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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

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

December 30, 2015

**WELL WORK PERMIT**

**Fracture**

This permit, API Well Number: 47-8704729, issued to HARD ROCK EXPLORATION, INC., 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: HR-492

Farm Name: HAYS, BENJAMIN R. & ANDREA

**API Well Number: 47-8704729**

**Permit Type: Fracture**

Date Issued: 12/30/2015

**Promoting a healthy environment.**

**01/01/2016**

## PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

### CONDITIONS

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1. 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 §22-6-20, 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.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced, drilling ceased, 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) within 30 days of commencement of drilling.

CK283  
55000 Frac Permit

WW - 2B  
(Rev. 8/10)

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

1) Well Operator: Hard Rock Exploration, Inc. 494464205 Roane Curtis Peniel, WV 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: HR-492 3) Elevation: 699'

4) Well Type: (a) Oil \_\_\_\_\_ or Gas X  
(b) If Gas: Production X / Underground Storage \_\_\_\_\_  
Deep \_\_\_\_\_ / Shallow X

5) Proposed Target Formation(s): Lower Huron Shale (see wr35) Proposed Target Depth: \_\_\_\_\_

6) Proposed Total Depth: \_\_\_\_\_ Feet Formation at Proposed Total Depth: \_\_\_\_\_

7) Approximate fresh water strata depths: \_\_\_\_\_

8) Approximate salt water depths: \_\_\_\_\_

9) Approximate coal seam depths: None noted in offset wells

10) Approximate void depths,(coal, Karst, other): None

11) Does land contain coal seams tributary to active mine? No

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)  
Perform 14 stage Nitrogen Fracture treatment utilizing open hole packer system currently in place.

Refer to attached WR 35 for completed well work details.

*[Signature]*  
10-26-15

13) **CASING AND TUBING PROGRAM**

TYPE SPECIFICATIONS FOOTAGE INTERVALS CEMENT

	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor						
Fresh Water						
Coal						
Intermediate						
Production						
Tubing						
Liners						

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Packers: Kind: \_\_\_\_\_  
Sizes: \_\_\_\_\_  
Depths Set \_\_\_\_\_

WW-2B1  
(5-12)

Well No. HR-492

West Virginia Department of Environmental Protection  
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name Standard Labs or Sturm Lab  
Sampling Contractor Standard Labs or Sturm Lab

Well Operator Hard Rock Exploration, Inc.  
Address 1244 Martins Branch Road  
Charleston, WV 25312  
Telephone (304)984-9004

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

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WR-35  
Rev (5-01)

DATE: 6-19-15  
API #: 47-08704729

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Benjamin and Andrea Hayes Operator Well No.: HR 492

LOCATION: Elevation: 699' Quadrangle: Peniel WV 7.5'

District: Curtis County: Roane  
Latitude: 11599' Feet South of 38 Deg. 52 Min. 30 Sec.  
Longitude 223' Feet West of 81 Deg. 25 Min.      Sec.

Company: Hard Rock Exploration

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1244 Martins Branch Road Charleston WV, 25312		GL		
Agent: Marc Scholl	20"	10'	10'	NA
Inspector: Ed Gainer	13 3/8"	83'	83'	CTS 50.5cuft
Date Permit Issued: 3-14-13	9 5/8"	514'	514'	CTS 264cuft
Date Well Work Commenced: 3-17-14	7"	2358'	2358'	CTS 526cuft
Date Well Work Completed:	4.5"	7546'	7546'	95cuft
Verbal Plugging:				
Date Permission granted on:	Gamma Log from (3456' - 7651' MD)			
Rotary x Cable Rig	Ran Gyro Log from (3646' - Surface)			
Total Depth (feet): 7651'TMD, 4216'TVD				
Fresh Water Depth (ft.): 30', 250'				
Salt Water Depth (ft.): 1618', 2027'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): <u>N/A</u>				

OPEN FLOW DATA

Producing formation Lower Huron Shale Pay zone depth (ft) 4070' - 7651' MD  
3995'TVD - 4216' TVD

Gas: Initial open flow 100-150 MCF/d Oil: Initial open flow      Bbl/d  
Final open flow      MMCF/d Final open flow      Bbl/d  
Time of open flow between initial and final tests      Hours  
Static rock Pressure no test psig (surface pressure) after      Hours

Second producing formation      Pay zone depth (ft)       
Gas: Initial open flow      MCF/d Oil: Initial open flow      Bbl/d  
Final open flow      MCF/d Final open flow      Bbl/d  
Time of open flow between initial and final tests      Hours  
Static rock Pressure      psig (surface pressure) after      Hours

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NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORMANCE OF OPERATIONS AT THIS INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS ENCOUNTERED BY THE WELLBORE.

