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

February 13, 2015

WELL WORK PERMIT

Secondary Recovery Well

This permit, API Well Number: 47-8704762, issued to HG ENERGY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: E. SMITH 118
Farm Name: FISHER, FREDDIE ET AL
API Well Number: 47-8704762
Permit Type: Secondary Recovery Well
Date Issued: 02/13/2015

8704762S

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 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 on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

8704762S

FORM WW-3 (B)
1/12

1) Date: 01/16/2015
2) Operator's Well No. Elkannah Smith 118
3) API Well No.: 47 - Roane - ____
State County Permit
4) UIC Permit No. UIC2R08704AP

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

5) WELL TYPE: Liquid Injection [✓] / Gas Injection (not storage) [ ] / Waste Disposal [ ]
6) LOCATION: Elevation: 1064' Watershed: Laurel Fork
District: Smithfield 5 County Roane Quadrangle Looneyville 7.5' 444
7) WELL OPERATOR: HG Energy, LLC
Address 5260 Dupont Road
Parkersburg, WV 26101
8) DESIGNATED AGENT Diane White
Address 5260 Dupont Road
Parkersburg, WV 26101
9) OIL & GAS INSPECTOR TO BE NOTIFIED
Name Ed Gainer
Address P. O. Box 821
Spencer, WV ~~26201~~ 25276
10) DRILLING CONTRACTOR
Name To Be Determined Upon Approval of Permit
Address ____
11) PROPOSED WELL WORK Drill [✓] / Drill deeper [ ] / Redrill [ ] / Stimulate [✓]
Plug off old formation [ ] / Perforate new formation [ ] Convert [ ]
Other physical change in well (specify) ____
12) GEOLOGIC TARGET FORMATION Big Injun Depth 2115 Feet (top) to 2135 Feet (bottom)
13) Estimated Depth of Completed Well, (or actual depth of existing well): 2215 TVD, 2760 TMD Feet
14) Approximate water strata depths: Fresh 380 Feet Salt 1605 Feet
15) Approximate coal seam depths: NA
16) Is coal being mined in the area? Yes ____ No X
17) Virgin reservoir pressure in target formation 1250 psig Source Estimated
18) Estimated reservoir fracture pressure 2650 psig (BHFP)
19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 25 BBL Bottom hole pressure 2400 psi
20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES Fresh water, produced water, bactericides and other chemicals as needed to maintain water quality and improve oil recovery.
21) FILTERS (IF ANY) Cartridge filters and/or coal bed filters
22) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL ____
23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS Size	Grade	Weight per ft.	New	Used	FOOTAGE INTERVALS For Drilling	Left In Well	CEMENT FILL-UP OR SACKS (CU. FT.)	PACKERS
Conductor									Kinds
Fresh Water	7"	LS ST&C	17#			500'	500'	CTS	
Coal									Sizes
Intermediate									2.375" x 4.5"
Production	4 1/2"	J-55	10.5#			2700'	2700'	200 sks	Depths set
Tubing	2 3/8"	J-55	4.6#			2450'	2450'		2350'
Liners									Perforations
									Top Bottom

24) APPLICANT'S OPERATING RIGHTS were acquired from Elkannah, et ux
by deed ____ / lease X / other contract ____ / dated 02/28/1906 of record in the
Roane County Clerk's office in lease Book 8 Page 435

1/20/15

Received
Office of Oil & Gas
JAN 22 2015

87047625
CK 2910
$ 650.00

FORM WW-3 (A)
1/12

1) Date: January 16, 2015
2) Operator's Well No. Elkannah Smith 118
3) API Well No.: 47 - _____ - _____
State County Permit
4) UIC Permit No. UIC2R08704AP

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OF WASTE DISPOSAL WELL WORK PERMIT APPLICATION
FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS,

5) Surface Owner(S) To Be Served
(a) Name Freddie Fisher
Address 4513 Clay Road
Spencer, WV 25276
(b) Name James Shamblin
Address 4292 Clay Road
Spencer, WV 25276
(c) Name _____
Address _____

6) Inspector Ed Gainer
Address P. O. Box 821
Spencer, WV 25276
Telephone 304-389-7582

7) (a) Coal Operator
Name _____
Address _____

7) (b) Coal Owner(S) With Declaration Of Record
Name _____
Address _____
Name _____
Address _____

7) (c) Coal Lessee with Declaration Of Record
Name _____
Address _____

TO THE PERSONS NAMED ABOVE: You should have received this form and the following documents

(1) The Application For A Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work;
(2) The plat (surveyor's map) showing the well location on Form WW-6; and
(3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

The date proposed for the first injection or waste disposal is _____ 20 15 .

