling medium anticipated for this well (vertical and horiz	zontal)? Air, freshwater, oil based, etc.
-If oil based, what type? Synthetic, petroleum, etc	0
Additives to be used in drilling medium?	
Drill cuttings disposal method? Leave in pit, landfill, remo	oved offsite, etc
-If left in pit and plan to solidify what medium wil	Il be used? (cement, lime, sawdust)
-Landfill or offsite name/permit number?	
	nd Gas of any load of drill cuttings or associated waste rejected at any ided within 24 hours of rejection and the permittee shall also disclose
on August 1, 2005, by the Office of Oil and Gas of the Wes provisions of the permit are enforceable by law. Violation law or regulation can lead to enforcement action.  I certify under penalty of law that I have person application form and all attachments thereto and that, b	and conditions of the GENERAL WATER POLLUTION PERMIT issued at Virginia Department of Environmental Protection. I understand that the ms of any term or condition of the general permit and/or other applicable mally examined and am familiar with the information submitted on this based on my inquiry of those individuals immediately responsible for is true, accurate, and complete. I am aware that there are significant assibility of fine or imprisonment.
	Λ4
0.011	
Subscribed and sworn before me this 18th day of	f /Vlarch, 20 16
Subscribed and swom before me this 18th day of	Notary Tubic
Subscribed and swom before me this 18th day of My commission expires 0.3/11/2019	COMMONWEALTH OF BENNEY! VANIA

Form WW-9	WW-9			ell No. 12900
CNX Gas Com	pany LLC			
Proposed Revegetation Tr	. /	ned 1.5	Prevegetation pH	to be determined
Lime based o	n pH Tons/acre or to	correct to pH7		
Fertilizer type	20-20			
Fertilizer amount		lbs/acre		
Mulch	2	Tons/acre		
		Seed Mixtures		
	Temporary		Perma	nent
Seed Type	lbs/acre		Seed Type	lbs/acre
orchard grass	25			
birdsfoot trefoil	15			
lidino clover	10			
Photocopied section of inverse Plan Approved by:	Λ	snect.		
				ON OF ON
				APR 14 20
Title: 01 9 GAS I	SPECTOR	Date:	3/25/2016	TH 1 4 20
	(×) Yes	() No		Departmen
	7.7			enta, ven



WW-7 8-30-06



# West Virginia Department of Environmental Protection Office of Oil and Gas

VV E	LL LUCATION FUR	dvi: GPS		
API: 47-047-00	904 w	ELL NO.: 1	2900	
FARM NAME: POO	ahontas Land Con	npany	<u> </u>	
RESPONSIBLE PARTY	vell	Compaky	, LLC	
COUNTY: McDov	vellpist	<sub>RICT:</sub> Elkt	norn	
QUADRANGLE: B	ramwell			
SURFACE OWNER: _	Pocahontas Land (			
ROYALTY OWNER: _	Pocahontas Land C	Company		
	4,132,695.883 m.			
	467,930.64 m. <sub>GP</sub>		<sub>N:</sub> 2662 ft.	
preparing a new well loca above well. The Office of the following requirement 1. Datum: NAD height above n 2. Accuracy to D 3. Data Collection Survey grade GPS	1983, Zone: 17 North, Coordinate nean sea level (MSL) – meters. atum – 3.05 meters n Method: _: Post Processed Differential Real-Time Differential	or assigned AP PS coordinates ate Units: mete	I number on the that do not meet	Pivel. Dil and Ga
•	X : Post Processed Different		A3R 1	4 2016
A Lattan siza sa	Real-Time Differential		Englished Papar location: Ortographic	tmen+
i me undersigned, hereby	formation required by law and f Oil and Gas.	the regulations	owledge and sissued and	Pro
gro	PostceTin 1	Forman	3/30/16	
Signature	Title		Date	