



west virginia department of environmental protection

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

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

August 20, 2013

WELL WORK PERMIT

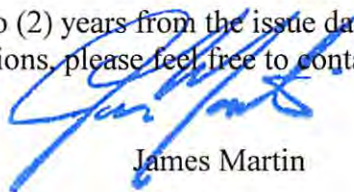
Vertical Well

This permit, API Well Number: 47-10501368, 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-495A
Farm Name: MCCLUNG, KENNETH & ELIKA
API Well Number: 47-10501368
Permit Type: Vertical Well
Date Issued: 08/20/2013

10501368

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 Wirt Spring Creek Burning Springs, WV 7.5'
105 06 271
Operator ID County District Quadrangle

2) Operator's Well Number: HR-495 3) Elevation: 1029'

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 Proposed Target Depth: 4560' TVD

6) Proposed Total Depth: 8350'TMD Feet Formation at Proposed Total Depth: Lower Huron

7) Approximate fresh water strata depths: Pittsburg estimated at 770' - 820'

8) Approximate salt water depths: 2000'

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)

Drill 12 3/8" hole on air/ Freshwater foam; Drill 8 3/4" hole on Air/Freshwater foam/Fluid; Drill Bottom hole on Air
KOP-3960', Land curve-4900'MD/ 4560'TVD , 4050'VS, 8350'TMD

Run 4.5" casing with open hole packer completion (Depths noted at bottom) -Set packers, cement on top packer, Fracture with Nitrogen gas.

13) **CASING AND TUBING PROGRAM**

| TYPE | SPECIFICATIONS | | | FOOTAGE INTERVALS | | CEMENT |
|--------------|----------------|-------|---------------|-------------------|--------------|--------------|
| | Size | Grade | Weight per ft | For Drilling | Left in Well | |
| Conductor | 13 3/8" | LS | 37# | 30' | 30' | |
| Fresh Water | 9 5/8" | LS | 26# | 920' | 920' | 455cuft-CTS |
| Coal | | | | | | |
| Intermediate | 7" | LS | 19# | 2310' | 2310' | 520cuft -CTS |
| Production | 4 1/2" | N-80 | 11.6# | 8350' | 8350' | 130cuft |
| Tubing | | | | | | |
| Liners | | | | | | |

Received
JUL 2 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

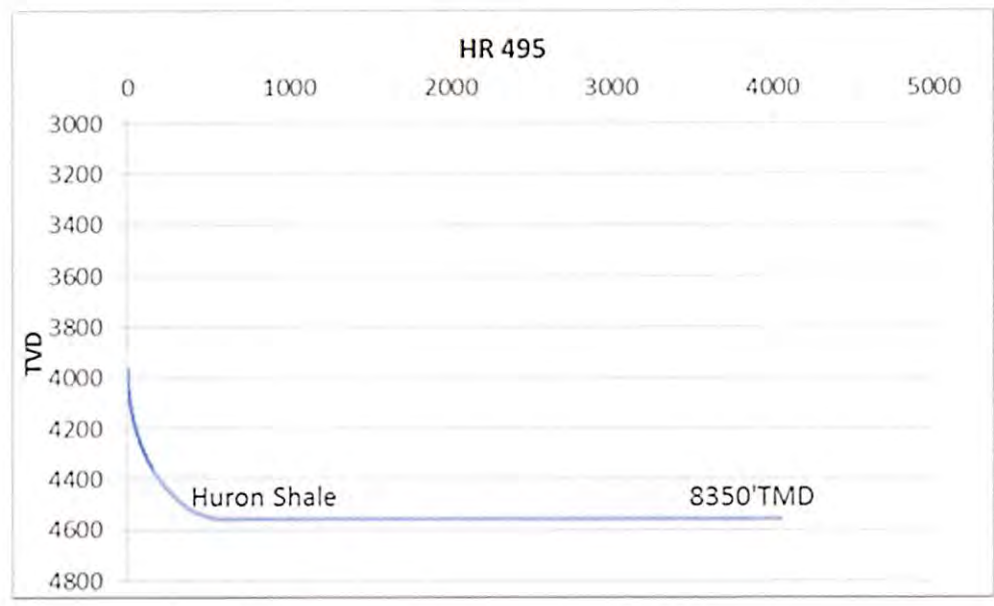
CK# 14588
650

[Handwritten Signature]
8/13

Packers: Kind: Mechanical Set open hole packer
Sizes: 4.5" X 6 5/8" 10k diff Seal
Depths Set Place 16stg open hole packer system from 4430'MD- 8350' (245' spacing per stg) , 17th packer at 2600' Dump 130cuft

