

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

July 14, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4300963, issued to CHESAPEAKE APPALACHIA, L.L.C., 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

Chief

James Martin

Operator's Well No: 806630 (6630)

Farm Name: GOODMAN, ELVA - ADKINS, SAN

API Well Number: 47-4300963

Permit Type: Plugging
Date Issued: 07/14/2014

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.
- 4. This well is under a consent order and must be plugged within two years of the date of issuance of this permit.

FORM WW-4 (B)
Observe
File Copy
(Rev. 2/01)

1) Date: 4/23/2014
2) Operator's Well No. 806630 P&A
3) API Well No. 47-043-00963

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

		APPLICATION FO	R A PERMIT	TTO PLUG AND A	BANDON	
4)	Well Type:	Oil Gas)	<u>K</u> Liq	uid injection	Wast	e disposal
	(Is Gas, Prod	uction X or Underground stora	age)	Deep	_	Shallow X
5)	Location:		atershed		Big Ugly Cı	eek
		District Harts Creek Cou	untyI	Lincoln Qua	idrangle	Big Creek, WV 7.5'
6)	Well Operator Address	Chesapeake Appalachia, L.L. P.O. Box 18496 Oklahoma City, OK 73154-04		Designated Agent Address	Eric B. Gille P.O. Box 60 Charleston,	70
8)	Name Raiph Address 5539 I	pector to be notified Triplett McClellan Highway chland, WV 25506		Address P.O. Box	ake Appalach	
10)	Work Order: Th	e work order for the manner of p	lugging this w	ell is as follows:		

See Attached Sheet

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work Order approved by Inspector

Ralph D. Trupiell

Date

07/18/2014

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806630 P&A PROCEDURE

- 1) Prepare road and location, MIRU service rig
- RIH with tools and check for top of cavings (approximately 2025')
- 3) Run W.S. to 2000', load hole with gel
- 4) Spot 150' cement plug 2000'-1850', pull W.S. to 1715'
- 5) Spot 115' cement plug 1715'-1600', pull W.S. to 1525'
- 6) Spot 100' cement plug 1525'-1425', pull W.S.
- 7) RIH with tools to check top of plug (If top of plug is below 1450' then re-set plug)
- 8) Cut 7" at free-point (approximately 825') and pull
- 9) Run W.S. to 825', load hole with gel
- 10) Spot 100' cement plug 825'-725', pull W.S.
- 11) Attempt to pull 8 5/8" casing
 - A) If successful
 - a) Run W.S. to 500', load hole with gel
 - b) Spot 100' cement plug 500'-400'
 - c) Proceed to step 12

OK

TO STEP 12

- B) If unsuccessful
 - a) Run W.S. to 500'
 - b) Spot 100' cement plug 500'-400', pull W.S.
 - c) Cut 8 5/8" at free-point (approximately 150') and pull
 - d) Proceed to step 12
- 12) Pull or run W.S. to 150'
- 13) Spot 150' cement plug 150' surface
- 14) Pull W.S. and top off with cement
- 15) Set monument and reclaim as prescribed by law

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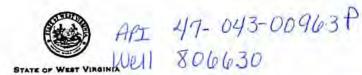
AFI 47-043-00963 P

Fermation	Color	Hard or Soft	Тор	Bottom	Oil, Gas or Water	Depth Found	Remarks	Pg 20/3
Little Li Pencil Ca Big Lime	nie ve		1410 1440 1443	1440 1443 1632	Show Gas	1535' 1590'	in Big Limo Big Lime 3/10	
Injun san	d		1632	1715	lias	1708'	1" 18 M Injun 6/10 W	
Broken sa Big Shell slate & s Berea san Lime shel slate & s Brown sha white sla Total dep	hells d l hells le		1715 1815 1880 2186 2198 2222 3245	1815 1880 2186 2198 2222 3245 3595 3610 3610 DLK	Gas	3/371	26 M Shale 8/10 W 1 30 M	լո
					5Fot 3-27- from 32	37-3610	1" 30 N DuPont Gelatir t 4/10 W 2" 84	
						FLOW - 84 M	And the World	
			r I		Shut in 3-	28-51 in 7" c	asing.	
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APPROVED UNITED FUELTIME COMPANIAI Profestion

