



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

May 15, 2014

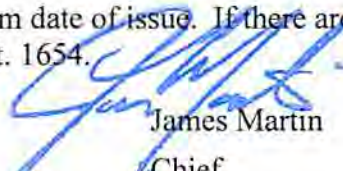
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-2101484, issued to HARPER, HAYDEN ENERGY KA, 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: 1
Farm Name: BALL, LAURA
API Well Number: 47-2101484
Permit Type: Plugging
Date Issued: 05/15/2014

Promoting a healthy environment.

05/16/2014

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. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. 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.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged within two years of the date of issuance of this permit.

1) Date February 20, 2014
2) Operator's
Well No. L. Ball #1
3) API Well No. 47-021 - 01484

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production X or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 710' Watershed Little Kanawha River
District DeKalb County Gilmer Quadrangle Glenville

6) Well Operator Hayden & Harper KA, LLC 7) Designated Agent Brett McDonough
Address 1001 Moorehead Square Dr. Suite 350 Address 1001 Moorehead Square Dr. Suite 350
Charlotte, NC 28203 Charlotte, NC 28203

8) Oil and Gas Inspector to be notified Name Bryan Harris
Address P.O Box 157
Volga, WV 26238
9) Plugging Contractor Name Patchwork Oil & Gas, LLC
Address 8165 Elizabeth Pike
Elizabeth, WV 26143

10) Work Order: The work order for the manner of plugging this well is as follows:

See attached procedure and diagram on the following page, L. Ball #1 47-021-01484.

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.
Work order approved by inspector Bryan O'Harris

RECEIVED
Office of Permitted
Oil and Gas
MAR 26 2014
Date 3/20/14
Department of
Environmental Protection
WV Department of
Environmental Protection
05/16/2014

L. Ball #1
47-021-01484

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Office of Oil and Gas

MAY 7 2014

WV Department of
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(2.5) 50lb sacks of 6% gel used
(161) 100lb sacks of cement

Elevation 710'

CEMENT

PULL 16" CONDUCTOR (NOT CEMENTED)
GEL HOLD. SET BOTTOM HOLE PLUG
FROM 1587' - 1300'. CUT & PULL
4 1/2" CASING @ FREE POINT
≈ 1300'. IF 4 1/2" IS PULLED DOWN
TO 1300', SET 700' CEMENT PLUG
FROM 700' TO SURFACE. (INCLUDES ELEV. PLUG)
(IF 4 1/2" IS CUT & PULLED
FROM DIFFERENT DEPTH, THEN
SET 100' CEMENT PLUG ACROSS
CASING CUT.)

Attempt to rip casing at 1300'.

2

1

1587'

Plugs
Plug #2 650-Surface
Plug #1 1300'-1587' (bottom & gas show)

Cement plugs are at a minimum of 100'
Class A Cement with no more than 3%
CaCl₂ and no other additives.

Gel spacers between all cement plugs
must be fresh water with at least 6%
Bentonite by weight

: Cement
: Gel
: Bridge Plug (if any)

2101484P



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Quadrangle Glenville

Permit No. GIL-1484

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company Sinstar Development Company
 Address Box 350, Spencer, West Virginia
 Farm Laura Ball Acres 152
 Location (waters) Little Kanawha
 Well No. 1 Elev. 710
 District DeKalb County Gilmer
 The surface of tract is owned in fee by Ball et al
 Address Glenville, W.Va.
 Mineral rights are owned by Same
 Address _____
 Drilling commenced 12-3-62
 Drilling completed 1-1-63
 Date Shot No From _____ To _____
 With _____
 Open Flow /10ths Water in Show Inch _____
 /10ths Merc. in _____ Inch _____
 Volume Show Cu. Ft. _____
 Rock Pressure 40# lbs. 24 hrs.
 Oil None hbls., 1st 24 hrs.
 WELL ACIDIZED No

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16	16'	16'	Kind of Packer _____
13			
10			Size of _____
8 1/2	189'	0	
6 3/4	610'	0	Depth set _____
5 3/4 - 4 1/2	1525'	1525'	
3			Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

WELL FRACTURED 700 barrel H₂O and 30,000 sand

RESULT AFTER TREATMENT 800,000 wft

ROCK PRESSURE AFTER TREATMENT 680# -- 24 hrs.