Signed: \_\_\_\_\_  
By: \_\_\_\_\_  
Date: \_\_\_\_\_

Office of Oil and Gas  
Department of Environmental Protection  
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01/01/2016

**Formation:                      Top:                      Bottom:**

<u>Soil/Sand/Shale</u>	0	1536
<u>Salt Sand</u>	1536	1909
<u>Injun Sand</u>	1909	1996
<u>Shale</u>	1996	2236
<u>Weir Sand</u>	2236	2256
<u>Coffee Shale</u>	2296	2306
<u>Devonian Shale</u>	2306	4350
<u>L Huron Section</u>	4150	4350(tvd)

**All formation depths shown As TVD**

12/9/14 Run 14 stg Packers Plus hydraulic set open hole packer system. Run total of 176 jts R-3 4.5" 11.6ppf N-80 equiv. casing to depth of 7546' KB. Land casing with 8" N-80 nipple and mandrel hanger. NU DSA and frac valve.

12/10/14 Pump 5 bbls water Drop 1.25" ball for toe sub, and follow with 3bbls water and N2 at 7000kscf/min. Land ball and pressure up to 3000psi with approx 118kscf N2. Hold pressure approx 20-30min and bleed casing pressure back to 500psi. RU to grout backside of 4.5" casing. Pump 17bbls cmt mixed at 15ppg and follow with 2-3bbls water.

**NOTE: THERE ARE NO PERFORATED INTERVALS IN THIS STYLE OF COMPLETION. THE PACKERS WILL SERVE AS STAGE ISOLATION AND THE BALL ACTIVATED MECHANICAL SLEEVES SERVE AS THE MEANS OF COMMUNICATION FROM WELLBORE TO FORMATION. ALL DEPTHS ARE INDICATED BELOW.**

Stage	Sleeve	Sleeve Size	Ball Size	Packer
1	7440.78	HP	N/A	7348.88
2	7262.52	2.000	2.125	7128.82
3	7000.66	2.125	2.250	6908.76
4	6780.60	2.250	2.375	6646.90
5	6518.74	2.375	2.500	6426.84
6	6298.68	2.500	2.625	6206.83
7	6078.67	2.625	2.750	5944.97
8	5816.81	2.750	2.875	5724.91
9	5596.80	2.875	3.000	5463.15
10	5334.99	3.000	3.125	5201.34
11	5073.23	3.125	3.250	4981.38
12	4853.22	3.250	3.375	4761.32
13	4633.16	3.375	3.500	4499.46
14	4245.90	3.500	3.625	4070.40
Anchor				2682.20

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 01/01/2016

WW-2A  
(Rev. 6-14)

1). Date: October 20, 2015  
2.) Operator's Well Number HR-492  
State 47- County 087 Permit 04729  
3.) API Well No.:

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

4) Surface Owner(s) to be served:  
(a) Name Benjamin R. and Andrea S. Hays  
Address 1761 Reedville Road  
Reedv. WV 25270  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Joe Taylor  
Address 1478 Claylick Road  
Riplev. WV 25271  
Telephone (304)380-7469

5) (a) Coal Operator  
Name Benjamin R. and Andrea S. Hays  
Address 1761 Reedville Road  
Reedv. WV 25270  
(b) Coal Owner(s) with Declaration  
Name Benjamin R. and Andrea S. Hays  
Address 1761 Reedville Road  
Reedv. WV 25270  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name None  
Address \_\_\_\_\_

**TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:**

       Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas  
**OR**

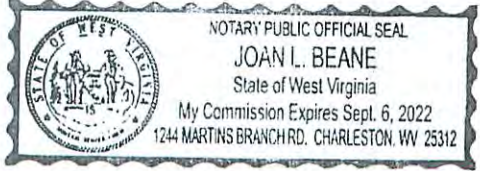
       Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)  
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through        on the above named parties by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

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, 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 Hard Rock Exploration, Inc.  
By: Monica Han  
Its: Executive Vice President  
Address: 1244 Martins Branch Road  
Charleston, WV 25312  
Telephone: (304)984-9004  
Email: monica@hardrockexploration.com

Subscribed and sworn before me this 20th day of October, 2015

Joan L. Beane Notary Public

My Commission Expires Sept. 6, 2022  
Oil and Gas Privacy Notice

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OCT 27 2015  
WV Dept. of Environmental Protection

WW-2A1  
(Rev. 1/11)

Operator's Well Number HR-492

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
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:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Jeffrey T Foster	Hard Rock Land Services, LLC	% of 1/8	249/174
Robert Michael Grudier	Hard Rock Land Services, LLC	% of 1/8	249/249
Hard Rock Land Services, LLC	Hard Rock Exploration, Inc.	Assignment	250/273

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**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

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:  
By: Its:

Hard Rock Exploration, Inc.