08/23/2013

NOTICE
WELLBORE GRAPH
HARD ROCK EXPLORATION WELL NO. HR-495



HARD ROCK EXPLORATION, INC.
1244 MARTINS BRANCH ROAD
CHARLESTON, WV 25312

7-25-13

Received
AUG - 2 2013
Office of Oil and Gas
WV Dept. of Environmental Protection
08/23/2013

10501368

WW-2A
(Rev. 6-07)

1.) Date: July 24, 2013
2.) Operator's Well Number HR-495
State 47- County 105 Permit 01368
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**

Check # 14588
\$ 650.00

4) Surface Owner(s) to be served: W

(a) Name Kennith McClung
Address 805 Fairview Ridge
Palestine, WV 26160

(b) Name Keith Miller, et al.
Address 4485 Parkersburg Road ✓
Reedy, WV 25270

(c) Name _____
Address _____

5) (a) Coal Operator
Name None
Address _____

(b) Coal Owner(s) with Declaration W
Name Kennith McClung
Address 805 Fairview Ridge
Palestine, WV 26160

Name Keith Miller, et al. ✓
Address 4485 Parkersburg Road
Reedy, WV 25270

(c) Coal Lessee with Declaration
Name None
Address _____

6) Inspector 1472 SA
Name Joe Taylor
Address 497 Claylick Road
Ripley, WV 25271
Telephone (304)380-7469

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

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

Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

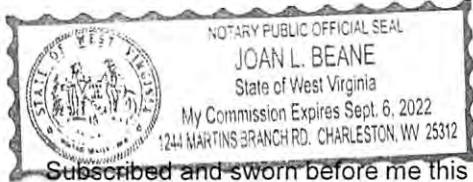
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

- 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 Parisul
Its: Executive Vice President
Address 1244 Martins Branch Road
Charleston, WV 25312
Telephone (304)984-9004

Subscribed and sworn before me this 29th day of July, 2013

Joan L. Beane Notary Public

My Commission Expires Sept. 6, 2022

Received

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

08/23/2013

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Wirt Operator Hard Rock Exploration, Inc.
Operator well number HR-495

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

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

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) 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 a 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.

Comments must be in writing. Your comments must 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.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ___ including a work order on Form WW2-B, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Kenneth E. M. Class
Signature
Kenneth E. M. Class
Print Name

Date 7/30/13

Company Name _____
By _____
Its _____
Date _____
Signature _____
Date _____

Received
AUG -2 2013
Office of Oil and Gas
WV Dept. of Environmental Protection
08/23/2013

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Wirt Operator Hard Rock Exploration, Inc.
Operator well number HR-495

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Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Elika M. M. Clung Date 7-30-13 Company Name _____
Signature By _____
Elika M. M. Clung Its _____
Print Name

Date

Signature _____
Date

Received

400 - 2
Office of Oil and Gas
WV Dept. of Environmental Protection
08/23/2013

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Wirt
Operator Hard Rock Exploration, Inc. Operator's Well Number HR-495

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator ____/ owner ____/ lessee ____/ of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Kenneth E. McClary Date 7/30/13
Signature Company Name
By
Its

Signature Date

Received
AUG - 2 2013
Office of Oil and Gas
WV Dept. of Environmental Protection
08/23/2013

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Wirt
Operator Hard Rock Exploration, Inc. Operator's Well Number HR-495

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601 57th St. SE
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FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Erika M. McHenry Date 7-30-13
Signature

Company Name _____
By _____
Its _____ Date _____
Signature _____ Date _____

| SENDER: COMPLETE THIS SECTION | COMPLETE THIS SECTION ON DELIVERY | |
|--|--|---|
| <ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. | A. Signature X <i>Kenneth McClung</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee | |
| | B. Received by (Printed Name) <i>Kenneth McClung</i> | C. Date of Delivery <i>7/13/2013</i> |
| 1. Article Addressed to: Kennith and Elika McClung 805 Fairview Ridge Palestine, WV 26160 | D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No | |
| | 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. | |
| | 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes | |
| 2. Article Number (Transfer from service label) 7011 2000 0001 7717 5258 | | |
| PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540 | | |

| SENDER: COMPLETE THIS SECTION | COMPLETE THIS SECTION ON DELIVERY | |
|--|--|---------------------|
| <ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. | A. Signature X <i>Pamela Miller</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee | |
| | B. Received by (Printed Name) | C. Date of Delivery |
| 1. Article Addressed to: Keith Miller et al 4485 Parkersburg Road Reedy, WV 25270 | D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No | |
| | 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. | |
| | 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes | |
| 2. Article Number (Transfer from service label) 7011 2000 0001 7717 5234 | | |
| PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540 | | |

