



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

December 12, 2013

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-9502128, 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: STEWART WINLAND UNIT #130C

Farm Name: STEWART, JAMES L. & MARTHA

API Well Number: 47-9502128

Permit Type: Horizontal 6A Well

Date Issued: 12/12/2013

Promoting a healthy environment.

12/13/2013

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) 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. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.



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Oil and Gas Conservation Commission
601 57th Street, SE Charleston, WV 25304
(304)926-0499, Ext 1656

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

November 21, 2013

Department of Environmental Protection
Office of Oil and Gas
Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-095-02128

COMPANY: Triad Hunter LLC

FARM: Stewart Winland #1300

COUNTY Tyler DISTRICT: Ellsworth QUAD: Paden City

The application for the above company is **approved to drill to TRENTON formation, POINT PLEASANT production zone**

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners; yes
2. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells, well name, and the name and address of the operator; none
3. Provided a plat showing that the proposed location is a distance of 500 feet from the nearest lease line or **unit boundary** and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

Cindy Raines
Executive Assistant

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION

1) Well Operator: Triad Hunter, LLC 494494833 Tyler 95 Ellsworth 02 Paden Ctiy 528
Operator ID County District Quadrangle

2) Operator's Well Number: Stewart Unit # 1300 UH Well Pad Name: Stewart/Winland

3 Elevation, current ground: 920' Elevation, proposed post-construction: 904'

4) Well Type: (a) Gas Oil
Other _____
(b) If Gas: Shallow _____ Deep
Horizontal

5) Existing Pad? Yes or No: Yes

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):
Point Pleasant and Utica Shale Formations; 10,600' TVD, 17,200' TMD, 5,000 - 6,000 # BHP

7) Proposed Total Vertical Depth: 10,600 feet

8) Formation at Total Vertical Depth: Trenton Limestone; PB TVD will be in the Point Pleasant Formation

9) Proposed Total Measured Depth: 17,200 feet

10) Approximate Fresh Water Strata Depths: surface - 250 feet

11) Method to Determine Fresh Water Depth: Examine depths of local water wells.

12) Approximate Saltwater Depths: @ 1,000 feet

13) Approximate Coal Seam Depths: 600 feet to 1,150 feet

14) Approximate Depth to Possible Void (coal mine, karst, other): None known; will report voids if found.

15) Does land contain coal seams tributary or adjacent to, active mine? No

16) Describe proposed well work: Drill vertical pilot hole into the Trenton Limestone @ 10,600 feet, Run electrical logs to evaluate potential pay zones, Plug back pilot hole with cement to the base of the 9 5/8" casing @ 9,400 feet, Drill horizontal well in the Point Pleasant Formation to a TMD of 17,200 feet (estimated length of lateral section @ 5650 feet, Cement 5 1/2" production casing from total depth back to the surface.

17) Describe fracturing/stimulating methods in detail:
Complete the Point Pleasant Formation in twenty to twenty-five stages. Each stage will consist of 8,000 bbls. of gelled water, 400,000 lbs. of sand and 500-1,000 gals. of acid. Each stage will contain @ 60 perforations and composite frac plugs will be used to isolate each stage, Treating pressures are expected to range between 8,000 and 9,000 PSI. and treating rates should be between 60 and 70 BPM., After the completion of the well is finished a coil tubing unit or a work-over rig / snubbing unit will clean out the production casing to total depth, Flow testing of the well will then be conducted to determine the well's potential.

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 12.73 acres

19) Area to be disturbed for well pad only, less access road (acres): 5.55 acres

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9-30-13

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WW-6B
(9/13)

18)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	26"	new	A252	102.65 lb	100'	100'	177 - CTS
Fresh Water	20"	new	J-55	94 lb	600'	600'	743 - CTS
Coal	13 3/8"	new	J-55	68 lb	3,000'	3,000'	2709 - CTS
Intermediate	9 5/8"	new	N-80 & P-110	40 lb & 47 lb	9,400'	9,400'	3827 - CTS
Production	5 1/2"	new	P-110	23 lb	-0-	17,200'	4729 - CTS
Tubing	2 3/8"	new	J-55	4.70 lb	-0-	10,000'	N/A
Liners							

UKC
12-12-13

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	26"	30"	.375"	N/A	Class A	1.18 cu.ft./sk
Fresh Water	20"	24"	.438"	2110 psi	Class A	1.18 cu.ft./sk
Coal	13 3/8"	17 1/2"	.480"	3450 psi	Class A, 2% gel	1.36 cu.ft./sk
Intermediate	9 5/8"	12 1/4"	.435 & .472"	6330 & 9440 psi	Class A, 2% & 6% gel	1.36 and 1.54 cu.ft./sk
Production	5 1/2"	8 3/4"	.415"	14,520 psi	50/50 Poz & Class A	1.26 and 1.18 cu.ft./sk
Tubing						
Liners						