By 07/18/2014

Chief Engineer



DEPARTMENT OF MINES DIL AND GAS DIVISION

WELL RECORD Permit No. LIN-963 Oil or Gas Well Company United Fuel Gas Company Used in Drilling Casing and Tubing Left in Well Packers Address P.O.Box 1273. Charleston 25, W. Va. Farm Irvin Dugan Size Location (waters) Big Ugly Creek Kind of Packer. 6630 Elev. 879.43 Well No. County Lincoln District Harts Creek 331 331 Size of 10 3/4 The surface of tract is owned in fee by. 4431 4431 8-5/B Address 14681 0% 7H 14681 Depth set Mineral rights are owned by Irvin Dugan 1601 - 5th Avenue Address Huntington 3, W. Perf. top. 1- 5-51 Drilling commenced Perf. bottom 3-25-51 Drilling completed Perf. top. 3237 3610 Liners Used Date Shot 3-27-51 Perf. bottom. 21.00# Gel. With 4/10ths Water in_ Open Flow CASING CEMENTED_ SIZE /10ths Merc. in. Inch 84M - Shale Cu. Ft. 478 Ibe. 6 Days Rock Pressure COAL WAS ENCOUNTERED AT 112 FEET 24 INCHES bbls., 1st 24 hrs. Oil INCHES INCHES Fresh water. 812 INCHES INCHES test FEET Salt water Oil, Gas or Water Depth Hard or Soft Remarks Top Bottom Formation Color 2 Surface 8 2 Sand 8 60 Slate 75 60 Sand 95 75 Slate 108 95 Sand 112 108 Slate 114 112 Coal 114" Fresh 1-10" Water 170 114 Slate bailer every 2 Hours 170 215 Sand 268 215 Slate 268 285 Sand 300 285 Slate 300 344 Sand 392 344 Slate 392 404 Sand 475 404 Slate 488 475 Sand 488 535 Slate 560 535 Sand 560 726 Slate 750 726 Sand 795 750 Slate & Shells 8121 Salt hole full Water 795 Salt Sand 864 842 Slate 900 864 Line Shell 974 900 Salt Sand RECEIVED 974 994 Slate & Shell 1165 994 Lime Shel Office of Oil and Gas 1168 1165 Slate 1234 1168 Sand 1287 MAY 22 2014 1234 Slate & Shells 1287 1297 Red Rock

1297

1303

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Lime Shells

Lime Shell

Slate & Shells

Red Rock

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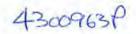
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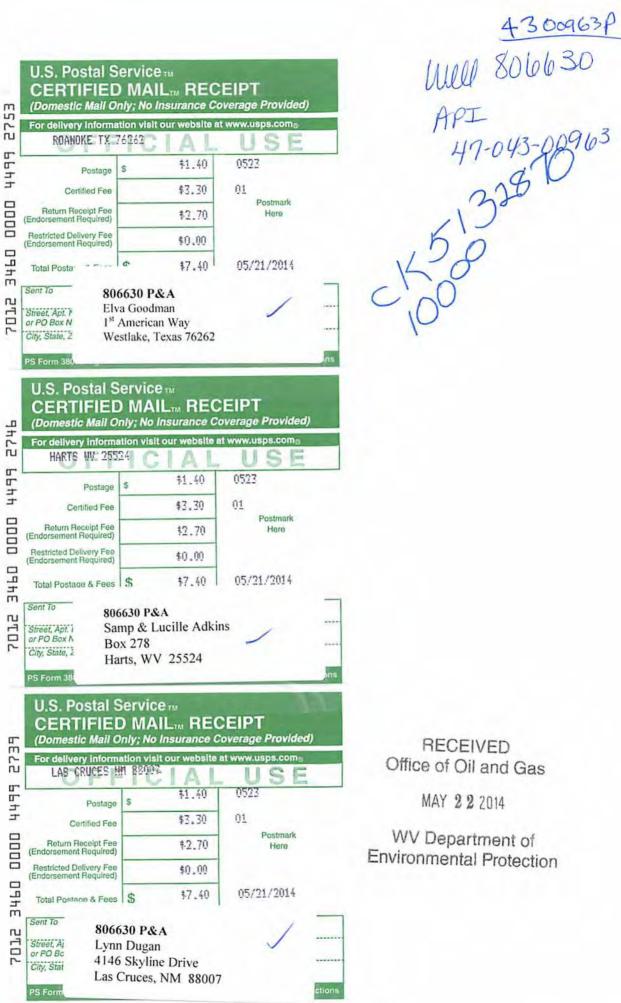
WV Department of