Fresh Water None Feet _____ Salt Water None Feet _____

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Soil			0	5			
Slate			5	15			
Sand			15	35			
Red Rock			35	65			
Slate			65	110			
Red Rock			110	129			
Slate			129	170			
Red Rock			170	215			
Slate			215	245			
Red Rock			245	310			
Sand			310	330			
Slate			330	355			
Sand			355	425			
Slate			425	525			
Sand			525	565			
Slate			565	612			
Sand			612	620			
Slate			620	670			
Sand			670	816			
Slate			816	896			
Sand			896	930			
Slate			930	972			
Sand			972	982			
Slate			982	1155			
Sand			1155	1185			
Slate			1185	1250			
Sand			1250	1265			
Slate			1265	1295			
Sand			1295	1370			



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Office of Oil and Gas

MAR 26 2014

WV Department of
Environmental Protection

(over)

05/16/2014

2101484P

Formation	Color	Hard or Soft	Top <i>8</i>	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate			1370	1375	Show of gas	1355'	
Lime			1375	1399			
Sand			1399	1414			
Slate			1414	1424			
Lime			1424	1555			
Sand			1555	1586			
Slate			1586	1587			
Total Depth 1587'							

RECEIVED
Office of Oil and Gas

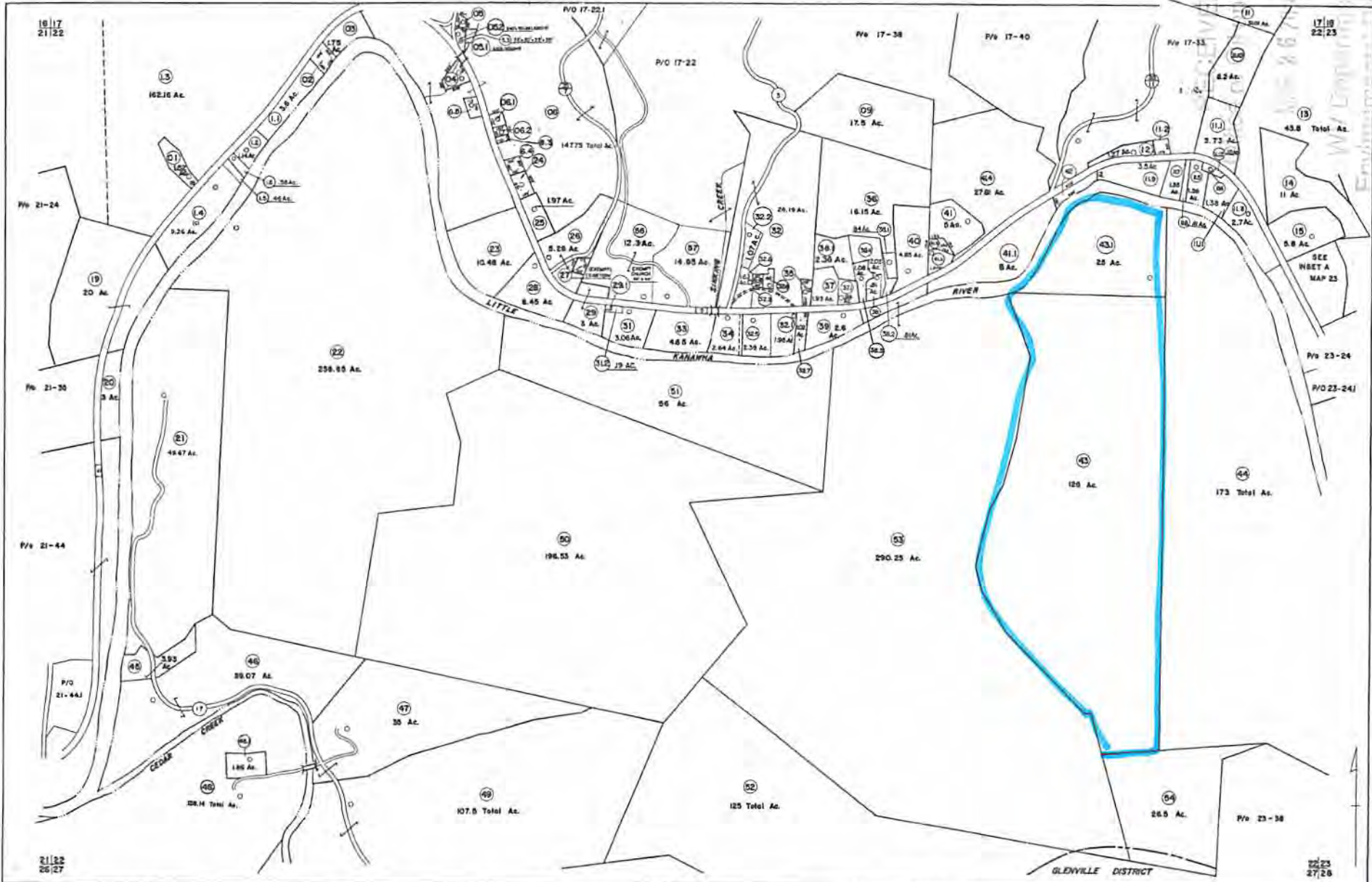
MAR 26 2014

Date February 18, 1963

APPROVED Sinstar Development Company, Owner

By *ex dlat* Environmental Protection
(Title)

05/16/2014



FOR TAX PURPOSES ONLY

Prepared by
L. ROBERT KIMBALL
Consulting Engineer
