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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, May 31, 2018  
WELL WORK PERMIT  
Horizontal 6A / New Drill

TRIAD HUNTER, LLC  
125 PUTNAM ST

MARIETTA, OH 45750

Re: Permit approval for SPENCER 1UH  
47-095-02495-00-00

This well work permit 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 any additional specific 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 of 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.

Per 35 CSR 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- 0450.

James A. Martin  
Chief

Operator's Well Number: SPENCER 1UH  
Farm Name: ANNE L. SPENCER  
U.S. WELL NUMBER: 47-095-02495-00-00  
Horizontal 6A New Drill  
Date Issued: 5/31/2018

## 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

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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 one hundred (100) 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. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. 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.
10. 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.

API Number: 95-02495

## PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov).

06/01/2018



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west virginia department of environmental protection

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Oil and Gas Conservation Commission  
601 57<sup>th</sup> Street SE, Charleston, WV 25304  
304-926-0499 Ext 1274

Barry K. Lay, Chairman  
dep.wv.gov

April 10, 2018

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

RE: Application for Deep Well Permit – API #47-095-02495

COMPANY: Triad Hunter, LLC

FARM: Triad Hunter, LLC Spencer 1UH

COUNTY: Tyler DISTRICT: Ellsworth QUAD: Paden City

The deep well review of the application for the above company is **Approved to drill to Point Pleasant for completion.**

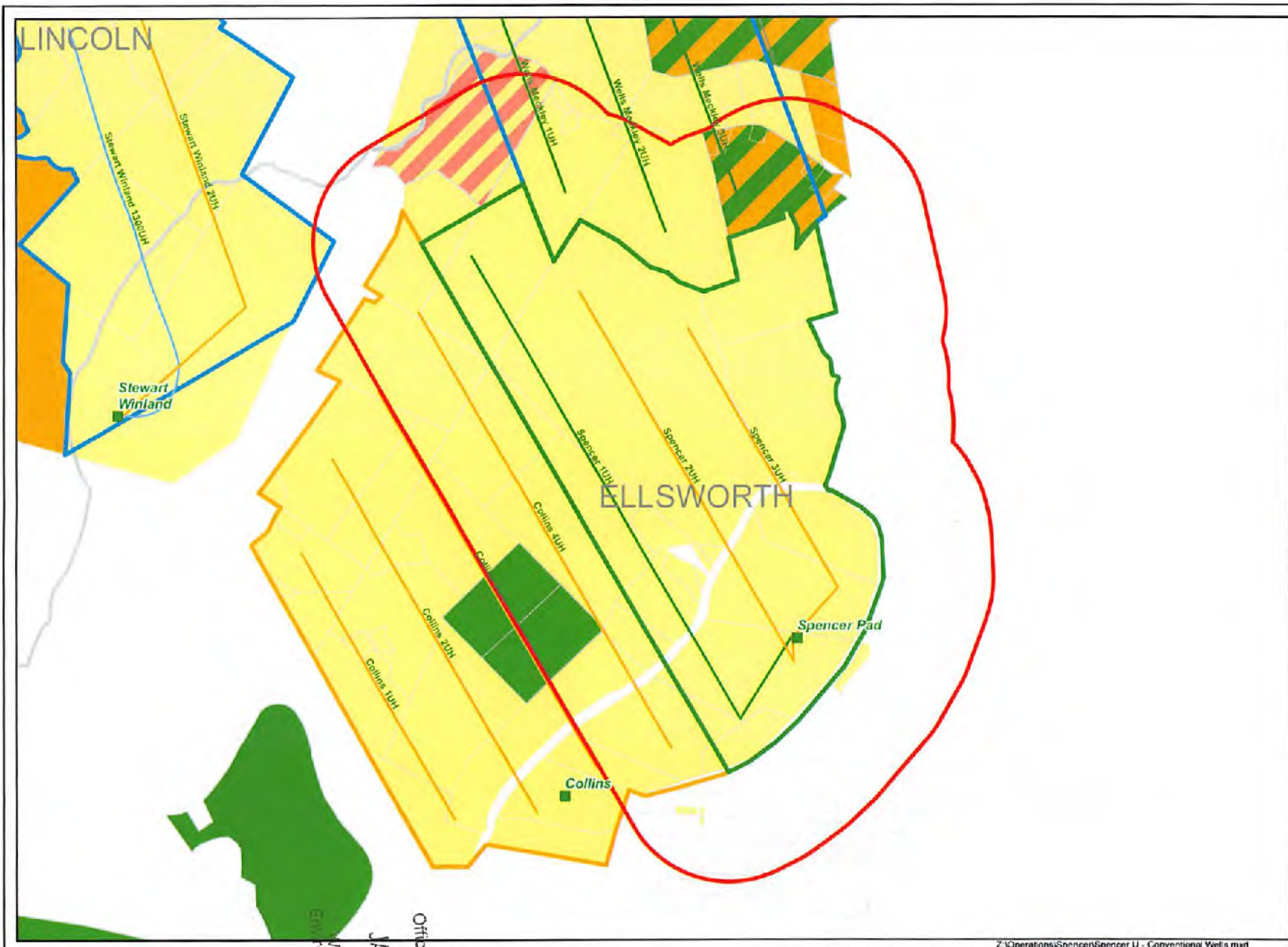
The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Comments to Notice of Deviation filed? No.
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners? Yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells: WELLS MECKLEY 2UH; 47-095-02485
4. Provided a plat showing that the proposed location is a distance of 400+ 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.

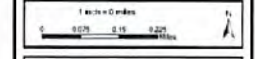
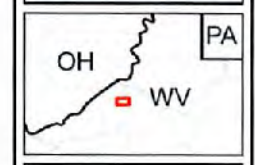
Sincerely,

A handwritten signature in blue ink that reads "Susan Rose".

Susan Rose  
Administrator



Blue Ridge Mountain Resources, Inc.  
 Spencer U Unit  
 Conventional Wells  
 with 1,500'  
 Date: 12/22/2017 Author: Matt Anderson  
 Coordinate System:  
 NAD 1983 StatePlane West Virginia North, FIPS 4721 Feet



- Legend**
- Pad Site
  - Industry Well
  - 1,500' Buffer
  - Leasehold**
  - BRMR
  - Competitors**
  - Antero
  - EQT
  - Open
  - Triad Units**
  - Drilled
  - Proposed
  - Preliminary
  - Triad Laterals**
  - Drilled
  - Proposed
  - Preliminary



Z:\Operations\Spencer\Spencer U - Conventional Wells.mxd

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47 09 50 24 95  
47 09 50 24 95



Date

(Conventional Well Operator)  
(address)  
(address)

RE: Spencer Hydraulic Fracturing Notice

To whom it may concern,

Triad Hunter has developed a Marcellus and Utica pad (Spencer pad) located in Tyler County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due

Should you have any questions please call me at 740-760-0558.

Thank you,

Will Harless  
Supervisor Regulatory Operations

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(Date)

[Conventional Well Operator]  
[Address]  
[State]

RE: Spencer Hydraulic Fracturing Notice

To whom it may concern,

Triad Hunter has developed a Marcellus and Utica pad (Spencer pad) located in Tyler County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geological zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,400' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability, Alexander formation (approximately 5,200' TVD).

Triad Hunter anticipates conducting hydraulic fracturing at the Spencer Pad during the third quarter of 2018. We have identified conventional natural gas wells operated by your company within 1500' (lateral distance) of our new planned laterals. Plans for each well on the pad are attached.

We recommend that conventional well operators conduct the following activities before, during, and after fracturing operations:

1. Inspect surface equipment, prior to fracturing, to establish integrity and establish well conditions.
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas, or pressure.
3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
4. Notify the OOG and Triad Hunter if any changes in water, gas production, pressure, or other anomalies are identified.