PACKERS

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

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21) Describe centralizer placement for each casing string. _____

(26") Conductor Casing: None

(20") Surface Casing: Three (3); 1st,3rd, and 5th joints

(13 3/8") 1st Intermediate Casing: Ten (10); 3 - 1st, 3rd, & 5th joints and 7 - one on every fifth additional joint

(9 5/8") 2nd Intermediate Casing: Twenty (20); 4 - 1st, 3rd, 5th, 7th jts. and 16 - one on every tenth additional joint

(5 1/2") Production Casing: Eighty (80); 60 - one on every third joint from total depth to the base of the 9 5/8" casing
20 - one on every ten additional joints to surface

22) Describe all cement additives associated with each cement type. _____

✓ Conductor & Surface Cement Jobs: Standard Class A Cement, 1/4# cello-flake / sack, 2% CaCl.

1st and 2nd Intermediate Cement Jobs: Lead Cement - 35/65 Poz-Mix, 1/4# cello-flake / sack, 2% CaCl.

Tail Cement - Standard Class A, 2% gel, 1/4# cello-flake / sack, 2% CaCl.

Production Cement Job: Lead Cement - 50/50 Poz-Mix with fluid loss, clay control, suspension, retarder and defoamer additives. Tail Cement - Standard Class A Cement, 80% - 100% acid soluble, with fluid loss, suspension, lightweight, retarder, and defoamer additives, 2% CaCl

23) Proposed borehole conditioning procedures. _____

(See Attached Sheet)

*Note: Attach additional sheets as needed.

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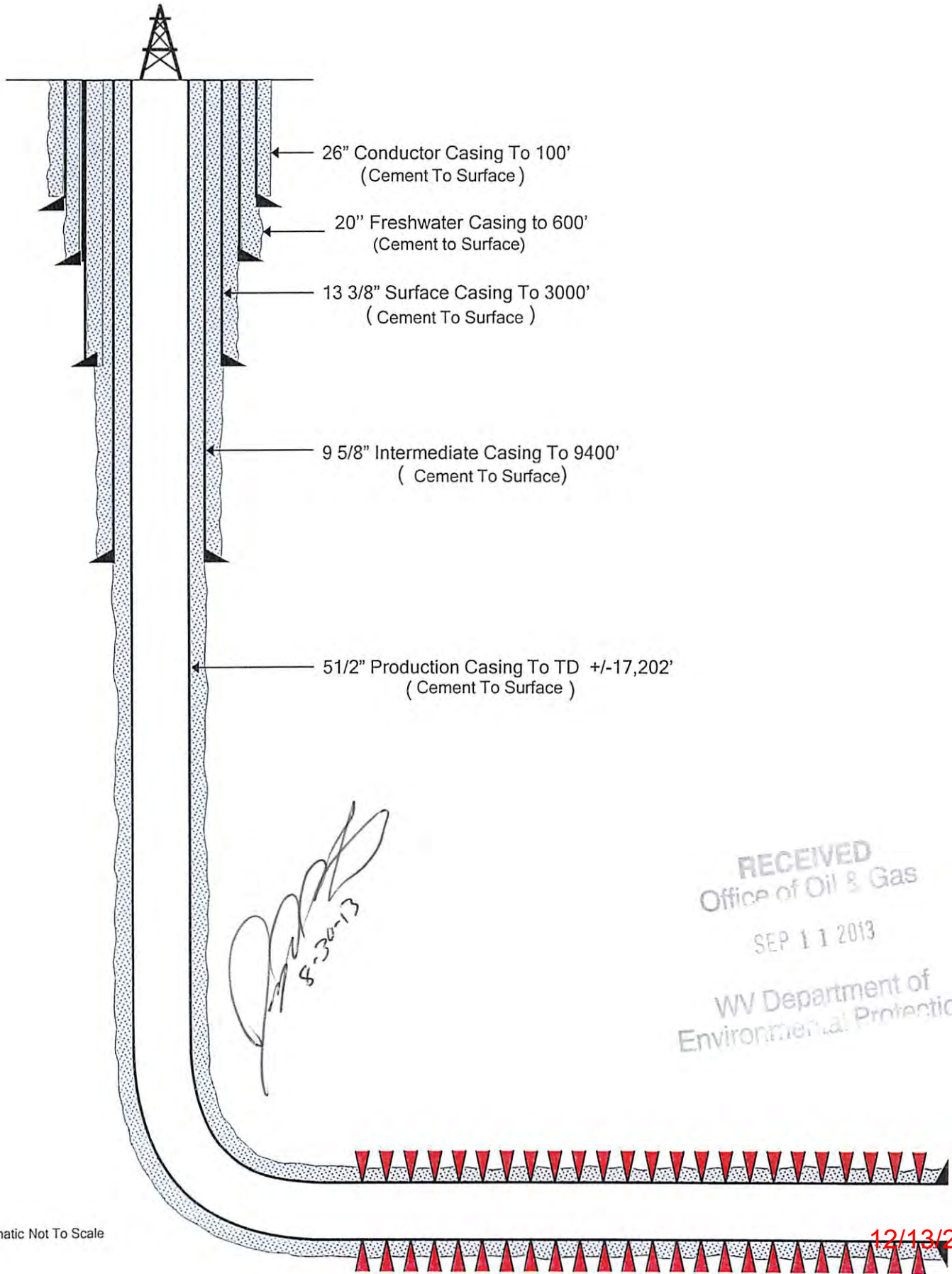
95-02128



