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**west virginia** department of environmental protection

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

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

January 17, 2014

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-8502777, 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: FRESHOUR 2  
Farm Name: FRESHOUR, JOHN W.  
**API Well Number: 47-8502777**  
**Permit Type: Plugging**  
Date Issued: 01/17/2014

**Promoting a healthy environment.**

## PERMIT CONDITIONS

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

### CONDITIONS

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1. 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.

8502777A

WW-4B  
Rev. 2/01

1) Date November 25, 2013  
2) Operator's  
Well No. Freshour 2  
3) API Well No. 47-085 - 02777

CK 24750  
00  
100

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 XX / Liquid injection \_\_\_ / Waste disposal \_\_\_ /  
(If "Gas, Production \_\_\_ or Underground storage \_\_\_) Deep \_\_\_ / Shallow XX

5) Location: Elevation 1076.17 Watershed UT of Left Fork of Spruce Creek of South Fork of Hughes Rr  
District Union County Ritchie Quadrangle Burnt House WV 7 1/2'

6) Well Operator Hayden Harper Energy KA, LLC 7) Designated Agent Brett McDonough  
Address 1001 Moorehead Square Drive - Suite 350 Address 1001 Moorehead Square Drive - Suite 350  
Charlotte, NC 28203 Charlotte, NC 28203

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name David Cowan Name Patchwork Oil and Gas  
Address 1597 Devil Hole Road Address 8165 Elizabeth Pike  
Harrisville WV 26362-7543 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 following page "API 47-085-02777 Freshour 2"**

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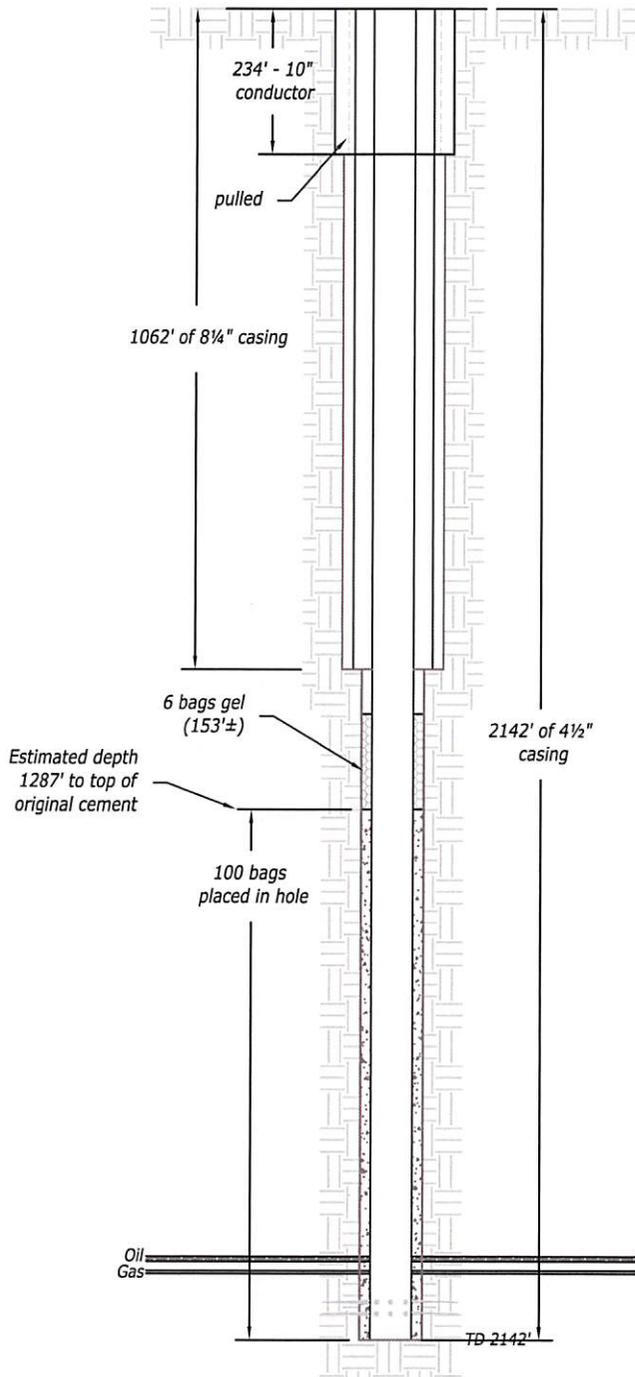
Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector *David Cowan* Date 1-2-13