Should you have any questions please call me at 740-760-0558.

Thank you,

Will Harless  
Supervisor Regulatory Operations

909 Lake Carolyn Pkwy • Suite 600 • Irving, TX 77039  
Office (469) 444-1647 • Fax (469) 444-1649

06/01/2018

## **Purpose**

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near Triad Hunter, LLC hydraulic fracturing in Tyler County, WV prior to hydraulic fracturing at the following Triad Hunter wells near the Collins Pad: (47-095-00865).

Due to apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 6,400' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Alexander formation (approximately 5,200' TVD).

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. These additional measures include pre-notification of conventional well operators of the timing and location of the hydraulic fracturing, establishment of measures conventional well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing.

## **1. Communication with Conventional Well Operators**

Triad Hunter, using available data (WV Geological Survey, WVDEP website, and HIS data service), has identified all known conventional wells and well operators within 1,500 feet of this pad and the lateral sections. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

Upon approval of this plan, Triad Hunter will notify these operators, via letter, of the hydraulic fracturing schedule for these wells. A copy of this letter is included in **Attachment B**.

The letter provides recommendations to these conventional operators to 1) increase their monitoring of their wells during that time period, 2) ensure that their well head equipment is sound, and 3) provide immediate notification to Triad hunter and the OOG in the event of any changes in their well conditions.

Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity
4. Notify the OOG and Triad Hunter if any changes in water, gas production, pressure, or other anomalies are identified

## **2. Reporting**

Triad Hunter will provide information relating to the hydraulic fracturing schedule, communication with conventional operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.



API	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4709502033	1st Salt Sand	Well Record	960	Reasonable	132	Reasonable	703	Ground Level
4709502033	2nd Salt Sand	Well Record	1146	Reasonable	37	Reasonable	703	Ground Level
4709502033	3rd Salt Sand	Well Record	1394	Reasonable	34	Reasonable	703	Ground Level
4709502033	Big Lime	Well Record	1552	Reasonable	92	Reasonable	703	Ground Level
4709502033	Big Injun (undiff)	Well Record	1650	Reasonable	171	Reasonable	703	Ground Level

Coal	Structure	Thickness (In.)	
Washington Coal - Dunkard Group	810	0	
Waynesburg A Coal - Dunkard Group	810	0	
Pittsburgh Coal - Monongahela Group	370	~48	Inferred from WVGES coal mapping project
Redstone Coal - Mon Group	410	less than 12	Inferred from WVGES coal mapping project
Sewickley Coal Mon Group	460	less than 18	Inferred from WVGES coal mapping project

06/01/2018

WW-6B  
(04/15)

API NO. 47-95 -  
OPERATOR WELL NO. 1UH  
Well Pad Name: Spencer

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

1) Well Operator: Triad Hunter, LLC      494494833      Tyler      Ellsworth      Paden City  
Operator ID      County      District      Quadrangle

2) Operator's Well Number: 1UH      Well Pad Name: Spencer

3) Farm Name/Surface Owner: Anne Spencer      Public Road Access: County Road 26

4) Elevation, current ground: 703'      Elevation, proposed post-construction: 703'

5) Well Type (a) Gas x      Oil x      Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_

(b) If Gas      Shallow \_\_\_\_\_      Deep x \_\_\_\_\_  
Horizontal x \_\_\_\_\_

6) Existing Pad: Yes or No Yes

*DMH 1-9-18*      *JOB 1/9/2018*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Point Pleasant Shale, 10,891' TVD, 19,565' TMD, 256' Thick, 7,000-9,000 # BHP

8) Proposed Total Vertical Depth: 10,891' TVD

9) Formation at Total Vertical Depth: Point Pleasant Shale

10) Proposed Total Measured Depth: 19,565' MD ✓

11) Proposed Horizontal Leg Length: 7,486' ✓

12) Approximate Fresh Water Strata Depths: 300'

13) Method to Determine Fresh Water Depths: Examine local water wells

14) Approximate Saltwater Depths: 1,100' - 2,000'

15) Approximate Coal Seam Depths: Multiple, thin, non-commercial seams 1,300' - 1,800'

16) Approximate Depth to Possible Void (coal mine, karst, other): None known

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

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

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WW-6B  
(04/15)

API NO. 47- 95 - \_\_\_\_\_  
 OPERATOR WELL NO. 1UH \_\_\_\_\_  
 Well Pad Name: Spencer \_\_\_\_\_

18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	26"	New	A-500	85 ppf	110'	100'	Cement to surface
Fresh Water	20"	New	J-55	94 ppf	370'	350'	Cement to Surface
Coal	13 3/8"	New	J-55	61 ppf	2,110'	2,095'	Cement to Surface
Intermediate	9 5/8"	New	HCP-110	43.5 ppf	9,615'	9,600'	2,120 Cu. Ft.
Production	5 1/2"	New	P-110	23 ppf	19,565'	19,565'	3,471 Cu. Ft.
Tubing	2 3/8"	New	p-110	4.7 ppf	N/A	N/A	N/A
Liners	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*QJB 1/9/2018 DMH 1-9-18*

<b>TYPE</b>	<b>Size (in)</b>	<b>Wellbore Diameter (in)</b>	<b>Wall Thickness (in)</b>	<b>Burst Pressure (psi)</b>	<b>Anticipated Max. Internal Pressure (psi)</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
Conductor	26"	30"	.375"	N/A	0	Class A	1.18-1.20 cu.ft./sk
Fresh Water	20"	24"	.438"	2,110	750	Class A	1.18-1.20 cu.ft./sk
Coal	13 3/8"	17 1/2"	.480"	3,090	750	Class A	1.18-1.24 cu.ft./sk
Intermediate	9 5/8"	12 1/4"	.435"	8,700	1750	Class A	1.18-3.0 cu.ft./sk
Production	5 1/2"	8 1/2"	.415"	16,800	9000	Class A & H	1.51-2.08 cu.ft./sk
Tubing	2 3/8"	4 3/4"	.380"	7,700	3000	N/A	N/A
Liners	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**PACKERS**

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

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WW-6B  
(10/14)

API NO. 47- 95 - \_\_\_\_\_  
OPERATOR WELL NO. 10H \_\_\_\_\_  
Well Pad Name: Spencer

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

*Dmit*

*1-9-18*

*JOB*  
*1/9/2018*

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 0 acres

22) Area to be disturbed for well pad only, less access road (acres): 0 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.

(WW-6B)

**ATTACHMENT: I-B****#19 Proposed Well Work:****Drill and complete a new horizontal Utica Shale Well.**

1. AIR Drill a 30" conductor hole to 30 feet; run 26" casing to T.D., cement / grout to surface with Class A cement.
2. AIR Drill a 24" surface hole to depth of 350 feet; run 20" casing to T.D. and cement to surface with Class A Cement.
3. AIR/SOAP Drill a 17 1/2" intermediate hole to a depth of 2,095 feet; run 13 3/8" casing to T.D. and cement to surface with Class A cement.
4. AIR / SOAP Drill a 12 1/4" intermediate hole to a depth of 9,600 feet; run 9 5/8" casing to T.D. and cement back to 1,000 feet with Class A cement.
5. Fluid Drill an 8 1/2" production hole to the projected total measured depth @ 19,403 feet.
6. Run and Cement 5 1/2" production casing to the TMD; cement casing back to 2,500 with Class A and Class H cement.
7. Run Cased-hole logs ( Gamma-Ray, CCL, Bond ).
8. Open toe sleeve and establish 15 BPM pump rate.
9. Perforate and stimulate multiple stages in Point Pleasant lateral section.
  - a. Perforations per stage = sixty to seventy
  - b. Average stage length = two hundred fifty feet
10. Clean-out 5 1/2" production casing using a coil tubing rig or a work over rig and snubbing unit.
11. Flow test well for seven to ten days to clean up wellbore and determine overall productivity.
12. Turn well into production.