Magnum Hunter Resources

UTICA SHALE - STEWART 1300

WELLBORE SCHEMATIC *



* Schematic Not To Scale

12/13/2013

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Triad Hunter, LLC OP Code 494494833

Watershed (HUC 10) Middle Island Creek Quadrangle Paden City

Elevation 904' County Tyler District Ellsworth

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes X No

Will a pit be used for drill cuttings? Yes No X

If so, please describe anticipated pit waste: NA

Will a synthetic liner be used in the pit? Yes No If so, what ml.?

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 387 Ohio Disposal Well, 34-121-3995)
- Reuse (at API Number)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain)

Will closed loop system be used? Yes

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air on top and synthetic based mud for lateral/horizontal portion

-If oil based, what type? Synthetic, petroleum, etc. Synthetic

Additives to be used in drilling medium? See attached MSDS for SBM

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) NA

-Landfill or offsite name/permit number? Wetzel County Landfill, SWPU ID 12-10-45

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 [Signature]

Company Official (Typed Name) Rocky Roberts

Company Official Title Senior VP of Appalachian Operations

Subscribed and sworn before me this 28th day of August, 20 13

Elizabeth R. Tebay
My commission expires 2-29-16



ELIZABETH R. TEBAY
Notary Public
In and For The State of Ohio
My Commission Expires
2-29-16

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Form WW-9

Operator's Well No. Stewart 1300

Triad Hunter, LLC

Proposed Revegetation Treatment: Acres Disturbed 5.5 Prevegetation pH 6-7

Lime 2-5 Tons/acre or to correct to pH 6.0-7.0

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

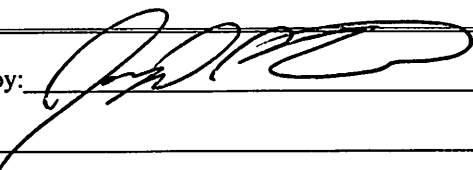
Mulch 2 Tons/acre

Seed Mixtures

Area I	Area II
Seed Type	Seed Type
lbs/acre	lbs/acre
Common Orchard Grass	Road to be stoned
Perennial Rye	Areas requiring to be revegetated will be the same as area 1
Medium Red Clover	
Common Timothy	

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: OOG Inspector

Date: 8-30-13

Field Reviewed? Yes No

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Water Management Plan: Primary Water Sources



WMP-01561

API/ID Number: 047-095-02128

Operator:

Triad Hunter

Stewart Winland Unit #1300

Important:

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

DEP is aware that some intake points will be used for multiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interpreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov.

APPROVED NOV 15 2013

12/13/2013

Source Summary

WMP-01561

API Number:

047-095-02128

Operator:

Triad Hunter

Stewart Winland Unit #1300

Stream/River

● Source **Middle Island Creek @ Smith Withdrawal Site** Tyler Owner: **Donna Smith**

Start Date	End Date	Total Volume (gal)	Max. daily purchase (gal)	Intake Latitude:	Intake Longitude:
7/1/2013	7/1/2014	7,560,000		39.49973	-80.94715

Regulated Stream? Ref. Gauge ID: 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Max. Pump rate (gpm): **420** Min. Gauge Reading (cfs): **56.24** Min. Passby (cfs) **44.15**

DEP Comments:

12/13/2013

Source Detail

WMP 01561

API/ID Number: 047-095-02128

Operator:

Triad Hunter

Stewart Winland Unit #1300

Source ID: 28565 Source Name: Middle Island Creek @ Smith Withdrawal Site
Donna Smith

Source Latitude: 39.49973
Source Longitude: -80.94715

HUC-8 Code: 5030201

Drainage Area (sq. mi.): 449.39 County: Tyler

Anticipated withdrawal start date: 7/1/2013

Anticipated withdrawal end date: 7/1/2014

- Endangered Species? Mussel Stream?
- Trout Stream? Tier 3?
- Regulated Stream?
- Proximate PSD?
- Gauged Stream?

