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

October 05, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-10301840, issued to DAC 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.

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 penalities 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: KUHN 2
Farm Name: KUHN, MICHAEL G.
API Well Number: 47- 10301840
Permit Type: Plugging
Date Issued: 10/05/2015

Promoting a healthy environment.

10301840P

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.

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WW-4B
Rev. 2/01

1) Date May 11, 2015
2) Operator's Well No. KUHN LEASE NO.2
3) API Well No. 47 - 103 - 01840

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 X / Gas X / Liquid injection ____ / Waste disposal ____ /
(If "Gas, Production X or Underground storage ____) Deep ____ / Shallow X

5) Location: Elevation 1,519' Watershed Knob Fork
District Center County Wetzel Quadrangle Big Run 7.5'

6) Well Operator DAC Energy, LLC
Address P.O. Box 99
Alma, WV 26320-0099

7) Designated Agent Kenneth R. Mason
Address P.O. Box 99
Alma, WV 26320-0099

8) Oil and Gas Inspector to be notified
Name Derek Haught
Address P.O. Box 85
Smithville, WV 26178

9) Plugging Contractor
Name Meadows Well Service
Address 45 Meadows Drive
Ravenswood, WV 26164

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

SEE ATTACHED SHEET FOR MANNER OF PLUGGING

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AUG 20 2015
WV Department of Environmental Protection

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

Work order approved by inspector _____ Date 6/10/15

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KUHN LEASE NO. 2

47-103-01840

CASING	LEFT IN WELL	CEMENT	TOC (EST.)
9 5/8"	218'	68 sks CTS	
6 5/8"	1765'	100 sks	905'
4 1/2"	3695'	150 sks	1,342'
TD	3759'		

FORMATIONS	DEPTHS
Bayard	3420'-3552'
Big Injun	2612'-2662'

MANNER OF PLUGGING

SPOT GEL

Plug 1 3410' - 3310'

Plug 2 2610' - 2510'

Free point, cut , & pull 4 1/2" at 1340' (Estimated)

Plug 3 1390' - 1290'

Free point, cut, & pull 6 5/8' at 900' (Estimated)

Plug 4 950' - 850'

Plug 5 270' - 170'

Plug 6 100' - Surface

Fill well-bore with 6% gel between cement plugs

Erect Monument with API Number

DMH
6-10-15

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To State 10-3-01

09-15-01
API# 47-103-01840

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operators Report of Well Work

Farm name: Kuhn Operator Well #: Kuhn #2

Location: Elevation: 1,519. Quadrangle: Big Run 7.5'

District: Center County Wetzel
Latitude 3,400 feet south of 39 Deg. 37 Min. 30 Sec.
Longitude 9,100 feet west of 80 Deg. 30 Min. 00 Sec.

Company: Drilling Appalachian Corporation
P.O. Box 99
Alma WV 26320

Agent: Kenneth Mason

Inspector: Randall Mick
Permit Issued: 06-05-01
Well Work Commenced: 08-23-01
Well Work Completed: 08-30-01
Verbal Plugging
Permission granted on:
Rotary____ Cable ____ Rig
Total Depth (ft) 3759'
Fresh water depth (ft) 2030'
Salt water depth (ft) N/A
Is coal being mined in are (Y/N) N
Coal depths (ft) N/A

Casing	Used in Drilling	Left in Well	Cement Fill up
9 5/8	225	218	68 sks
6 5/8	1850	1765	100 sks
4 ½	3759	3695	150 sks

OPEN FLOW DATA

Producing formation Bayard Pay zone depths (ft) 3420-3552
Gas: Initial open flow 120 mcf/d Oil: Initial open flow bbls/day
Final open flow 120 mcf/d Final open flow bbls/day
Time of open flow between initial and final tests 48 Hours
Static rock pressure 450# psig (surface pressure) after 48 Hours