Received
 AUG - 2 2013
 Office of Oil and Gas
 WV Dept. of Environmental Protection
08/23/2013

**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 |
|---------------------------------|-----------------------------|----------|-----------|
| Kennith E. & Erika M. McClung | Hard Rock Exploration, Inc. | % of 1/8 | 239/1 |
| Russell E. & Polly A. Howdysell | Hard Rock Exploration, Inc. | % of 1/8 | 240/304 |

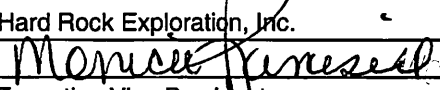
**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

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

Received
 Office of Oil and Gas
 WV Dept. of Environmental Protection
 08/23/2013

WW-2B1
(5-12)

Well No. HR-495

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 | <u>Standard Labs or Sturm Lab</u> |
| Sampling Contractor | <u>Standard Labs or Sturm Lab</u> |

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

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.

NOTICE**WATER TESTING
HARD ROCK EXPLORATION WELL NO. HR-495A**

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

**KENNITH & ELIKA McCLUNG
805 FAIRVIEW RIDGE
PALESTINE, WV 26160**

**DANIEL BRINDO
647 FAIRVIEW RIDGE
PALESTINE, WV 26160**

**WILLIAM DUNBAR
1909 SPENCER RD.
RIPLEY, WV 25271**

**OR
CHERI TAYLOR &
TAMERA BUTTA
PO BOX 173
ELIZABETH, WV 26143**

**DAVID H. SUIT, ET UX,
KEITH MILLER
4485 PARKERSBURG RD.
REEDY, WV 25270**

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

07-11-13

Received

AUG - 2 2013

Office of Oil and Gas
WV Dept. of Environmental Protection **08/23/2013**

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) Buck Run of Spring Creek Quadrangle Burning Springs, WV 7.5'

Elevation 1029' County Wirt District Spring Creek

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

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

If so, please describe anticipated pit waste: Drill Cuttings

Will a synthetic liner be used in the pit? Yes X No _____ If so, what ml.? 10 or greater 20 ml

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? No

Drilling medium anticipated for this well? 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? _____

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 Stephens
Company Official (Typed Name) Monica Stephens
Company Official Title Executive Vice President

Received
400 - 2 2013
5-1-13

Subscribed and sworn before me this 29th day of July
Joan L. Beane

My commission expires Sept. 6, 2022

Office of Oil and Gas
WV Dept. of Environmental Protection

Notary Public

NOTARY PUBLIC OFFICIAL SEAL
JOAN L. BEANE
State of West Virginia
My Commission Expires Sept. 6, 2022
1244 HARBING BRANCH RD, CHARLESTON, WV 25311

08/23/2013

Form WW-9

Operator's Well No. HR-495

Proposed Revegetation Treatment: Acres Disturbed 0.68 Prevegetation pH 5.5

Lime 3 Tons/acre or to correct to pH 6.5

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


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

Seed Mixtures

| Area I | | Area II | |
|--|----------|--|----------|
| 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.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