THE REASON YOU HAVE RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION [(FORM WW-3(B)] DESIGNATED TO YOU. HOWEVER YOU ARE NOT REQUIRED TO TAKE ACTION AT ALL.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to a well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of the mailing or delivery to the Chief.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document 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 HG Energy, LLC
Address 5260 Dupont Road
Parkersburg, WV 26101
By: Diane White
Its: Agent
Signature: Diane White

Received
Office of Oil & Gas
JAN 22 2015

8704762-S

7013 2630 0001 9028 9324

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

Postage	$ 1.40
Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 7.40

Postmark Here
USPS PARKERSBURG, WV JAN 20 2015
ES 118

Sent To: Freddie Fisher
Street, Apt. No.; or PO Box No.: 4513 Clay Road
City, State, ZIP+4: Spencer WV 25276

PS Form 3800, August 2006 — See Reverse for Instructions

7013 2630 0001 9028 9317

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

Postage	$ 1.40
Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 7.40

Postmark Here
USPS PARKERSBURG, WV JAN 20 2015
ES118

Sent To: James Shamblin
Street, Apt. No.; or PO Box No.: 4292 Clay Road
City, State, ZIP+4: Spencer WV 25276

PS Form 3800, August 2006 — See Reverse for Instructions

HG ENERGY, LLC 03-11
304-422-6565
5260 DUPONT RD
PARKERSBURG, WV 26101

2910
56-250/442
02

DATE 1-19-2015

PAY TO THE ORDER OF WV D.E.P. $ 650.00

Six Hundred Fifty Dollars and 00/100 ---------- DOLLARS

Security Features Details on Back

Peoples BANK
Working Together. Building Success.
800.374.6123
peoplesbancorp.com

FOR Permit - Elkannah Smith No. 118

⑈002910⑈ ⑆000 00 100⑆ ⑆000 00 100⑆ ⑈

Received
Office of Oil & Gas
JAN 22 2015

8704762S

WW-2B1
(5-12)

Well No. Elkannah Smith 118

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 Sturm Environmental
Sampling Contractor Sturm Environmental

Well Operator HG Energy, LLC
Address 5260 Dupont Road
Parkersburg, WV 26101
Telephone 304-420-1119

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.

Surface Owners With Water Sources Identified for Sampling / Analysis:

* Freddie Fisher
4513 Clay Road
Spencer WV 25276

* James C Shamblin
4292 Clay Road
Spencer WV 25276

* Caroline Miller
4326 Clay Road
Spencer WV 25276

8704762S

WW-9
Rev. 5/10

Page 435 of _____
API Number 47 - _____ - _____
Operator's Well No. Elkannah Smith 118

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name HG Energy, LLC OP Code 494497948

Watershed Laurel Fork Quadrangle Looneyville 7.5'

Elevation 1064' County Roane District Smithfield

Description of anticipated Pit Waste: Fluids encountered while stimulating subject well

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

Will a synthetic liner be used in the pit? Yes . If so, what mil.? 20 mil

Proposed Disposal Method For Treated Pit Wastes:

x Land Application
X Underground Injection (UIC Permit Number 25-561)
_____ Reuse (at API Number _____)
_____ Off Site Disposal (Supply form WW-9 for disposal location)
_____ Other (Explain _____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air, Fresh Water
-If oil based, what type? Synthetic, petroleum, etc. NA
Additives to be used? Water, Soap, KCl
Will closed loop system be used ? No
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 Native soil, cement, 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 Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