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1-9-18JEB  
1/9/2018

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(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 from 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.

DAH  
1-9-18

QEB  
1/9/2018

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(WW-6B)

ATTACHMENT: III-B

**#23 Centralizer Placement:**

- A. (26") Conductor Casing – No centralizers used.
  - 1. 26" to be set @ 30'TVD—no centralizers.
  
- B. (20") Surface Casing – Between two and four run based on setting depth of casing.
  - 1. 20" to be set @ 350'TVD—centralizer every 2 joints (estimate 4 centralizers to be ran)
  
- C. (13 3/8") 1st Intermediate Casing- Between six and ten run based on setting depth of casing.
  - 1. 13.375" to be set @ 2095'TVD—centralizer every 5 joints (estimate 10 centralizers to be ran)
  
- D. (9 5/8") 2<sup>nd</sup> Intermediate Casing – Between ten and twenty run based on setting depth of casing. Run composite or centex centralizers beginning on first joint for first 1,000', then every second joint to top of cement; then every third joint from there to surface.
  - 1. 9.625" to be set @ 9600' TVD—centralizer 1 per 1 for 1<sup>st</sup> 1000', then 1 per 2 to surface.
  
- E. (5 1/2") Production Casing:
  - 1. Beginning on joint #5 run one Solid Body Composite Spiral centralizer every third joint throughout lateral up to KOP (Top of Curve). Then run 1 per 4 from KOP to surface.

06/01/2018

**(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<sup>3</sup>/5k.
  - c) No additional additives are used.

DmH  
1-5-18**B. Surface Cement Job (20" csg.)**

1. Surface Cement Job (20" csg.)
  - a) Average weight = 15.4 to 15.6 lbs./gal
  - b) Average yield = 1.19 to 1.24 ft<sup>3</sup>/5k
2. Common Additives
  - a) ¼ lb./5k Cello Flake (Lost circulation material)
  - b) 2%-3% Calcium Chloride (Accelerator)

JEB  
1/9/2018

\*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<sup>3</sup>/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<sup>3</sup>/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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- |            |                |                       |
|------------|----------------|-----------------------|
| 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<sup>3</sup> / 5k.
- Common Additives
- |              |             |                       |
|--------------|-------------|-----------------------|
| a) BA – 90   | 3lbs. /5k   | (Bonding Agent)       |
| b) R – 3     | .258 bwoc   | (Retarder)            |
| c) 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<sup>3</sup>/5k
- Common Additives
- |                        |            |                       |
|------------------------|------------|-----------------------|
| a) R-3                 | .2% bwoc   | (Retarder)            |
| b) CD-32               | .75 % bwoc | (Dispersant)          |
| c) ASA – 301           | .35 % bwoc | (Free water removal)  |
| d) BA-10A              | 1.25% bwoc | (Bonding Agent)       |
| e) ASCA                | 30lbs. /5k | (Solubility additive) |
| f) Sodium Metasilicate | .58 bwoc   | (Extender)            |

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Environmental Protection

(WW-6B)

**ATTACHMENT: V-B****#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 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 soap is utilized to assist in lifting drill cuttings and freshwater out of the hole.

**8 1/2" 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.

DMH  
1/18JOB  
1/9/2018

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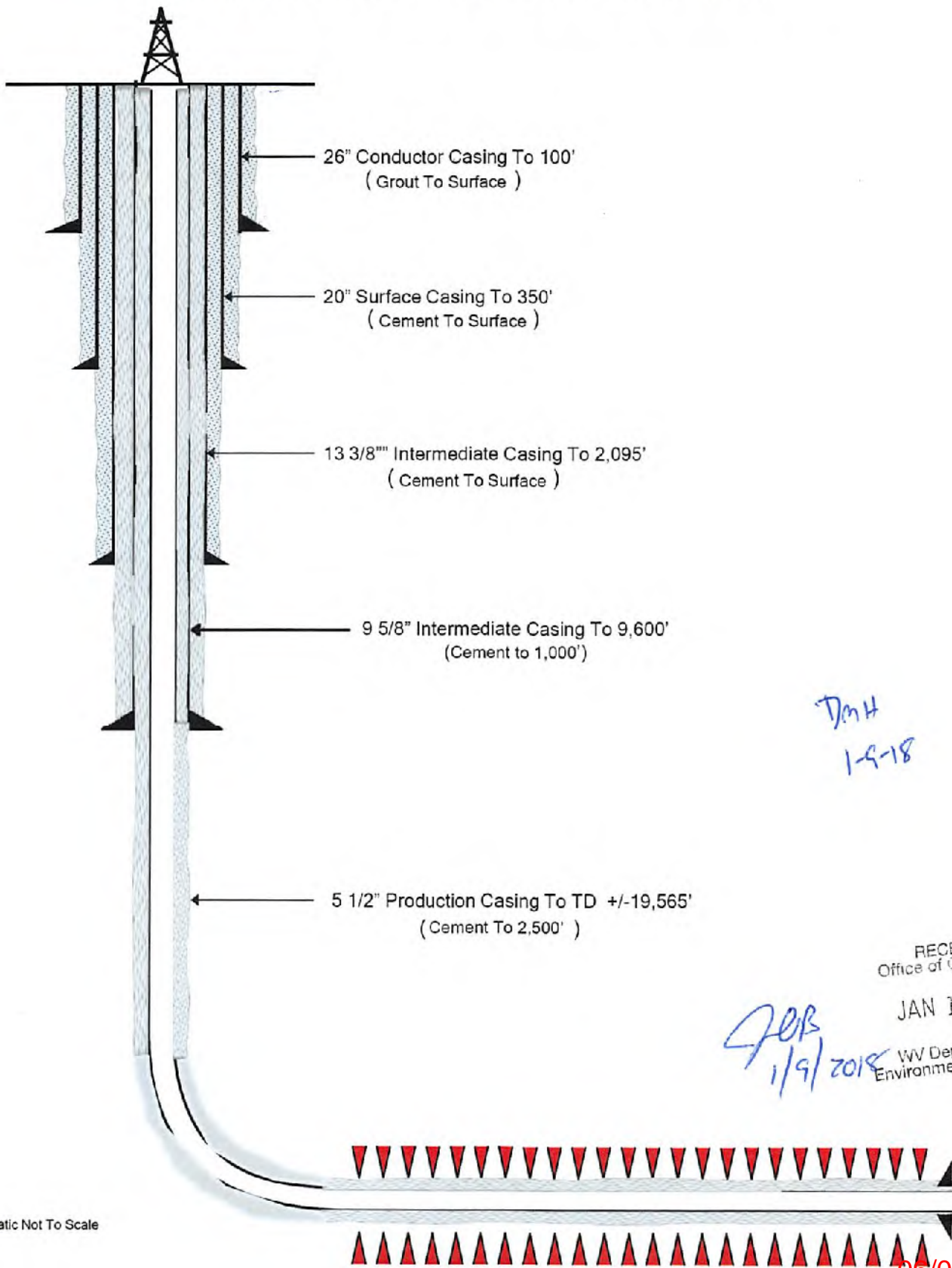
06/01/2018



# Triad Hunter, LLC

## Spencer 1UH

### POINT PLEASANT SHALE WELLBORE SCHEMATIC\*



*DMH  
1-9-18*

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*FOR  
1/9/2018*

WV Department of  
Environmental Protection

\* Schematic Not To Scale

06/01/2018

WW-9  
(9/13)

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. Spencer 1UH

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 703' County Tyler District Ellsworth

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: \_\_\_\_\_

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 \_\_\_\_\_)

*DMH  
1-9-18  
JOB  
1/9/2018*

Will closed loop system be used? If so, describe: Yes, cuttings fluids+gases are separated through a series of vessels. Cuttings are then solidified in debris boxes and hauled to landfill.