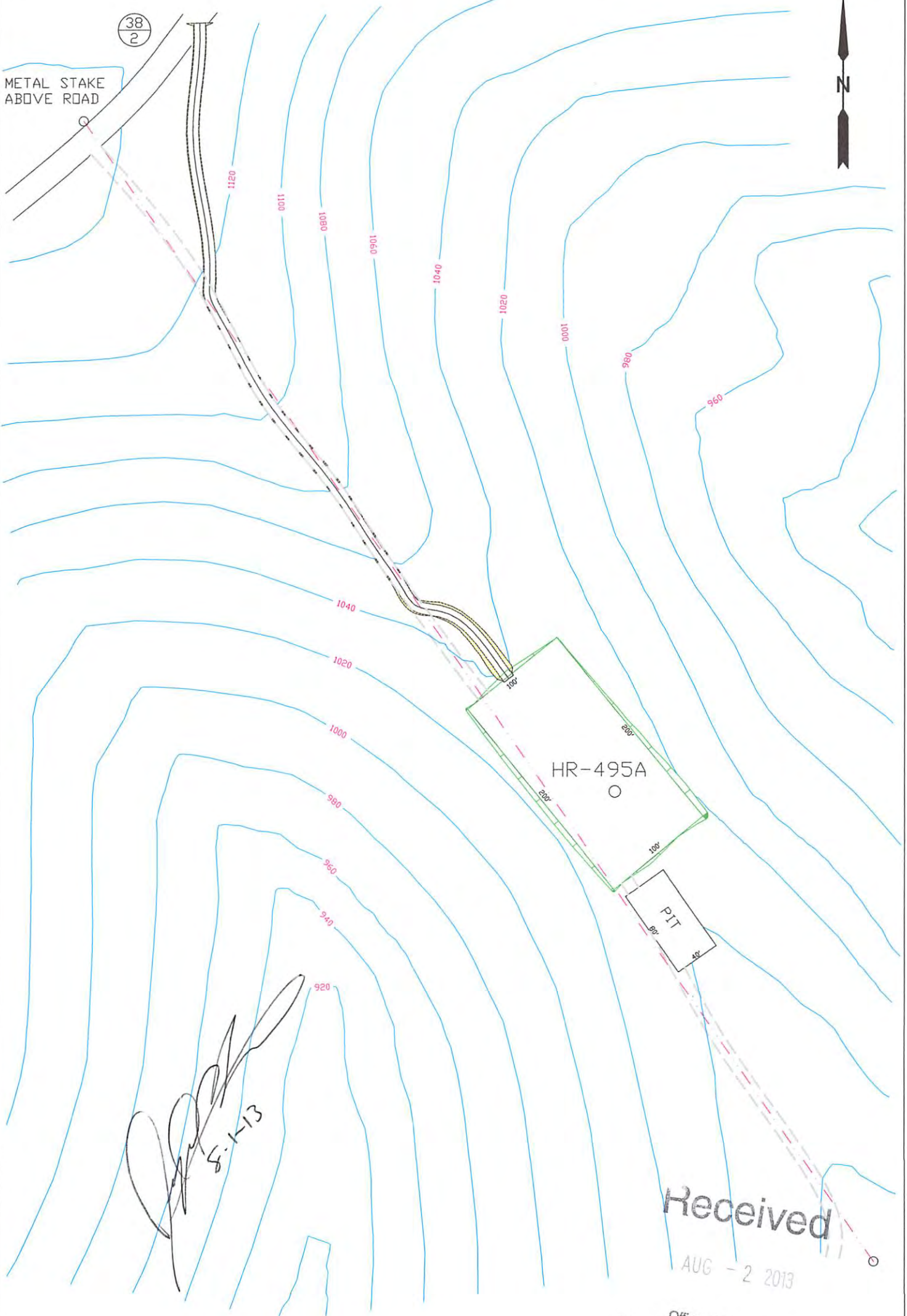
Comments: _____

Title: Inspects Date: 8-1-13

Field Reviewed? Yes No

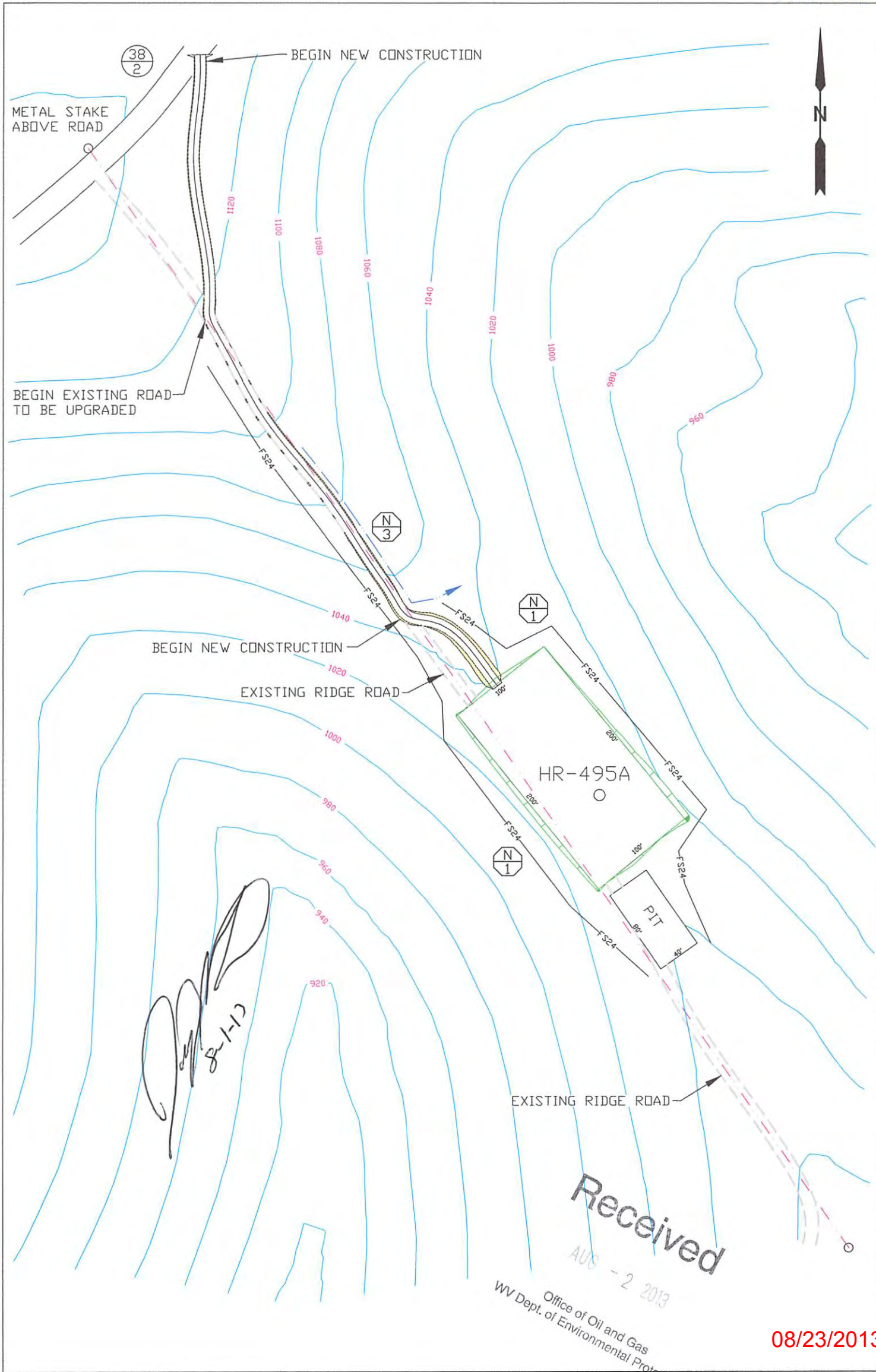
Received
AUG - 2 2013
Office of Oil and Gas