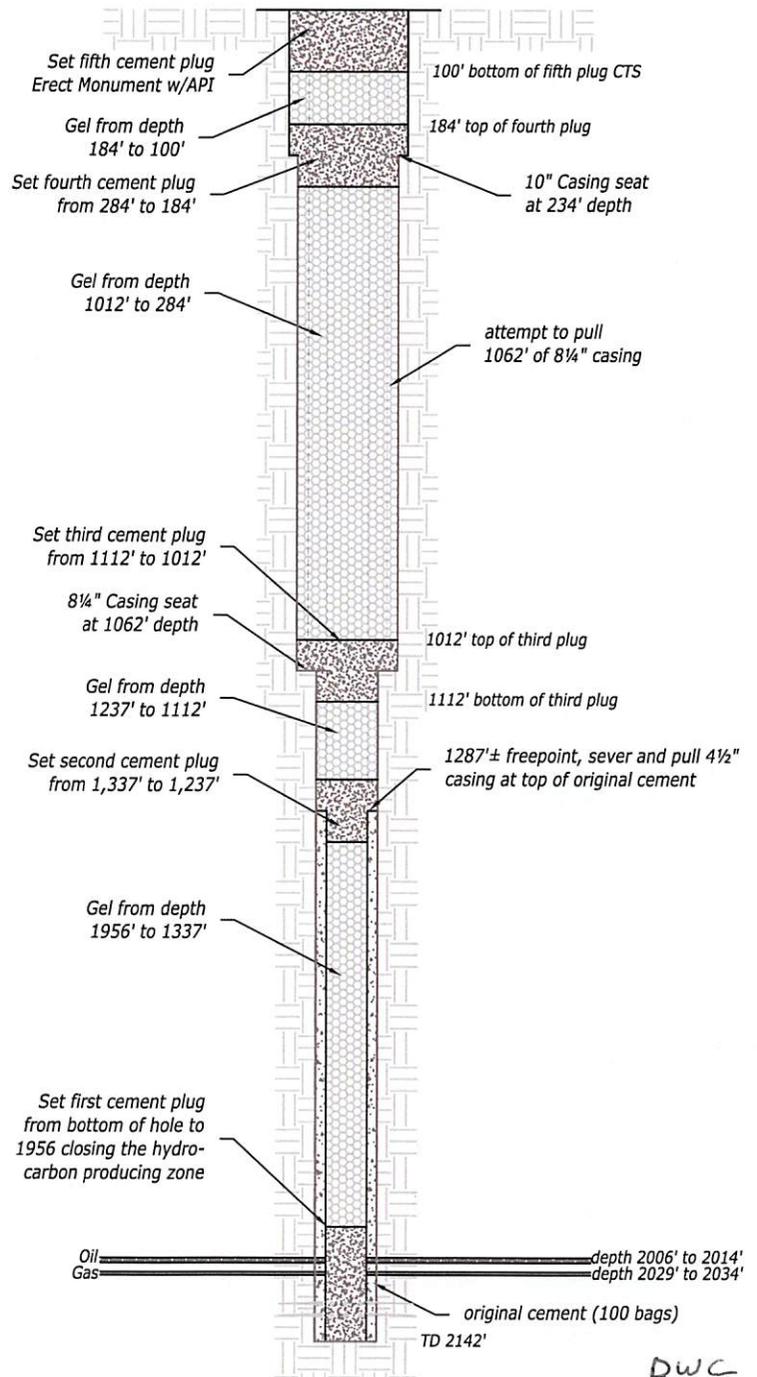
ELEVATION - 1041'

Existing Status API 47-085-02777  
Freshour 2

Best Available Data



Plugging Plan; API 47-085-02777  
Freshour 2



RWC

CEMENT PLUGS MUST BE A MINIMUM OF 100' CLASS A CEMENT WITH NO MORE THAN 3% CaCl<sub>2</sub> AND NO OTHER ADDITIVES.