Total Volume from Source (gal): 7,560,000

Max. Pump rate (gpm): 420

Max. Simultaneous Trucks: 0

Max. Truck pump rate (gpm): 0

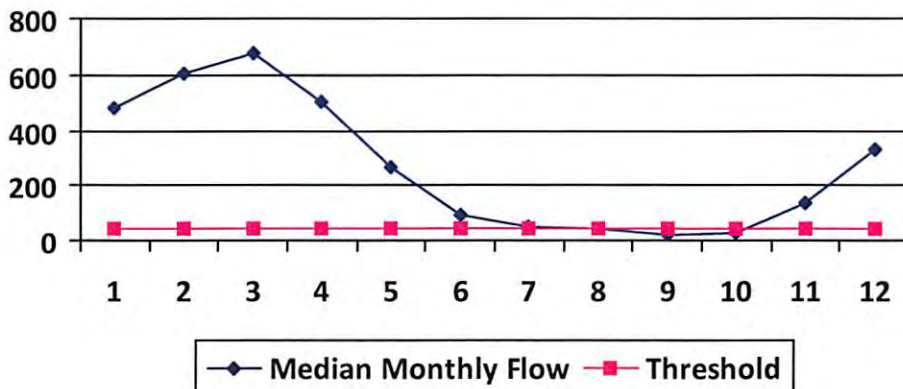
Reference Gaug 3114500 MIDDLE ISLAND CREEK AT LITTLE, WV

Drainage Area (sq. mi.) 458.00

Gauge Threshold (cfs): 45

Month	Median monthly flow (cfs)	Threshold (+ pump)	Estimated Available water (cfs)
1	481.93	55.39	426.59
2	606.21	55.39	550.88
3	678.33	55.39	622.99
4	503.72	55.39	448.38
5	265.72	55.39	210.38
6	92.79	55.39	37.45
7	52.51	55.39	-2.83
8	43.24	55.39	-12.10
9	22.14	55.39	-33.19
10	27.82	55.39	-27.51
11	135.86	55.39	80.53
12	331.96	55.39	276.63

Water Availability Profile



Water Availability Assessment of Location

Base Threshold (cfs):	44.15
Upstream Demand (cfs):	10.30
Downstream Demand (cfs):	0.00
Pump rate (cfs):	0.94
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00

Min. Gauge Reading (cfs):	56.24
Passby at Location (cfs):	44.15

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

12/13/2013



west virginia department of environmental protection
 601 57th Street SE
 Charleston, WV 25304-2345

**WATER MANAGEMENT PLAN/
 WATER ADDENDUM**
For Horizontal Oil and Gas Well Permits
 Office of Oil and Gas
 Phone: (304) 926-0450

DEP Office Use only	
Date Received by Oil & Gas:	<u>9/11/13</u>
Administratively Complete – Oil & Gas:	<input checked="" type="checkbox"/> Yes <u>SN</u> <input type="checkbox"/> No:
Date Received by Water Use:	
Complete – Water Use:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>JH</u>

Section I - Operator Information

API: 47 - 95 - 02128 Modification?
 County Permit

Operator Name: <u>Triad Hunter, LLC</u>	
Operator ID: <u>494494833</u>	*Registered in the Frac Water Reporting Website? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Mailing Address: <u>125 Putnam St Marietta, OH 45750</u>	Contact Name/Title (Water Resources Manager): <u>Rocky Roberts Senior VP of Appalachian Operations</u>
Contact Phone: <u>740-374-2940</u>	Contact Email: <u>rroberts@triadhunter.com</u>

Received
 SEP 12 2013

*If no, the operator will be required to register with the WV DEP Water Use Section; contact dep.water.use@wv.gov

Section II - Well Overview

Operator's Well Number: <u>Stewart 1300</u>			
Anticipated Frac Date: <u>07/01/2013</u>	Location (decimal degrees, NAD 83)		
	Latitude: <u>39.509364</u>	Longitude: <u>-80.940269</u>	County: <u>Tyler</u>

