

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 28, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-1501655, issued to TRIAD HUNTER, 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

James Martin

Chief

Operator's Well No: J.B. CASTO #123

Farm Name: KING, JAMES SR.

API Well Number: 47-1501655

Permit Type: Plugging
Date Issued: 04/28/2014

Promoting a healthy environment.

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 January 30	, 2014
2) Operator's	
Well No. J.B. Casto # 1	23
3) API Well No. 47-	015 - 01655

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

 	 	124	 -	 	

		evation 1495' GPS Strict Henry 02	Watershed Grannys Creek County Clay 15 Quadrangle Newton 512
5) 1		Triad Hunter, LLC	7) Designated Agent Kim Arnold
	Address	125 Putnam Street Marietta, Ohio 45750	Address P.O. Box 154 Waverly, W.V. 26184
()	Oil and Gas Ir Name Ed Gain Address P.O	ner	9)Plugging Contractor Name_N/A Address
	Spe	ncer, W.V. 25276	
	Work Order: 1		manner of plugging this well is as follows:

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

Work order approved by inspector

Environmental Protection

(2014)

Plugging Procedure Attachment (Wells with 8 5/8" Casing)

Well Name: J.B. Casto # 123 Permit Number: 47-015-01655

District: Henry County: Clay

MIRU service rig and flowback tank; blow well down.

Pull tubing and rods OOH.

2. Check total depth with sandpump; clean out hole below bottom perforation.

3. Run 2 3/8" tubing below bottom perforation.

4. (Bottom Hole Plug) Mix/Pump 20 sacks Class A cement, (23.6 cu. ft.), ¼ lb.flocele/sk., no CaCl.

5. Displace cement through tubing with gel water.

BHP (2500' - 2250')

6. Pull 2 3/8" tubing OOH.

Eco. 14951

7. RIH with casing cutter tool, check depth of 1st plug and find 4 1/2" cement top (free pipe).

8. Cut-off 4 ½" casing just above the cement top, break circulation, and pull one jt. of casing OOH.

9. (Cut Plug) Mix/Pump 30 sacks Class A cement, (35.4 cu. ft.), ¼ lb. flocele/sk.,no CaCl.

10. Displace cement through casing with gel water.

11. Pull 4 1/2" casing up to the subsea elevation depth.

12. (Elevation Plug) Mix/Pump 30 sacks of Class A cement, (35.4 cu. ft.), ¼ lb. flocele/sk., no CaCl. (1545 - 1445)

13. Displace cement through casing with gel water.

15. (Surface Plug) Mix/Pump 30 sacks of Class A cement, (35.4 cu. ft.), 1/2 lb. flocele/sk., no CaCl.

16. Circulate cement to surface.

17. Pull remaining joints of 4 ½" casing OOH. Top load annulus with Class A cement to surface.

18. Weld a three foot monument pipe on to the existing casing. Fill monument pipe with cement and attach identification plate to monument pipe.

19. RDMO service rig and supporting equipment.

20. Reclaim well site and lease road.

Plug Summary

-					
	(Plug Name)	(Thickness)	(Cement Type)	(Sacks)	(Cubic Feet)
1.	Bottom Hole	250 ft.	Class A	20	-0=R3ED
2.	Cut Plug	100 ft.	Class A	30 RI	ECE35 and Gas
3.	Elevation Plug	100 ft	Class A	30 Hice	ECENTED Gas of 035.4
4.	Elevation Plug Surface Plug	100 ft.	Class A	30	FEB 25,4014 129.8 cu. ft. of
5.	Totals:			110 sacks	129.8 cu. ft. of
24	261-24361)	S		190 W	FEB 231-2011 129.8 cu. ft. of V Department of onmental Protection
				EUAII	0,

PERFORMIONS: (24261-24361)

