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

July 30, 2014

WELL WORK PERMIT

Horizontal Well

This permit, API Well Number: 47-3503022, 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-466
Farm Name: HARRIS, ALAN L. & KARLA L.
API Well Number: 47-3503022
Permit Type: Horizontal Well
Date Issued: 07/30/2014

3503022H

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

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 within 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. This permit is being conditioned to address the possibility of flooding in the area of this well. Any tanks stored on this location must be securely anchored in cement to prevent the loss of tanks should a flood occur. In addition, cages must be placed around the well head to prevent debris from damaging the well head.

3503022H

WW - 2B
(Rev. 8/10)

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

35 5 362

1) Well Operator: Hard Rock Exploration, Inc.

494464205	Jackson	Washington	Gay, WV 7.5'
Operator ID	County	District	Quadrangle

2) Operator's Well Number: HR-466 3) Elevation: 635' ✓

CK 15484
650.00

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: 4200'

6) Proposed Total Depth: 7640' Feet Formation at Proposed Total Depth: Lower Huron

7) Approximate fresh water strata depths: 380'

8) Approximate salt water depths: 1595'

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-3600', Land curve-4540'MD/ 4200'TVD , 3700'VS, 7640'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	Fill -up (Cu. Ft.)
Conductor	13 3/8"	LS	37#	30'	30'	NA
Fresh Water	9 5/8"	LS	26#	570'	570'	CTS ✓
Coal						
Intermediate	7"	LS	19#	2150'	2150'	CTS ✓
Production	4 1/2"	N-80	11.6#	7640'	7640'	130cuft
Tubing						
Liners						

Jamie Stevens 4/3/2014

Packers: Kind: Hydraulic set open hole packers

Sizes: 4.5" X 6 5/8" 10k diff Seal

Depths Set Place 15 stg open hole packer system from 4060'MD- 7640' (238' spacing per stg) , 16th packer at 2450' Dump 130cuft cmt

3503022H

WW-2A
(Rev. 6-14)

1). Date: June 30. 2014
2.) Operator's Well Number HR-466
3.) API Well No.: State 47- County 035 - Permit 03022H

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 Alan L. & Karla Harris
Address 3861 Fisher Ridge Road
Kenna. WV 25248

(b) Name
Address

(c) Name
Address

6) Inspector Jamie Stevens
Address ~~HC 62 Box 1 C~~ 105 Kimberly Rd.
Kenna. WV 25248
Telephone (304)206-7775

5) (a) Coal Operator
Name None
Address

(b) Coal Owner(s) with Declaration
Name Alan L. & Karla Harris
Address 3861 Fisher Ridge Road
Kenna. WV 25248

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

X 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)
X 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.

NOTARY PUBLIC OFFICIAL SEAL
JOAN L. BEANE
State of West Virginia
My Commission Expires Sept. 6, 2022
1244 MARTINS BRANCH RD. CHARLESTON, WV 25312

Well Operator Hard Rock Exploration, Inc.
By: Monica Runner
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 30th day of June 2014

Joan L. Beane
Notary Public

My Commission Expires Sept. 6, 2022

RECEIVED
Office of Oil and Gas
JUL 14 2014
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 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

WW-2A Surface Waiver

3503022 14

SURFACE OWNER WAIVER

County Jackson

Operator Hard Rock Exploration, Inc.

Operator well number HR-466

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 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 sand 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

Signature Date 7/9/14

Alan L Harris
Print Name

FOR EXECUTION BY A CORPORATION, ETC.

Company Name RECEIVED Office of Oil and Gas

By

Its Date JUL 14 2014

Signature Date

WV Department of Environmental Protection

WW-2A Coal Waiver

3503022H

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Jackson
Operator Hard Rock Exploration, Inc. Operator's Well Number HR-466

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

_____ Date 7/9/14
Signature

FOR EXECUTION BY A CORPORATION, ETC.

Company Name _____
By _____
Its _____ Date

_____
Signature Date

RECEIVED
Office of Oil and Gas

JUL 14 2014

WV Department of
Environmental Protection

3503022H

SURFACE OWNER WAIVER

County Jackson

Operator Hard Rock Exploration, Inc.

Operator well number HR-466

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 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

Karla Harris
Signature

Date 7-8-14

Karla Harris
Print Name

FOR EXECUTION BY A CORPORATION, ETC.

