



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

February 28, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-1501594, 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 penalties 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 #117
Farm Name: TRIAD HUNTER, LLC
API Well Number: 47-1501594
Permit Type: Plugging
Date Issued: 02/28/2014

Promoting a healthy environment.

02/28/2014

1) Date January 30, 2014
2) Operator's
Well No. J.B. Casto # 117
3) API Well No. 47-015 - 01594

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ___ / Gas ___ / Liquid injection X / Waste disposal ___ /
(If "Gas, Production X or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 1211' GPS Watershed Summers Fork
District Henry 02 County Clay 15 Quadrangle Newton 512

6) Well Operator Triad Hunter, LLC 7) Designated Agent Kim Arnold
Address 125 Putnam Street Address P.O. Box 154
Marietta, Ohio 45750 Waverly, W.V. 26184

8) Oil and Gas Inspector to be notified Name Ed Gainer
Address P.O.Box 821
Spencer, W.V. 25276
9) Plugging Contractor Name N/A
Address _____

10) Work Order: The work order for the manner of plugging this well is as follows:

(SEE ATTACHED SHEET)

See changes

6 1/2 gal between all plugs

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

Work order approved by inspector



FEB 21 2014
WV Department of
Environmental Protection
Date 2/4/14

(2014)

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

Well Name : J.B. Casto # 117

Permit Number: 47-015-01594

District: Henry

County: Clay

MIIRU service rig and flowback tank; blow well down.

1. 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.
6. Pull 2 3/8" tubing OOH.
7. RIH with casing cutter tool, check depth of 1st plug and find 4 ½" 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 ½" 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.
- 13a. → 13. Displace cement through casing with gel water.
14. Pull 4 ½" casing to 100 feet below surface. *Set 100 ft plug at bottom surface pipe (410 - 310)*
15. (Surface Plug) Mix/Pump 30 sacks of Class A cement,(35.4 cu. ft.), ¼ 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)
1. Bottom Hole	250 ft.	Class A
2. Cut Plug	100 ft.	Class A
3. Elevation Plug	100 ft.	Class A
4. Surface Plug	100 ft.	Class A
5. Totals:		

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 (2150' - 7950')
 (1261' - 1161')
 (410' - 310')

1501594P

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

1-10-80, 19

FORM IV-35
(Obverse)

Operator's
Well No. J. B. Casto 117

[08-78,

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

API Well No. 47 - 015-1594-1
State County Per

WELL TYPE: Oil ___ / Gas ___ / Liquid Injection X / Waste Disposal ___
(If "Gas", Production ___ / Underground storage ___ / Deep ___ / Shallow ___ /)

LOCATION: Elevation: 1182.80 Watershed: Granny's Creek
District: Henry County: Clay Quadrangle: Newton 7.5'

WELL OPERATOR Pennzoil Company
Address P. O. Box 1588
Parkersburg, WV 26101

DESIGNATED AGENT James A. Crews
Address P. O. Box 1588
Parkersburg, WV 26101

PERMITTED WORK: Drill X / Convert ___ / Drill deeper ___ / Redrill ___ / Fracture or stimulate ___
Plug off old formation ___ / Perforate new formation ___ /
Other physical change in well (specify) _____

PERMIT ISSUED ON 3-19-, 19 79

OIL & GAS INSPECTOR FOR THIS WORK:

(IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED

Name Martin Nichols
Address Clendenin, WV

GEOLOGICAL TARGET FORMATION: Big Injun Depth 2136 feet

Depth of completed well, 2150 feet Rotary X / Cable Tools ___

Water strata depth: Fresh, ___ feet; salt, ___ feet.

Coal seam depths: _____ Is coal being mined in the area? No

Work was commenced 5-7-, 19 79, and completed 5-10-, 19 79

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water								
Coal	8-5/8					360	360	Sizes
Intermediate							225 sks.	
Production	4-1/2					2147	2147	Depths set
Tubing							50 sks.	
Liners								Perforations:

OPEN FLOW DATA

Producing formation Injun Pay zone depth _____ feet

Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, _____ Bbl/d

Final open flow, _____ Mcf/d Final open flow, _____ Bbl/d

Time of open flow between initial and final tests, _____ hours

Static rock pressure, _____ psig (surface measurement) after _____

[If applicable due to multiple completion--]

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Second producing formation _____ Pay zone depth _____ feet

Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, _____ Bbl/d

Final open flow, _____ Mcf/d Final open flow, _____ Bbl/d

Time of open flow between initial and final tests, _____ hours

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

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WV Department of
Environmental Protection

FORM IV-35
(Reverse)

[08-78]

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

Fractured 10-15-79 w/250 Gal. 15% HCL, 136BW, 1000# 20/40 sd.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	100	
Sand			100	138	
Shale			138	248	
Sand			248	264	
Shale			264	288	
Sand			288	298	
Shale			298	376	
Sand			376	492	
Shale			492	518	
Sand			518	524	
Shale			524	554	
Sand			554	708	
Shale			708	766	
Sand			766	796	
Shale			796	832	
Sand			832	952	
Shale			952	980	
Sand			980	982	
Shale			982	994	
Sand			994	996	
Shale			996	1004	
Sand			1004	1010	
Shale			1010	1012	
Sand			1012	1018	
Shale			1018	1022	
Sand			1022	1026	
Shale			1026	1030	
Sand			1030	1038	
Shale			1038	1152	
Sand			1152	1220	
Shale			1220	1306	
Sand			1306	1352	
Shale			1352	1436	
Sand			1436	1572	
Shale			1572	1574	
Sand			1574	1588	
Shale			1588	1602	

(Attach separate sheets to complete as necessary)

Well Operator _____

By _____

Its _____

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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 coal, encountered in the drilling of a well."

FORM IV-35
(Reverse)

[08-78]

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

Fractured 10-15-79 w/250 Gal. 15% HCL, 136BW, 1000# 20/40 sd.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks
					Including indication of all fresh and salt water, coal, oil and gas
Sand			1602	1782	
Shale			1782	1786	
Sand			1786	1794	
Shale			1794	1858	
Sand			1858	1872	
Little Lime			1872	1928	
Pencil Cave			1928	1950	
Big Lime			1950	1992	
Loyalhanna			1992	2070	
Big Injun			2070	2098	
Shale			2098	2128	
Squaw			2128	2142	
Shale			2142	2150	
Total Depth				2150	

(Attach separate sheets to complete as necessary)

Pennzoil Company
Well Operator

By Curtis A. Lucas RECEIVED 2/28/2014
Its Civil Engineering Dept. RECEIVED

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 coal, encountered in the drilling of a well."

Noted 4-15-84

Office of Oil and Gas
FEB 21 2014
WV Department of Environmental Protection

N McCullough

BOND CEMENT AND/OR SONIC SEISMOGRAM LOG

GAMMA RAY

FILING NO.
HBC-GR-SS-98748

PENNZOIL CO.
 PETROLEUM ENGR. DEPT.
 THIS COPY

COMPANY PENNZOIL COMPANY

WELL J.B. CASTO #117

FIELD HENRY DISTRICT

COUNTY CLAY STATE W. VA.