  
Executive Vice President



6704729F

**NOTICE**

**WATER TESTING  
HARD ROCK EXPLORATION WELL NO. HR-492A**

**THE FOLLOWING WATER SOURCES WERE IDENTIFIED WITHIN 2000' OF THE  
ABOVE PROPOSED WELL SITE:**

**BENJAMIN R. & ANDREAS S. HAYS  
1761 REEDYVILLE RD.  
REEDY WV 25270**

**ANNA NEAL & PAUL L. TAYLOR  
1585 REEDYVILLE RD.  
SPENCER WV 25276**

**GARY GRANOFF  
P O BOX 1812  
TALLAHASSEE FL 32302**

**JACK D. GARRETT II  
1262 PARKERSBURG RD.  
SPENCER WV 25276**

**TRUE LINE SURVEYING, INC.  
6211 FAIRVIEW DRIVE  
HUNTINGTON, WV 25705**

**12-14-12**

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Environmental

WW-9  
(2/15)

API Number 47 - 087 - 04729  
Operator's Well No. HR-492

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Hard Rock Exploration, Inc. OP Code 494464205  
Watershed (HUC 10) Left Fork of Reedy Creek Quadrangle Peniel, WV 7.5'

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  **NO PIT WILL BE USED MUST USE FLOWBACK TANKS.**  
If so, please describe anticipated pit waste: Drill Cuttings

**N/A** Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? 10 or greater

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number UIC2D0190460, 3416729685 )
- Reuse (at API Number 8704669, 3502970, 3502987, 3502999, 8704700, 8704698, 8704703, 8704713 - Well will be noted in DMR )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

Will closed loop system be used? If so, describe: No **9" N/A FRACTURE PERMIT ONLY,**

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air

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

Additives to be used in drilling medium? Soap, KCl, or Clay Stay

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

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

-Landfill or offsite name/permit number? \_\_\_\_\_

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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 *Monica Francisco*  
Company Official (Typed Name) Monica Francisco  
Company Official Title Executive Vice President

NOV 10 2015

Office of Oil and Gas  
WV Dept. of Environmental Protection

Subscribed and sworn before me this 20th day of October  
Joan L. Beane  
My commission expires Sept. 6, 2022



WV Department of Environmental Protection

**Hard Rock Exploration, Inc.**

Proposed Revegetation Treatment: Acres Disturbed 0.58 Prevegetation pH 5.5

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre


Mulch Hay/Straw/Paper (Paper at 1600 lbs/acre) Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Top	15	Red Top	15
Orchard Grass	25	Orchard Grass	25
Perennial Rye/Crimson Red Clover 25 Each		Perennial Rye/Crimson Red Clover 25 Each	
Annual Rye	40	Annual Rye	40

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: 

Comments:  
~~Final~~ Final reclamation to be done when work is completed!!  
Sediment control to be in place at all times!