Company Name RECEIVED
Office of Oil and Gas

By

Its

Date JUL 14 2014

Signature WV Department of Environmental Protection Date

3503022H

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Jackson
Operator Hard Rock Exploration, Inc. Operator's Well Number HR-466

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

Kara Harris
Signature

Date 7-8-14

FOR EXECUTION BY A CORPORATION, ETC.

Company Name _____
By _____
Its _____ Date

_____
Signature Date

RECEIVED
Office of Oil and Gas

JUL 14 2014

WV Department of
Environmental Protection

3503022H

WW-2A1
(Rev. 1/11)

Operator's Well Number HR-466

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
Freda Wilson	Hard Rock Exploration, Inc.	% of 1/8	268/415
Oscar and Cheryl Harris	Hard Rock Exploration, Inc.	% of 1/8	268/310
John Wolfe, AIF for Virginia Wolfe	Hard Rock Exploration, Inc.	% of 1/8	268/595
Emily Ann Starcher Pace	Hard Rock Land Services, LLC	% of 1/8	244/858
Roderick L. Parsons	Hard Rock Land Services, LLC	% of 1/8	249/492
Hard Rock Land Services, LLC	Hard Rock Exploration, Inc.	Misc. Assignment	466

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.

RECEIVED
Office of Oil and Gas
JUL 14 2014
WV Department of
Environmental Protection

Well Operator: Hard Rock Exploration, Inc.
By: Its: Executive Vice President

· 35030224

WW-2B1
(5-12)

Well No. HR-466

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.

RECEIVED
Office of Oil and Gas
JUL 14 2014
WV Department of
Environmental Protection

35030224

NOTICE

WATER TESTING
HARD ROCK EXPLORATION WELL NO. HR-466A

WATER SOURCE(S) IDENTIFIED WITHIN 2000' OF THE ABOVE PROPOSED WELL SITE.

Noble and Nancy Davis
P O Box 23
Ripley WV 25271

MUST TEST AT LEAST ONE (1).

Cindy Knopp
7802 Spencer Rd.
Leroy WV 25252

Oscar Harris
7422 Spencer Rd.
Leroy WV 25252
304 372-3957

Alan L. & Karla L. Harris
3861 Fisher Ridge Road
Kenna WV 25248
304 531-1297

Mike Ross, Inc.
P. O. Box 219
Coalton WV 26257

Craig E. & Lorna M. Canterbury
527 Frozen Camp Creek
Gay WV 25244

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

06-20-14

RECEIVED
Office of Oil and Gas
JUL 14 2014
7/9/2014
WV Department of
Environmental Protection

3503022H

WW-9
(5/13)

Page _____ of _____

API Number 47 - 035 - _____

Operator's Well No. HR-466

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) Little Mill Creek Quadrangle Gay, WV 7.5'

Elevation 629' County _____ District Washington

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~~ 20MIL,

Proposed Disposal Method For Treated Pit Wastes:

- ■ Land Application
- ■ Underground Injection (UIC Permit Number UIC2D0190460, 3416729685)
- ■ Reuse (at API Number 8704696, 8704701, 8704698, 8704703, 8704669, 3502970, 3502987, 8704700, ... - 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 Francisco

Company Official (Typed Name) Monica Francisco

Company Official Title Executive Vice President

RECEIVED
Office of Oil and Gas
JUL 14 2022
WV Department of Environmental Protection

Subscribed and sworn before me this 30th day of June, 2022

Joan L. Beane Notary Public

My commission expires Sept. 6, 2022

NOTARY PUBLIC OFFICIAL SEAL
JOAN L. BEANE
State of West Virginia
My Commission Expires Sept. 6, 2022
124 MARENS BRANCH ROAD
CHARLESTON, WV 25312

3503022H

Form WW-9

Operator's Well No. HR-466

Proposed Revegetation Treatment: Acres Disturbed 0.78 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: Jamie Stevens

Comments:

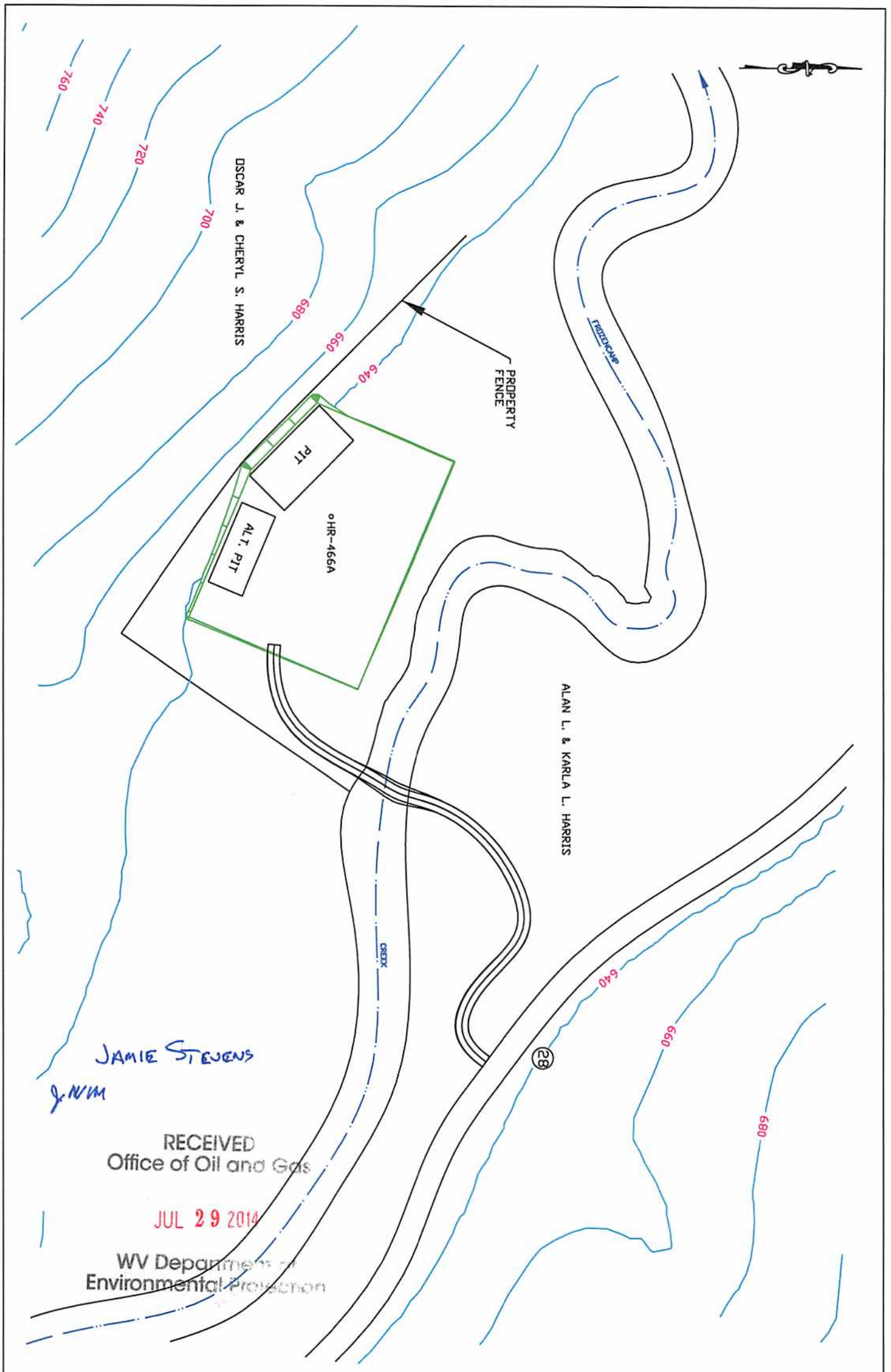
Title: Inspector Date: 7/3/2014

Field Reviewed? (✓) Yes ( ) No

RECEIVED
Office of Oil and Gas
JUL 14 2014
WV Department of
Environmental Protection

RECEIVED

3503022H



JAMIE STEVENS
JNM

RECEIVED
Office of Oil and Gas
JUL 29 2014
WV Department of
Environmental Protection

DISTURBED AREAS	
WELL PAD CONSTRUCTION	0.67 AC.
NEW ACCESS ROAD CONSTRUCTION	0.11 AC.
ADDITIONAL CLEARING	
TOTAL DISTURBED AREA	0.78 AC