LOCATION
NEWTON 7.5 QUAD

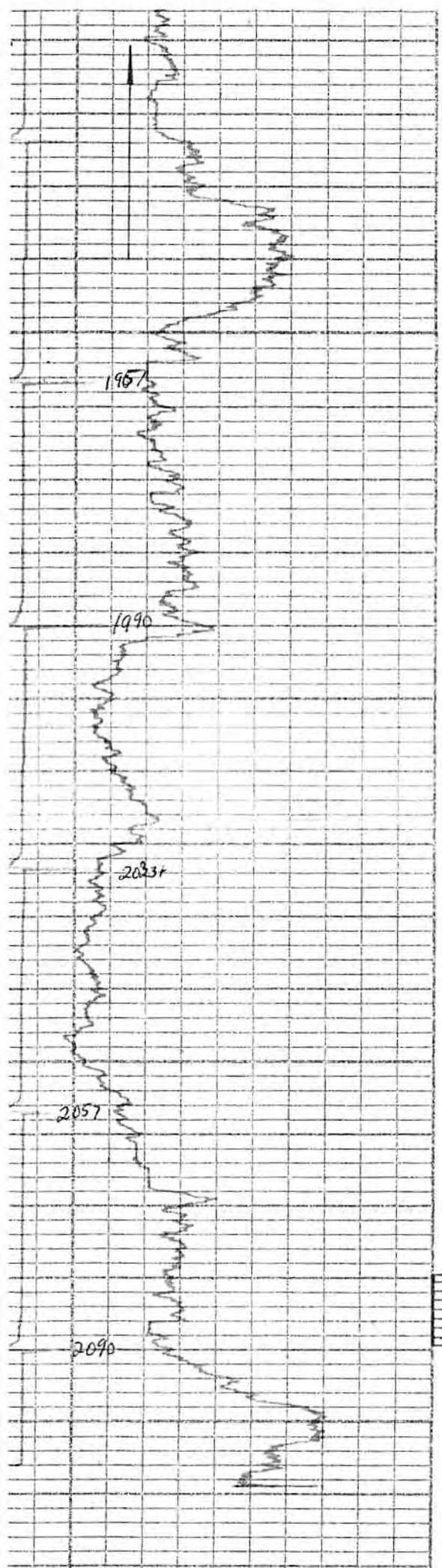
OTHER SERVICES

PERMANENT DATUM	GL	ELEV. 1182.8'	ELEVATIONS:
LOG MEASURED FROM	KB		KB 1190.8'
DRILLING MEASURED FROM	KB		DF. 1189.8'
			GL 1182.8'
DATE	8-3-79		
RUN NO.	ONE		
TYPE LOG	BOND CEMENT-GAMMA RAY-SONIC SEISMOGRAM		
DEPTH - DRILLER	2150'		
DEPTH - LOGGER	2120.5'		
BOTTOM LOGGED INTERVAL	2116'		
TOP LOGGED INTERVAL	1600'		
TYPE FLUID IN HOLE	WATER		
SALINITY PPM CL.			
DENSITY LB./GAL.			
LEVEL	FULL		
MAX. REC. TEMP. DEG. F.			
OPR. RIG TIME	1-1/2 HOURS		
RECORDED BY	MAYFIELD		
WITNESSED BY	MR. HELDMAN		

RUN NO.	BORE HOLE RECORD				CASING RECORD			
	BIT	FROM	TO	SIZE	WGT.	FROM	TO	
1				8-5/8"		0	360'	
				4-1/2"		0	TD	

THIS HEADING AND LOG CONFORMS TO API RECOMMENDED STANDARD PRACTICE RP-33 1979

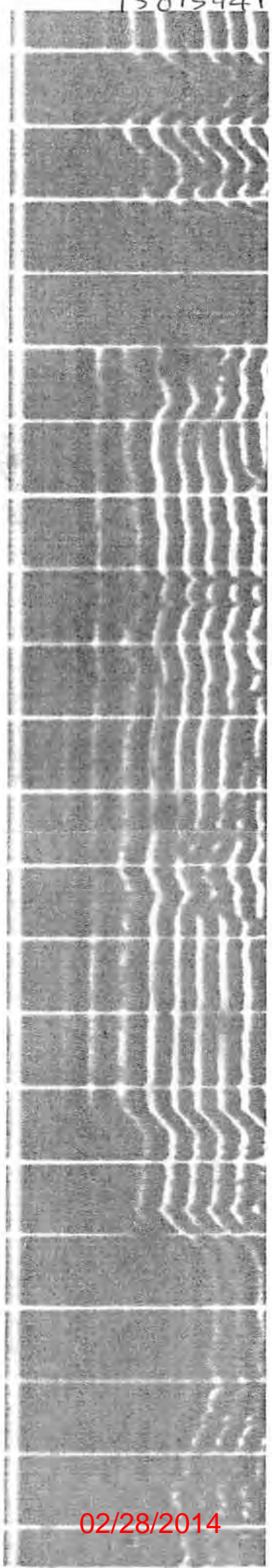
FOLD HERE



1950
2000
2050
2100



KODVK
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Y
RVELELA 411 M



1501594P

WW-4A
Revised 6-07

1) Date: January 30, 2014
2) Operator's Well Number
J.B. Casto # 117

3) API Well No.: 47 - 015 - 01594

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

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Triad Hunter, LLC</u>	Name <u>N/A</u>
Address <u>125 Putnam Street</u>	Address _____
<u>Marietta, Ohio 45750</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>N/A</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Ed Gainer</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 821</u>	Name <u>N/A</u>
<u>Spencer, W.V. 25276</u>	Address _____
Telephone <u>(304) 389-7582</u>	_____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator Triad Hunter, LLC
 By: Rocky Roberts
 Its: Senior V.P. Appalachian Operations
 Address 125 Putnam Street
Marietta, Ohio 45750
 Telephone (740) 374-2940

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Office of Oil and Gas

Subscribed and sworn before me this 30th day of January, 2014
Elizabeth R. Juby
 My Commission Expires 2-29-16
 Notary Public

WV Department of
 Environmental Protection
 2-29-16

Oil and Gas Privacy Notice

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 Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

02/28/2014

1501594P

WW-9
Rev. 5/08

Page 1 of 2
API Number 47 - 015 - 01594
Operator's Well No. J.B. Casto # 117

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 Triad Hunter, LLC OP Code _____

Watershed Summers Fork Quadrangle Newton

Elevation 1211' GPS County Clay District Henry

Description of anticipated Pit Waste: No Pit; fluids will be separated at Ovapa Facility; oil stored and salt water re-injected.