Title: 006 Inspect

Date: 10-26-15

Field Reviewed?  Yes  No

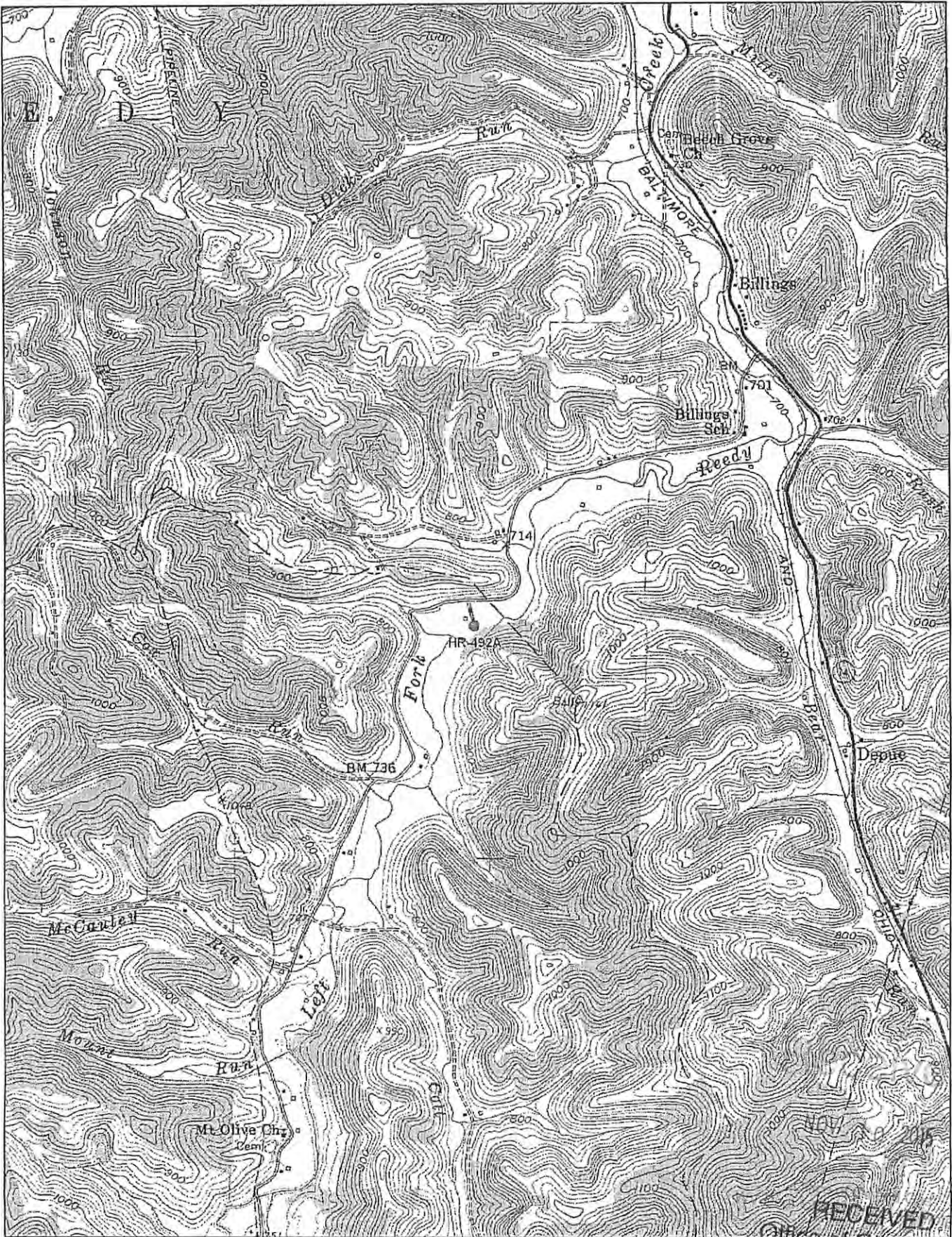
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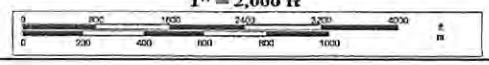
WV Department of Environmental Protection  
09/10/2016