LEGEND

- STREAM
- PROPERTY LINE
- SLOPE AREA
- WETLAND
- BUFFER AREA

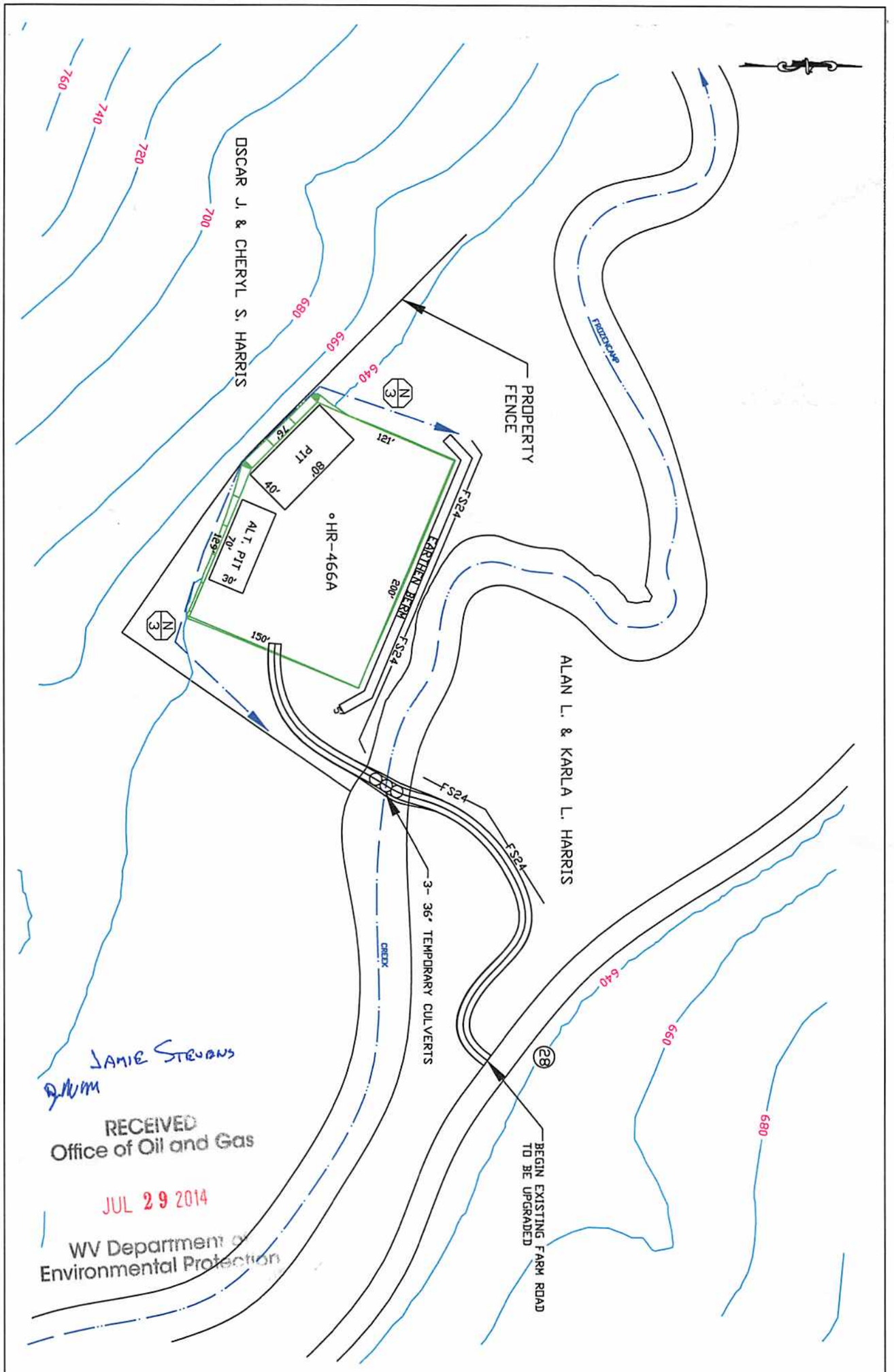
SITE PLAN

HARD ROCK EXPLORATION
PROPOSED WELL # HR-466A
WASHINGTON DISTRICT, JACKSON COUNTY
GAY QUAD, WV 7.5'
JULY 29, 2014

TRUE LINE SURVEYING
6211 FAIRVIEW DR.
HUNTINGTON, WV 25705

PAGE 1 OF 1

3503022H



JAMIE STEVENS

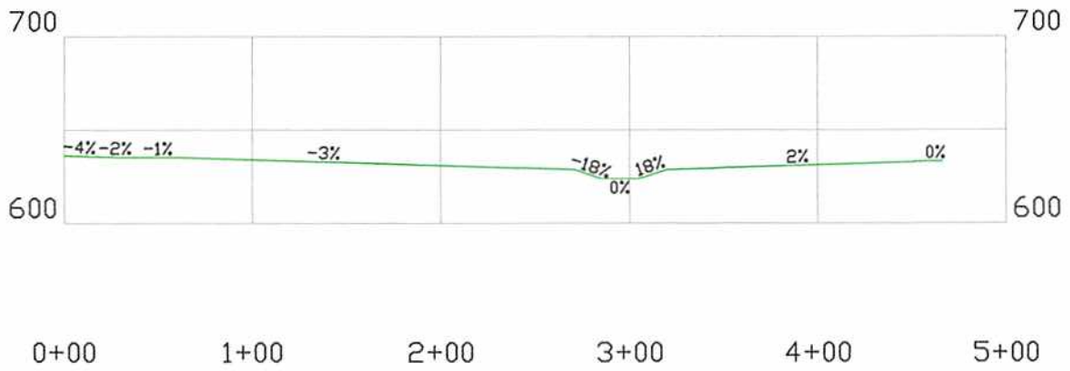
RECEIVED
Office of Oil and Gas

JUL 29 2014

WV Department of
Environmental Protection

LEGEND		EROSION AND SEDIMENT CONTROL PLAN
N1 PROVIDE FLEXTERRA HIGH PERFORAMNCE FLEXABLE GROWTH MEDIUM (HP-FLM) ON CUT AND FILL SLOPES	STREAM	HARD ROCK EXPLORATION PROPOSED WELL # HR-466AA
N2 LEVEL SPREADER	PROPERTY LINE	WASHINGTON DISTRICT, JACKSON COUNTY GAY QUAD, WV 7.5'
N3 DIVERSION DITCH	SLOPE AREA	JULY 29, 2014
N4 BERM OUTLET	WETLAND	TRUE LINE SURVEYING 6211 FAIRVIEW DR. HUNTINGTON, WV 25705
	FS24 — 24" COMPOST FILTER SOCK AS REQUIRED	PAGE 1 OF 1