Handwritten signature and date: 8-30-13

Section III – Source Water Overview (check all that apply)

Streams/Rivers <input checked="" type="checkbox"/>	Lakes/Reservoirs <input type="checkbox"/>	Ground Water <input type="checkbox"/>	Purchased Water (PSD) <input type="checkbox"/>
Purchased Water (Private) <input type="checkbox"/>	Recycled Frac Water <input type="checkbox"/>	Multi-Site Impoundment <input type="checkbox"/>	
Other (describe):			
Total anticipated water volume to be used (gal): <u>7560000</u>			

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Section III(a) - Surface Water Source (to be completed for each surface water withdrawal location, print additional pages as necessary)

Source Name: Middle Island Creek		
Location (decimal degrees, NAD 83)		
Latitude: 39.49973	Longitude: -80.94715	County: Tyler
Landowner name and address: Donna Smith 353 Allen Run Road Sistersville, WV 26175		Phone: 304-758-4098
Obtained Landowner Permission? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

Proposed Withdrawal Details

Start Date: 07/01/2013	End Date: 12/01/2013	Total Withdrawal from Source (gal): 7560000	Max. Pump Rate (gpm): 420
No. of Pump Trucks: N/A	Max. Pump Rate per Truck (gpm): N/A	No. Trucks Simultaneously Pumping: N/A	

Determination that sufficient flow is available downstream from proposed intake point

Allow passby to be calculated by the DEP (Preferred)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, advance written authorization by DEP is required. Attach authorization and details.)

Aquatic Life Protection

Describe Entrainment and Impingement Prevention Plan: THE HOSES THAT WILL EXTRACT WATER OUT OF THE STREAM WILL HAVE A SCREEN AROUND THE NOZZLE TO PREVENT FISH AND OTHER AQUATIC LIFE FROM BEING PULLED UP. ALSO, THE PROCESS WILL BE OBSERVED TO MAKE SURE NO FISH OR AQUATIC LIFE IS PULLED AGAINST THE SCREEN
Describe Invasive Species Transfer Prevention Plan: THE TRUCKS AND HOSES WILL HAVE GONE THROUGH A CLEANING SYSTEM BEFORE ENTERING THE STREAM TO ENSURE THAT FOREIGN PLANT AND ANIMAL LIFE IS NOT TRANSFERRED FROM ONE STREAM TO ANOTHER.

Stream details

DEP Office Use Only			
Contact Recreation <input type="checkbox"/>	Aquatic Life-Trout Water <input type="checkbox"/>	Aquatic Life-Warm Water <input type="checkbox"/>	Drinking Water Supply <input type="checkbox"/>
Industrial <input type="checkbox"/>	Agriculture <input type="checkbox"/>	Irrigation <input type="checkbox"/>	Reference Gauge:
Gauged Stream : <input type="checkbox"/>	Stream Final Code:	Regulated by:	
Trout? <input type="checkbox"/>	Sensitive Aquatic Species? <input type="checkbox"/>	Tier 3 Stream? <input type="checkbox"/>	Within 1 mile upstream of a PSD? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Mussels? <input type="checkbox"/>	Upstream Drainage Area?		

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Section III(b) - Ground Water Source (to be completed for each groundwater withdrawal location, print additional pages as necessary)

Well Permit #: N/A		Well name: N/A	
Location (decimal degrees, NAD 83)			
Latitude: N/A	Longitude: N/A	County: N/A	
Aquifer: (if known) N/A			
Landowner name and address: N/A		Phone: N/A	
Obtained Landowner Permission? Yes <input type="checkbox"/> No <input type="checkbox"/>		<input type="checkbox"/> *New well (Drill date: <u>N/A</u>) <input type="checkbox"/> Existing well	

*If drilling a new well, please submit well logs to DEP's Water Use Section; Wells must be drilled and plugged in accordance with DHHR regulations

Total Depth: N/A	Type of Casing: N/A	Casing Diameter: N/A	Screen Interval: N/A	Screen Size: N/A
Static Water Elevation: N/A	Top of Casing Elevation: N/A	Surface Elevation: N/A	Type of Well Cap: N/A	
Withdrawal Details				
Start Date:	End Date:	Total Withdrawal from Source (gal): N/A	Max. Pump Rate (gpm): N/A	

Analysis of potential groundwater impacts

Static Water Level Prior to Test: <u>N/A</u> feet below grade
Drawdown (Water Level/Elevation During Pump Test): <u>N/A</u> feet
Duration of Pump Test: <u>N/A</u> hours
Gallons Per Minute During Pump Test: <u>N/A</u> gpm
Time to Return to Static Water Level After Pump Test: <u>N/A</u> hours