GEL SPACERS BETWEEN ALL CEMENT PLUGS MUST BE FRESH WATER WITH AT LEAST 6% BENTONITE BY WEIGHT.

not to scale

OK gnm

Plugging Procedure: Contact Inspector David Cowan 304-389-3509

- 1) Attempt to clean out well bore to total depth.
- 2) Circulate gel to 20' above cleaned out area, place the first cement plug from BOH' to 1956' to close the hydrocarbon producing zone.
- 3) Attempt to pull the 4 1/2" casing; freepoint. sever and pull the 4 1/2" casing above the original cemented depth; 1287'±. Remove 1272'± 4 1/2".
- 4) Circulate gel from 1956' to 1337' depth, place the second cement plug from 1337' to 1237' to include casing cut and top of original cement.
- 5) Circulate gel from 1237' to 1062' depth, pull the 8 1/4" casing (1062' total) place the third cement plug from 1112' to 1012' including the 8 1/4" casing seat.
- 6) Circulate gel from 1012' to 284'; set fourth cement plug from depth 284' to 184'.
- 7) Circulate gel from 184' to 100' then cement to surface.
- 8) Remove tubing and erect monument with API number affixed.

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Division of Oil and Gas Regulation

8502777P



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION 16

Quadrangle HOLBROOK

WELL RECORD

Permit No. RIT-2777

Oil or Gas Well BOTH  
(KIND)

Company <u>DRILCO OIL PRODUCTIONS</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>720 UNION TRUST BLDG. PARKERSBURG, W. VA.</u>	Size			
Farm <u>ORPHA FRESHOUR</u> Acres <u>107</u>	16			Kind of Packer
Location (waters) <u>SPRUCE CREEK</u>	13			Size of
Well No. <u>2</u> Elev. <u>1041</u>	10	<u>234</u>		Depth set
District <u>UNION</u> County <u>RITCHIE</u>	8 3/4	<u>1062</u>		
The surface of tract is owned in fee by <u>ORPHA FRESHOUR</u>	6 3/8			
Address <u>BEREA, W. VA.</u>	5 3/16			
Mineral rights are owned by <u>ORPHA FRESHOUR</u>	3	<u>2142</u>	<u>2142'</u>	Perf. top <u>2079</u>
Address <u>BEREA, W. VA.</u>	2			Perf. bottom <u>2081</u>
Drilling commenced <u>7/22/63</u>	Liners Used			Perf. top <u>2098</u>
Drilling completed <u>8/20/63</u>				Perf. bottom <u>2100</u>
Date Shot From To				
With				
Open Flow /10ths Water in <u>SHOW</u> Inch				
/10ths Merc. in Inch				
Volume Cu. Ft.				
Rock Pressure <u>NONE TAKEN</u> lbs. hrs.				
Oil <u>SHOW</u> bbls. 1st 24 hrs.				
WELL ACIDIZED				
WELL FRACTURED				

CASING CEMENTED 4 1/2 SIZE 2142 No. Ft. 8/21/63 Date  
100 sks. cement-6 naggogel-Lawson  
 COAL WAS ENCOUNTERED AT FEET INCHES  
NONE  
 FEET INCHES FEET INCHES  
 FEET INCHES FEET INCHES

RESULT AFTER TREATMENT 80/10 WATER 2" GAS AND 2 BBL. OIL  
 ROCK PRESSURE AFTER TREATMENT 470 LBS. IN 12 HRS.  
 Fresh Water Feet Salt Water NONE Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Red rock			0	40			
Sand			40	55			
Blue Mud			55	75			
Blue Rock			75	92			
Sand			92	114			
Blue Stone			114	129			
Red Rock			129	157			
Blue Slate			157	162			
Red Rock			162	171			
Blue Slate			171	184			
Blue sand			184	234			
Blue slate			234	241			
Red rock			241	257			
Blue rock			257	262			
Red rock			262	275			
Sand			275	299			
Blue slate			299	312			
Sand			312	319			
Blue slate			319	331			
Red rock			331	406			
Sand			406	418			
Red rock			418	422			
Sand			422	460			
Blue slate			460	466			
Red rock			466	506			
Shale			506	560			
Red rock			560	587			
Shale & shells			587	610			
Blue slate			610	619			
Shale & shells			619	633			