FORM	IV-35		DEPARTM	ENT OF MINES, O	L AND GAS DIVI	SION Operato	, 19
(Obve				WELL OPERATOR	C DEDODE	Well No	J. B. Casto 123
[08-7	8.	DRILLING	, ThacTTh	OF		API Wet	No. <u>27</u> -015-1655 State County Pen
							some county fer
WELL TYPE:	011	/ Gas_	/ Ld	iquid Injection_	X / Waste	Disposal	*
	(I: "Gas	", Produc	tion	/ Underground	storage/	Deep	Shallow/)
LOCATION:	Elevation	n: (1:	502.92	Watershed: _	Grannys Cre	eek	
	District	:tler	nry	County:	Clay	Quadrangle:	Newton 7.5'
WELL OPERAT	OR	Penna	oil Com	oany			
Addres	S	P. O.	Box 158			P. O.	
		Parke	rsburg,	WV 26101	nuaress		sburg, WV 26101
		- 12					
PERMITTED W	ORK: Dri	11 X/	Convert	/ Drill dee	eper/ Red	rill/ Pr	acture or stimulate
	Plu	g off old	formatio	n/ Perfo	rate new format	ion/	
	Oth	er physic	al change	in well (speci	ry)		
		-					
PERMIT ISSU	DED ON	9-10-7	9	19	OIL & GAS IN	SPECTOR FOR THE	S WORK.
(IF APPLICA	BLE: PLU	GGING OF	DRY HOLE	OM		Martin Nich	
REWORK	ING. VER	RESSION F BAL PERMI	SSION OBT	ING OR AINED		Box 554	
-		, 19				Clendenin,	
GEOLOGICAL	TARGET FO	RMATION:	S	quaw		Depth	2501 Feet
Depth	of comple	ted well,	2506	feet R	otary X /	Cable Tools	1667
Water	strata de	pth: Fre	sh,	_feet; salt	feet.		
Coal s	eam depth	s:		Is coal t	eing mined in	the area? No	
Work w	as commen	ced	10	-2- , 19 79	, and completed	11	-13 , 19 79
CASING AND S CASING OR SUBING TYPE	1	UPECIFICA'		FOOTAGE	INTERVALS	CEMENT FILL-U	PACKERS
conductor						100010 1995	V1-1-
resh water							Kinds
oal	8-5/8		A Paris	699	699	450 sks	Cinca
ntermediate						430 SKS	Sizes
roduction	4-1/2			2505	2505		Depths set
ubing			1				
iners						RI	CEIVED Gas
						Office	Reoperadoms:
						F	EB 2 11 2014 Bottom
					42		-mt Of
PEN FLOW DA'	TA			*		MA	Department of nmental Protection
Product	n)t format	Ion	Water	Injection		Enviro	Illinoi
Gas	s: Initi	il open r	Contract Con	M. O.A.		i'ay zone deptah	feet
	Final	open flow		Mcf/d	Oll: Initial	open flow,	Bb1/d
	r	time of or	on Plane 1	Mcf/d			
Sta	itir rock	pressure	The state of	neta (nuc	and Final test	s, hours	05/02/2014
							05/02/2014
Second p	producing	formation		2.5		O Pay zone denth	ffice of Oil and Gas
Gas	101111	r open 11	OW,	Mcf/d	Off. Inthini	61	FFR 2.0.2014
	Final	open flow		Mer/d	Final on	en flow	NV Department of
2.7					and linal test:	s, ho E rrv	NV De partment of ironmental Protection
21.2	1. 1. C. TOOK	DEGERMA		nete (sunces			

Static rock pressure, _____ psig (surface measurement) after ____ hours shut in

FORM IV-35 (Reverse)

[08-78]