DeLORME

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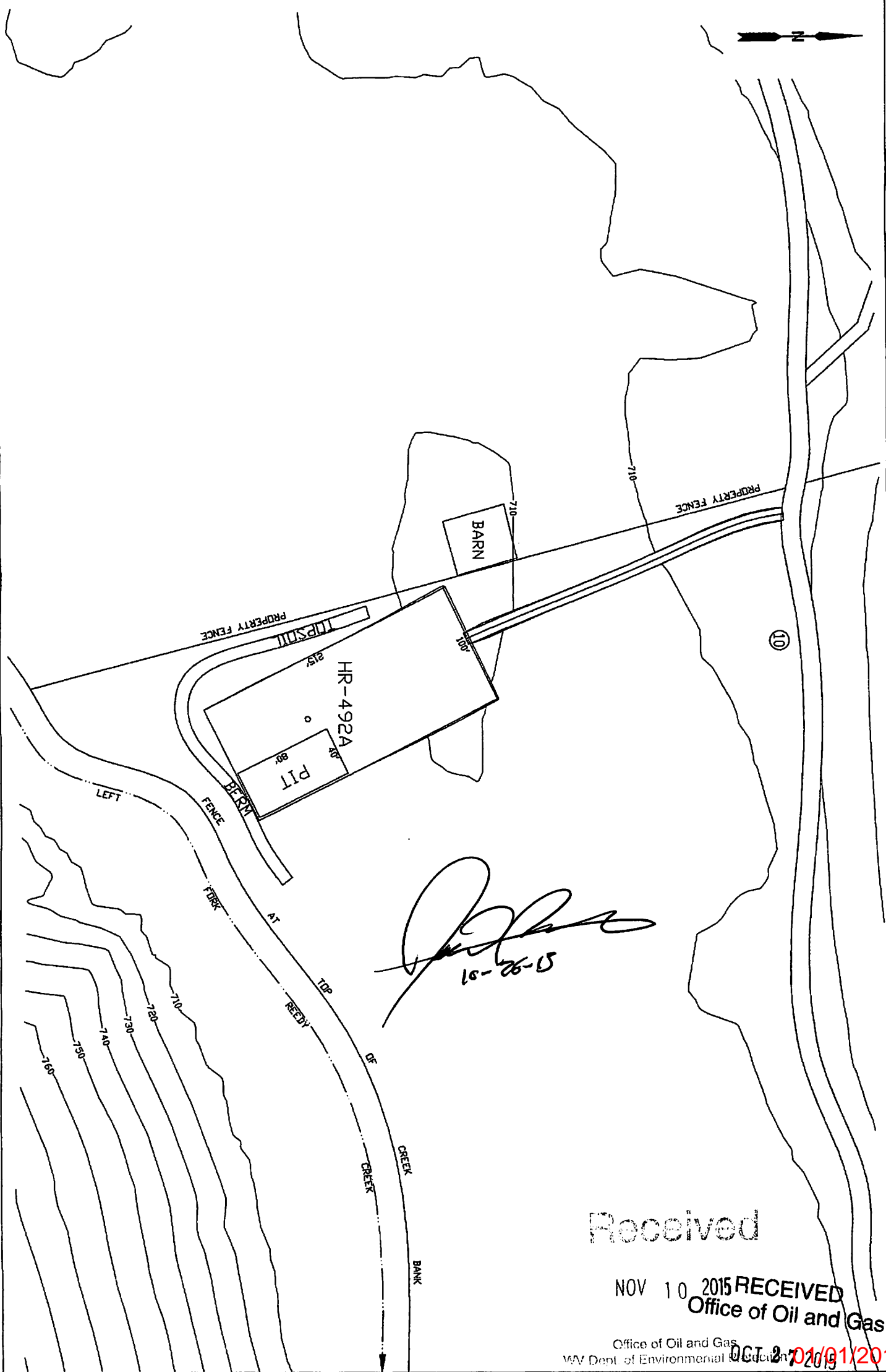
Scale 1 : 24,000  
1" = 2,000 ft



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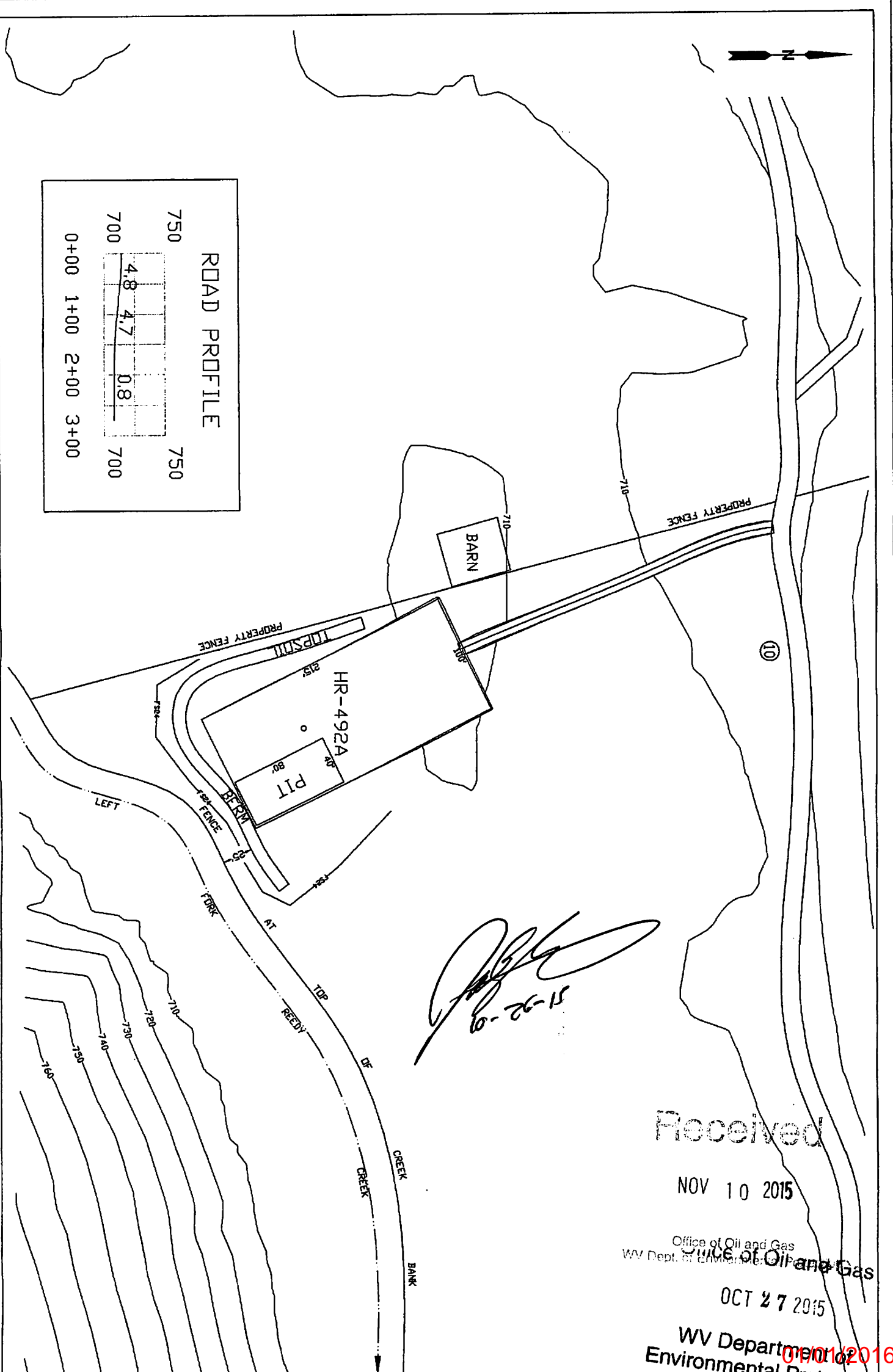
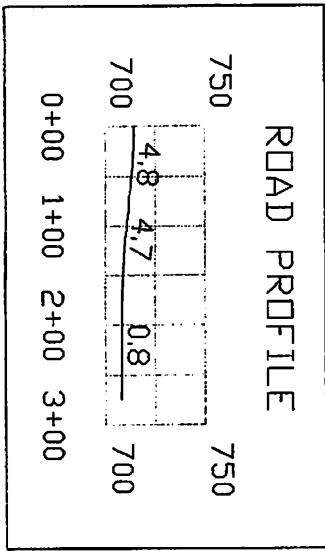
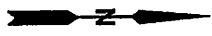
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DISTURBED AREAS	
WELL PAD CONSTRUCTION	0.51 AC.
NEW ACCESS ROAD CONSTRUCTION	0.07 AC.
ADDITIONAL CLEARING	
TOTAL DISTURBED AREA	0.58 AC.