Formation	Color	Hard or Soft	Top 16	Bottom	Oil, Gas or Water	Depth Found	Remarks
Blue slate			633	644			
Slate			644	676			
Sand			676	689			
Blue slate			689	695			
Shale & shells			695	709			
Red rock			709	759			
Sand			759	771			
Red lime			771	796			
Red rock			796	805			
Sand			805	825			
Slate			825	828			
Sand			828	834			
Blue shale			834	846			
Lime & shells			846	858			
Red rock			858	870			
Lime & shells			870	880			
Slate & shells			880	904			
Shale & shells			904	915			
Red rock			915	970			
Slate			970	991			
Sand			991	996			
Slate & shells			996	1024			
Red rock			1024	1030			
Lime shells			1030	1034			
Sand			1034	1060			
Slate & shells			1060	1065			
Sand			1065	1094			
Blue slate			1094	1115			
Slate & shells			1115	1127			
Sand			1127	1153			
Lime & shells			1153	1186			
Sand			1186	1198			
Lime & shells			1198	1275			
Sand			1275	1317			
Slate & shells			1317	1337			
Sand			1337	1360			
Slate & shells			1360	1391			
Sand			1391	1408			
Slate & shells			1408	1452			
Sand			1452	1460			
Slate & shells			1460	1510			
Sand			1510	1525			
Lime & shells			1525	1766			
Sand			1766	1817			
Slate			1817	1869			
Sand			1869	1894			
Blue slate			1894	1909			
Little lime			1909	1926			
Slate			1926	1929			
Big lime			1929	2023	Oil	2006-2014	
Sand			2023	2087	Gas	2029-2034	
Blue slate			2087	2100			
Lime			2100	2142	T.D.		

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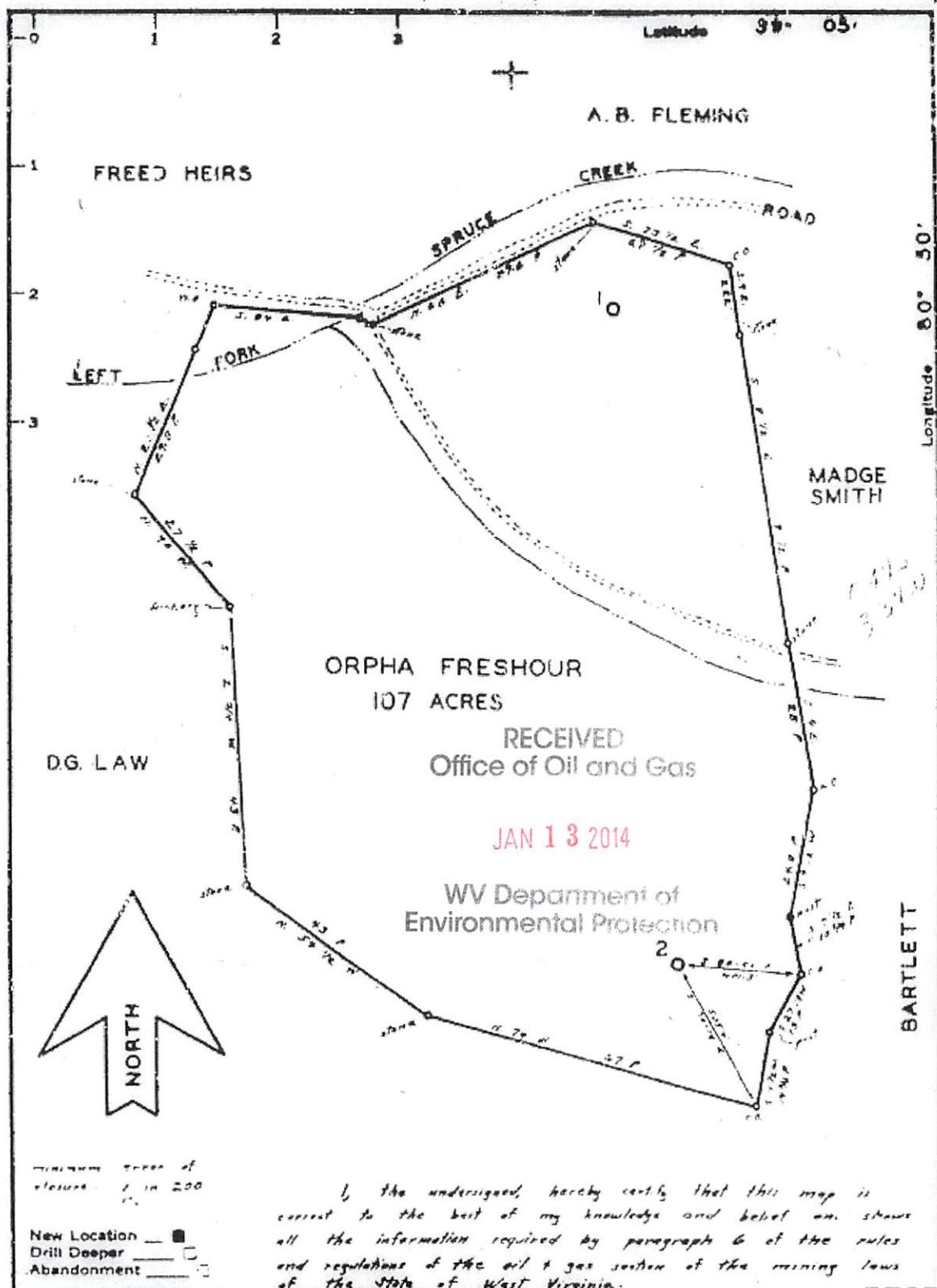
JAN 02 2014