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

Fractured w/ 174BW, 800# 20/40 sd., 250 gals. 15% HCL

WELL LOG

FORMATION	Color	llard or Soft	Mo- P-i	Bottom	Remarks Including indication of all fresh
Shale		1 3012	Top Feet	Feet	and salt water, coal, oil and gas
Sand	ł		0	94	
Shale		ſ	94	162	
Sand		1	162	221	. •
Shale		Ĭ	221	253	İ
Sand			253	300	
Shale			300	318	
Sand		i	318	577	
Shale			577	625	
Sand			625	703	
Shale			703	840	
Sand	l l		840	900	·
Shale	i"	}	900	1075	
Sand	1		1075	1180	
Shale		1	1180	1200	
Sand			1200	1219	
Shale	- 1		1219	1268	
Sand			1268	1435	
Shale			1435	1464	
Sand			1464	1656	
Shale]		1656	1775	
Sand			1775	1828	
Sh al e			1828	2163	
			2163	2232	
Little Lime			2232	2310	
Big Lime	i		2310	2352	
oyalhanna	1		2352	2419	
Big Injun			2419	2449	
hale	1 1	}	2449	2479	
quaw			2479	2494	
hale	1 1	j	2494	2506	•
otal Depth				2506	

(Attach separate sheets to complete as necessary)

PENNZOIL COMPANY

Well Operator

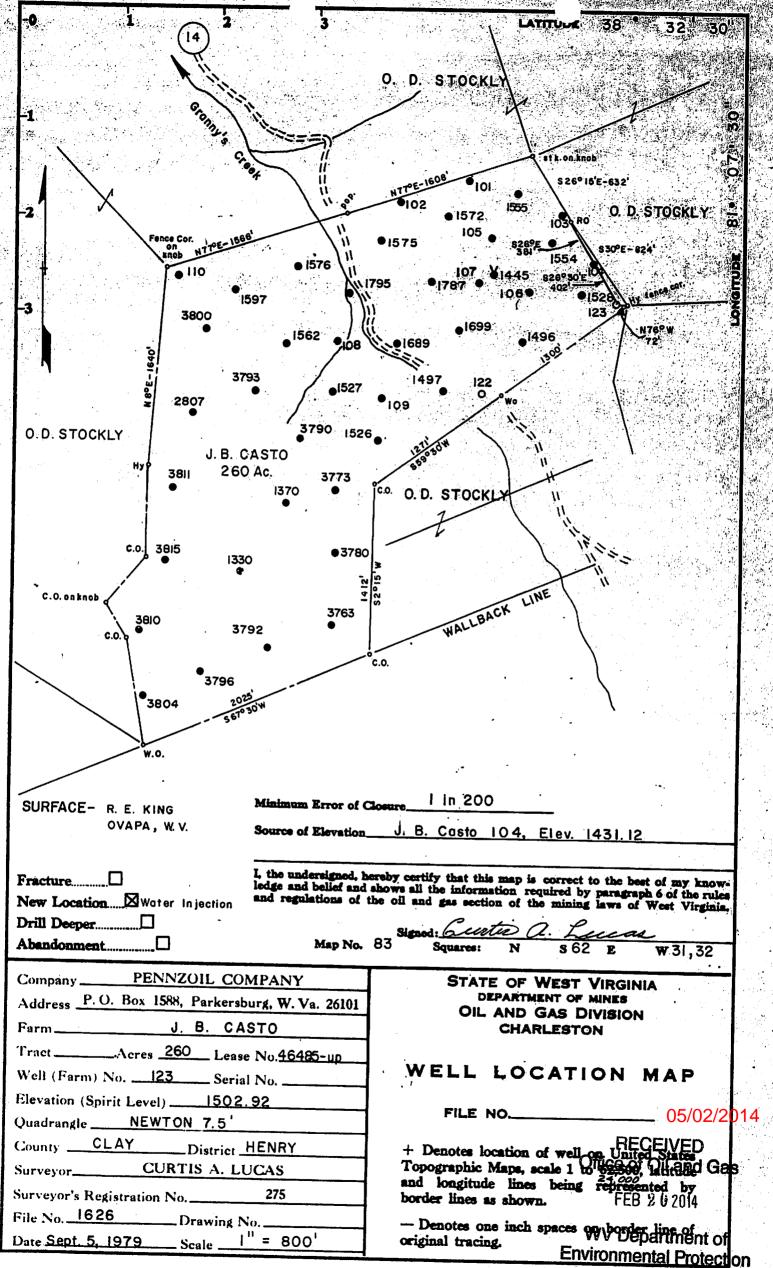
The Civil Engineering Dept Office of Oil and Gas