35030224



7/3/2014

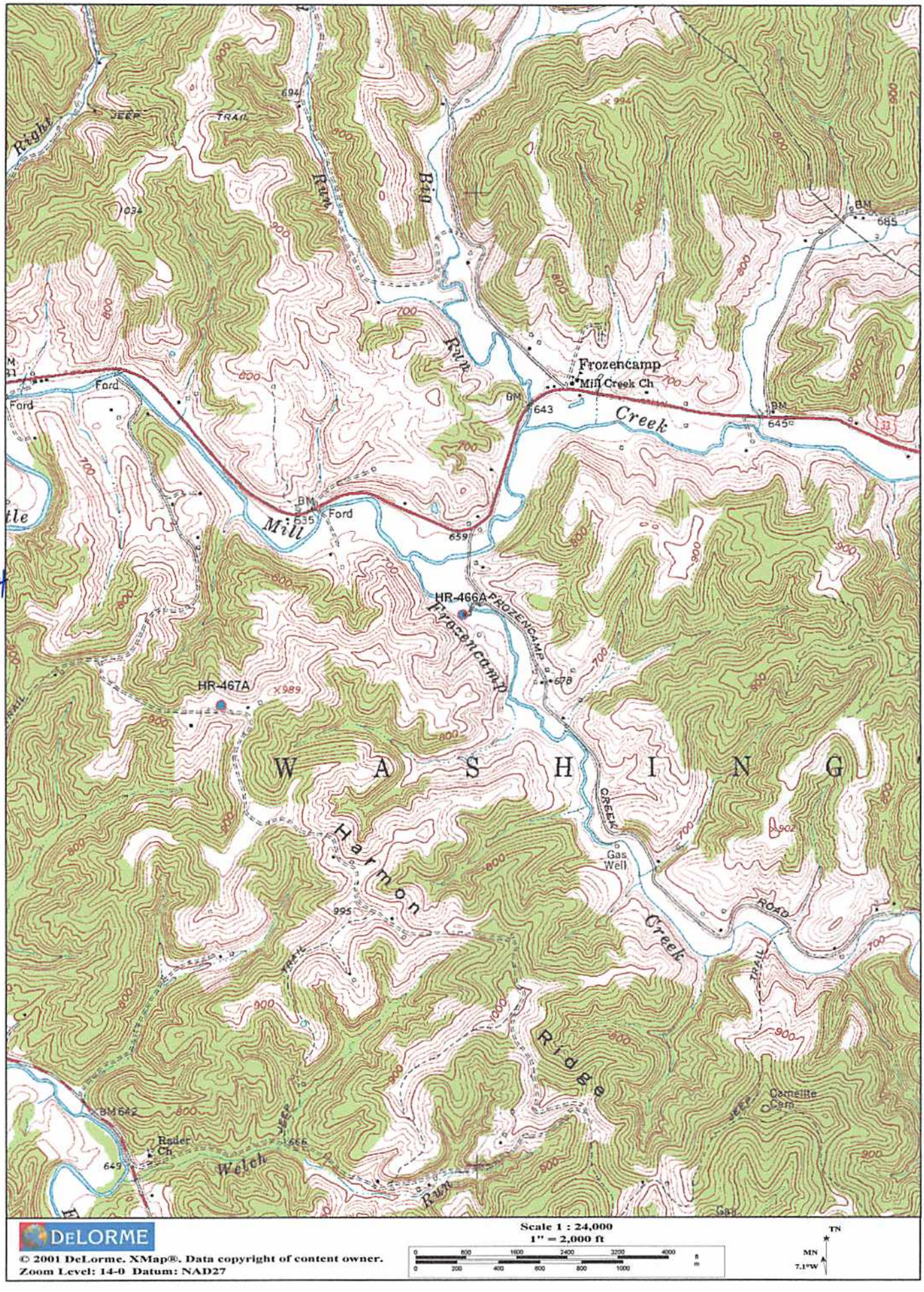
ROAD PROFILE

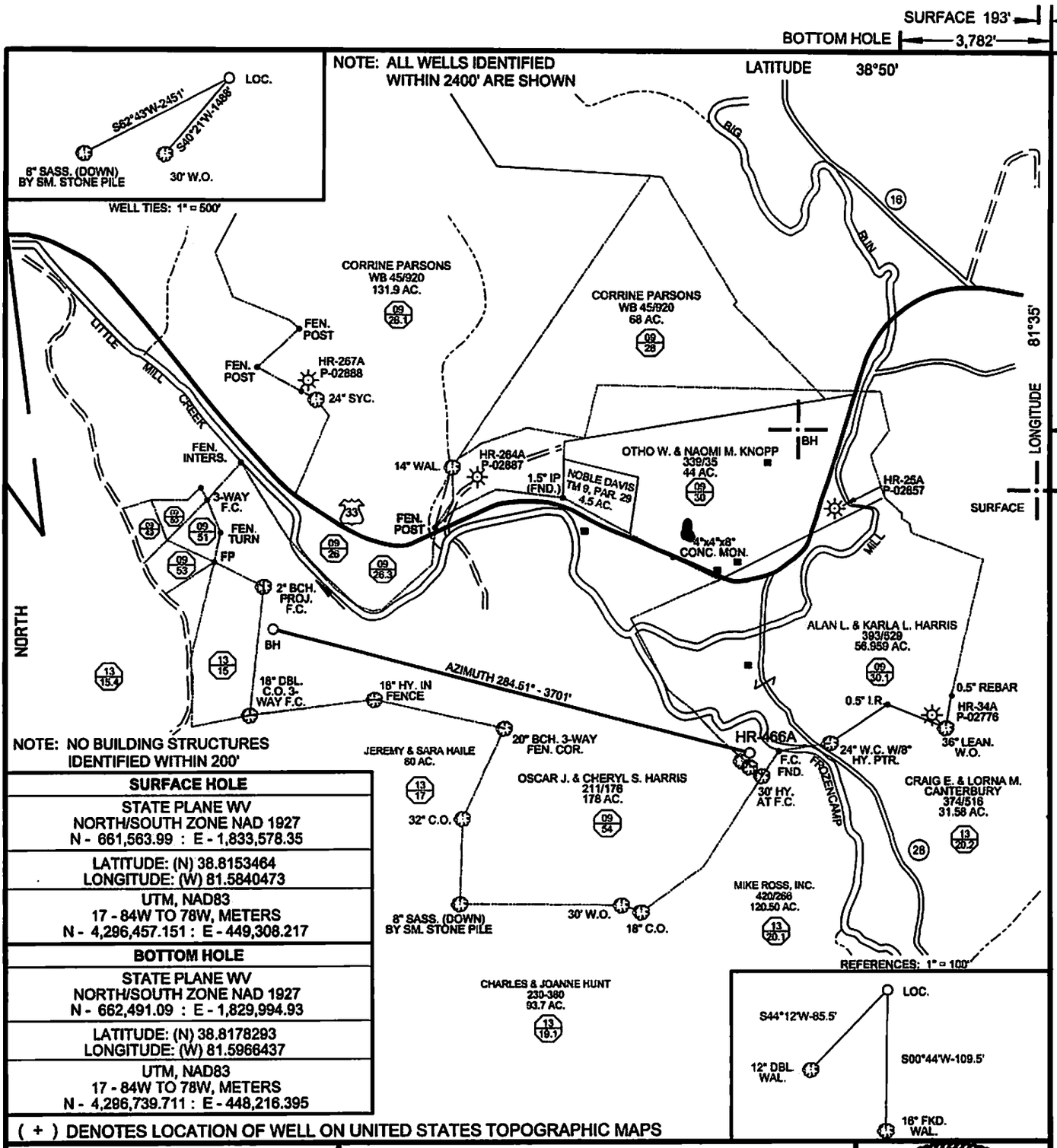
HARD ROCK EXPLORATION
PROPOSED WELL # HR-466A
WASHINGTON DISTRICT, JACKSON COUNTY
GAY QUAD, WV 7.5'