187 Department of  
Energy and Environment

Date September 11, 19 63



850277P



Minimum error of closure 1 in 200

New Location

Drill Deeper

Abandonment

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil & gas section of the mining laws of the State of West Virginia.

*Deal*

Company **DRILCO OIL PRODUCTIONS**  
**DON W. HARDMAN, AGENT**  
 Address **720 UNION TRUST BUILDING**  
**PARKERSBURG WEST VIRGINIA**  
 Farm **ORPHA FRESHOUR**  
 Tract \_\_\_\_\_ Acres **107** Lease No. \_\_\_\_\_  
 Well (Farm No.) **2** Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) **1041 FEET**  
 Quadrangle **HOLBROOK, W. VA. SC**  
 County **RITCHIE** District **UNION**  
 Engineer **M. B. Good**  
 Engineer's Registration No. **IND. 4040**  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

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

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Environmental Protection

**WELL LOCATION MAP**  
 FILE NO. **RIT-2727**

+ 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.

WW-4A  
Revised 6-07

1) Date: November 25, 2013  
2) Operator's Well Number  
Freshour 2

3) API Well No.: 47 - 085 - 02777

**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>John W Freshour</u> ✓	Name <u>n/a</u>
Address <u>1707 Newberne Road</u>	Address _____
<u>Cox Mill WV 26342</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>n/a</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>David Cowan</u> ✓	(c) Coal Lessee with Declaration
Address <u>1597 Devil Hole Road</u>	Name <u>n/a</u>
<u>Harrisville WV 26362-7543</u>	Address _____
Telephone <u>304-389-3509 cell, or 304-628-4016</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 reverses 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.



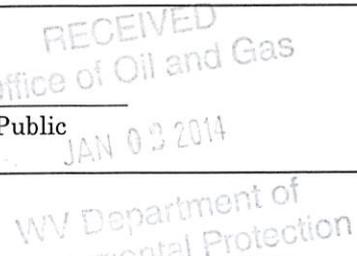
Well Operator	<u>HAYDEN HARPER ENERGY KA, LLC</u>
By:	<u>Brett McDonough</u> 
Its:	<u>Vice President</u>
Address	<u>1001 Moorehead Square Drive - Suite 350</u>
	<u>Charlotte, NC 28203</u>
Telephone	<u>704-343-2447</u>

Subscribed and sworn before me this 10th day of December 2013  
Deedee Taylor Notary Public

My Commission Expires May 17th, 2016

**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](mailto:depprivacyofficer@wv.gov).



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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HAYDEN HARPER ENERGY KA, LLC OP Code 494495359

Watershed (HUC 10) 0503020310 Left Fork of Spruce Creek Quadrangle Burnt House WV 7 1/2'

Elevation 1076.17 County Ritchie District Union

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

Will a pit be used for drill cuttings? Yes XX No \_\_\_\_\_

If so, please describe anticipated pit waste: fluids used and associated with well plugging activities

Will a synthetic liner be used in the pit? Yes XX No \_\_\_\_\_ If so, what ml.? 20 ml

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 \_\_\_\_\_)