WV Dept. of Environmental Protection
08/23/2013

(38/2)
METAL STAKE ABOVE ROAD



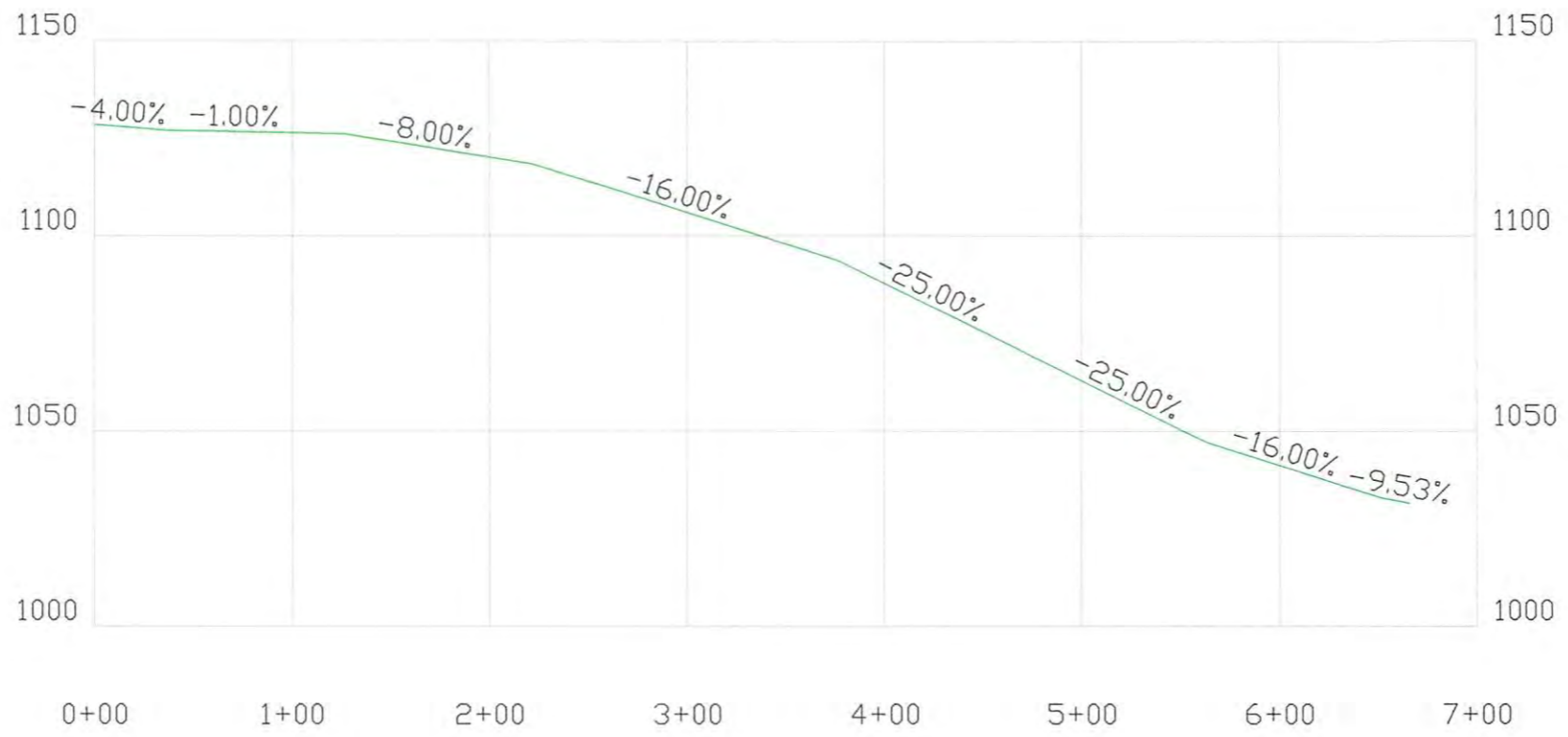
Office of Oil and Gas
WV Dept. of Environmental Protection
08/23/2013