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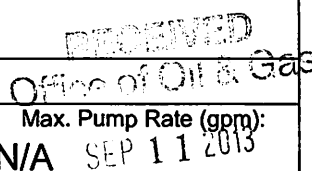
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Section III(c) - Purchased Water Source (to be completed for each water supplier, print additional pages as necessary)

Supplier Name and Contact Information: N/A			
Location(decimal degrees, NAD 83)			
Latitude: N/A	Longitude: N/A	County: N/A	
Public Water Provider <input type="checkbox"/>	Waste Water Treatment Plant <input type="checkbox"/>	Industrial (intake locations must be provided) <input type="checkbox"/>	
Commercial Supplier (intake locations must be provided) <input type="checkbox"/>		Private (intake locations must be provided) <input type="checkbox"/>	
Purchase Details			
Start Date:	End Date:	Total Purchase from Source (gal): N/A	Max. daily purchase (gal): N/A
Supplier intake details: N/A			

Section III(d) - Lake/Reservoir Water Source (to be completed for each lake/reservoir)

Lake/Reservoir Name: N/A			
Location (decimal degrees, NAD 83)			
Latitude: N/A	Longitude: N/A	County: N/A	
Landowner name and address: N/A			
Permission to withdraw obtained from owner: Yes <input type="checkbox"/> No <input type="checkbox"/>		Minimum release (cfs): N/A	
Withdrawal Details			
Start Date:	End Date:	Total Withdrawal from Source (gal): N/A	Max. Pump Rate (gpm): N/A


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Section III(e) - Multi-Site impoundment (to be completed for each source, print additional pages as necessary)

Impoundment Name and Owner: N/A			
Referenced WMP#: N/A			
Location (decimal degrees, NAD83)			
Latitude: N/A	Longitude: N/A	County: N/A	Registered LQU? Yes <input type="checkbox"/> No <input type="checkbox"/>
Landowner name and address: N/A			
Permission to Withdraw Obtained from Owner: Yes <input type="checkbox"/> No <input type="checkbox"/>		Intake type: Permanent Structure <input type="checkbox"/> or Temporary Structure <input type="checkbox"/>	
Withdrawal Details from Impoundment to well-site			
Start Date:	End Date:	Total Withdrawal from Source (gal): N/A	

Impoundment filling details – source

Source Name: N/A		
Location of intake (decimal degrees, NAD 83)		
Latitude: N/A	Longitude: N/A	County: N/A

Section III(f) - Reused Frac Water (to be completed for each source, print additional pages as necessary)

API # of Previous Well (where water was obtained from): N/A	Total withdrawal from source (gal): N/A
Date of Water Transfer	
Start Date:	End Date:

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Section IV – Planned Disposal Method

			<i>Estimate % each facility is to receive</i>			
	Name	Location (decimal degrees, NAD 83)	Permit #	Fracturing	Stimulation	Production
UIC	WARREN DISPOSAL FACITITLY	Lat: 39.65388 Long: -81.47532	34121399	100%	100%	100%
NPDES (Treatment Plant)		Lat: Long:				
Re-Use		Lat: Long:				
Other		Lat: Long:				

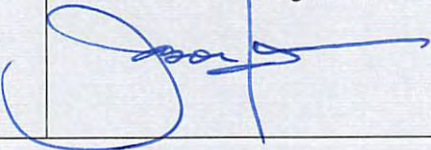
Section V - Planned Additives to be used in Fracturing or Stimulations (attach list to form)

Section VI - Operator Comments

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Section VII – Plan Reviewed By

DEP Office Use only			
API # 47-095-02128			
Name: Jason Harmon		Signature:	Date: 11/15/13
Comments			

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Section V – Planned Additives to be used in Fracturing or Stimulation

- 420,000 gallons of water per stage
- 430,000 pounds of sand proppant
- PROGEL-4 – Guar Gum blend – Concentration- 2 gal PROGEL/1000 gal of water
- MB-7530 – Tetrahydro-3, 5- dimethyl-2H, 3, 5- thiaziazine-2-thione- biocide –
Concentration- 0.10 gal MB-7530/1000 gal of water
- AS-9220 – Scale Inhibitor – Concentration- 0.10 gal AS-9220/1000 gal of water
- AS-9810 – Anionic water soluble polymer- friction reducer –
Concentration- 0.75 gal AS-9810/1000 gal of water
- Hydrochloric Acid – 7.5% HCL – 2,000 gallons per stage
- AS-9899 – Micromulsion Surfactant – Concentration- 0.10 gal As9899/1000 gal of water