Will closed loop system be used? ~~yes~~ NO

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. n/a

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

Additives to be used in drilling medium? \_\_\_\_\_

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

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

-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 \_\_\_\_\_

Company Official (Typed Name) Brett McDonough

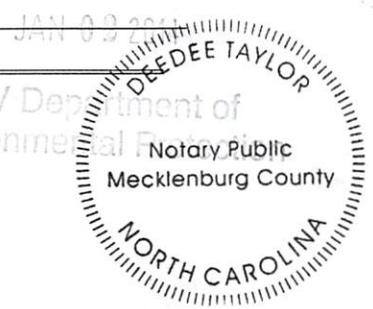
Company Official Title Vice President

Subscribed and sworn before me this 10<sup>th</sup> day of December, 2013

Dee Dee Taylor Notary Public

My commission expires May 17<sup>th</sup>, 2016

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Office of Oil and Gas



TOPO SECTION OF:  
United States Department of the Interior  
Geological Survey - Burnt House, WV - 7½' Quad.

**PROPOSED CULVERT INVENTORY**  
(For Bid Purposes Only)

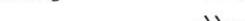
15" (Minimum) Culverts	None
------------------------	------

Additional Culverts and/or other drainage structures and sediment control devices may be required by the WVDEP Oil & Gas Inspector. Operator is responsible for coordination with contractor and True Line regarding any changes or additions the State may require.

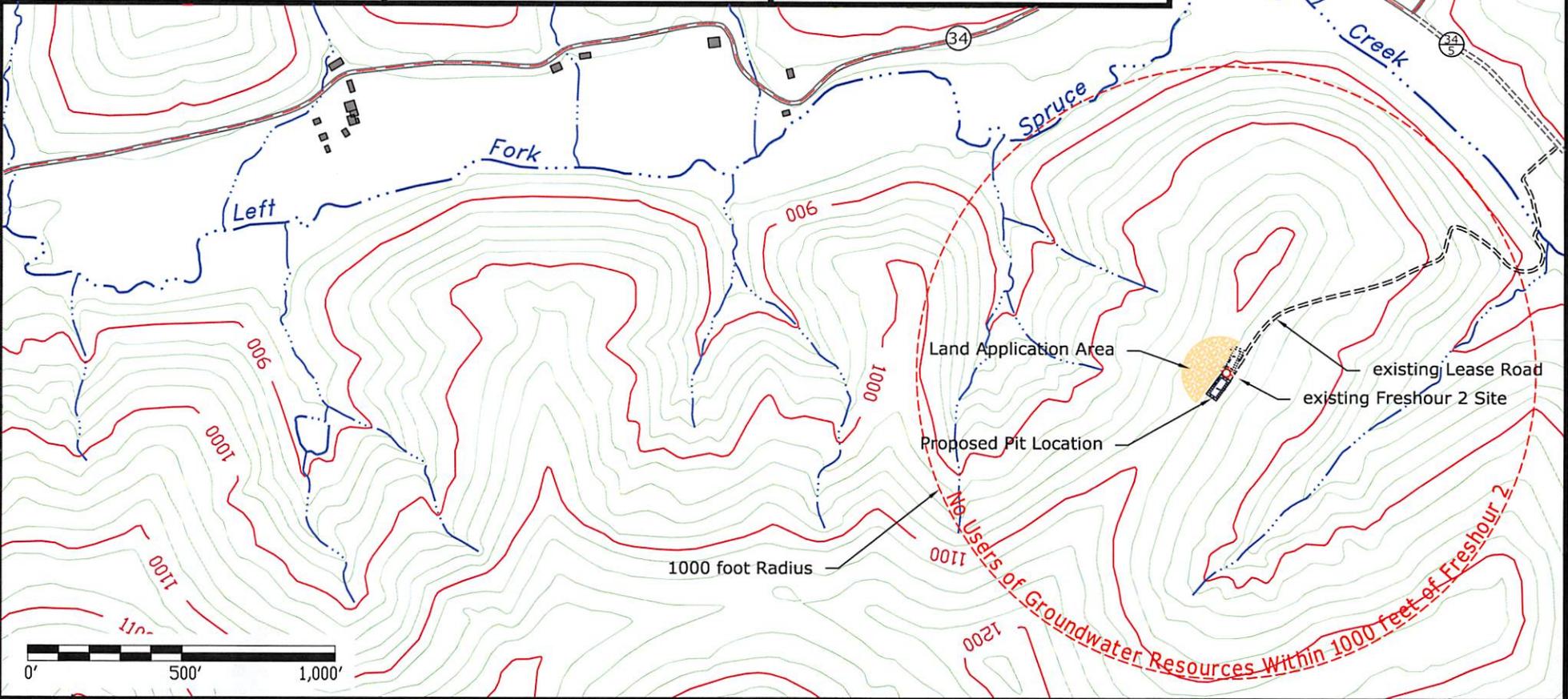
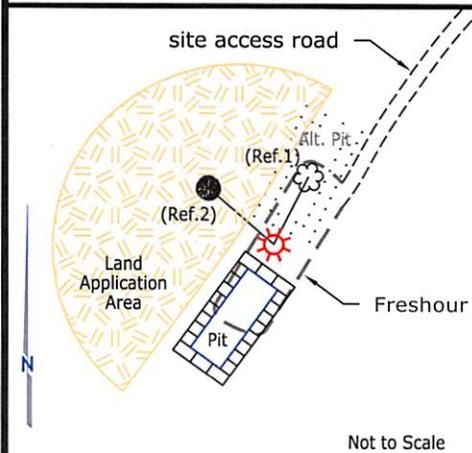
**PROJECTED EARTHEN DISTURBANCE**