| DISTURBED AREAS | | LEGEND | | SITE PLAN | |
|------------------------------|----------|--------|---------------|---|--|
| WELL PAD CONSTRUCTION | 0.50 AC. | | STREAM | HARD ROCK EXPLORATION PROPOSED WELL # HR-495A | |
| NEW ACCESS ROAD CONSTRUCTION | 0.18 AC. | | PROPERTY LINE | SPRING CREEK DISTRICT, WIRT COUNTY BURNING SPRINGS QUAD, WV 7.5' | |
| ADDITIONAL CLEARING | | | SLOPE AREA | JULY 12, 2013 | |
| | | | WETLAND | TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705 | |
| TOTAL DISTURBED AREA | 0.68 AC | | BUFFER AREA | PAGE <u>1</u> OF <u>1</u> | |



| LEGEND | | EROSION AND SEDIMENT CONTROL PLAN | |
|---|--|---|--|
| PROVIDE FLEXTERRA HIGH PERFORMANCE FLEXIBLE GROWTH MEDIUM (HP-FLM) ON CUT AND FILL SLOPES | STREAM | HARD ROCK EXPLORATION PROPOSED WELL # HR-495A | |
| LEVEL SPREADER | PROPERTY LINE | SPRING CREEK DISTRICT, WIRT COUNTY BURING SPRINGS QUAD, WV 7.5' | |
| DIVERSION DITCH | SLOPE AREA | JULY 12, 2013 | |
| BERM OUTLET | WETLAND | TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705 | |
| | FS24 24" COMPOST FILTER SOCK AS REQUIRED | PAGE <u>1</u> OF <u>1</u> | |