FEB 2 0 2014

WV Department of **Environmental Protection**

Regulation 2.02(i) provides as follows: NOTE:

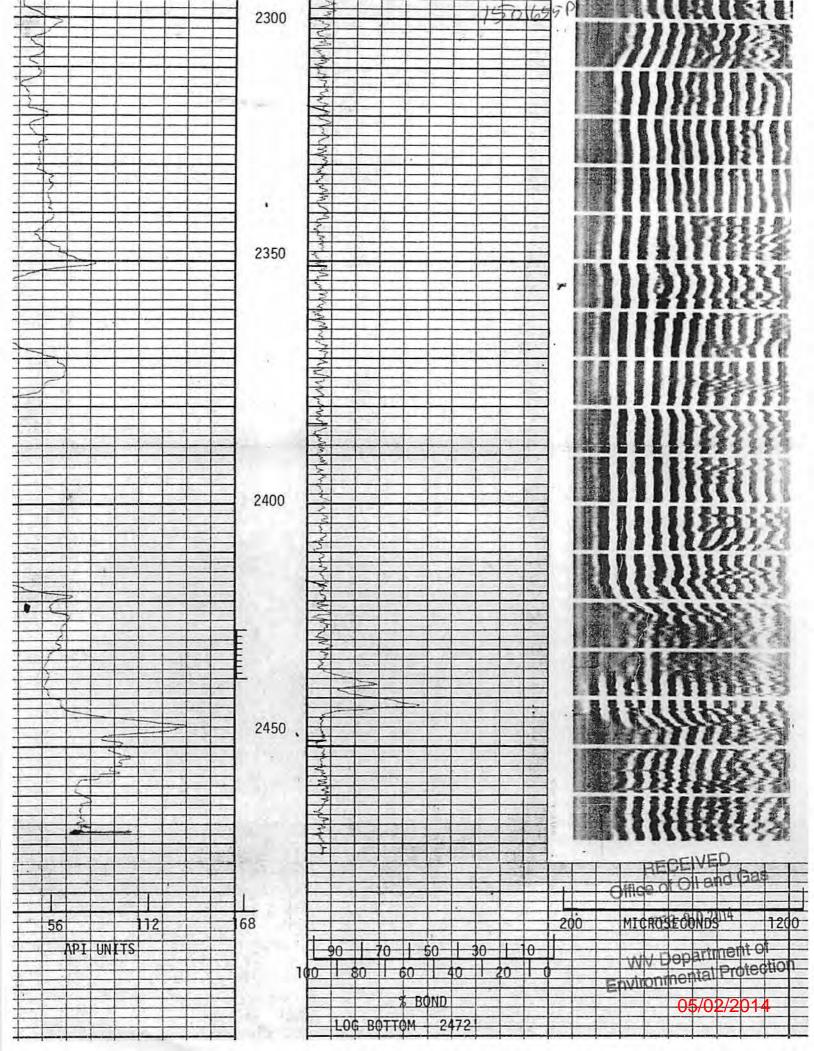
"The term 'log' or 'well log' shall mean a systematic, detailed geologial record of all formations, including coal, encountered in the drilling of a well."