WW4-A
Revised
2/01

1) Date: 4/23/2014 2) Operator's Well No. 806630 P&A 3) API Well No. 47-043-00693

			MENT OF ENVIR	ONMENTAL PRO	JREAU OF ENVIRO	E OF OIL AN	D GAS
45	C			LICATION TO PL	UG AND ABANDO		
4)		ner(s) to be serv		7	5) Coal Operat		
	(a) Name	Elva Goodman	1/-		(a) Name	None	
	Address	1st American V		_	Address		
		Westlake, Texa	s 76262	_			
				27		ALL DAY	
			J. J		Coal Owner	(s) with Dec	aration
	(b) Name	Samp & Lucille	Adkins /		(b) Name	Lynn Duga	an
	Address	Box 278			Address	4146 Skyll	ne Drive
		Harts, WV 255	24	_		Las Cruce	s, NM 88007
				7.0			
				7			
	(c) Name				Name		
	Address			<u> </u>	Address		
				-		-	
				7		-	
					Coalless	e with Dec	laration
6)	Inspector	Palph Triplett			(c) Name	None	ini mii vii
0)	and the second second second second	Ralph Triplett	Ulahua	-			-
	Address	5539 McClellan		-	Address		
		Branchland, W	V 25506	2			
	Laborator Control						
	Telephone	304-389-0350					
	The reason yo instructions on	the reverses side.	cuments is that you However, you are	u have rights regard not required to lake			
	Notice and App	plication and accom	panying document	s for a permit to plug	rsigned well operator g and abandon a well respect to the well at	with the Chief	of the Office of
	attached Applie	cation and depicted	on the attached Fo	orm WW-6. Copies	of the Notice, the App	olication, and th	ne plat have been
	mailed by regis	stered or certified m	ail or delivered by I	hand to the person(s	a) named above (or by	v publication in	certain
) on or before the da			Andread and academic	1,631351100.11	4
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	tunn	mmm	mmy	Well Operator:	Chesapeake Appa	lachia, V.L.	77
	1	Official Seal Notan State of West Vis	Public 2	Ву:	Mes	W//Ll	2.0
	A S. A.			Its:	Manager - Operation	олэ, Appalachi	a South ,
	11 省流	A Phyllis A.	1 2 7	Address:	P.O. Box 18496		
		My Commission E			Oklahoma City, Ol	C 73154-0496	
	1	September 16,		Telephone:	405-935-4073		RECEIVED
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		and the second second	no d			4447	onico of off and das
Sub	scribed and swo	rn before me this	33-0 day o	of April	the year of	2014	MAY O O COLL
			Phyllis (2. Capley	1	Notary Public	MAY 2 2 2014
My C	Commission Exp	ires	Sente	mber 16, 2018		744	
	n WW-9	772					WV Department of
							Environmental Protection
							Environmental Protection