LEGEND	
	STREAM
	PROPERTY LINE
	SLOPE AREA
	WETLAND
	BUFFER AREA

**WV Department of Environmental Protection**  
 ENVIRONMENTAL PROTECTION  
 CURTIS DISTRICT, ROANE COUNTY  
 PENIEL QUAD, WV 7.5'  
 DECEMBER 10, 2012  
 TRUE LINE SURVEYING  
 6211 FAIRVIEW DR.  
 HUNTINGTON, WV 25705  
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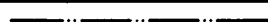




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10/16/2016

**LEGEND**

-  PROVIDE FLEXTERRA HIGH PERFORMANCE FLEXIBLE GROWTH MEDIUM (HP-FLM) ON CUT AND FILL SLOPES
-  LEVEL SPREADER
-  DIVERSION DITCH
-  BERM OUTLET

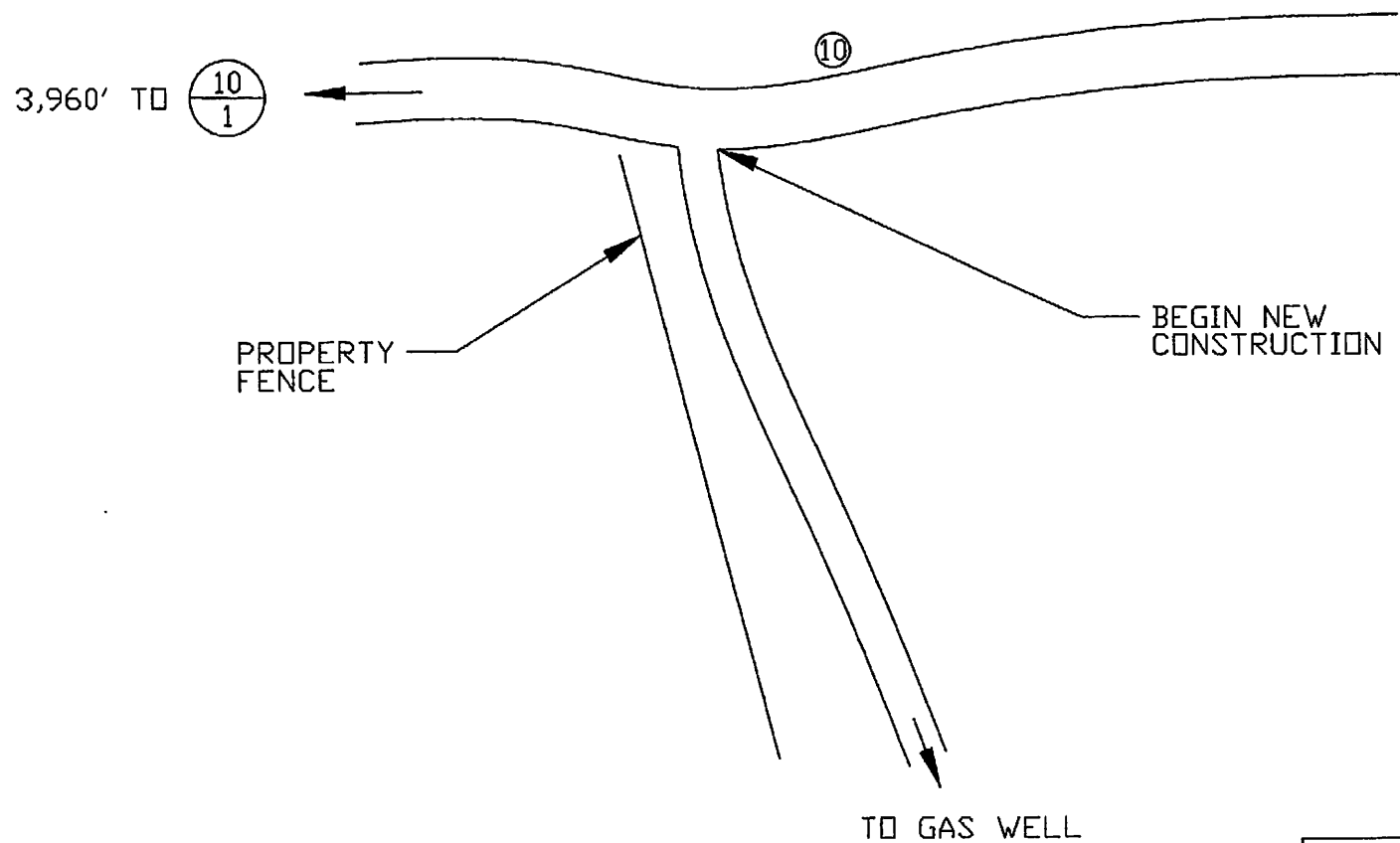
-  STREAM
-  PROPERTY LINE
-  SLOPE AREA
-  WETLAND
-  24" COMPOST FILTER SOCK AS REQUIRED

**EROSION AND SEDIMENT CONTROL PLAN**

HARD ROCK EXPLORATION  
PROPOSED WELL # HR-492A  
CURTIS DISTRICT, ROANE COUNTY  
PENEL GUAD, WV 75'  
DECEMBER 10, 2012  
TRUE LINE SURVEYING  
6211 FAIRVIEW DR.  
HUNTINGTON, WV 25705

PAGE 1 OF 1

8704729F



Received  
 RECEIVED  
 Office of Oil and Gas  
 NOV 10 2015  
 OCT 27 2015  
 Office of Oil and Gas  
 WV Dept. of Environmental Protection  
 WV Department of Environmental Protection