Barnsburg, Parsonsville

Legend	
Property line	Shaded red line
Map of ground or water	Blue or green
Consecutive line	Panel or other number in box
Boundary line	Intersect
Survey line	Various

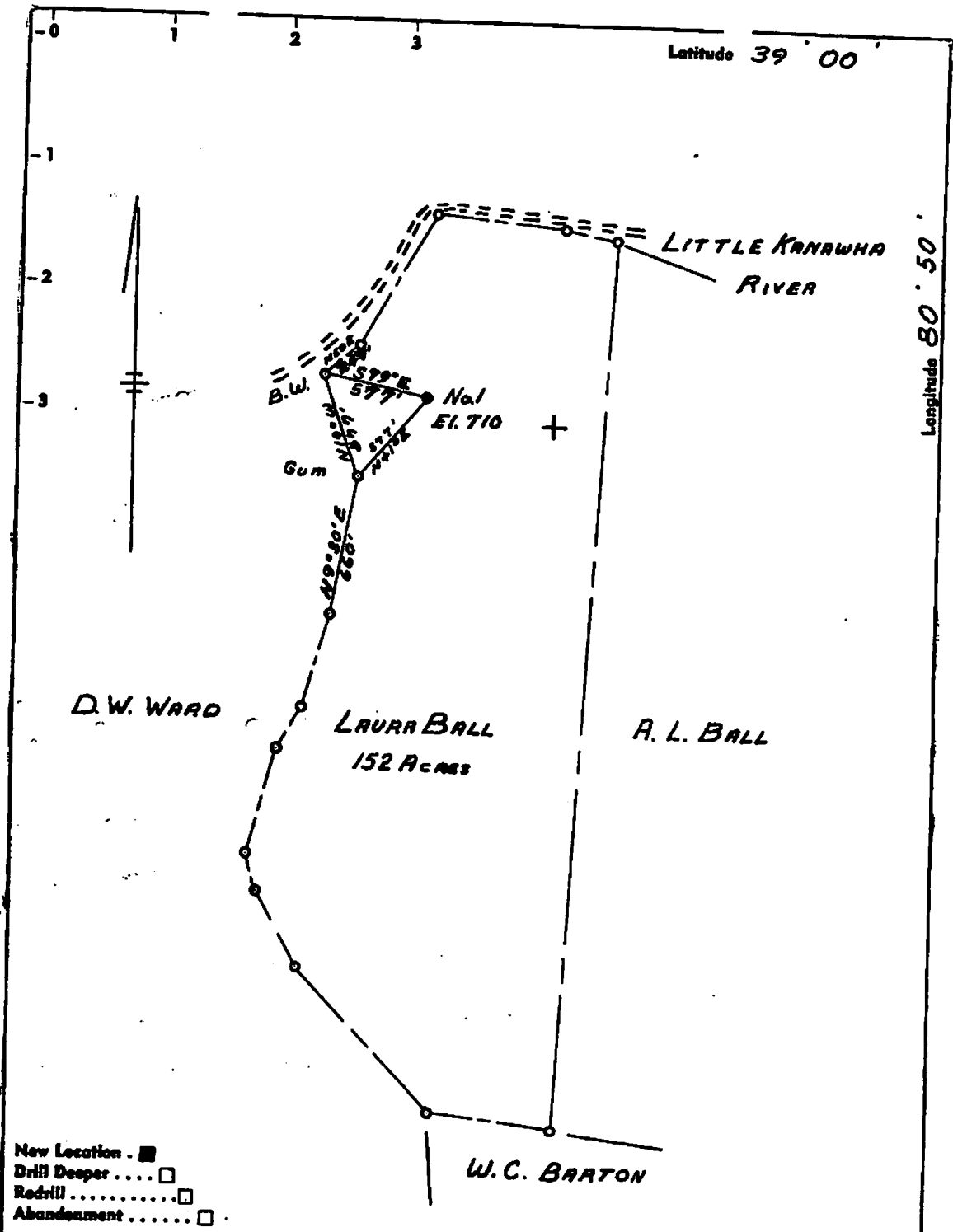
Revisions	
1. REVISED TO JULY 1982	2. DATE
3. REVISED TO JULY 1982	4. BY
5. REVISED TO JULY 1982	6. BY
7. REVISED TO JULY 1982	8. BY
9. REVISED TO JULY 1982	10. BY
11. REVISED TO JULY 1982	12. BY
13. REVISED TO JULY 1982	14. BY
15. REVISED TO JULY 1982	16. BY
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47. REVISED TO JULY 1982	48. BY
49. REVISED TO JULY 1982	50. BY
51. REVISED TO JULY 1982	52. BY
53. REVISED TO JULY 1982	54. BY
55. REVISED TO JULY 1982	56. BY
57. REVISED TO JULY 1982	58. BY
59. REVISED TO JULY 1982	60. BY
61. REVISED TO JULY 1982	62. BY
63. REVISED TO JULY 1982	64. BY
65. REVISED TO JULY 1982	66. BY
67. REVISED TO JULY 1982	68. BY
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73. REVISED TO JULY 1982	74. BY
75. REVISED TO JULY 1982	76. BY
77. REVISED TO JULY 1982	78. BY
79. REVISED TO JULY 1982	80. BY
81. REVISED TO JULY 1982	82. BY
83. REVISED TO JULY 1982	84. BY
85. REVISED TO JULY 1982	86. BY
87. REVISED TO JULY 1982	88. BY
89. REVISED TO JULY 1982	90. BY
91. REVISED TO JULY 1982	92. BY
93. REVISED TO JULY 1982	94. BY
95. REVISED TO JULY 1982	96. BY
97. REVISED TO JULY 1982	98. BY
99. REVISED TO JULY 1982	100. BY

