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

August 06, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3905204, issued to REED GAS 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.

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: AL-81
Farm Name: APPALACHIAN LAND CO.
API Well Number: 47-3905204
Permit Type: Plugging
Date Issued: 08/06/2014

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

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.

WW-4B
Rev. 2/01

1) Date 6/10/14, 20 14
2) Operator's Well No. AL-81
3) API Well No. 47- 39 - 5204P

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 ____ or Underground storage ____) Deep ____/ Shallow____

5) Location: Elevation 1331' Watershed Middle Fork of Blue Creek
District Elk County Kanawha Quadrangle Mammoth

6) Well Operator Reed Gas Inc
Address Virginia Street
Charleston WV. 25301

7) Designated Agent James W. Reed Jr.
Address Virginia Street
Charleston WV. 25301

8) Oil and Gas Inspector to be notified
Name Terry Urban
Address P.O.Box 1207
Clendenin WV.25045

9) Plugging Contractor
Name Duckworth Well Service
Address P.O.Box 6871
Charleston WV. 25363

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

~~Perament Plug @1450'~~
~~Cement 1450' to 1350'~~
~~Cement 490' to 390'~~
~~Cement 100' to surface~~

See plugging Diagram

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

Work order approved by inspector [signature] Date 6-30-14

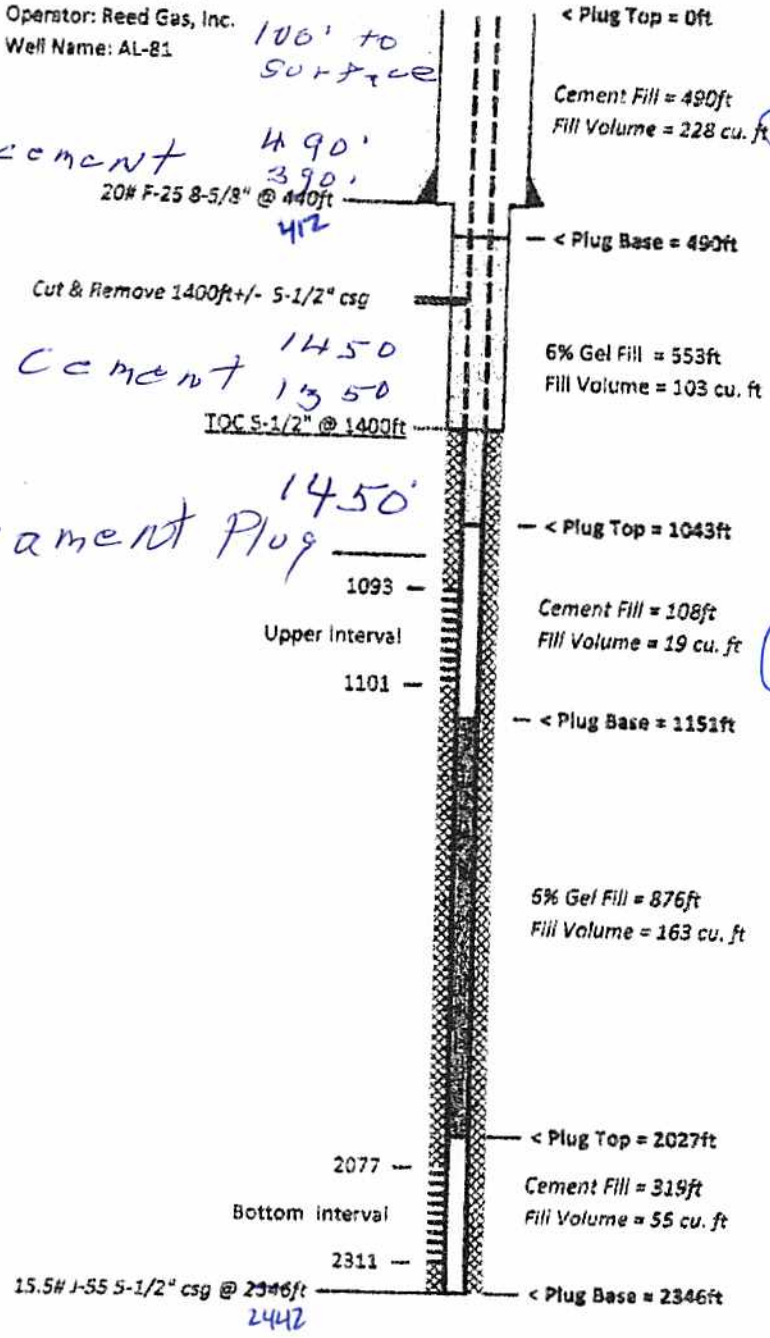
Received
JUL 11 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