Received
Office of Oil & Gas
JAN 22 2015

Subscribed and sworn before me this 16th day of January , 20 15

S. Dianne Dulaney
Notary Public

My commission expires Oct. 4, 2016

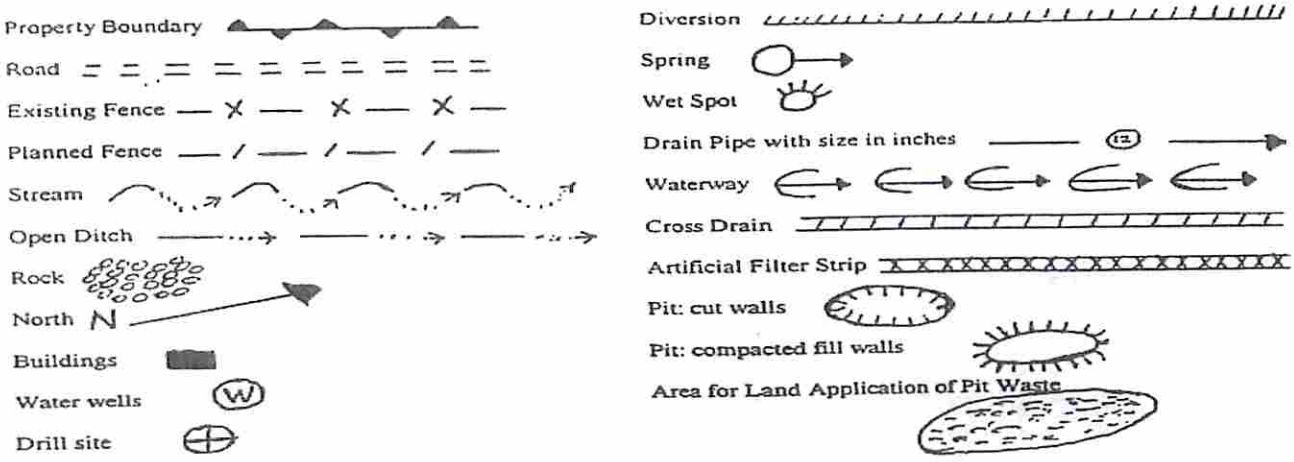
OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
S. DIANNE DULANEY
P O Box 5519
Vienna, West Virginia 26105
My Commission Expires Oct 4, 2016

8704762S

Form WW-9

Operator's Well No. Elkannah Smith 118

LEGEND



Proposed Revegetation Treatment: Acres Disturbed 1.8 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

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

Mulch Straw 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

Proper sediment control should be in place at all times.

Attach:
Drawing(s) of road, location,pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