STATE OF WEST VIRGINIA
COUNTY OF GILMER
Office of Assessor

DEKALB DISTRICT
SHEET 22

Date, Aerial Photography: Mar. 1962
Photo No. 90, 222
Date, Map: Dec. 1962
Scale: 1" = 400'

21014844



New Location .
 Drill Deeper
 Redrill
 Abandonment

Company SINSTAR DEVELOPMENT CO.
 Address SPENCER W. VA.
 Farm LAURA BALL
 Tract Acres 152 Lease No. _____
 Well (Farm) No. 1 Serial No. _____
 Elevation (Spirit Level) 710'
 Quadrangle GLENVILLE
 County GILMER District DEKLEB
 Engineer A. L. SIMON
 Engineer's Registration No. 3978
 File No. _____ Drawing No. _____
 Date 11-9-62 Scale 1" = 660'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. GIL-1484

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

-- Denotes one inch spaces on border line of original tracing.

2101484P

WW-4A
Revised 6-07

1) Date: February 20, 2014
2) Operator's Well Number _____
L. Ball #1 _____

3) API Well No.: 47 - 021 - 01484

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Roxil D. Hamric</u>	Name _____
Address <u>PO BOX 196</u>	Address _____
<u>Glennville, WV 26351</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Bryan Harris</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 157</u>	Name _____
<u>Volga, WV 26238</u>	Address _____
Telephone <u>304-553-6087 or 304-472-1732</u>	

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

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverse side. However, you are not required to take any 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 permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat 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 mailing or delivery to the Chief.



Well Operator Hayden & Harper KA, LLC

By: Brett McDonough

Its: Vice President

Address 1001 Moorehead Square Dr. Suite 350

Charlotte, NC 28203

Telephone 704-343-2447

Subscribed and sworn before me this 12th day of March, 2014

Deedee Taylor Notary Public

My Commission Expires May 17, 2016

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.