Rev. 02/01

API Number 47-043-00693 Operator's Well No. 806630 P&A

STATE OF WEST VIRGINIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name	Chesapeake	Appalachia, L.L	C.	OP Code 49	4477557	
Watershed	Big	Ugly Creek		Quadrangle _	Big Creel	k, WV 7.5'
Elevation 905		County _	Lincoln	_ Di	strict	Harts Creek
Description of anticip	pated Pit Waste:	Plugging Retu	ırns/Cement			
Will a synthetic liner	be used in the pit	? Yes		20	MIL	
Proposed Disposal N	X Land Ap Underg	oplication round Injection ((at API Number_ Disposal (Suppl)) on)	
Proposed Work For	Drilling Workov Swabbi X Pluggin	rer ng)	
issued on Decembe understand that the permit and/or other I certify under p this application form for obtaining the info	iderstand and agree to in 31, 1999, by the Off provisions of the pern applicable law or regu- enalty of law that I have a and all attachments ormation, I believe that for submitting false in gnature	ice of Oil and Gas of nit are enforceable by lation can lead to enforce we personally examin thereto and that, base the information is tr	the West Virginia I y law. Violations of forcement action. ed and am familiar ed on my inquiry of ue, accurate, and o	Department of Environment of Environment of any term or condition with the information those individuals important the environment of the environment of Env	onmental Prote on of the gener submitted on mediately resp	ection, I al consible
Company Official (Ty	yped Name)	David Gocke			-	
Company Official Tit	le	Manager - Op	erations, Appa	lachia South	RECEIV	ED
Subscribed and swo	rn before me this	23rd day of	April a. Cool	Offic 201		and Gas 014 tary Public.
				reg		tary Public.

My Commission Explisa September 16, 2018

Attachment #1

API #: 47-043-00693 Operator's Well No. 806630 P&A

	L	ECEND	
Property Boundary		Diversion Control of the Control of	
Rond = = = = = = =		Spring	
Existing Fence — X — X —	× —	Wet Spat	
Planned Fence / /	/	Drain Pipe with size in inches (3)	
Stream Change Control	77	Waterway	
	» — ·	Cross Drain	
Rock 63566	,	Artificial Filter Strip	CA YA YIX
North N		Pit: cut walls	
Buildings		Pit: compacted fill walls	
Water wells W		Area for Land Application of Pit Waste	
Drill site			
Proposed Revegetation Treatment:	Acres Disturbed	1.0 Prevegetation pH 6.1	
	Lime 3	Tons/acre or to correct to pH 6.5	
		· —	
	1	U 4 4540 U 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
Fertilizer (10-20-20 or equi	valent) 1/3 TON	ibs/acre (500 lbs minimum)	
rertinzer (10-20-20 or equi	Mulch Hay 2		
	Mulch Hay 2		
Area I	Mulch Hay 2	Tons/acre	
Area I Seed Type	Mulch Hay 2 Se	Tons/acre ed Mixtures Area II Seed Type	lbs/acre
Area I Seed Type KY-31	Mulch Hay 2 Se Ibs/acre 40	Tons/acre ed Mixtures Area II Seed Type ORCHARD GRASS	lbs/acre 15
Area I Seed Type KY-31 ALSIKE CLOVER	Mulch Hay 2 Se Ibs/acre 40 5	Tons/acre ed Mixtures Area II Seed Type	
Area I Seed Type KY-31	Mulch Hay 2 Se Ibs/acre 40	Tons/acre ed Mixtures Area II Seed Type ORCHARD GRASS	15
Area I Seed Type KY-31 ALSIKE CLOVER ANNUAL RYE	Mulch Hay 2 Se Ibs/acre 40 5	Tons/acre ed Mixtures Area II Seed Type ORCHARD GRASS	15
Area I Seed Type KY-31 ALSIKE CLOVER	Mulch Hay 2 Se Ibs/acre 40 5 15	Tons/acre ed Mixtures Area II Seed Type ORCHARD GRASS ALSIKE CLOVER	15
Area I Seed Type KY-31 ALSIKE CLOVER ANNUAL RYE Attach: Drawing(s) of road, location, pit and p	Mulch Hay 2 Se Ibs/acre 40 5 15 proposed area for	Tons/acre ed Mixtures Area II Seed Type ORCHARD GRASS ALSIKE CLOVER land application.	15
Area I Seed Type KY-31 ALSIKE CLOVER ANNUAL RYE Attach:	Mulch Hay 2 Se Ibs/acre 40 5 15 proposed area for	Tons/acre ed Mixtures Area II Seed Type ORCHARD GRASS ALSIKE CLOVER land application.	15
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Area I Seed Type KY-31 ALSIKE CLOVER ANNUAL RYE Attach: Drawing(s) of road, location, pit and p Photocopied section of involved 7.5' t	Mulch Hay 2 Se Ibs/acre 40 5 15 proposed area for	Tons/acre ed Mixtures Area II Seed Type ORCHARD GRASS ALSIKE CLOVER land application.	15
Area I Seed Type KY-31 ALSIKE CLOVER ANNUAL RYE Attach: Drawing(s) of road, location, pit and p Photocopied section of involved 7.5' t Plan Approved by: Plan Approved by: Plan Approved by: Date: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Mulch Hay 2 Se Ibs/acre 40 5 15 proposed area for	Tons/acre ed Mixtures Area II Seed Type ORCHARD GRASS ALSIKE CLOVER land application.	15