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

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

Additives to be used in drilling medium? See Attachment I-A: 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.

Company Official Signature *Mike Horan*

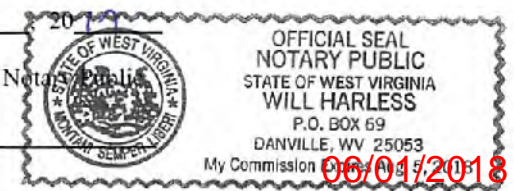
Company Official (Typed Name) Mike Horan

Company Official Title Operations Manager Conventional/Infrastructure

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Environmental Protection

Subscribed and sworn before me this 21 day of December  
Will Harless

My commission expires Aug 5, 2018



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 type \_\_\_\_\_

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%	Same as temporary	
Perennial Rye	35%		
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: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: Oil & Gas Inspector

Date: 1/9/2018

Field Reviewed? (  ) Yes (  ) No

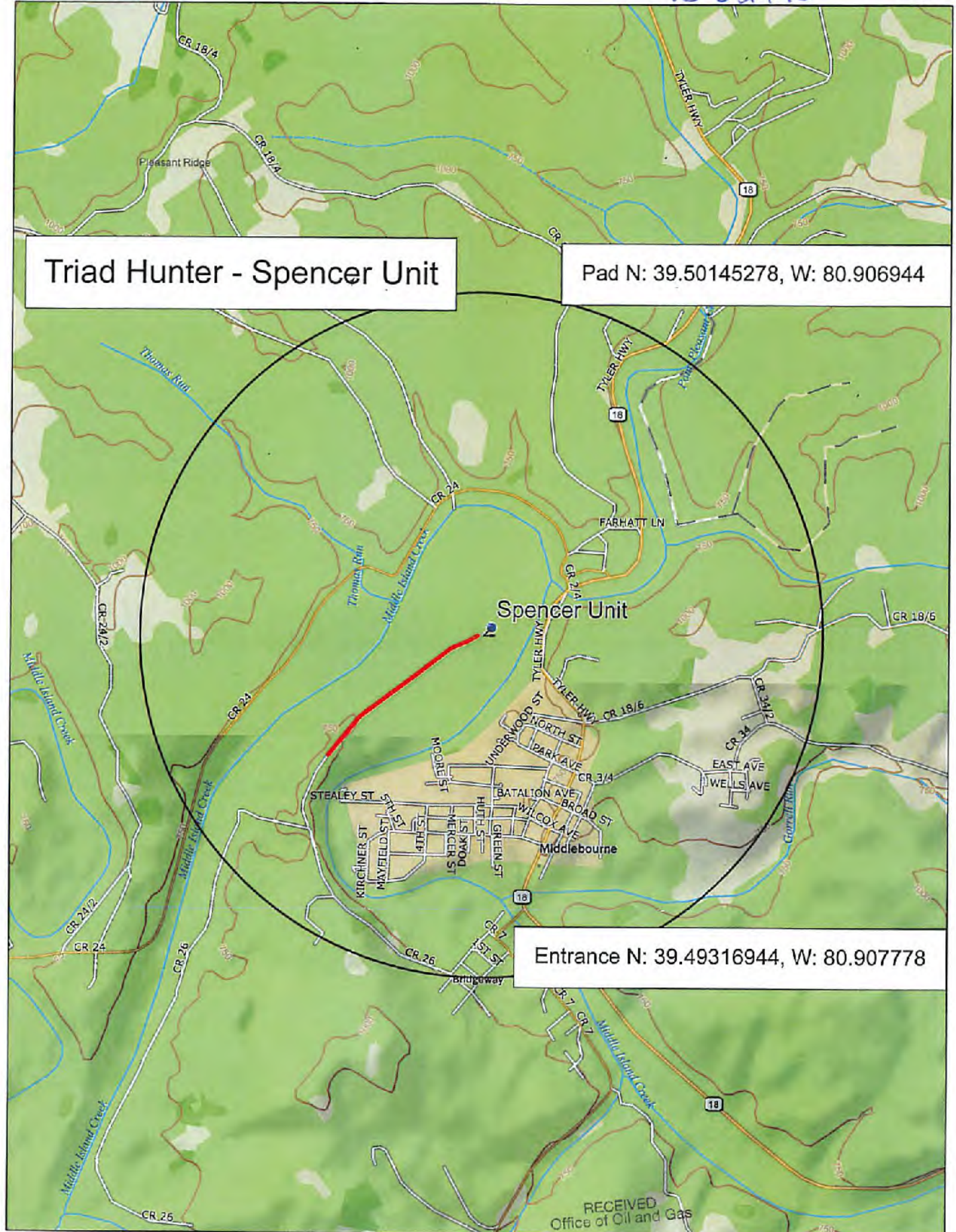
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Triad Hunter - Spencer Unit

Pad N: 39.50145278, W: 80.906944

Spencer Unit

Entrance N: 39.49316944, W: 80.907778



Data use subject to license.

© DeLorme. XMap® 7.

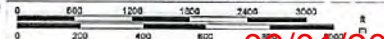
www.delorme.com



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JAN 12 2018

Scale 1 : 24,000



WV Department of  
Environmental Protection

1" = 2,000.0 ft

Data Zoom 13-1

06/01/2018

# TRIAD HUNTER LLC. Subsidiary Of Blue Ridge Mountain Resources

125 Putnam Street  
Marietta, Ohio 45750

## SITE & SAFETY PLAN

Spencer  
Tyler County  
West Virginia


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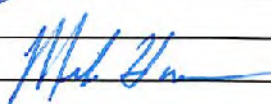
Approved:

West Virginia DEP

  
\_\_\_\_\_

Date: 1/9/2018  
1-9-18

Triad Hunter LLC

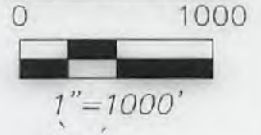
  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: 12/22/17  
\_\_\_\_\_  
\_\_\_\_\_

