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

June 09, 2014

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-10302996, 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: WVDNR #1411
Farm Name: WV CONSERVATION COMMISSI(
API Well Number: 47-10302996
Permit Type: Horizontal 6A Well
Date Issued: 06/09/2014

API Number: 103-02996

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 (USACE). Through this permit, you are hereby being advised to consult with USACE 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.

9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

103 4 548

1) Well Operator: TRIAD HUNTER,LLC	494494833	Wetzel	Grant	Pine Grove
	Operator ID	County	District	Quadrangle

2) Operator's Well Number: WVDNR # 1411 H Well Pad Name: WVDNR (Pad 6)

3) Farm Name/Surface Owner: WV Conservation Commission Public Road Access: Buffalo Run Road (CR 8/2)

4) Elevation, current ground: 1475' Elevation, proposed post-construction: 1460'

5) Well Type (a) Gas ■ Oil ■ Underground Storage _____
Other _____
(b)If Gas Shallow ■ Deep _____
Horizontal ■

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4-14-14

6) Existing Pad: Yes or No YES

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus Shale, TVD = 7614', Thickness = 55', BHP = 3,000 psi.

8) Proposed Total Vertical Depth: 7614' (At Toe)

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 12,592'

11) Proposed Horizontal Leg Length: 4,642'

12) Approximate Fresh Water Strata Depths: Surface to 1,200 feet

13) Method to Determine Fresh Water Depths: Data from other wells in the area.

14) Approximate Saltwater Depths: 1,750' - 2,750'

15) Approximate Coal Seam Depths: 500' - 1,200'

16) Approximate Depth to Possible Void (coal mine, karst, other): No open mines in the area, No known voids

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes ☐ No ☑

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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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	20"	new	A53B	90 lb.	100'	100'	Grout to Surface
Fresh Water	13 3/8"	new	J-55	54.5 lb.	1300'	1300'	To Surface
Coal							
Intermediate	9 5/8"	new	J-55	36 lb.	3400'	3400'	To Surface
Production	5 1/2"	new	P-110	20 lb.	N/A	12,590'	To Surface
Tubing	2 3/8"	new	J-55	4.70 lb.	N/A	unknown	N/A
Liners							

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TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	.375	1,380 psi.	Class A	1.18 - 1.21
Fresh Water	13 3/8"	17 1/2"	.760	2,730 psi.	Class A	1.20 - 1.24
Coal						
Intermediate	9 5/8"	12 1/4"	.704	3,520 psi.	Light / Class A	1.70 - 1.20
Production	5 1/2"	8 3/4"	.722	12,360 psi.	50:50 Poz / Class H	1.44 - 1.63
Tubing	2 3/8"	4 3/4"	.380	7,700 psi.	N/A	N/A
Liners						

PACKERS

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

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19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

See Attachment: I-B

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

See Attachment: II-B

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 6.69 acres

22) Area to be disturbed for well pad only, less access road (acres): 4.60 acres

23) Describe centralizer placement for each casing string:

See Attachment: III-B

24) Describe all cement additives associated with each cement type:

See Attachment: IV-B

25) Proposed borehole conditioning procedures:

See Attachment: V-B

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*Note: Attach additional sheets as needed.

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Attachment I-B

(WW-6B)

#19 Proposed Well Work:

Drill and complete a new horizontal Marcellus Shale Well.

1. AIR/SOAP Drill 24" conductor hole to 100 feet; run 20" casing to T.D. and grout to surface.
2. AIR/SOAP Drill 17 ½" surface hole to the projected depth; run 13 3/8" casing to T.D. and cement to surface with Class A Cement.
3. AIR/SOAP Drill 12 ¼" intermediate hole to the projected depth; run 9 5/8" casing to T.D. and cement to surface with Class A cement.
4. Fluid Drill 8 ¾" production hole to the projected total measured depth (TMD).
5. Run/Cement 5 ½" production casing to the TMD; cement casing back to the surface with Class A and Class H cement.
6. Run Cased-hole logs.
7. Open toe sleeve and establish 15 BPM rate.
8. Perforate and stimulate multiple stages in Marcellus lateral section.
    a. Perforations per stage = sixty to seventy
    b. Average stage length = two hundred fifty feet
9. Clean-out 5 ½" production casing using a coil tubing rig or a work over rig and snubbing unit.
10. Flow test well for seven to ten days to clean up wellbore and determine overall productivity.
11. Turn well into production.