Well Location Site	0.10 Acres
Access Road	0.36 Acres
Approximate Total Disturbance	0.46 Acres

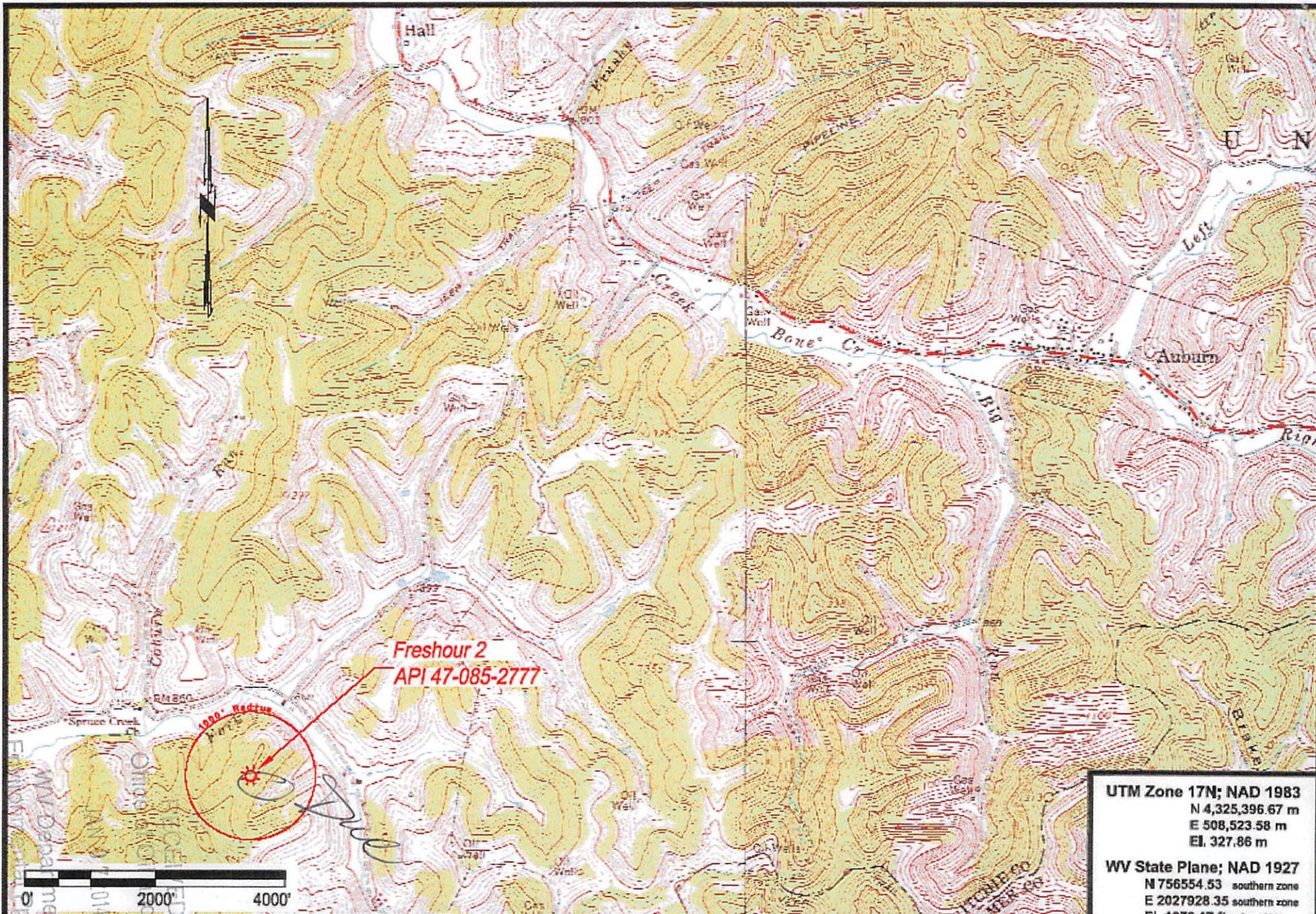
**LEGEND**

- Proposed Road 
- Existing Road 
- Existing Culvert 
- Proposed Culvert (15" Min. unless noted) 
- Proposed Stream Crossing 
- Cross Drain 
- Diversion Ditch 
- Silt Fence 
- Brush Barrier 
- Tree Line 
- Road Ditch 
- Gas Line 
- Fence Line 
- Water Well 
- House/Structure 
- Spring 
- Wet Spot 

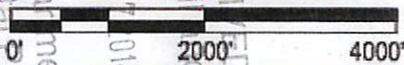
**Detail Sketch existing well Freshour 2**



850 2777P



Freshour 2  
API 47-085-2777



UTM Zone 17N; NAD 1983  
N 4,325,396.67 m  
E 508,523.58 m  
El. 327.86 m

WV State Plane; NAD 1927  
N 756554.53 southern zone  
E 2027928.35 southern zone  
El. 1076.17 ft. NGVD 1929

Geodetic Lat./Long. WGS84  
Lat 39° 04' 39.5"  
Long -80° 54' 05.3"



Freshour 2

API 47-085-02777  
November 25, 2013  
Located near Auburn in Union District of Ritchie County, West Virginia

8502777A

8502777P

WW-7  
8-30-06



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

API: 47-085-02777 WELL NO.: Freshour 2

FARM NAME: Orpha Freshour

RESPONSIBLE PARTY NAME: Hayden Harper Energy KA, LLC

COUNTY: Ritchie DISTRICT: Union

QUADRANGLE: Burnt House WV 7½' Series

SURFACE OWNER: John W Freshour

ROYALTY OWNER: John W Freshour

UTM GPS NORTHING: 4325396.67

UTM GPS EASTING: 508523.58 GPS ELEVATION: 361.04 1076 FT