Office of Oil and Gas

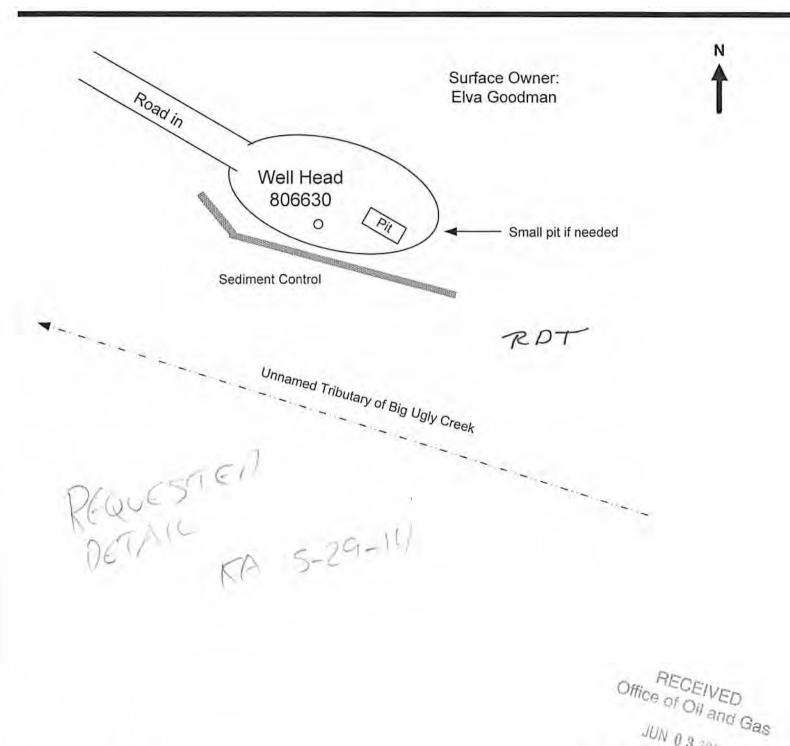
JUN 03 2014

WV Department of
Environmental Protection

CHESAPEAKE APPALACHIA, L.L.C.

4300963P

Diagram of Well 806630 P&A
API 47-04 - 00963
Field Office - Branchland
County - Lincoln



Site Plan

Prepared by: Kris Aldridge

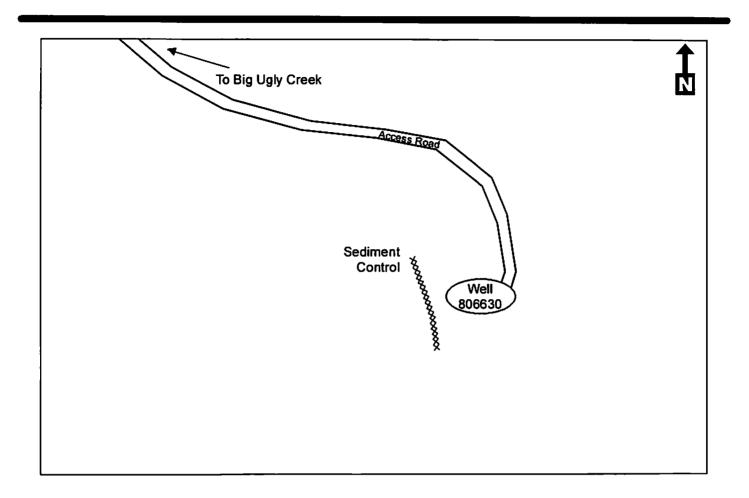
Date: 5/29/2014

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WV Department of
Environmental Protection

CHESAPEAKE APPALACHIA, L.L.C.