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Attachment II-B

(WW-6B)

#20 Fracturing/Stimulation Methods:

Upon the successful cementation of the 5 ½" production casing, completion of the well will be performed as follows:

1. Run a GR/CCL/Bond log from the bottom of the curve to surface.
2. Pressure-up on casing, open the toe sleeve and establish pump rate of 15 bpm through the toe sleeve.
3. Run a GR/CCL log form the toe to the base of the curve and correlate with the GR/CCL/Bon log.
4. Pump down through the casing a solid bridge plug and perforating guns.
5. Set the solid bridge plug just above the toe sleeve and perforate the first stage with 60-70 perforations over a 200'-250' interval (stage#1).
6. Fracture stage #1 with a slick water/sand stimulation using approximately 8,000bbls of water and 450,000lbs of sand. Average treating pressure is expected to range between 6,000psi and 7,000psi and average treating rates are expected to range between 70bbls and 80bbls per minute. Upon completion of the stage, the five minute and ten minute shut in pressures are recorded.
7. Repeat the same methodology of perforating and fracturing on subsequent stages using composite frac plugs instead of solid bridge plugs. Once the heel is reached, completion operations are suspended. The average number of stages completed in each well range between twenty and thirty.
8. Upon completion of the last stage, solid bridge plugs are set in the casing, just above the top of the curve and just below the well head for safety purposes.
9. Well is shut in until clean out and flow back operations are initiated.

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Attachment III-B

(WW-6B)

#23 Centralizer Placement:

A. (20") Conductor Casing – No centralizers used.

B. (13 3/8") Surface Casing – Between two and four run based on setting depth of casing.

C. (9 5/8") Intermediate Casing – Between six and ten run based on setting depth of casing.

D. (5 ½") Production Casing:
   1. Spiral centralizers run on every 3rd joint from the toe to KOP (Top of Curve). Roughly 50-60 spiral centralizers run.
   2. Bow centralizers run on every 10th joint from the KOP to surface. Roughly 10-15 bow centralizers run.

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Attachment IV-B
page 1 of 2

(WW-6B)

#24 Cement Additives:

A. Conductor Cement Job (26"csg.)

1. All conductor casings are cemented with standard CLASS A CEMENT.
   a) Average weight = 15.6lb./gal
   b) Average yield = 1.18 ft ^{3}/5k.
   c) No additional additives are used.

B. Surface Cement Job (13 3/8" csg.)

1. Surface Cement Job (13 3/8" csg.)
   a) Average weight = 15.4 to 15.6 lbs./gal
   b) Average yield = 1.19 to 1.24 ft^3/5k
2. Common Cement Additives:
   a) ¼ lb./5k Cello Flake (Lost circulation material)
   b) 2%-3% Calcium Chloride (Accelerator)
   *Note: Gel Sweep is usually pumped ahead of the cement.
   Gel Spacer consists of 6% gel w/cello Flake.

C. Intermediate Cement Job (13 3/8" csg. & 9 5/8" csg.)

Due to depth, most intermediate casings are cemented in two stages.

1. The upper (lead) stage cement job usually consists of CLASS A CEMENT or LIGHT CEMENT.
   a) Average weight = 13.1 to 13.5 lbs. /gal.
   b) Average yield = 1.54 to 1.70 ft^3/5k.

Common Additives

   a) ¼ lb./5k Cello Flake (Lost circulation material)
   b) 1% - 2% Calcium Chloride (Accelerator)
   *Note: Gel Sweep is usually pumped ahead of the cement.
   Gel Spacer consists of 6% gel w/cello Flake.

2. The lower (tail) stage usually consists of standard CLASS A CEMENT.
   a) Average weight = 15.4 to 15.6 lbs./gal
   b) Average yield = 1.18 to 1.20 ft^3/5k.