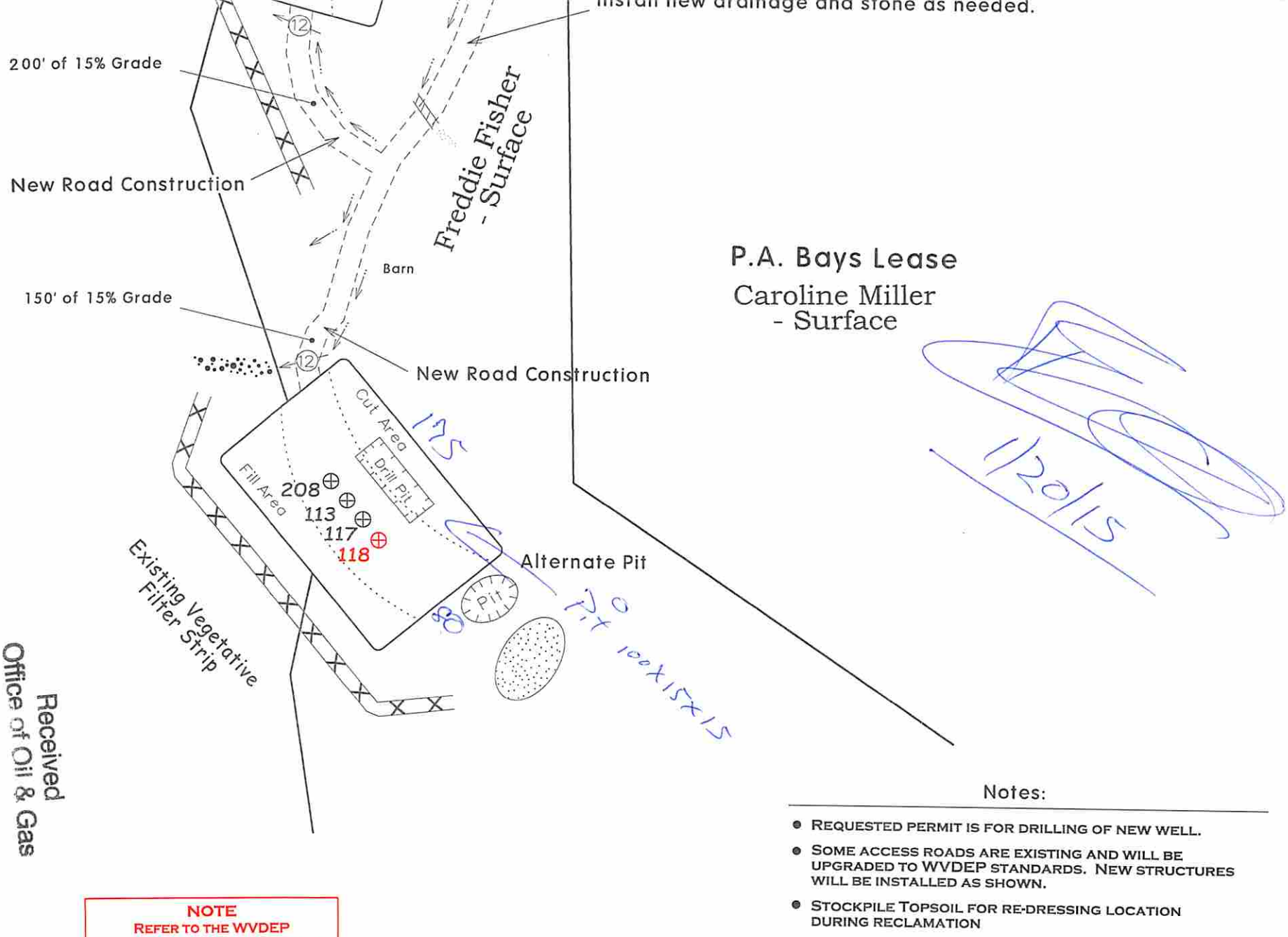
Plan Approved by: _____

Comments: _____

Title: Inspector Date: 1/20/15

Field Reviewed? (X Roane) Yes ( ) No

Received
Office of Oil & Gas
JAN 22 2015



Received
Office of Oil & Gas
JAN 22 2015

NOTE
REFER TO THE WVDEP EROSION AND SEDIMENT CONTROL FIELD MANUAL VER. MAY 2012 FOR BMPS CONTROLLING EROSION AND SEDIMENT FROM SOIL-DISTURBING OPERATIONS.