N. McCullough

BOND CEMENT AND-OR SONIC SEISMOGRAM LOG
GAMMA RAY

HBC-GR-SS-100117	СОМРА	NY	INZOIL CO		-			_
	WELL_	J.E	. CASTO	#123				_ :
	FIELD_	HEN	IRY DIST	RICT				
Ca. R. DEPT.	COUNT	CLA	Υ	s	TATE WE	ST VIE	RGINIA	-
PETROLEUM ENGR. C.	LOCATI	GRANNY' QUAD. N	S CREEK IEWTON 7				ER SERVICE	S:
PERMANENT DATUM	SEC.	GL	P. ELEV.	RGE.		KB.	1512.92'	i c
LOG MEASURED FROM	4	KB		302.32		DE		
DRILLING MEASURED		KB				GL.	1502.92'	_ 5
DATE		10-12-7	9					
RUN NO.		ONE				I Live	- 1	- 6
TYPE LOG			MENT-GAI	MMA RAY-	SONIC S	EISMO	GRAM	
DEPTH-DRILLER		2505'	1		- 1.41.1.4			
DEPTH_LOGGER		2476'						
BOTTOM LOGGED INT		2472'						-
TOP LOGGED INTERV	AL	1800'						
YPE FLUID IN HOLE		WATER						-
SALINITY PPM CL.								- 3
DENSITY LB./GAL.		DUL.						- 3
LEVEL AX. REC. TEMP. DEG.	-	FULL						
OPR. RIG TIME	1.7	3 HOURS	+					
RECORDED BY	-	MONDAY				+		
VITNESSED BY		MR. HEL	.DMAN					
NIN BORE U	OLE REC	ORD		CA	SING RE	CORD		-
NO. BIT FRO		то	SIZE	WGT.	FROM		то	
1 6-3/4 250		7.00 '	4-1/2		0		TD PE	CE
1 0-3/4 250			8-5/8		0		700!	A (
							Office (C = 0
				/=== U.L				FF
							WV	-



WW-4A Revised 6-07

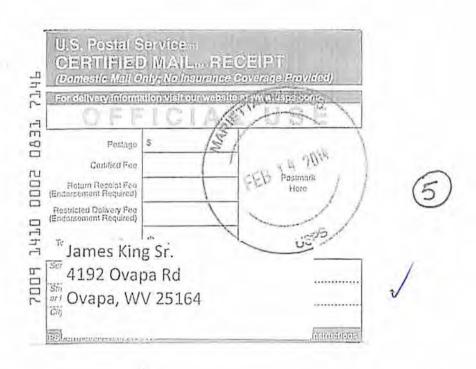
1) Date: January 30, 2	014		
2) Operator's Well Numb J.B. Casto # 123	er		
3) API Well No.: 47 -	015	01655	

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Ow	oner(s) to be served:	(5)	(a) Coal Operato	or ·
(a) Name	James King Sr.		Name	N/A
Address	4192 Ovapa Road		Address	
	Ovapa, W.V. 25164		-	
(b) Name			(b) Coal Ov	wner(s) with Declaration
Address			Name	N/A
	-		Address	
(c) Name			Name	
Address			Address	4
6) Inspector	Ed Gainer		(c) Coal Le	essee with Declaration
Address	P.O. Box 821		Name	N/A
2527.012	Spencer, W.V. 25276		Address	
Telephone	(304)389-7582			
Take notic accompan Protection the Applic	ying documents for a permit	of the West Virginia Co to plug and abandon a the location described ten mailed by registere	well with the Chief of to on the attached Applicated or certified mail or de	Il operator proposes to file or has filed this Notice and Application and the Office of Oil and Gas, West Virginia Department of Environmental tion and depicted on the attached Form WW-6. Copies of this Notice, elivered by hand to the person(s) named above (or by publication in
		Well Operator	r Triad Hunter, LLC	
		By:	Rocky Roberts	(Cuny Coison
		Its:	Senior V.P. Appalac	thian Operations
		Address	125 Putnam Street	
			Marietta, Ohio 4575	0
		Telephone	(740) 374-2940	
Subscribed and	I sworn before me th	nis 30th	day of	Notary Public TEBAY
My Commissio	n Expires	7,036	7 2-29	T/10
				281-11
Oil and Gas Priv	acy Notice			RECEIVED Gas
The Office of Oil regulatory dutie	and Gas processes yours. Your personal info	ur personal infort rmation may be di	mation, such as nar isclosed to other St	me, address and phone number, as a part of our ate agencies or third parties in the normal course of

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our 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 Office will appropriately secure your personal information. If you have any questions about our use proour personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.