Common Additives

   a) ¼ lb./5k Cello Flake (Lost circulation material)
   b) 1% - 2% Calcium Chloride (Accelerator)
   c) 1% bwoc EC-1 (Bonding Agent)
   d) 55% bwoc BA-10A (Bonding Agent)

D. Longstring Cement Job (5 ½" csg.)

Depending on how far cement is brought back into the intermediate casing, the production casing is usually cemented in two stages and a heavy weighted spacer is pumped ahead of the cement to condition the well bore.

1. Weighted Spacer Ultra Flush II 50 bbs. @ 13lbs. /gal
   a) Barite @257 lbs. /bbl (Weighting Material)
   b) US-40 2 gals. /bbl (Surface tension reducer)
   c) ss-2 13 lbs. /gal (Suractant)
2. Weighted Spacer

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Attachment IV-B
page 2 of 2

a) Barite	@257 lbs. /bbl	(Weighting Material)
b) SS-2	1 lb. /gal	(Surfactant)
c) MPA-170	1 lb. /bbl	(Fluid loss additive)

3. Lead Slurry 50:50 POZ/Premium NE-1

a) Average Weight = 13.50 lbs. /gal

b) Average yield = 1.44 ft^3/ /5k.

Common Additives

a) BA – 90	3lbs. /5k	(Bonding Agent)
b) R – 3	.258 bwoc	(Retarder)
d) MPA – 170	1 lb. / bbl	(Fluid loss additive)

4. Tail Slurry CLASS H CEMENT

a) Average Weight = 15.2lbs. /gal

b) Average Yield = 1.64 ft^3/5k

Common Additives

a) R-3	.2% bwoc	(Retarder)
c) CD-32	.75 % bwoc	(Dispersant)
d) ASA – 301	.35 % bwoc	(Free water removal)
e) BA-10A	1.25% bwoc	(Bonding Agent)
f) ASCA	30lbs. /5k	(Solubility additive)
e) Sodium Metasilicate	.58 bwoc	(Extender)

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Attachment V-B

(WW-6B)

#25 Borehole Conditioning Procedures:

17 ½" hole – Generally this section of the well is drilled on air with air compressors and boosters. It's imperative through this section of the well to have sufficient air volume and pressure on the borehole during drilling to ensure hole conditions remain clean and unobstructed. If a significant volume of freshwater is encountered during drilling "stiff foam" or soap is utilized to assist in lifting drill cuttings and freshwater out of the hole. "Red Rock" is a clay-dominant strata that is sensitive to freshwater in this area. Stiff foam is applied to the borehole when freshwater is encountered to prevent the clays from swelling and sloughing into the borehole.

12 1/4" hole - Generally this section of the well is drilled on air with air compressors and boosters. It's imperative through this section of the well to have sufficient air volume and pressure on the borehole during drilling to ensure hole conditions remain clean and unobstructed. If a significant volume of saltwater is encountered during drilling "stiff foam" or soap is utilized to assist in lifting drill cuttings and freshwater out of the hole. "Red Rock" is a clay-dominant strata that is sensitive to saltwater in this area. Stiff foam is applied to the borehole when saltwater is encountered to prevent the clays from swelling and sloughing into the borehole.

8 ¾" hole – Generally, this section of the well is drilled on fluid. In an effort to keep borehole conditions in good working order several mechanisms are used to condition the borehole:

1. **High Viscosity Sweeps:** Sweeps are mixed and pumped after drilling every 3 joints during the drilling process. Sweeps generally run 20 cp over the active mud system viscosity for 20 bbls.
2. **Clean-Up Cycle:** "Clean-Up Cycles" are utilized every 500' in the lateral section of the well. During this routine conditioning procedure drilling is halted for the amount of time it takes to circulate 2 sweeps to surface. Also, during this process the pipe is continuously rotated and reciprocated at this spot to help circulate out any "cutting beds" lying in the wellbore.
3. **Short Trips:** Short trips are utilized to work out tight spots and cutting beds from the borehole which cause increased torque and drag, and pressure. Two short trips are typically run during the drilling of this section of the wellbore. The first at the half-way point of the lateral. The drill pipe is pulled out of the hole to the "kick-off" point of the well. The second short trip is utilized at total depth (TD). At this point the drill pipe is pulled out of the wellbore to the half-way point of the lateral.
4. **At TOTAL DEPTH:** A clean-up cycle and short trip is utilized to condition the wellbore when total depth (TD) has been reached in preparation for running production casing.