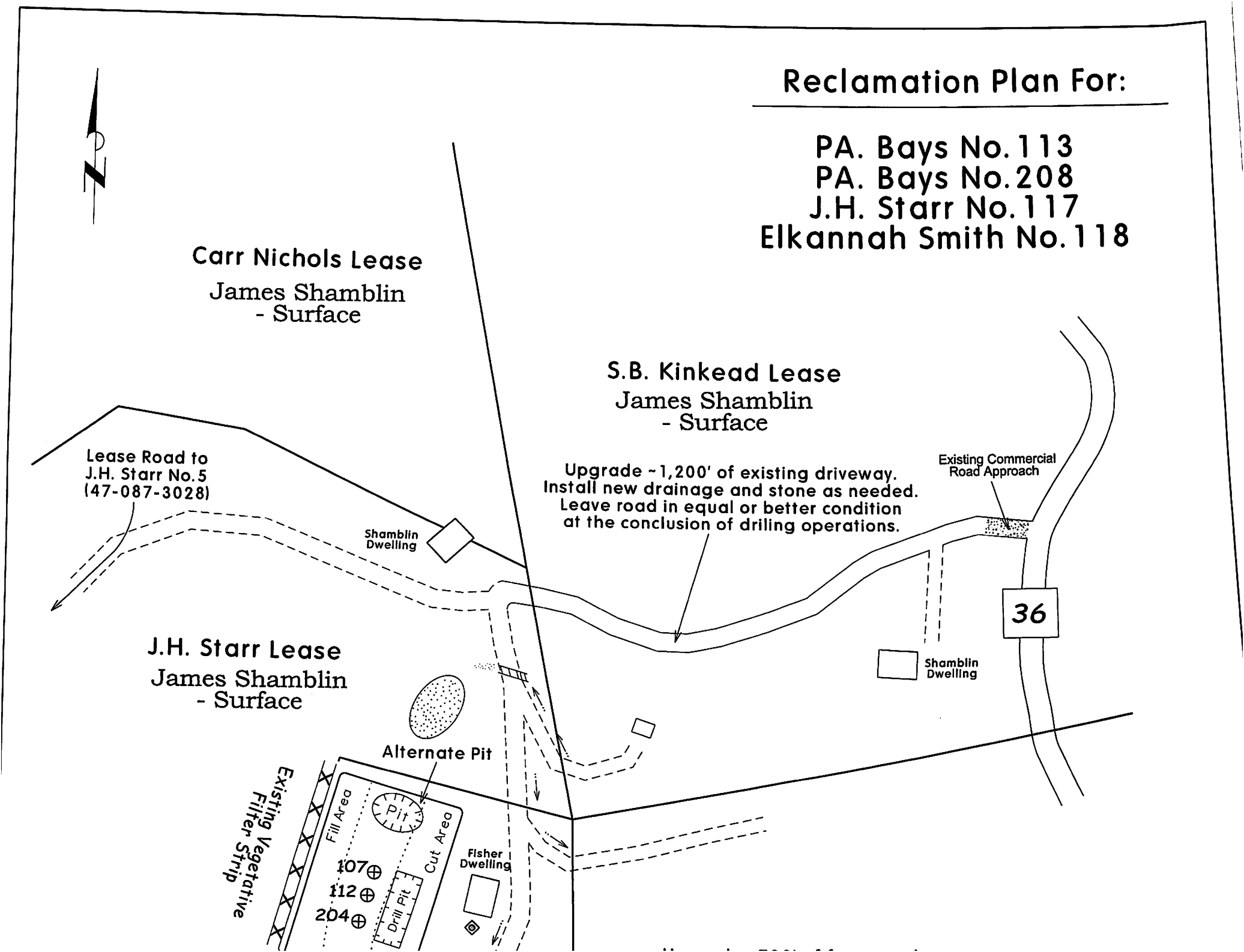
Notes:

- REQUESTED PERMIT IS FOR DRILLING OF NEW WELL.
- SOME ACCESS ROADS ARE EXISTING AND WILL BE UPGRADED TO WVDEP STANDARDS. NEW STRUCTURES WILL BE INSTALLED AS SHOWN.
- STOCKPILE TOPSOIL FOR RE-DRESSING LOCATION DURING RECLAMATION
- ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- ALL ROAD GRADES <5% EXCEPT AS NOTED.
- LOCATION OF DRILL PIT MAY BE CHANGED BASED ON AS-BUILT CONSIDERATIONS.
- DRAWING NOT TO SCALE.

8704

Reclamation Plan For:

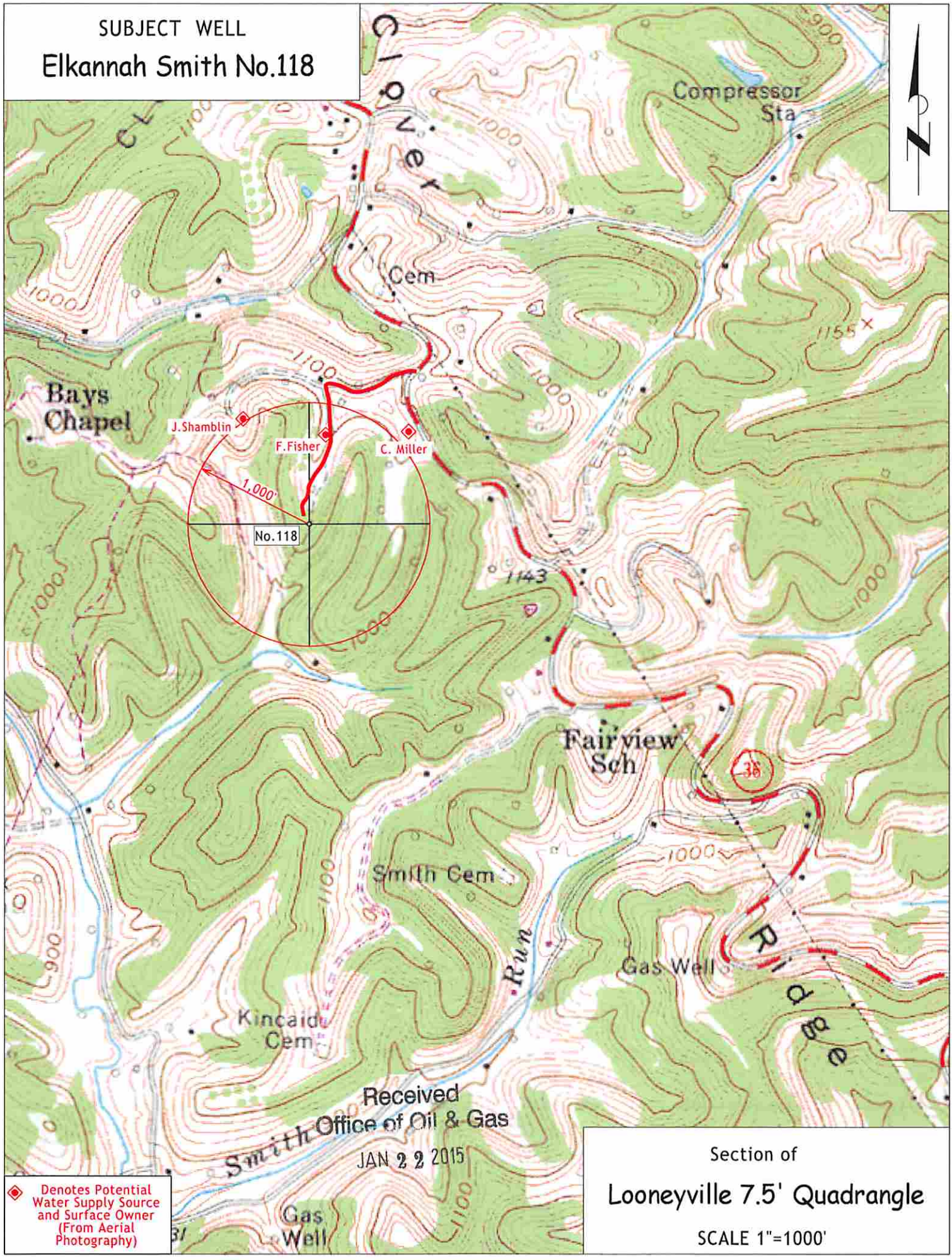
PA. Bays No. 113
PA. Bays No. 208
J.H. Starr No. 117
Elkannah Smith No. 118