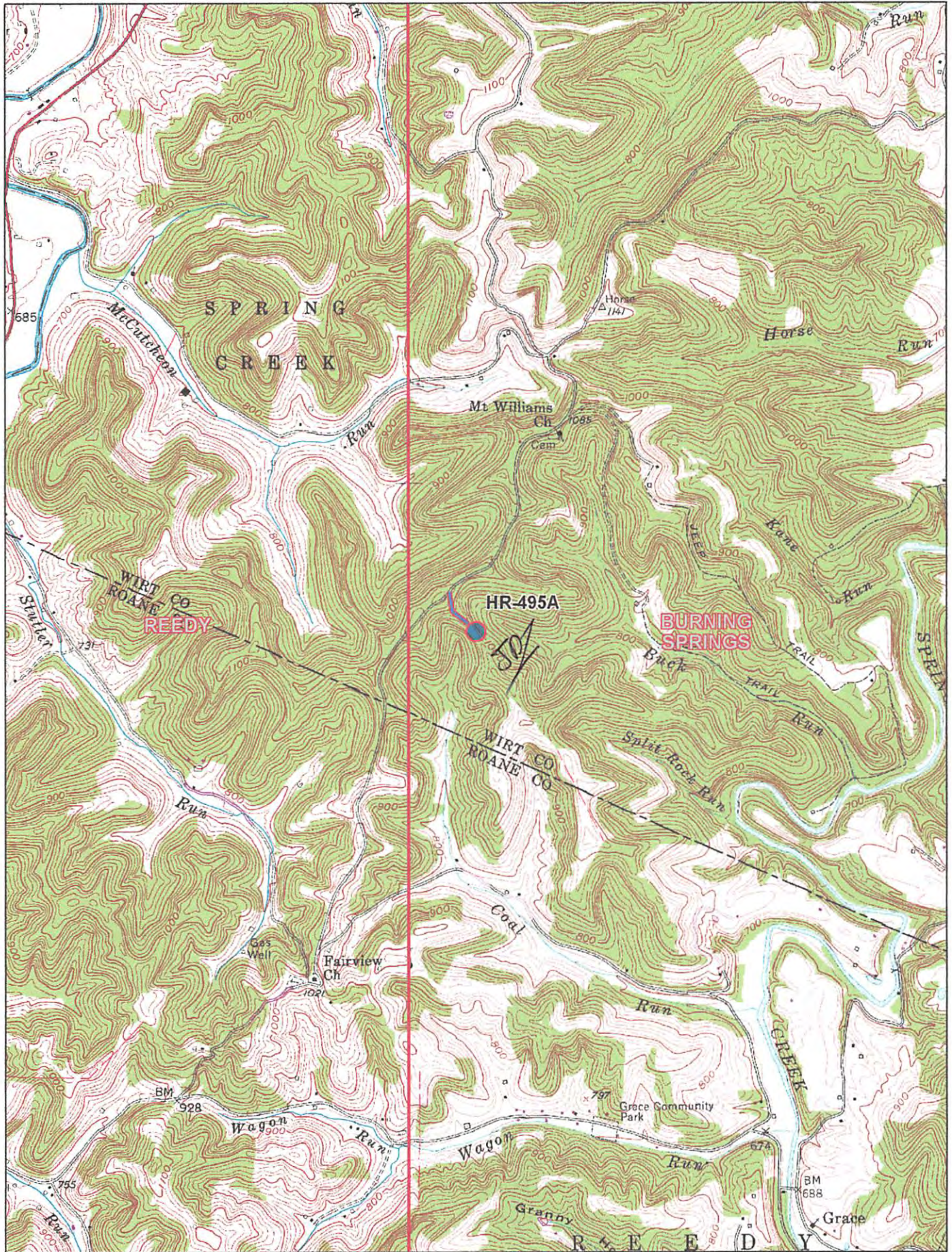
89E10501



Handwritten signature and date: 8-1-13

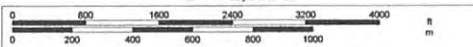
| |
|---|
| ROAD PROFILE |
| HARD ROCK EXPLORATION PROPOSED WELL # HR-495A |
| SPRING CREEK DISTRICT, WIRT COUNTY BURNING SPRINGS QUAD, WV 7.5' |
| JULY 12, 2013 |
| TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705 |
| PAGE <u>1</u> OF <u>1</u> |