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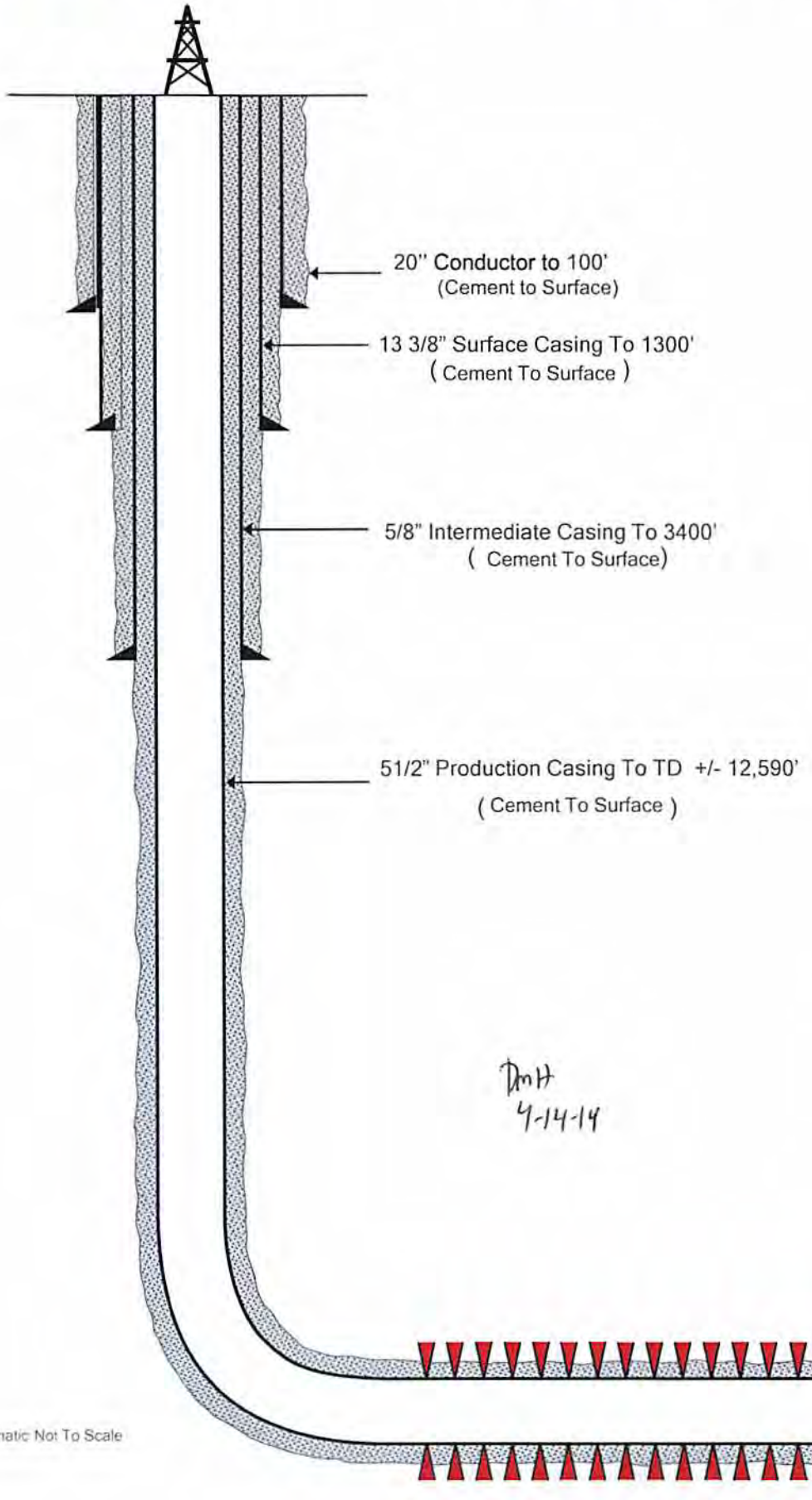
Magnum Hunter Resources