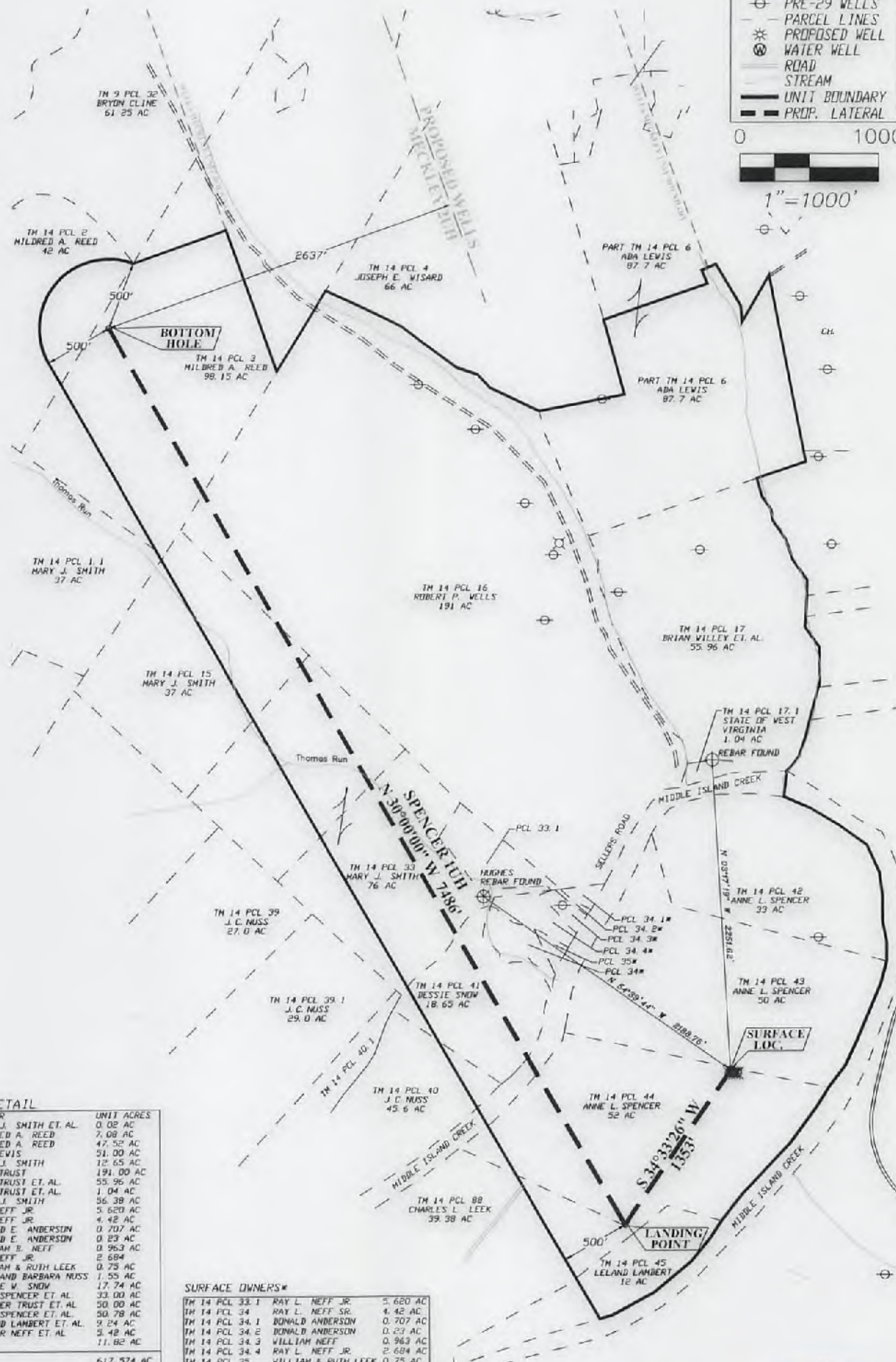
# SPENCER 1UH

**LEGEND**

- TOPOG MAP POINT
- EXISTING WELLS
- PRE-29 WELLS
- PARCEL LINES
- PROPOSED WELL
- WATER WELL
- ROAD
- STREAM
- UNIT BOUNDARY
- PROP. LATERAL



WV NORTH



**ROYALTY OWNER DETAIL**

TAX MAP - PARCEL	LESSOR	UNIT ACRES
TM 14 PCL 1.1	MARY J. SMITH ET. AL.	0.02 AC
TM 14 PCL 2	MILDRED A. REED	7.08 AC
TM 14 PCL 3	MILDRED A. REED	47.52 AC
TM 14 PCL 6	ADA LEWIS	51.00 AC
TM 14 PCL 15	MARY J. SMITH	12.65 AC
TM 14 PCL 16	WARD TRUST	191.00 AC
TM 14 PCL 17	WARD TRUST ET. AL.	55.96 AC
TM 14 PCL 17.1	WARD TRUST ET. AL.	1.04 AC
TM 14 PCL 33	MARY J. SMITH	36.38 AC
TM 14 PCL 33.1	RAY NEFF JR.	5.620 AC
TM 14 PCL 34	RAY NEFF JR.	4.42 AC
TM 14 PCL 34.1	DONALD E. ANDERSON	0.707 AC
TM 14 PCL 34.2	DONALD E. ANDERSON	0.23 AC
TM 14 PCL 34.3	VILLIAM B. NEFF	0.963 AC
TM 14 PCL 34.4	RAY NEFF JR.	2.684 AC
TM 14 PCL 35	VILLIAM & RUTH LEEK	0.75 AC
TM 14 PCL 40	J.C. AND BARBARA NUSS	1.55 AC
TM 14 PCL 41	BESSIE V. SNOW	17.74 AC
TM 14 PCL 42	ANNE SPENCER ET. AL.	33.00 AC
TM 14 PCL 43	LEWIS TRUST ET. AL.	50.00 AC
TM 14 PCL 44	ANNE SPENCER ET. AL.	50.78 AC
TM 14 PCL 45	LELAND LAMBERT ET. AL.	9.24 AC
TM 14 PCL 88	BANA R NEFF ET. AL.	5.42 AC
MIDDLE ISLAND CREEK		11.82 AC
<b>TOTAL</b>		<b>617.574 AC</b>

**SURFACE OWNERS\***

TM 14 PCL 33.1	RAY L. NEFF JR.	5.620 AC
TM 14 PCL 34	RAY L. NEFF SR.	4.42 AC
TM 14 PCL 34.1	DONALD ANDERSON	0.707 AC
TM 14 PCL 34.2	DONALD ANDERSON	0.23 AC
TM 14 PCL 34.3	VILLIAM NEFF	0.963 AC
TM 14 PCL 34.4	RAY L. NEFF JR.	2.684 AC
TM 14 PCL 35	VILLIAM & RUTH LEEK	0.75 AC

**SURVEY NOTES:**

1. THIS IS A VOLUNTARILY POOLED UNIT
2. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
3. THERE ARE NO EXISTING BUILDINGS WITHIN 625' OF PROPOSED WELL.
4. PROPOSED WELL IS GREATER THAN 100' FROM PERENNIAL STREAM, WETLAND, POND, RESERVOIR, OR LAKE.
5. THERE ARE NO NATIVE TRIBUT STREAMS WITHIN 300' OF PROPOSED WELL.
6. PROPOSED WELL IS GREATER THAN 1000' FROM SURFACE/GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY.
7. IT IS NOT THE INTENTION OF THIS PLAN TO REPRESENT SURVEYED LOCATIONS OF THE SURFACE OR MINERAL PARCELS DEPICTED HEREIN. THE LOCATION OF THE BOUNDARY LINES, AS SHOWN, ARE BASED ON RECORD DEED DESCRIPTIONS, FIELD EVIDENCE FOUND, AND/OR TAX MAP POSITION, UNLESS OTHERWISE NOTED.
8. THIS UNIT IS CALCULATED TO BE 617.594 ACRES BASED ON A COMBINATION OF DEEDED ACREAGE AND SURVEYED PROPERTY LINES.



**PICKERING ASSOCIATES**  
Architects • Engineers • Surveyors  
11283 EMERSON AVENUE  
PARKERSBURG, WV 26104  
(304) 464-5305 PICKERING USA.COM

API WELL#: 47-095-02495 H6A  
STATE COUNTY PERMIT

OPERATOR'S WELL#: **SPENCER 1UH**

WELL OPERATOR TRIAD HUNTER, LLC (SUBSIDIARY OF BLUE RIDGE MOUNTAIN RESOURCES) ADDRESS 125 PUTNAM ST. MARIETTA OH 45750  
DESIGNATED AGENT KIMBERLY ARNOLD ADDRESS PO BOX 154 WAVERLY WV 26184 DATE: 2/2/2018