Other producing formation Big Injun Pay zone depths (ft) 2612-2662
Gas: Initial open flow mcf/day Oil Initial open flow bbls/day
Final open flow mcf/day Final open flow bblss/day
Time of open flow between initial and final tests 48 Hours
Static rock pressure psig (surface pressure) after 48 Hours

For: Drilling Appalachian Corporation
By: Kenneth Mason
Date: 09-15-01

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AUG 20 2015
WV Department of
Environmental Protection

10301840P

WW-4A
Revised 6-07

1) Date: May 11, 2015
2) Operator's Well Number
KUHN LEASE NO.2

3) API Well No.: 47 - 103 - 01840

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Michael G. Kuhn
Address: 2538 Frederick Road
Catonsville, MD 21228

(b) Name
Address

(c) Name
Address

5) (a) Coal Operator
Name
Address

(b) Coal Owner(s) with Declaration
Name: Murray Energy
Address: 46226 National Road
St. Clairsville, OH 43950

Name
Address

(c) Coal Lessee with Declaration
Name
Address

6) Inspector: Derek Haught
Address: P.O. Box 85
Smithville, WV 26178
Telephone: 304-~~208~~ 206-7613

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: DAC Energy, LLC
By: Kenneth R. Mason
Its: President
Address: P.O. Box 99
Alma, WV 26320-0099
Telephone: 304-758-4638

Subscribed and sworn before me this 18th day of August 2015
Notary Public
My Commission Expires May 21, 2019

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Office of Oil and Gas
AUG 20 2015
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 depprivacyoffier@wv.gov.

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WW-9
(5/13)

Page _____ of _____
API Number 47 - 103 - 01840
Operator's Well No. Kuhn Lease NO.2

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name DAC ENERGY, LLC OP Code 494496257

Watershed (HUC 10) Knob Fork Quadrangle Big Run 7.5'

Elevation 1,519' County Wetzel District Center

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 _____ No X

If so, please describe anticipated pit waste: Fluids encountered in plugging subject well

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

Proposed Disposal Method For Treated Pit Wastes:

DmH
6-10-15

- ■ 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? _____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. _____

-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 Kenneth R. Mason

Company Official (Typed Name) Kenneth R. Mason

Company Official Title President

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Environmental Protection

Subscribed and sworn before me this 18th day of August, 2015

Betty Fletcher Notary Public

My commission expires May 21 2019

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Form WW-9

Operator's Well No. KUHN LEASE NO.2

DAC ENERGY, LLC

Proposed Revegetation Treatment: Acres Disturbed ~ 0.5 Prevegetation pH _____

Lime 2 Tons/acre or to correct to pH _____

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch Straw 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