JUNE 20, 2014

TRUE LINE SURVEYING
6211 FAIRVIEW DR.
HUNTINGTON, WV 25705

3503022 H


Right
JEEP
TRAIL
694
Run
Big
1034
994
BM
685
Frozencamp
Mill Creek Ch
Ford
Ford
643
Run
Creek
645
Mill
BM
635
Ford
659
HR-466A
FROZENCAMP
678
HR-467A
989
W A S H I N G
Harmon
995
Creek
Gas Well
ROAD
TRAIL
Ridge
Carnelite Cem
BM642
Rader Ch
649
Welch
Run
JEEP
DELORME
© 2001 DeLorme. XMap®. Data copyright of content owner.
Zoom Level: 14-0 Datum: NAD27
Scale 1 : 24,000
1" = 2,000 ft
TN
MN
7.1°W



NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

SURFACE HOLE
STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 N - 661,563.99 : E - 1,833,578.35
LATITUDE: (N) 38.8153464 LONGITUDE: (W) 81.5840473
UTM, NAD83 17 - 84W TO 78W, METERS N - 4,296,457.151 : E - 449,308.217
BOTTOM HOLE
STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 N - 662,491.09 : E - 1,829,994.93
LATITUDE: (N) 38.8178293 LONGITUDE: (W) 81.5966437
UTM, NAD83 17 - 84W TO 78W, METERS N - 4,296,739.711 : E - 448,216.395

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

FILE NO. HR-466A.DGN
DRAWING NO. HR-466A REV.
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

PAUL E. MILLER LICENSED No. 647 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR
PLACE SEAL HERE

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

DATE REVISED MAY 20, 20 14
OPERATOR'S WELL NO. HR-466A
API WELL NO.
47 (STATE) 035 (COUNTY) 03022 H (PERMIT)

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 635' WATER SHED FROZENCAMP CREEK OF LITTLE MILL CREEK
DISTRICT WASHINGTON COUNTY JACKSON
QUADRANGLE GAY, WV 7.5'
SURFACE OWNER ALAN L. & KARLA L. HARRIS ACREAGE 59.959
OIL & GAS ROYALTY OWNER Wilson, Harris, Intstate, Paul, Paisons LEASE ACREAGE 235 -
LEASE NO. _____
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION LOWER HURON ESTIMATED DEPTH 7640' MD; 4200' TVD
WELL OPERATOR HARD ROCK EXPLORATION, INC. DESIGNATED AGENT JAMES L. STEPHENS
ADDRESS 1244 MARTINS BR. RD., CHARLESTON, WV 25312 ADDRESS SAME

FORM WW-6

COUNTY NAME

PERMIT