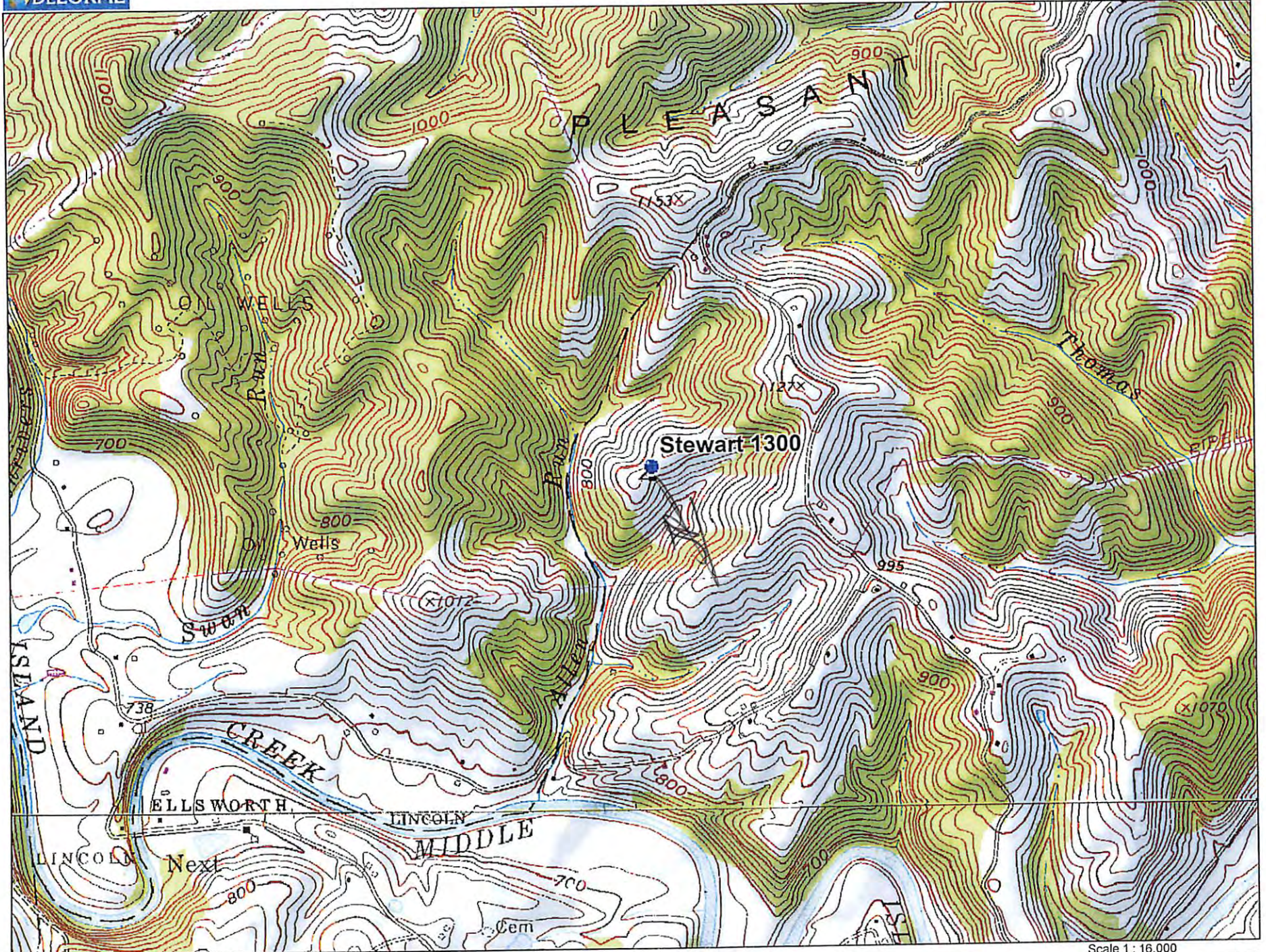
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12/13/2013

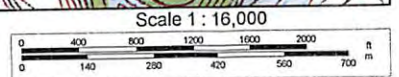
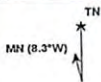
95-02128



Data use subject to license.