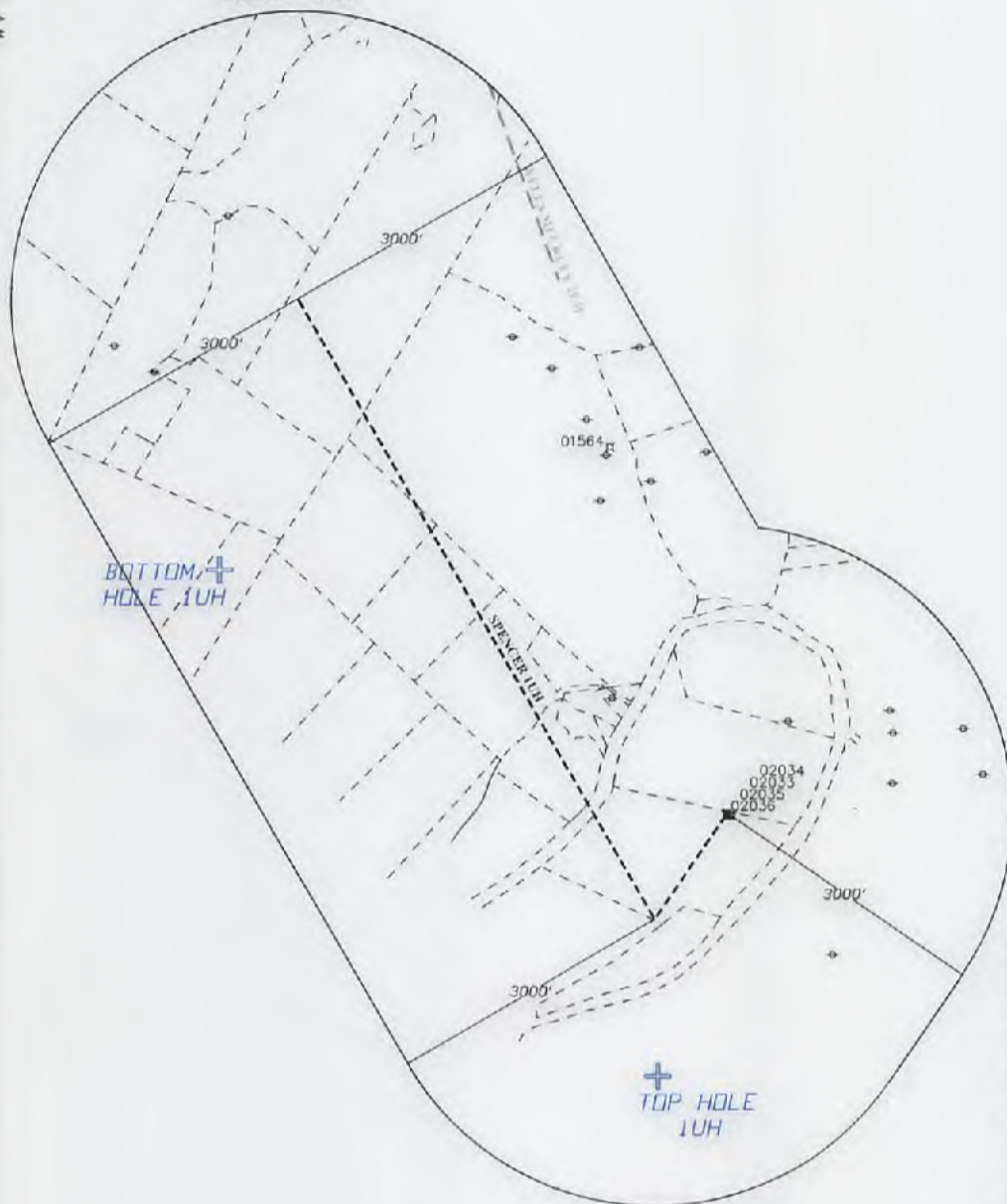


# SPENCER 1UH

9061'  
13653' TO BOTTOM HOLE  
LATITUDE 39° 32' 30"

14688'  
9392' TO BOTTOM HOLE  
LONGITUDE 80° 52' 30"

WELL DETAIL  
SCALE: 1"=2000'



LEGEND	
+	TOPO MAP POINT
⊗	EXISTING WELLS
⊖	PRE-29 WELLS
- - -	PARCEL LINES
⊙	PROPOSED WELL
⊕	WATER WELL
—	ROAD
~	STREAM

SURFACE L.O.C.	
UTM 17-NAD 83 METERS	
N:	4372419.23'
E:	507986.77'
NAD 83	
LAT:	39.50135705
LOX:	80.90710607

LANDING POINT L.O.C.	
UTM 17-NAD 83 METERS	
N:	4372075.81'
E:	507758.60'
NAD 83	
LAT:	39.49826468
LOX:	80.90976399

BOTTOM HOLE L.O.C.	
UTM 17-NAD 83 METERS	
N:	4374031.93'
E:	506585.25'
NAD 83	
LAT:	39.51590027
LOX:	80.92339117

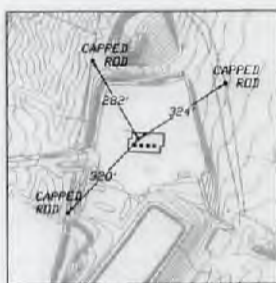
**SURVEY NOTES:**

1. THIS IS A VOLUNTARILY POOLED UNIT
2. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
3. THERE ARE NO EXISTING BUILDINGS WITHIN 625' OF PROPOSED WELL.
4. PROPOSED WELL IS GREATER THAN 100' FROM PERENNIAL STREAM, WETLAND, POND, RESERVOIR, OR LAKE.
5. THERE ARE NO NATIVE TROUT STREAMS WITHIN 300' OF PROPOSED WELL.
6. PROPOSED WELL IS GREATER THAN 1000' FROM SURFACE-GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY.
7. IT IS NOT THE INTENTION OF THIS PLAT TO REPRESENT SURVEYED LOCATIONS OF THE SURFACE OR MINERAL PARCELS DEPICTED HEREON. THE LOCATION OF THE BOUNDARY LINES, AS SHOWN, ARE BASED ON RECORD DEED DESCRIPTIONS, FIELD EVIDENCE FOUND, AND/OR TAX MAP POSITION, UNLESS OTHERWISE NOTED.
8. THIS UNIT IS CALCULATED TO BE 617,594 ACRES BASED ON A COMBINATION OF DEEDED ACREAGE AND SURVEYED PROPERTY LINES.

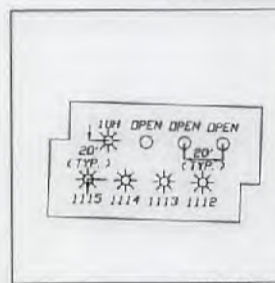


Architects • Engineers • Surveyors

11283 EMERSON AVENUE, PARKERSBURG, WV 26104  
(304) 464-5305 PICKERING USA.COM



REFERENCE/PAD DETAIL



PAD LAYOUT

FILE#: 2176692  
DRAWING#: TRH-SPENCER  
SCALE: 1"=2000'  
ACCURACY: 1/2500  
ELEVATION: OPUS SOLUTION  
DATE: 2/2/2018

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.

SIGNED: *William B. Showalter* PS# 2141



WELL TYPE:  OIL  WASTE DISPOSAL  PRODUCTION  DEEP OPERATOR'S WELL# : **SPENCER 1UH**  
 GAS  LIQUID INJECTION  STORAGE  SHALLOW API WELL#: 47 095 **02495 H6A**  
 WATERSHED: MIDDLE ISLAND CREEK STATE COUNTY PERMIT  
 COUNTY/DISTRICT: TYLER/ELLSWORTH QUADRANGLE: PADEN CI **06/01/2018**  
 SURFACE OWNER: ANNE L. SPENCER ACREAGE: 52 AC  
 ROYALTY OWNERS: SEE ROYALTY OWNERS DETAIL ACREAGE: SEE ROYALTY OWNERS DETAIL



DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON

PAD ELEVATION 703' CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY):  
 TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TVD. 10891' ± MD. 19565' ±

WELL OPERATOR TRIAD HUNTER, LLC (SUBSIDIARY OF BLUE RIDGE MOUNTAIN RESOURCES)  
 ADDRESS 125 PUTNAM ST. CITY MARIETTA STATE OH ZIP CODE 45750  
 DESIGNATED AGENT KIMBERLY ARNOLD  
 ADDRESS PO BOX 154 CITY WAVERLY STATE WV ZIP CODE 26184

WW-6A1  
(5/13)