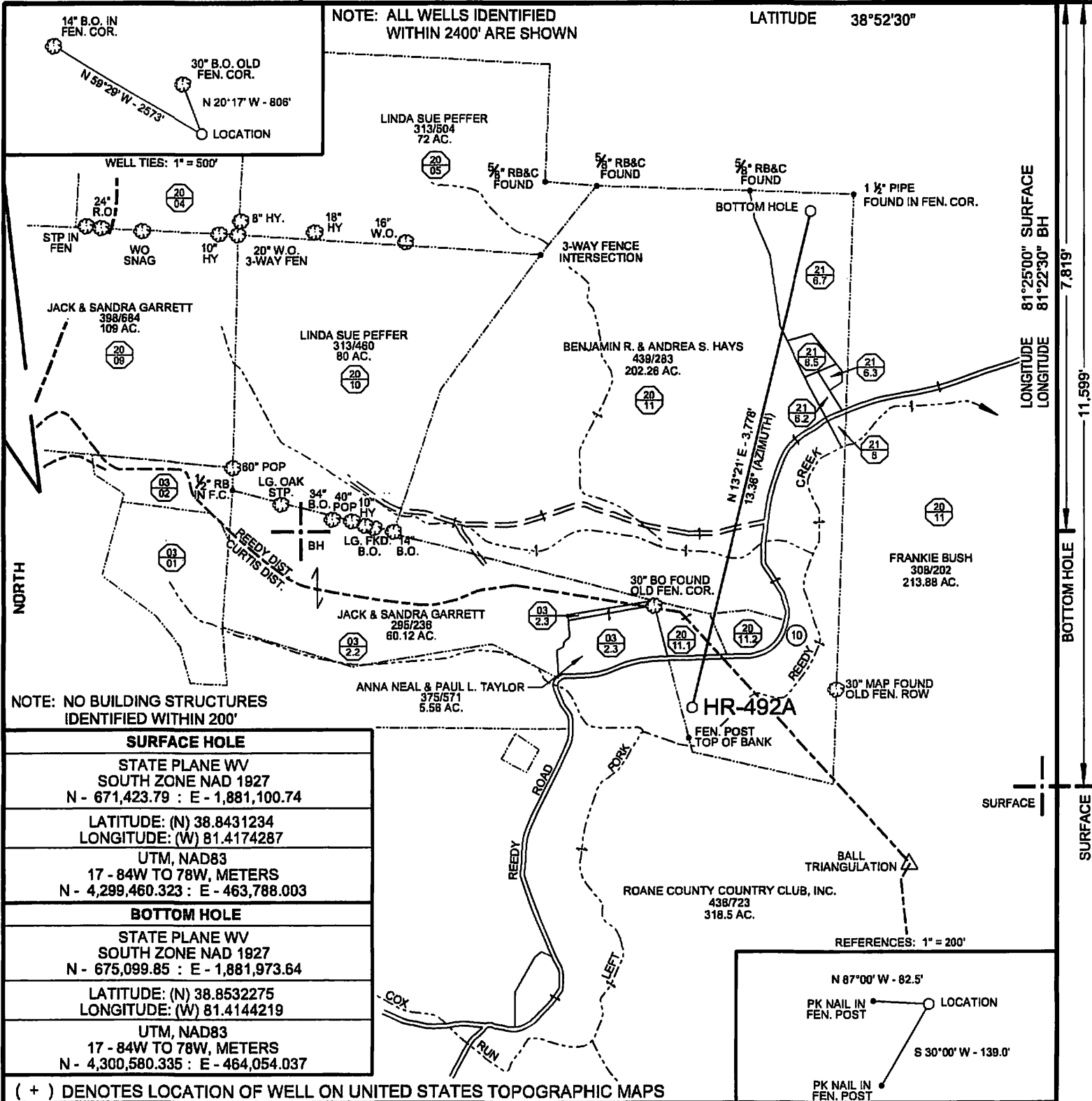
ROAD TURNOUT PLAN	
HARD ROCK EXPLORATION PROPOSED WELL # HR-492A	
CURTIS DISTRICT, ROANE COUNTY PENIEL QUAD, WV 7.5'	
DECEMBER 10, 2012	
TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705	
PAGE <u>1</u> OF <u>1</u>	



BOTTOM HOLE

11,238'

SURFACE



FILE NO. HR-492A\_AS DRILLED.DGN

DRAWING NO. HR-492 AS DRILLED

SCALE 1" = 1000'

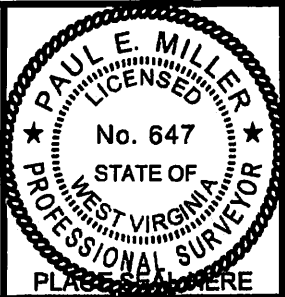
MINIMUM DEGREE OF ACCURACY 1:200

PROVEN SOURCE OF ELEVATION MAPPING GRADE GPS

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

(SIGNED) Paul E. Miller

R.P.E. \_\_\_\_\_ L.L.S. 647



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

DATE NOVEMBER 2, 20 15

OPERATOR'S WELL NO. HR-492A

API WELL NO. \_\_\_\_\_

47 087 04729 F  
STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
(IF "GAS,") PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 699' WATER SHED LEFT FORK OF REEDY CREEK  
DISTRICT CURTIS COUNTY ROANE  
QUADRANGLE PENIEL, WV 7.5'

SURFACE OWNER BENJAMIN R. & ANDREA S. HAYS ACREAGE 202.26

OIL & GAS ROYALTY OWNER \_\_\_\_\_ LEASE ACREAGE \_\_\_\_\_ LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG

TARGET FORMATION LOWER HURON ESTIMATED DEPTH \_\_\_\_\_

WELL OPERATOR HARD ROCK EXPLORATION, INC. DESIGNATED AGENT JAMES L. STEPHENS

ADDRESS 1244 MARTINS BR. RD. CHARLESTON, WV 25312 ADDRESS SAME

01/01/2016

FORM WV-6

COUNTY NAME  
PERMIT