MARCELLUS SHALE – WVDNR 1411
WELLBORE SCHEMATIC *



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* Schematic Not To Scale

103-02996

WW-9
(9/13)

API Number 47 - _____ - _____
Operator's Well No. WVDNR-1411

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) Tributary of Buffalo Run Road Quadrangle Pine Grove

Elevation 1455' County Wetzel District Grant

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

Will a pit be used? Yes ☐ No ☑

If so, please describe anticipated pit waste: n/a

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 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? If so, describe: Yes cuttings/fluids/gasses are separated a series of vessels/gasbusters/centrifugal shale shaker. Cuttings are then solidified in debris boxes & hauled to landfill.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Top Hole-Air Drilled. Lateral-Synthetic Mud

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

Additives to be used in drilling medium? See Attachment I-A: WVDNR-1411 Drilling Additives List

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) n/a

-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.

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Office of Oil and Gas
JUN 04 2014
WV Department of
Environmental Protection

Company Official Signature _____

Company Official (Typed Name) Rocky Roberts

Company Official Title Senior VP Appalachian Operations

Subscribed and sworn before me this 3rd day of June, 20 14

Pamela K Nicholson Notary Public

My commission expires 8-9-15

NOTARIAL SEAL
STATE OF OHIO

Pamela K. Nicholson, Notary Public
In and For The State of Ohio
My Commission Expires 8-9-15

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WW-9 Attachment: I-A

WVDNR-1411 Drilling Additives List (API #: 47-103-02996)

Chemical Name	Description
Barite	Drilling Fluid Additive
Calcium Chloride	Drilling Fluid Additive
Calcium Carbonate	Drilling Fluid Additive
Calcium Hydroxide (Lime)	PH Modifier
Gilsonite	Drilling Fluid Additive
Synthetic Hydrocarbons (Base Oil)	Drilling Fluid Additive

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Form WW-9

Operator's Well No. WVDNR 1411

Triad Hunter, LLC

Proposed Revegetation Treatment: Acres Disturbed No additional Prevegetation pH 6-7

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

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Common Orchard Grass	30%	A different seeding mixture maybe required by the WVDNR.	
Perennial Rye	35%	Will follow their requirement for all areas.	
Medium Red Clover	25%		
Common Timothy	10%		

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [signature]

Comments:

Received

APR 22 2014

Title: Oil & Gas Inspector Date: 4-14-14

Field Reviewed? (✓) Yes ( ) No

Office of Oil and Gas
WV Dept. of Environmental Protection

06/13/2014

103-02996

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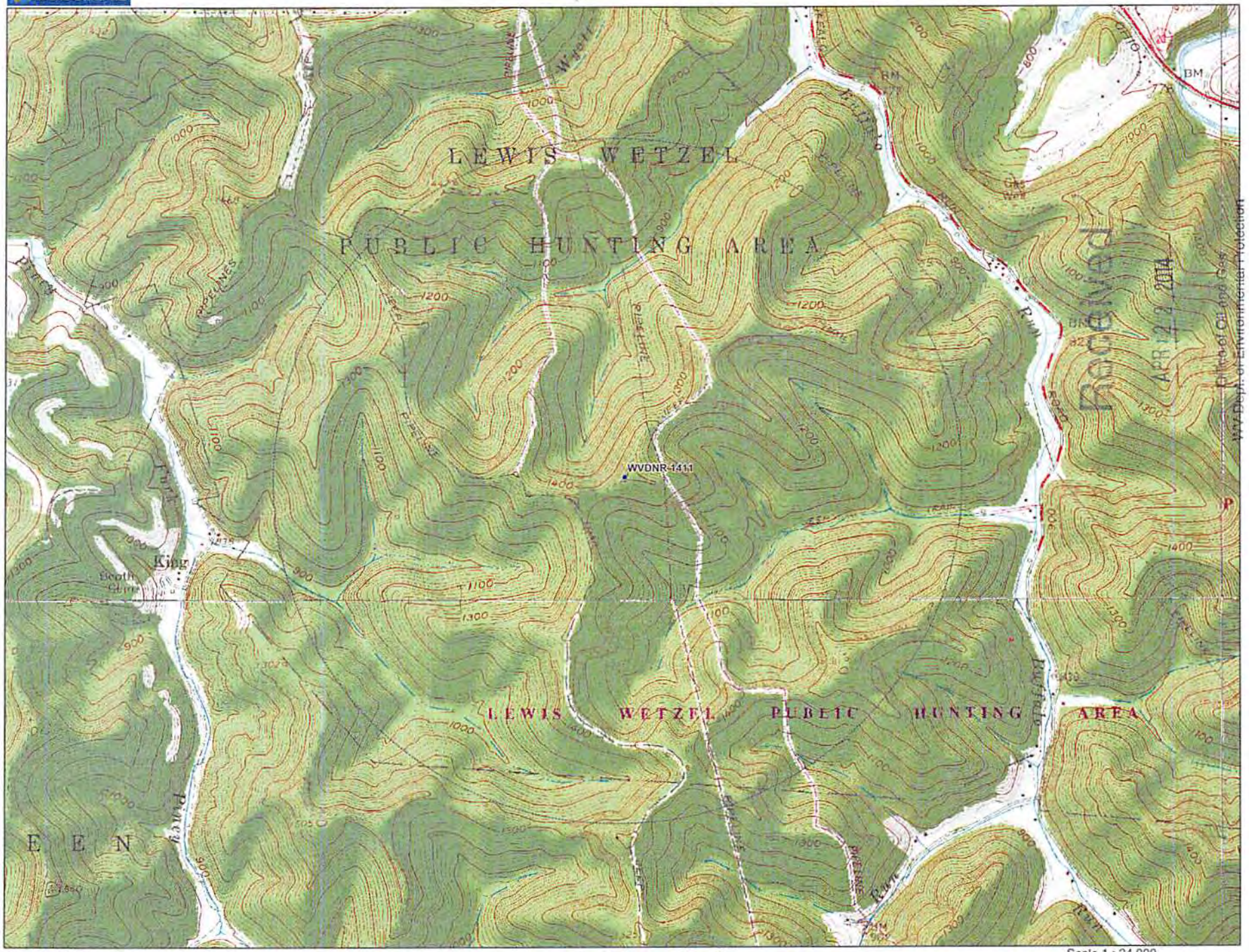

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TN

MN (8.6°W)