87047625

SUBJECT WELL

Elkannah Smith No.118



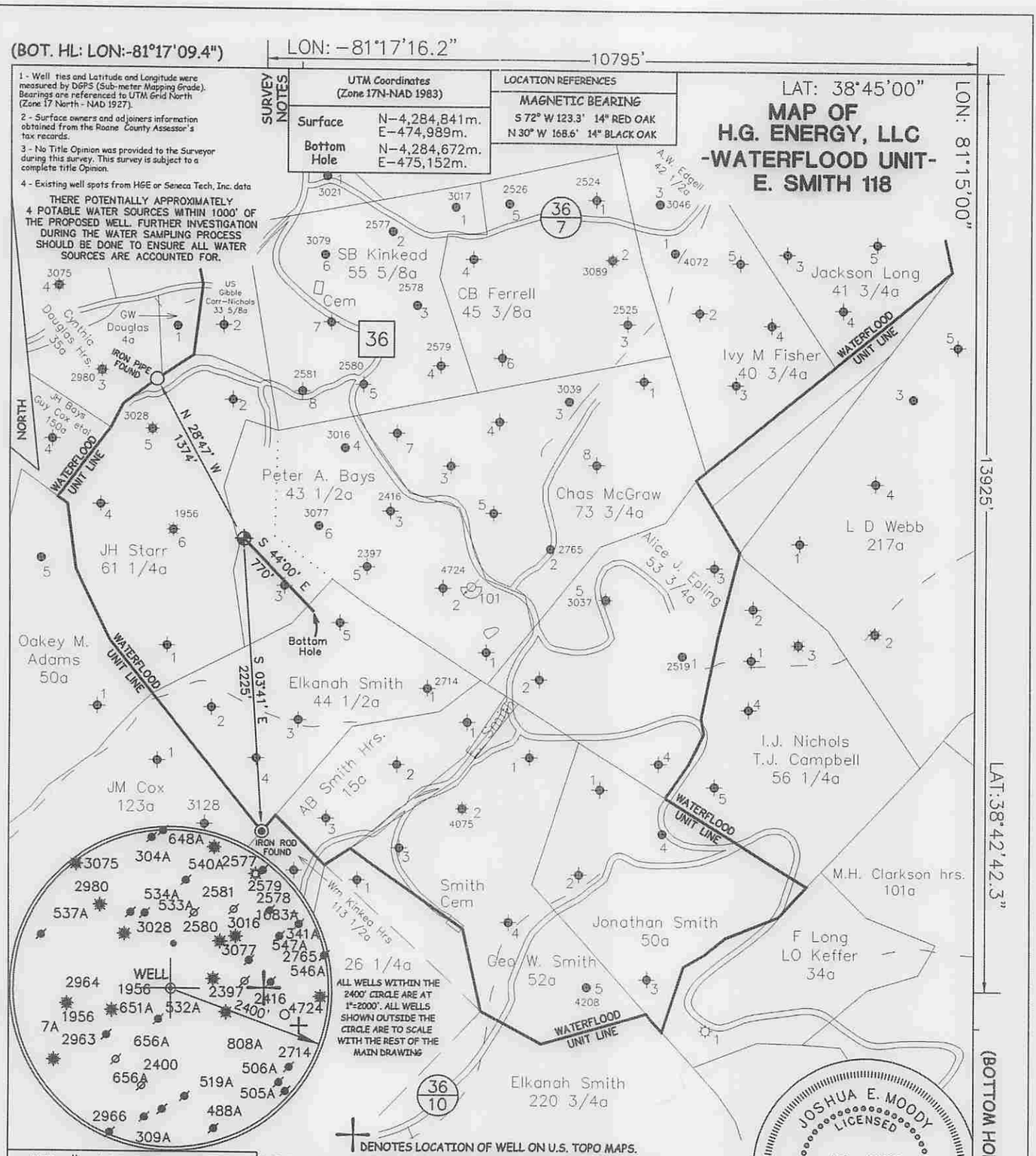
Received
Office of Oil & Gas
JAN 22 2015

◈ Denotes Potential Water Supply Source and Surface Owner (From Aerial Photography)

Section of

Looneyville 7.5' Quadrangle

SCALE 1"=1000'



JOB # 14-033
DRAWING # 14CLOVER FOLDER
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEV. 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 PERSCRIBED BY THE DEPTARTMENT OF ENVIRONMENTAL PROTECTION.

JOSHUA E. MOODY, P.S. 2020

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

MOODY LAND SURVEYING, LLC
ST. MARYS, WV 26170

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

DATE 12/15/14
OPERATOR'S WELL E. SMITH # 118

WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION X WASTE DISPOSAL ___ HORIZONTAL ___
(IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
LOCATION: ELEVATION 1064' WATERSHED LAUREL FORK
DISTRICT SMITHFIELD COUNTY ROANE
QUADRANGLE LOONEYVILLE 7.5'

API WELL # 47 - 087 - 047625
STATE COUNTY PERMIT

SURFACE OWNER FREDDIE FISHER ET AL ACREAGE 33.00 ACRES +/-
OIL & GAS ROYALTY OWNER FREEHOLD COMPANY ET AL LEASE ACREAGE 50.00 ACRES +/-
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WELL WILL BE DRILLED DIRECTIONALLY (S 44°00' E 770')
PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
TARGET FORMATION BIG INJUN ESTIMATED DEPTH TVD=2,215' MD=2,760'
WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT DIANE WHITE
ADDRESS 5260 DuPONT ROAD PARKERSBURG, WV 26101 ADDRESS 5260 DuPONT ROAD PARKERSBURG, WV 26101

COUNTY NAME PERMIT

FORM WW-6 LEASE # 60232-50