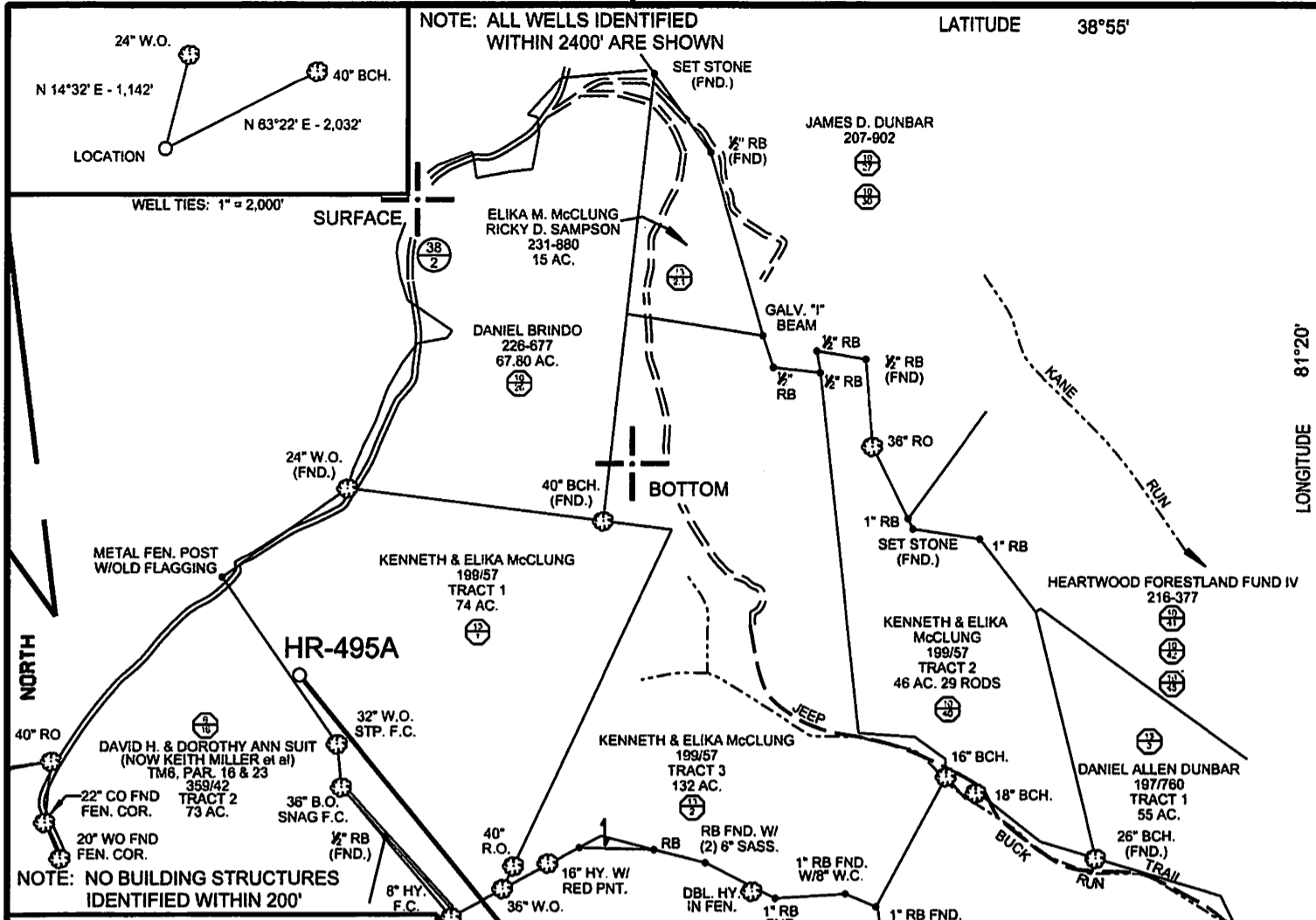
© 2001 DeLorme. XMap®. Data copyright of content owner.
 Zoom Level: 13-0 Datum: NAD27

Scale 1 : 25,000
 1" = 2,083 ft



08/23/2013

SURFACE ← 10,800' → 8,225' → SURFACE

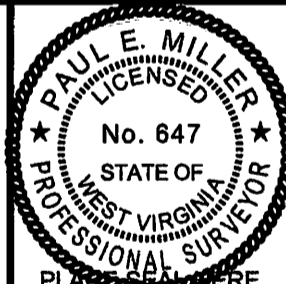


| SURFACE HOLE | |
|---|-----------------------------------|
| STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 | N - 695,843.35 : E - 1,894,341.82 |
| LATITUDE: (N) 38.9103259 | LONGITUDE: (W) 81.3712862 |
| UTM, NAD83 | 17 - 84W TO 78W, METERS |
| N - 4,306,900.218 : E - 467,822.806 | |
| BOTTOM HOLE | |
| STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 | N - 698,975.12 : E - 1,896,570.73 |
| LATITUDE: (N) 38.9189488 | LONGITUDE: (W) 81.3634970 |
| UTM, NAD83 | 17 - 84W TO 78W, METERS |
| N - 4,307,854.353 : E - 468,501.968 | |

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

FILE NO. HR-495A.DGN
 DRAWING NO. HR-495A
 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 JUNE 27, 2013
 OPERATOR'S WELL NO. HR-495A
 API WELL NO. 47 105 01368 #
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1029' WATER SHED BUCK RUN OF SPRING CREEK
 DISTRICT SPRING CREEK COUNTY WIRT
 QUADRANGLE BURNING SPRINGS, WV 7.5'

SURFACE OWNER KENNETH & ELIKA McClung ACREAGE 74
 OIL & GAS ROYALTY OWNER McClung; Howdyshell LEASE ACREAGE 176.2
 LEASE NO. 08/23/2013

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 8750' MO; 4560' TVD
 WELL OPERATOR HARD ROCK EXPLORATION, INC. DESIGNATED AGENT JAMES L. STEPHENS
 ADDRESS 1244 MARTINS BR. ROAD, CHARLESTON, WV 25312 ADDRESS SAME

FORM WW-6

COUNTY NAME
 PERMIT