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:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS XX: Post Processed Differential XX

Real-Time Differential \_\_\_\_\_

Mapping Grade GPS \_\_\_\_\_: Post Processed Differential \_\_\_\_\_

Real-Time Differential \_\_\_\_\_

4. **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.

[Signature]  
Signature

PS 1065  
Title

12/2/13  
Date

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JAN 03 2014

WV Department of  
Environmental Protection

**Hayden Harper Energy KA, LLC**  
1001 Moorehead Square Dr. - Suite 350  
Charlotte, NC 28203

Mr. James Martin, Chief  
Office of Oil and Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304-2345

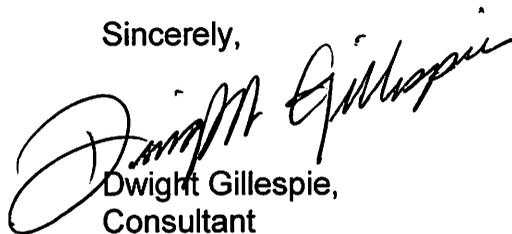
**RE: Plugging Permit for API #47-085-02777 Well No. Freshour 2**

Dear Mr. Martin:

Included are revised forms WW4-A, WW4-B and WW-9 for Hayden Harper Energy KA, LLC's Well No. 47-085-02777. A pit will be required for this work therefore a \$100.00 filing fee is included. Copies of the Certified Mail Receipts are also included.

Your prompt consideration of this application would be most appreciated. If you have any questions or need additional information, please contact me at (304) 448-2116.

Sincerely,

  
Dwight Gillespie,  
Consultant

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WV Department of  
Environmental Protection