WV Department of wvv Department of the Department



J. B. Casto	#	105	47-015-1176
14	*	106	47-015-1177
tt	林	123 .	47-015-1655
u	#	130	47-015-1943
u	井	134	47-015-2255

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VVV Department of Environmental Protection WW-9 Rev. 5/08

	Page	1	of 2	
API Number 47 -	015	- 4	01655	
Operator's Well N	o. J.B.	Casto # 1	23	

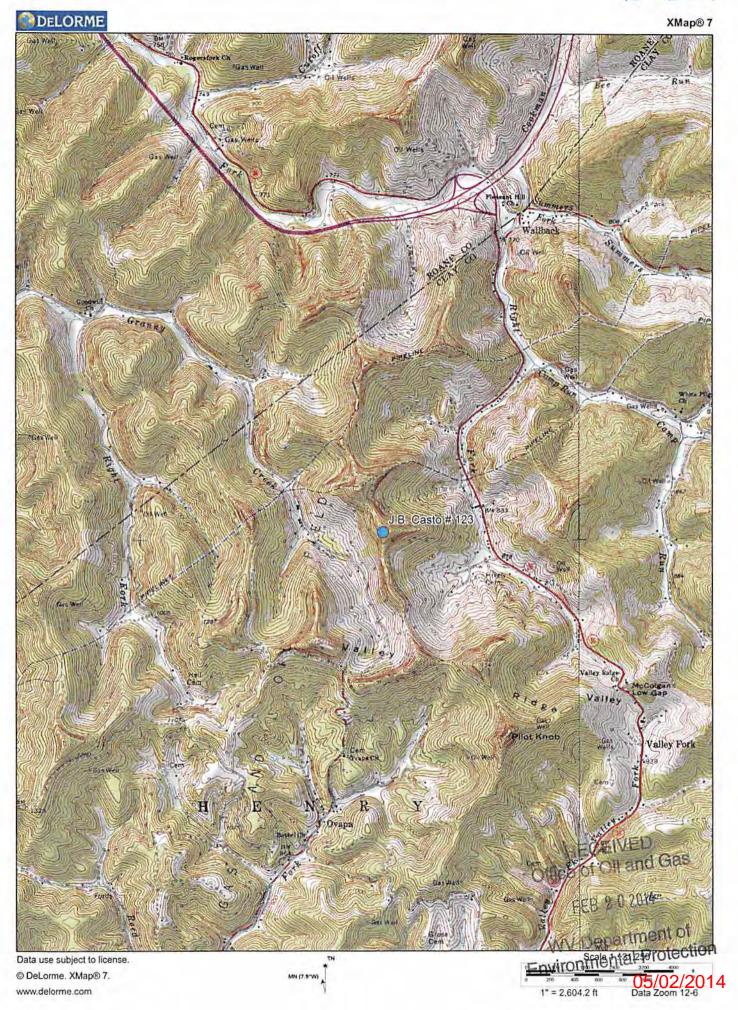
STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