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www.delorme.com



Scale 1 : 16,000
1" = 1,333.3 ft Data Zoom 13-1

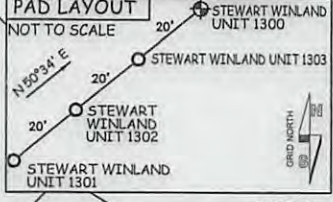
LATITUDE 39°32'30"

6,659'

- A - WALTER J. WEST D.B. 359 PG. 817 T.M. 12 PAR. 53.5 29.04 AC.±
- B - KENNETH L. LONDON SR. D.B. 370 PG. 747 T.M. 12 PAR. 53.6 27.25 AC.±
- C - KENNETH L. LONDON SR. D.B. 370 PG. 747 T.M. 12 PAR. 53.6 27.25 AC.±
- D - JOHN BACKEL ET AL D.B. 321 PG. 138 T.M. 12 PAR. 53.7 10.01 AC.±
- E - DENZIL SNYDER ET AL D.B. 359 PG. 817 T.M. 12 PAR. 53 18.33 AC.±
- F - WALTER J. WEST D.B. 359 PG. 817 T.M. 12 PAR. 53.3 9.044 AC.±
- G - GWENDOLYN STARCHER D.B. 379 PG. 686 T.M. 12 PAR. 53.2 11.96 AC.±
- H - GWENDOLYN STARCHER D.B. 379 PG. 686 T.M. 12 PAR. 53.1 13.98 AC.±
- I - STEVEN D. WEDEKAMM ET AL D.B. 353 PG. 608 T.M. 12 PAR. 54.1 5.12 AC.±

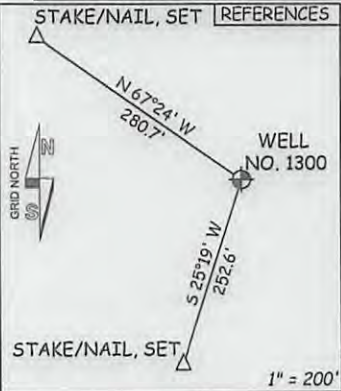
LATITUDE 39°32'30"
 Triad Hunter, LLC.
 Stewart Winland Unit
 Well No. 1300

NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.

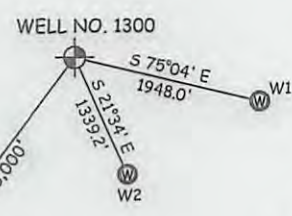


NOTES:
 WELL 1300 TOP HOLE INFORMATION:
 N: 370,889ft E: 1,593,647ft
 LAT: 39°30'33.71" LON: 80°56'24.97"
 BOTTOM HOLE INFORMATION:
 N: 376,621ft E: 1,592,590ft
 LAT: 39°31'30.20" LON: 80°56'39.63"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 1300 TOP HOLE INFORMATION:
 N: 4,373,314m E: 505,150m
 BOTTOM HOLE INFORMATION:
 N: 4,375,055m E: 504,798m



NOTE:
 2 WATER WELLS WERE LOCATED WITHIN 2000' OF PROPOSED WELL



WELL	SURFACE OWNER	ADDRESS
W1	L. Evans, Jr.	946 Allen Run Road, Sistersville, WV 26175
W2	Earnley H. Owens, Et Al	953 Allen Run Road, Sistersville, WV 26175

JOB # 12-096WT
 DRAWING # STEWART1300R1
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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 RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

LEGEND
 - - - Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 X Existing Fence
 ⊕ Found monument, as noted

THOMAS SUMMERS P.S. 2109

DATE 10/22/13
 OPERATOR'S WELL# STEWART WINLAND UNIT #1300

API WELL # 47 - 095 - 02128H6A
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
 WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 906' WATERSHED ALLEN RUN OF MIDDLE ISLAND CREEK
 QUADRANGLE PADEN CITY 7.5' DISTRICT ELLSWORTH COUNTY TYLE

SURFACE OWNER JAMES L. & MARTHA JO STEWART ACREAGE 194.04 ACRES +/-
 OIL & GAS ROYALTY OWNER JAMES STEWART ET AL; JAMES L. & MARTHA JO STEWART; LEASE ACREAGE 194 ACRES±; 76.1 ACRES±;
 JERRY STARKEY ET AL; LESLIE RAY TENNANT ET AL; JAMES D. HILLIARD ET AL; JOHN BACKEL ET AL 76.01 ACRES±; 54.07 ACRES±; 27.262 ACRES±; 10.009 ACRES±
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
 (SPECIFY) PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH 10,600' TVD 17,200' MD

WELL OPERATOR TRIAD HUNTER, LLC. DESIGNATED AGENT KIMBERLY ARNOLD
 ADDRESS 777 POST OAK BLVD., SUITE 910 ADDRESS P.O. BOX 154
 HOUSTON, TX 77056 WAVERLY, WV 26184

COUNTY NAME PERMIT