Title: Oil + Gas Inspector Date: 6-10-15

Field Reviewed? (✓) Yes ( ) No

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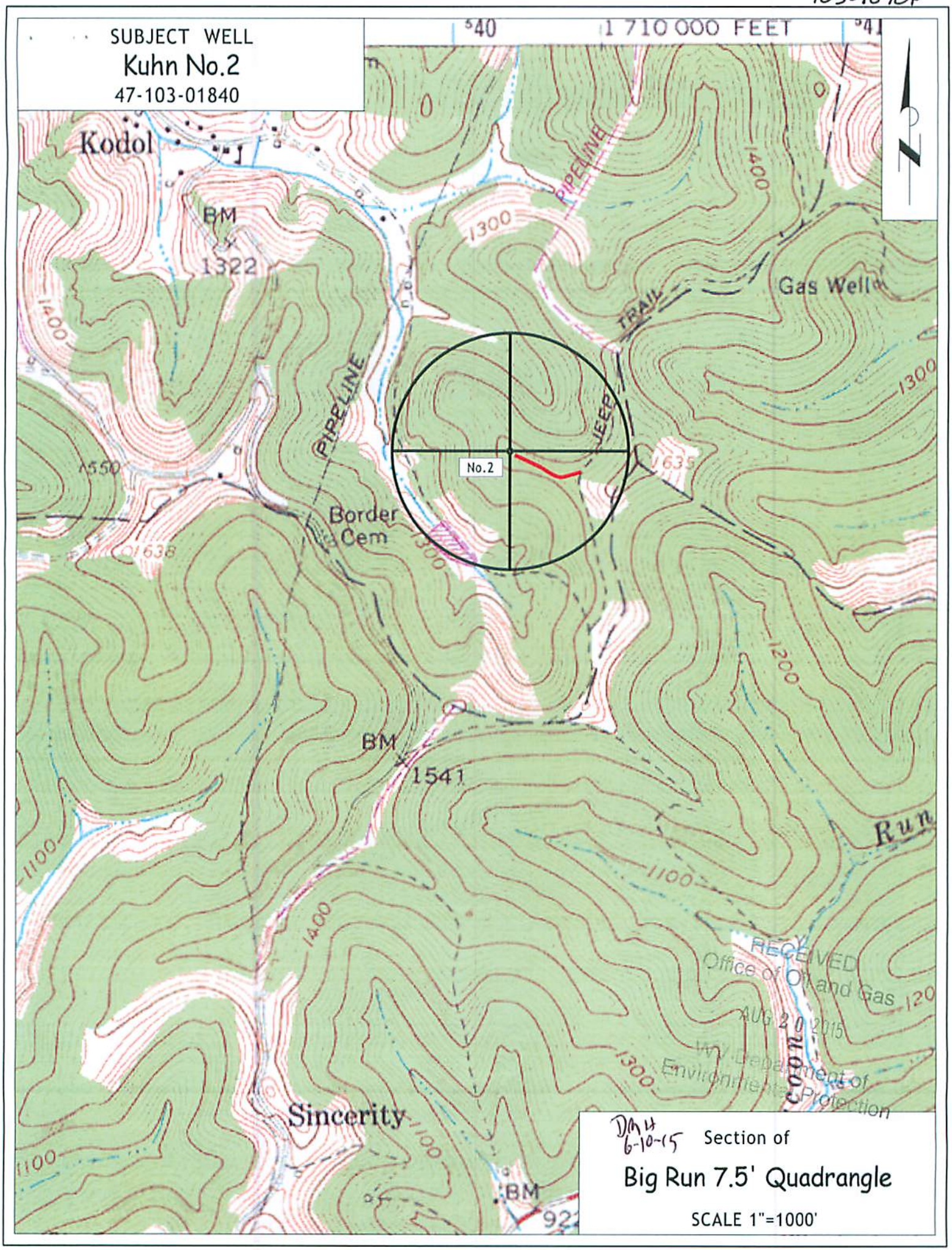
SUBJECT WELL
Kuhn No.2
47-103-01840
1 710 000 FEET
Kodol
BM
1322
PIPELINE
TRAIL
Gas Well
JEEP
No.2
Border Cem
BM
1541
Run
Sincerity
BM
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DMH 6-10-15
Section of
Big Run 7.5' Quadrangle
SCALE 1"=1000'

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WW-7
5-02

West Virginia Department of Environmental Protection
Office of Oil & Gas

WELL LOCATION FORM: GPS

API: 47- 103 - 1840 **WELL NO:** 2

FARM NAME: Kuhn Lease

RESPONSIBLE PARTY NAME: DAC Energy, LLC

COUNTY: Wetzel **DISTRICT:** Center

QUADRANGLE: Big Run 7.5'

SURFACE OWNER: Michael G. Kuhn

ROYALTY OWNER: Michael G. Kuhn

UTM GPS NORTHING: 4,385,199 (NAD 83)

UTM GPS EASTING: 540,177 (NAD 83) **GPS ELEVATION:** 463 m. (1519')

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit on the above well. The Office of Oil & 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	___	Post Processed Differential	___
		Real-Time Differential	___
Mapping Grade GPS	X	Post Processed Differential	X
		Real-Time Differential	___

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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.

Kenneth R. Mason — President
Signature — Title

May 11, 2015
Date