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Scale 1 : 24,000

1" = 2,000.0 ft

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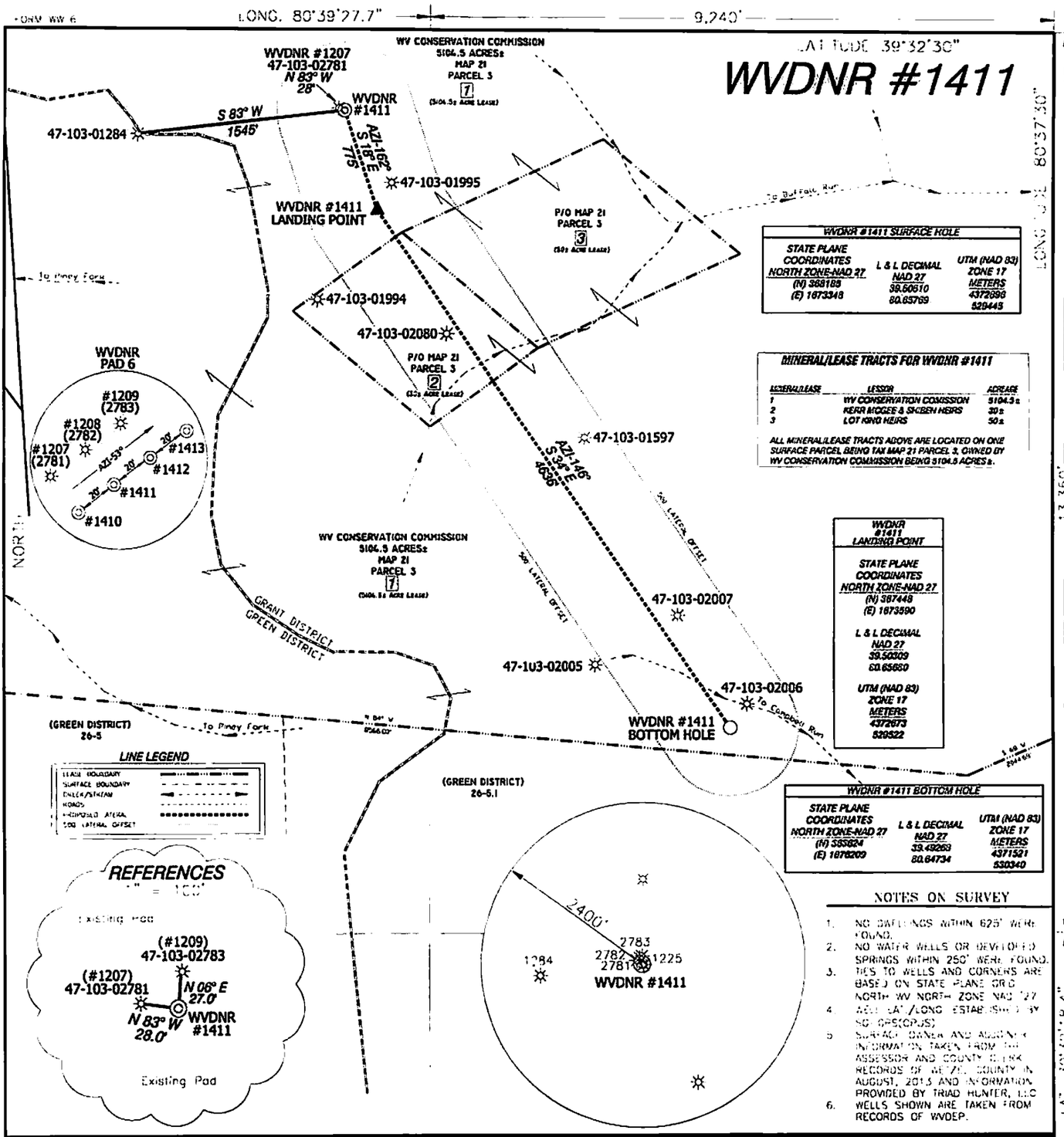

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 834

DOYLE HUPP, JR. LICENSED No. 834 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

HUPP Surveying & Mapping
P.O. Box 647 Grantsville, WV 26147
(304) 354-7035 EMAIL: hupp@frontiernet.net

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JUNE 2, 2014

OPERATORS WELL NO. WVDNR #1411

API WELL NO. 47 - 103 - 02996 HOA
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. W2102(BK58-78)

PROVEN SOURCE OF ELEVATION SG--GPS (OPUS) SCALE 1" = 1000'

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

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION:
ELEVATION 1,455' WATERSHED TRIBUTARY OF BUFFALO RUN
DISTRICT GRANT COUNTY WETZEL QUADRANGLE PINE GROVE 7.5'
SURFACE OWNER WEST VIRGINIA CONSERVATION COMMISSION ACREAGE 5104.5 ±
ROYALTY OWNER MILLS WETZEL LAND Inc./SHIBEN HEIRS/KERR MCGEE LEASE ACREAGE 5184.5± 06/13/2014
PROPOSED WORK: LEASE NO. ___
DRILL X CONVERT DRILL DEEPER ___ REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___ TARGET FORMATION MARCELLUS
ESTIMATED DEPTH 7,550' TVD 12,600' MD

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