	Quadrangle Newto	n
No Dis Suid		
escription of anticipated Pit Waste: No Pit; fluid	y Clay D	istrict_Henry
	ds will be separated at Ovapa Facility;	oil stored and salt water re-injected.
ill a synthetic liner be used in the pit?*No Pit *	•	
oposed Disposal Method For Treated Pit Wastes:	S:	
Land Application		
Underground Injection)
Reuse (at API Number		
	pply form WW-9 for disposal location	
Other (Explain		
oposed Work For Which Pit Will Be Used:		
Drilling	Swabbing	
Workover	Plugging	
Other (Explain_		
ovisions of the permit are enforceable by law. w or regulation can lead to enforcement action. I certify under penalty of law that I have	ve personally examined and am fami	liar with the information submitted on th
oplication form and all attachments thereto and obtaining the information, I believe that the informaties for submitting false information, including the information of the information	ormation is true, accurate, and comping the possibility of fine or imprisonme	se individuals immediately responsible for lete. I am aware that there are significant
opplication form and all attachments thereto and obtaining the information, I believe that the information of submitting false information, including the information of submitting false information, including the company Official Signature Rocky Roman ompany Official (Typed Name) Rocky Roman ompany Official Title Senior V.P. Ap	ormation is true, accurate, and comping the possibility of fine or imprisonment of the possibility	se individuals immediately responsible folicte. I am aware that there are significant.
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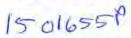
		LEGEND		
Property Boundary		Diversion Control Cont		
Rond = = = = = = =	===	Spring O		
Existing Fence — X — X —	- × -			
Planned Fence//	/	Drain Pipe with size in inches @		
Stream	, a	Waterway \longleftrightarrow \longleftrightarrow \longleftrightarrow		
Open Ditch		Cross Drain 77777777		
Rock ESSESS		Artificial Filter Strip		
North N		Pit: cut walls		
Buildings		Pit: compacted fill walls		
Water wells (W)		Area for Land Application of Pit Waste		
Drill site				
0 V 4 Z Trans W - 10 V - 10 V F 10	Disturbed One	(1) Province of 5.5		
Proposed Revegetation Treatment: Acres	Disturbed	- Trevegetation pri		
	re or to correct to pl	6.0 H		
Fertilizer (10-20-20 or equivalent	600 _{Ib}	os/acre (500 lbs minimum)		
Mulch 90 - 100 bales/	acre _{Tons}			
	Se	ed Mixtures		
Area I		Area II		
Seed Type lbs/ac	re	Seed Type lbs/acre		
Orchard Grass	30%			
Rye (Annual & BT)	35%			
Timothy (Climax)	25%			
Clover Med. Red)	10%			
Attach: Drawing(s) of road, location,pit and propo	osed area for land ap	oplication.		
Photocopied section of involved 7.5' topo,	graphic sheet.			
Plan Approved by:				
Comments:				
Commence				
~		W		
Title: Luspector		Date: 2 4 14		
Field Reviewed? () Ye	es (X) No		





West Virginia Department of Environmental Protection Office of Oil and Gas WELL LOCATION FORM: GPS

	LOCATION FOR	
_{API:} 47-015-01655	WE	LL NO.: 123
FARM NAME: J.B. Ca	sto	
RESPONSIBLE PARTY NA	ME: Triad Hunter	, LLC
COUNTY: Clay	DISTR	Henry
QUADRANGLE: Newto		
SURFACE OWNER: Jar	nes King Sr.	
ROYALTY OWNER: Kar	nawha Banking	and Trust Co. et al
UTM GPS NORTHING: 42		
UTM GPS EASTING: 048		SELEVATION: 1495'
	Zone: 17 North, Coordina sea level (MSL) – meters. – 3.05 meters thod:	te Units: meters, Altitude:
R	eal-Time Differential	
Mapping Grade GPS X:	Post Processed Differenti	al
	Real-Time Differential	X
I the undersigned, hereby certif	ation required by law and and Gas.	best of my knowle nce and VED the regulation simued en Oil and Gas
Den Imether	Geologist	1/168/1240 2014
Signature	Title	WV Department of Environmental Protection 05/02/2014





Chuck Taylor Toolbox

Geographic/UTM Coordinate Converter

You can convert between geographic coordinates and Universal Transverse Mercator (UTM) coordinates using this form.

Note: This is a JavaScript-powered form. If you have difficulties using this form, check your browser's settings to make sure you have enabled JavaScript.

Programmers: The JavaScript source code in this document may be copied and reused without restriction.

If you have a Java 1.1-compliant browser, and especially if you need to use an ellipsoid model other than WGS84, you may want to try the <u>Coordinate and Datum Transformations tool</u>.

(d	Geographic egrees decimal)	To/From		UTM	J.B. CA5+0 # 123	
lon	-81.143390240538	>>	x (easting)	0487504	9.0.2.30	
lat	lat 38.5423643419310	[<<] y	y (northing)	4266004	-	
			zone	17		
		hemisphere	N PS			

Geographic coordinates are entered and displayed in decimal degrees. Negative numbers indicate West longitudes and South latitudes. UTM coordinates are entered and displayed in meters. The ellipsoid model used for computations is WGS84.

Chuck Taylor -- (Copyright) -- (Contact)

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05/02/2014