Will a synthetic liner be used in the pit? "No Pit"

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Proposed Work For Which Pit Will Be Used:

- Drilling Swabbing
- Workover Plugging
- Other (Explain _____)

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Rocky Roberts*

Company Official (Typed Name) Rocky Roberts

Company Official Title Senior V.P. Appalachian Operations

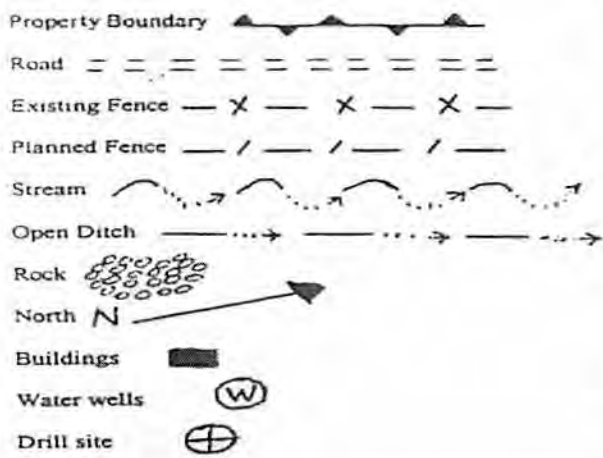
Subscribed and sworn before me this 30th day of January, 2014

Elizabeth R. Suby

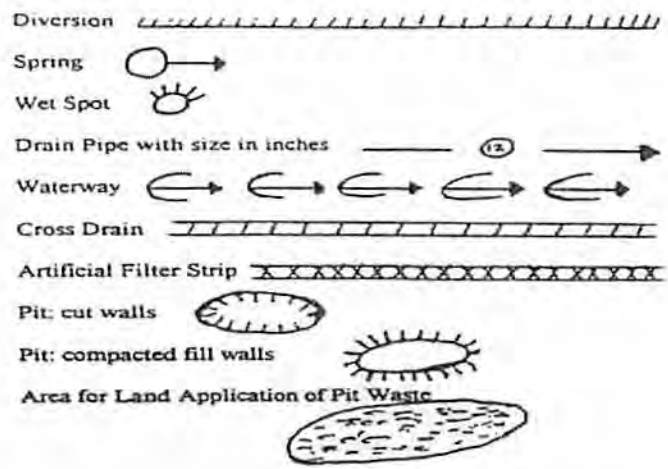


My commission expires 2-29-14

02/28/2014



LEGEND



Proposed Revegetation Treatment: Acres Disturbed One (1) Prevegetation pH 5.5

Lime Two (2) Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 600 lbs/acre (500 lbs minimum)

Mulch 90 - 100 bales/acre Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre	Seed Type	Area II	lbs/acre
Orchard Grass		30%			
Rye (Annual & BT)		35%			
Timothy (Climax)		25%			
Clover Med. Red)		10%			