05/16/2014

2101484P

SENDER: COMPLETE THIS SECTION

- 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.

1. Article Addressed to:

Rox. I D. Hamric ✓
 P.O. Box 196
 Glenville, WV 26031

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Roxie D Hamric* Agent
 Addressee

B. Received by (Printed Name)

C. Date of Delivery
3/13/14

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- Certified Mail Express Mail
- Registered Return Receipt for Merchandise
- Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee)

Yes

2. Article Number

(Transfer from service label)

7011 1570 0003 5498 6438

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

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Office of Oil and Gas

MAR 26 2014

Department of
Environmental Protection

05/16/2014

2101484P

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 021 - 01484
Operator's Well No. L. Ball #1 _____

CKL0356
10000

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 Hayden & Harper KA, LLC OP Code 494495359

Watershed Little Kanawha River Quadrangle Glenville

Elevation 710' County Gilmer District Dekalb

Description of anticipated Pit Waste: fluids used and associated with well plugging activities

Will a synthetic liner be used in the pit? Yes 20 MIL.

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Solidify with cement and life, bury.)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain _____)
- Swabbing
- Plugging

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 _____

Company Official (Typed Name) Brett McDonough

Company Official Title Vice President

Subscribed and sworn before me this 12th day of March, 2014

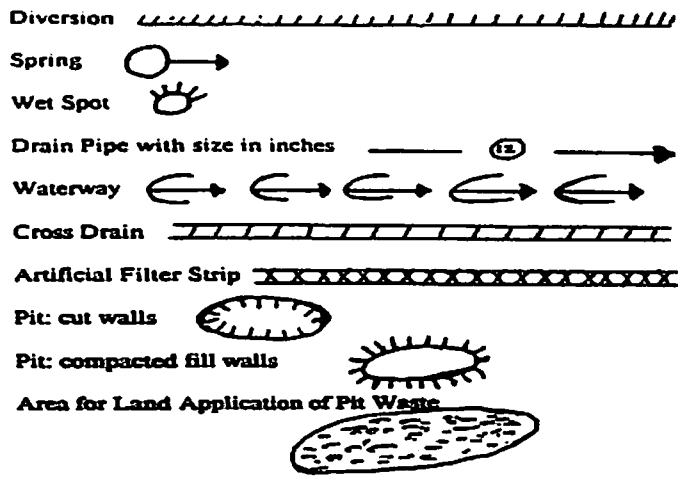
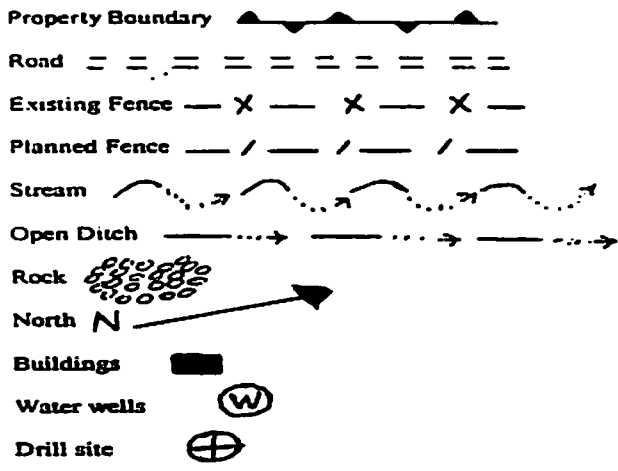
DeeDee Taylor Notary Public