Operator's Well No. 1UH

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
----------------------	-----------------------	-----------------------	---------	-----------

Please see attached sheets

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Triad Hunter, LLC  
 By: Mike Horan  
 Its: Manager Operations Conventional/Infrastructure

**Form WW6A1 - List of Lessors  
Spencer 1UH**

<b>Lease Number</b>	<b>Lessor</b>	<b>Lessee</b>	<b>Lessor's Address</b>	<b>Lease Recording Data</b>	<b>Royalty</b>	<b>Tax Map/Parcel Number of Parcel(s) In Unit</b>	<b>Lease Date</b>
LSE250SPE2	Anne L. Spencer	Triad Energy Corp	402 James St. New Martinsville, WV 26155	Book 378 Page 749	12.5%	14-44	3/1/2007
WVDNR License Agreement	Middle Island Creek			WVDNR License Agreement	N/A	N/A	N/A
LSE250SNO1	Dessie W. Snow	Triad Hunter, LLC	Route 1 Box 15 Middlebourne, WV 26149	Book 378 Page 150	12.5%	14-41	9/28/2010
LSE250SMI12	Mary J. Smith	Triad Hunter, LLC	PO Box 68 215 Francis Avenue, Windsor Heights, WV 26070	Book 377 Page 421	14%	14-33	9/1/2010
LSE250SMI12	Mary J. Smith	Triad Hunter, LLC	PO Box 68 215 Francis Avenue, Windsor Heights, WV 26070	Book 377 Page 421	14%	14-15	9/1/2010
LSE250WAR6	Sarah R. Ward Trust	Triad Energy Corp	600 Grant St. Suite 3100 Pittsburgh, PA 15219	Book 379 Page 222	12.5	14-16	8/9/2007
LSE250REE2	Mildred A. Reed	Triad Hunter, LLC	722 Pleasant Ridge Road Sistersville, WV 26175	Book 383 Page 100	14%	2-14-3	3/1/2011

95-02495



December 5, 2018

WVDEP  
Office of Oil and Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304

RE: Spencer Unit

To whom it may concern,

This letter serves you and the Office of Oil and Gas that Triad Hunter, LLC has the minerals leased for the development of the Marcellus and Point Pleasant Shale on the Spencer acreage located in the Ellsworth District, Tyler County. Spencer will have portions of the horizontal laterals crossing State Route 24. Triad Hunter, LLC also has the mineral rights and the rights to extract all minerals under this Subject State Route 24.

Furthermore Triad Hunter, LLC acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities that include, but not limited to the WV Division of Highways, U.S. Army Corp of Engineers, U.S. Fish Wildlife Service and County Floodplain Coordinator.

Should you have any questions please call me at my office 740-868-1324.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Horan".

Mike Horan  
Manager Operations Conventional/Infrastructure

909 Lake Carolyn Pkwy • Suite 600 • Irving, TX 77039  
Office (469) 444-1647 • Fax (469) 444-1649

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Office of Oil and Gas

JAN 19 2018

WV Department of  
Environmental Protection  
05/01/2018

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE CERTIFICATION**

Date of Notice Certification: \_\_\_\_\_

API No. 47- 695 - 02495  
Operator's Well No. 1UH  
Well Pad Name: Spencer

**Notice has been given:**

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>507968.7</u>
County: <u>Tyler</u>	UTM NAD 83 Northing: <u>4372419.2</u>
District: <u>Ellsworth</u>	Public Road Access: <u>County Road 26</u>
Quadrangle: <u>Paden City</u>	Generally used farm name: <u>Spencer</u>
Watershed: <u>Middle Island Creek</u>	

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p align="center"><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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WV Department of  
Environmental Protection

**Required Attachments:**

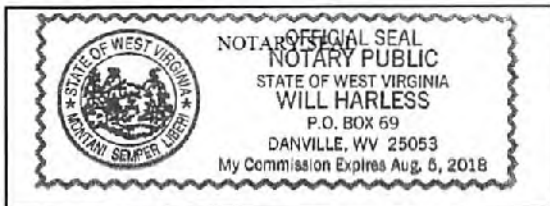
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

WW-6AC  
(1/12)

**Certification of Notice is hereby given:**

THEREFORE, I \_\_\_\_\_, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, 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 and imprisonment.

Well Operator:	Triad Hunter, LLC	Address:	125 Putnam Street
By:	Mike Horan <i>[Signature]</i>		Marietta, OH 45750
Its:	Operations Manager	Facsimile:	740-374-5270
Telephone:	740-868-1324	Email:	mhoran@brmresources.com



Subscribed and sworn before me this 20 day of December, 2017.

Neil Harless Notary Public

My Commission Expires Aug. 5, 2018

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).

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06/01/2018

WW-6A  
(9-13)

API NO. 47- 95 -  
OPERATOR WELL NO. 1UH  
Well Pad Name: Spencer

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 12/20/2017 Date Permit Application Filed: \_\_\_\_\_

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice  WSSP Notice  E&S Plan Notice  Well Plat Notice is hereby provided to:

SURFACE OWNER(s)  
Name: Anne Spencer  
Address: 402 James Street  
New Martinsville, WV 26155

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: Anne Spencer  
Address: 1301 Allen Run Road  
Sistersville, WV 26175

Name: Robert Neff  
Address: RR 2, Box 432  
Colliers, WV 26035

SURFACE OWNER(s) (Impoundments or Pits)  
Name: Anne Spencer  
Address: 402 James Street  
New Martinsville, WV 26155

COAL OWNER OR LESSEE  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OPERATOR  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

**This Notice Shall Include:**

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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**Well Location Restrictions**

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items



WW-6A  
(8-13)

API NO. 47-95 - 02495  
OPERATOR WELL NO. 1UH  
Well Pad Name: Spencer

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

**Water Well Testing:**

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

**Water Testing Laboratories:**

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

**Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:**

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

**Written Comment:**

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

06/01/2018

**Time Limits and Methods for Filing Comments.**

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

**Comment Requirements**

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

**Permit Denial or Condition**

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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WV Department of  
Environmental Protection

WW-6A  
(8-13)

API NO. 47-95 - 02495  
OPERATOR WELL NO. 10H  
Well Pad Name: Spencer

**Notice is hereby given by:**

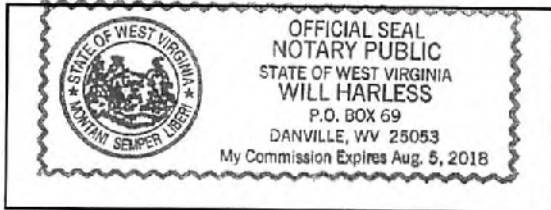
Well Operator: Triad Hunter, LLC  
Telephone: 740-868-1324  
Email: mhoran@brmresources.com



Address: 125 Putnam Street  
Marietta, OH 45750  
Facsimile: 740-374-5270

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).