Attach:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments: _____

Title: Inspector

Date: 2/4/14

Field Reviewed? () Yes (X) No

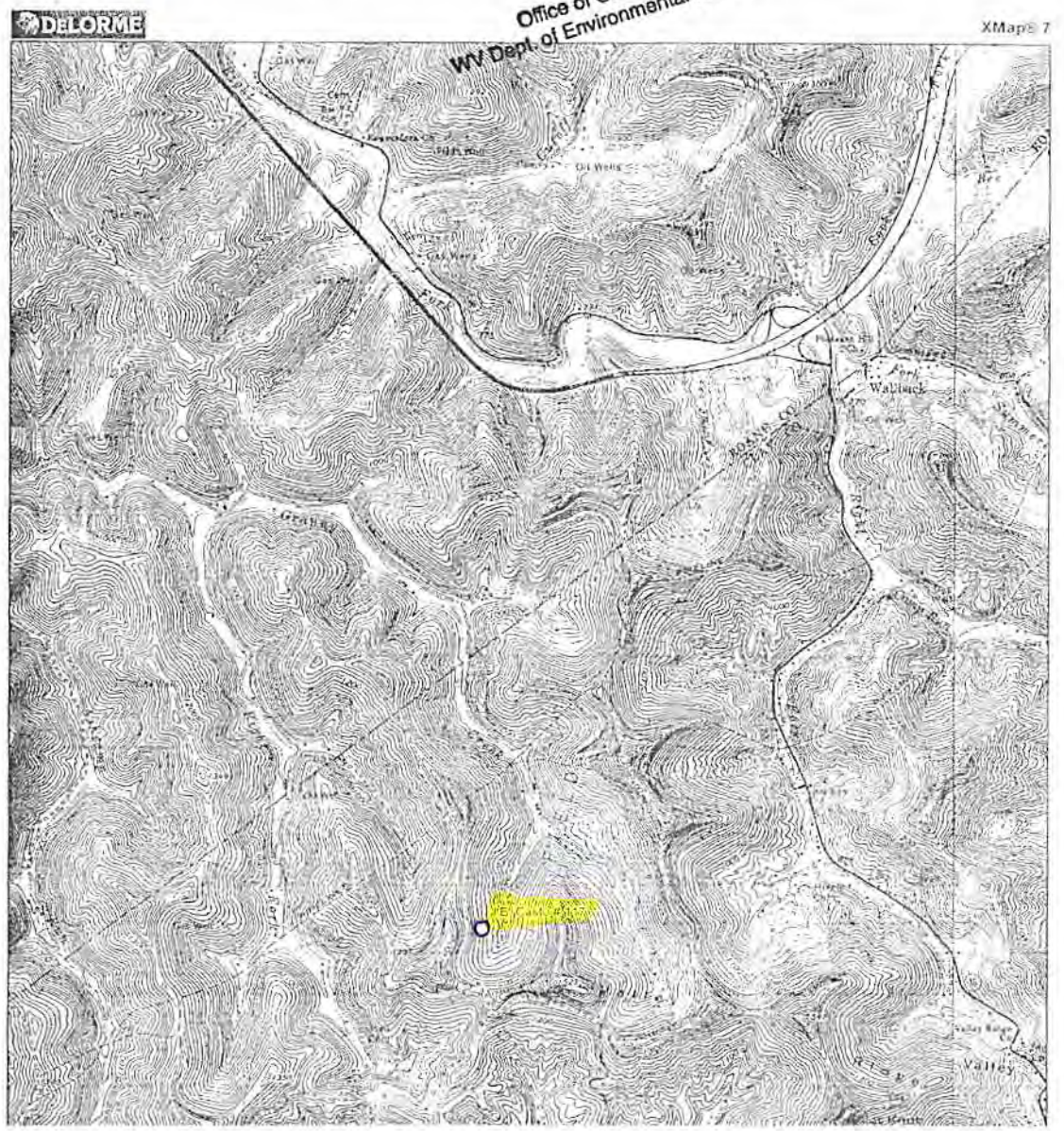
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Received

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FEB 27 2014

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1501594P

WW-7
8-30-06



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

API: 47-015-01594 WELL NO.: 117

FARM NAME: J.B. Casto

RESPONSIBLE PARTY NAME: Triad Hunter, LLC

COUNTY: Clay DISTRICT: Henry

QUADRANGLE: Newton

SURFACE OWNER: Triad Hunter, LLC

ROYALTY OWNER: Kanawha Banking and Trust Co. et al

UTM GPS NORTHING: 4265415

UTM GPS EASTING: 0486507 GPS ELEVATION: 1211'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential

Real-Time Differential

Mapping Grade GPS : Post Processed Differential

Real-Time Differential

4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

Ben Smeltzer
Signature

Geologist
Title

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Office of Oil and Gas
FEB 21 2014
WV Department of
Environmental Protection
1/16/14
Date



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 [Coordinate and Datum Transformations tool](#).

Geographic (degrees decimal)	To/From	UTM	
lon <input type="text" value="-81.154819291055"/>	[>>]	x (easting) <input type="text" value="0486507"/>	J.B. Casto # 117
lat <input type="text" value="38.537041682805"/>	[<<]	y (northing) <input type="text" value="4265415"/>	
		zone <input type="text" value="17"/>	
		hemisphere <input checked="" type="radio"/> N <input type="radio"/> S	

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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02/28/2014

1/10/2014