My commission expires May 17, 2016



WV Department of Environmental Protection

LEGEND



Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH 6.4

Lime 2 Tons/acre or to correct to pH 6.5

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

Mulch pulp fiber at 0.5-0.75 Tons/acre

Seed Mixtures

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

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

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Susan O'Hara

Comments: _____

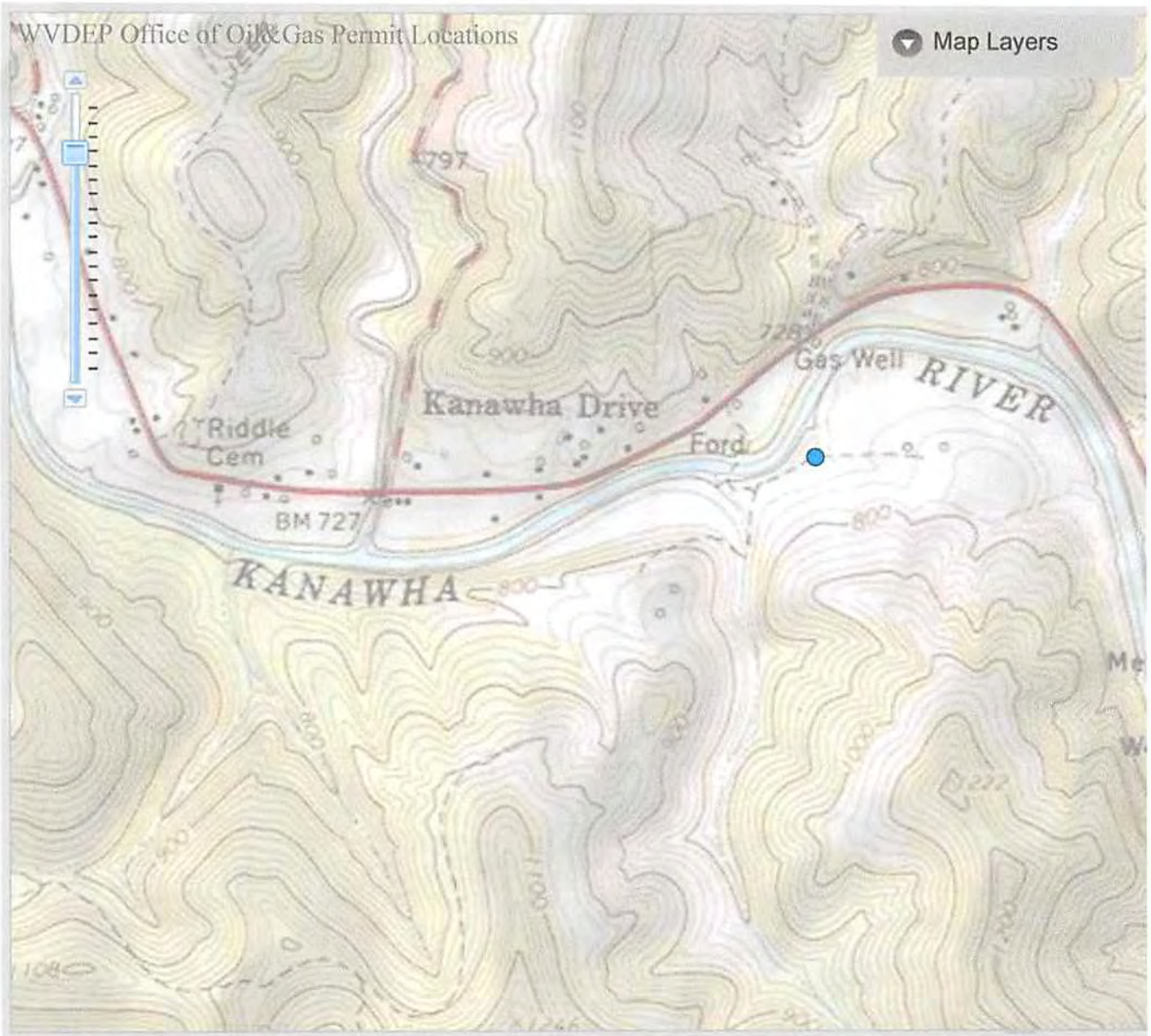
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Office of Oil and Gas

Title: Oil + Gas Inspector

Date: 3-20-14

Field Reviewed? Yes No

Environmental Protection



API 47-021-01484

05/16/2014

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-021-01484 WELL NO.: #1

FARM NAME: L. Ball

RESPONSIBLE PARTY NAME: Hayden & Harper KA, LLC

COUNTY: Gilmer DISTRICT: DeKalb *2*

QUADRANGLE: Glenville *372*

SURFACE OWNER: Roxil D. Hamric

ROYALTY OWNER: Roxil D. Hamric

UTM GPS NORTHING: 4311715.1

UTM GPS EASTING: 509633 GPS ELEVATION: 710'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:
Survey grade GPS xx ; Post Processed Differential XX

Real-Time Differential _____

Mapping Grade GPS _____ : Post Processed Differential _____

Real-Time Differential _____

- Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

J. M. [Signature]
Signature

Office manager
Title

2-26-14
Date

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Office of Oil and Gas
MAR 26 2014
West Virginia Department of
Environmental Protection
05/16/2014