Diagram of Well 806630 API 47-043-00963 Field Office - Branchland County - Lincoln



GENERAL NOTES

This Drawing is a schematic representation of the well site and access road. Proposed structures such as well site, drilling pit, roadways, culverts, sediment barriers, etc. are shown in approximate pre-planning configurations.

All culvert pipes will be a minimum of 15 inches in diameter. All culvert possessabled will be accompanied by an entrance sump with dimensions no less than 3 feet (width) x 3 feet (langth) x 4 feet (deep). Culverts will be installed at an angle to ensure proper flow. The outfall of culverts will be protected from erosion and sedimentation using large rocks or other sediment controls deemed necessary in the prevention of erosion and sedimentation. Storm water from the diverse will be directed to stable natural vegetative areas. Where culverts are not practical plantal and will have other sediment control in place to minimize erosion and sedimentation.

Cross drains, broad based dips, water bars, and diversion ditches will be employed during the construction phase. These erosion and sediment control structures will be used to control erosion and sedimentation during the construction phase, where applicable and areas that will allow. These structures will be considered permanent and used as such.

Permanent seeding: See Attachment #1

07/18/2014

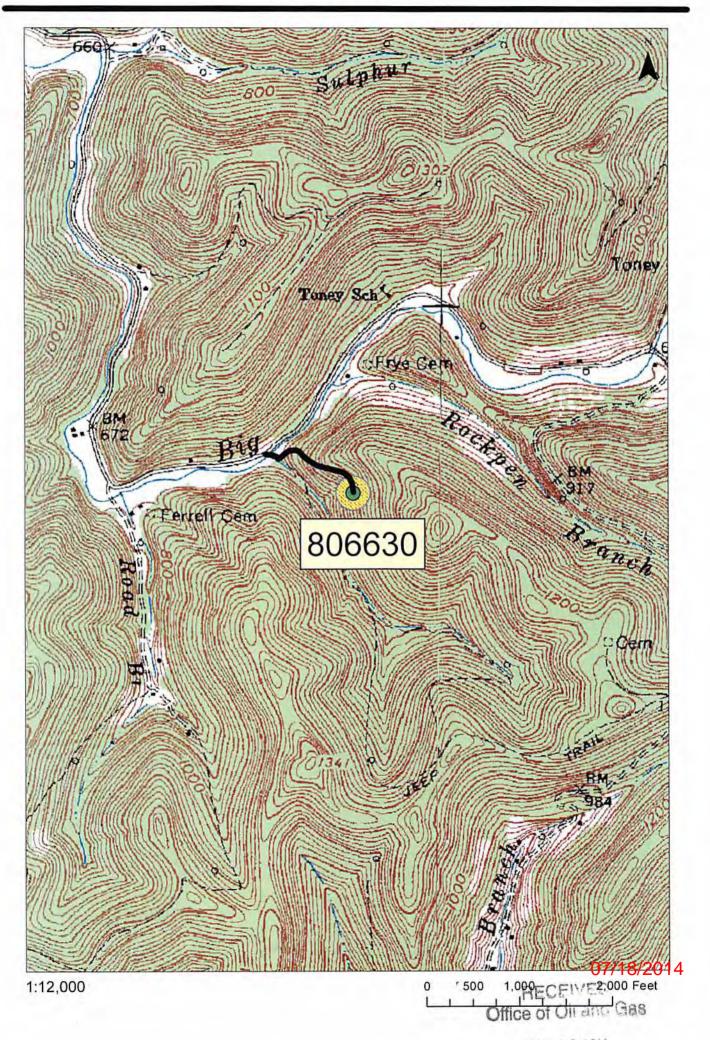
Site Plan

Prepared by: Lloyd Reynolds

Date: 05/20/2014

CHESAPEAKE APPALACHIA, L.L.C.

Topographical Map of Access and Well Location 806630 API 47-043-00963 Field Office - Branchland County - Lincoln



MAY 2 2 2014