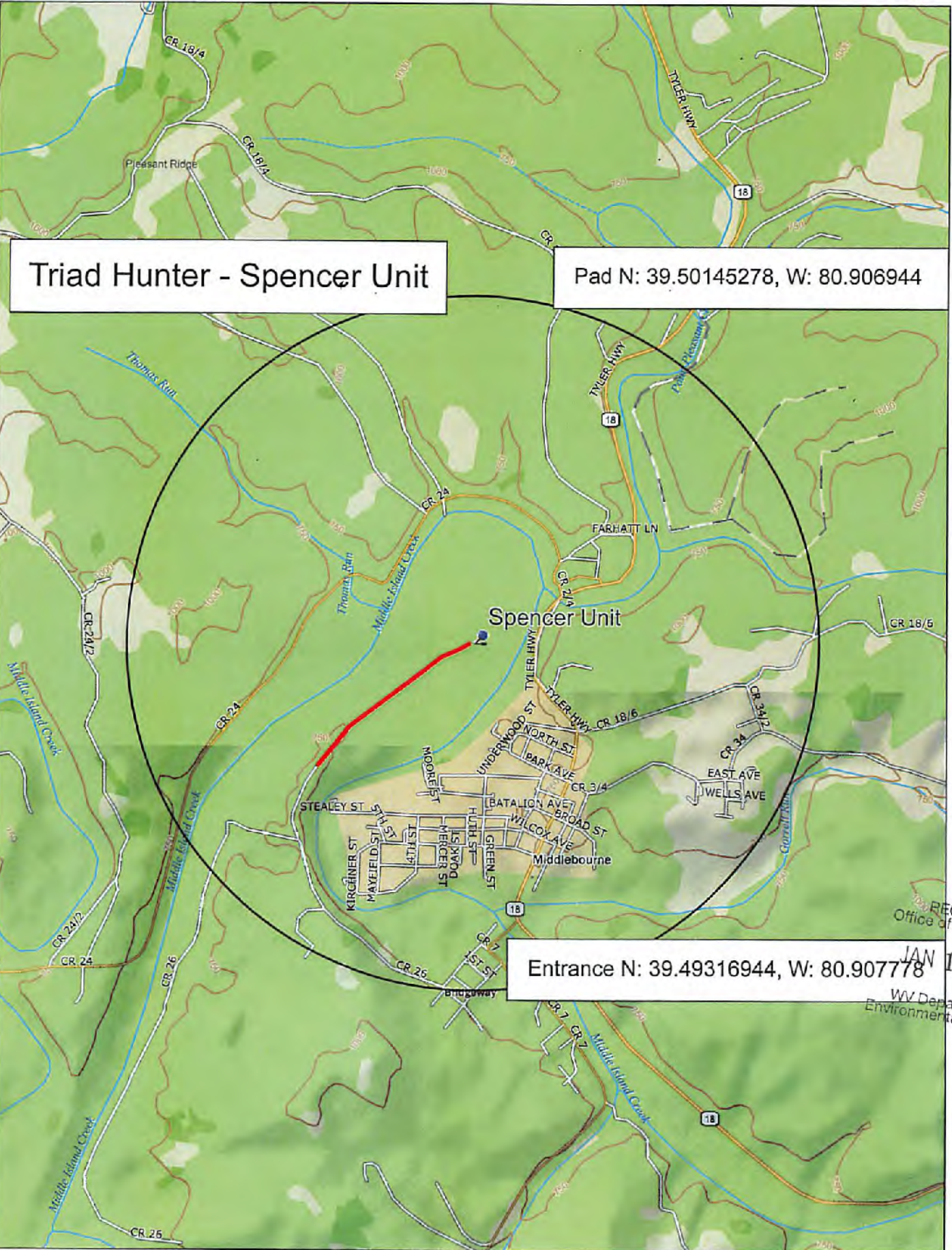
Subscribed and sworn before me this 21 day of 12, 2017.

Will Harless Notary Public

My Commission Expires Aug. 5, 2018

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95-02495



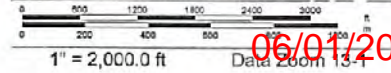
Triad Hunter - Spencer Unit

Pad N: 39.50145278, W: 80.906944

Spencer Unit

Entrance N: 39.49316944, W: 80.907778

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06/01/2018

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF INTENT TO DRILL**

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

**Notice Time Requirement:** Notice shall be provided at least **TEN (10)** days prior to filing a permit application.  
**Date of Notice:** 12/20/2017      **Date Permit Application Filed:** \_\_\_\_\_

**Delivery method pursuant to West Virginia Code § 22-6A-16(b)**

- HAND DELIVERY       CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*; That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

**Notice is hereby provided to the SURFACE OWNER(s):**

Name: Anne Spencer  
Address: 402 James Street  
New Martinsville, WV 26155

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>507968.7'</u>
County: <u>Tyler</u>	Northing: <u>4372419.2'</u>
District: <u>Ellsworth</u>	Public Road Access: <u>County Road 26</u>
Quadrangle: <u>Paden City</u>	Generally used farm name: <u>Spencer</u>
Watershed: <u>Middle Island Creek</u>	

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: Triad Hunter, LLC  
Address: 125 Putnam Street  
Marietta, OH 45750  
Telephone: (740) 760-0558  
Email: wharfess@brmresources.com  
Facsimile: \_\_\_\_\_

Authorized Representative: Mike Horan  
Address: 125 Putnam Street  
Marietta, OH 45750  
Telephone: 740-374-2940  
Email: mhoran@brmresources.com  
Facsimile: 740-374-5270

*M.H.*  
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JAN 12 2018  
WV Department of  
Environmental Protection

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

95-02495

WW-6A5  
(1/12)

Operator Well No. Spencer 1UH

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF PLANNED OPERATION**

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 12/20/2017      **Date Permit Application Filed:** \_\_\_\_\_

**Delivery method pursuant to West Virginia Code § 22-6A-16(c)**

CERTIFIED MAIL                                       HAND  
RETURN RECEIPT REQUESTED                                      DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

**Notice is hereby provided to the SURFACE OWNER(s)**

(at the address listed in the records of the sheriff at the time of notice):

Name: Anne Spencer                                      Name: \_\_\_\_\_  
Address: 402 James Street                                      Address: \_\_\_\_\_  
New Martinsville, WV 26155                                      \_\_\_\_\_


**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>507968.7</u>
County:	<u>Tyler</u>		Northing:	<u>4372419.2</u>
District:	<u>Ellsworth</u>	Public Road Access:	<u>County Road 26</u>	
Quadrangle:	<u>Paden City</u>	Generally used farm name:	<u>Spencer</u>	
Watershed:	<u>Middle Island Creek</u>			

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: Tried Hunter, LLC   
Telephone: 740-374-2940  
Email: wharfess@brmresources.com

Address: 125 Putnam Street  
Marietta, OH 45750  
Facsimile: 740-374-5270

RECEIVED  
Office of Oil and Gas  
JAN 12 2018  
WV Department of  
Environmental Protection

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as 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 or your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

06/01/2018



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**

1900 Kanawha Boulevard East • Building Five • Room 110  
Charleston, West Virginia 25305-0430 • (304) 558-3505

Thomas J. Smith, P. E.  
Secretary of Transportation/  
Commissioner of Highways

May 17, 2018

Jill M. Newman  
Deputy Commissioner

James A. Martin, Chief  
Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304

Subject: DOH Permit for the Spencer Unit Well Pad, Tyler County  
Spencer 1UH Well Site

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit # 06 -2011-0307 to Triad Hunter, LLC for access to the State Road for a well site located off of Tyler County Route 26 SLS.

The operator has signed an OIL AND GAS DISTRICT WIDE ROAD MAINTENANCE BONDING AGREEMENT for District 6 and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

A handwritten signature in blue ink that reads "Gary K. Clayton".

Gary K. Clayton  
Regional Maintenance Engineer  
Central Oil & Gas Coordinator

Cc: Cecily Kern  
Triad Hunter, LLC  
CH, OM, D-6  
File

**CAS Numbers for frac additives:**

1. Friction reducers, (PSC) AS-9810
  - a. Acrylamide, CAS #26100-47-0 34-40%
2. Scale inhibitor, (PSC) AS-9220
  - a. Organic phosphate, CAS #11024-99-2 10-25%
3. Flowback surfactant + iron stabilizer, (PSC) AS-9899
  - a. Ethoxylated alcohol, CAS #65439-46-3 10-15%
  - b. Stannous chloride, CAS #7772-99-8 5-10%
  - c. Sulfamic acid, CAS #5329-14-6, 5-8%
  - d. Monoethylamine CAS #141-43-5 2-6%
4. Microbiocide, One AquaSource MB-7530 (see attached MSDS, page 1)