Reed Brothers
Limited Partnership
Oil • Natural Gas
172 Odessa Drive
Glen, WV 25088
(304) 548.7142

39-5204

Well Plugging Work Or

API # : 47-039-05204P
Operator: Reed Gas, Inc.
Well Name: AL-81



Pull tubing
Will Also
Set Evelation
Plug

6-30-14

Received
JUL 11 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

STATE PLANE CO-ORDINATES
FOR THIS PROPOSED WELL
SITE ARE:
N 490,330.17
E 1,902,947.85

LATITUDE 38°22'30"

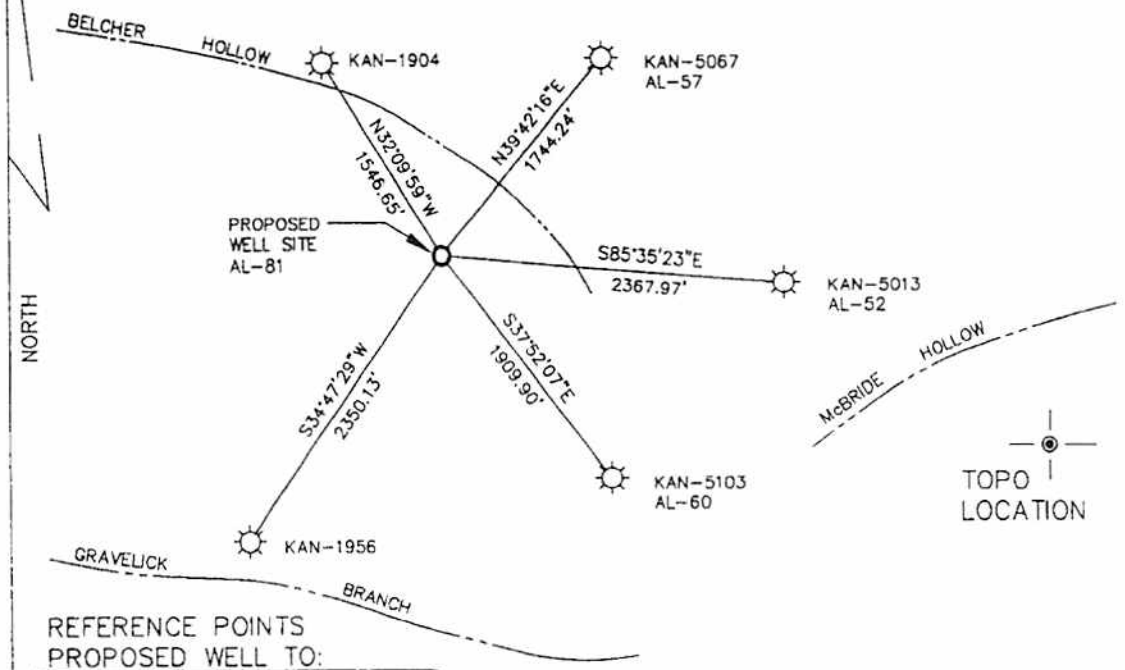
1500'

LONGITUDE 81°20'00"

10,450'

APPALACHIAN LAND COMPANY

TAX MAP 60 – PARCEL 1
DEED BOOK 2195, AT PAGE 421
1 – 22 – 88
SKYLES SURVEY TRACT 91



REFERENCE POINTS
PROPOSED WELL TO:

(1) 18 INCH DIA. RED OAK
N50°00'E 89.00 FEET
(2) 25 INCH DIA.RED OAK
N75°00'E 107.00 FEET

TECHNICAL MEASUREMENTS, INC.
LAND SURVEYORS
P.O. BOX 991
CLENDENIN, WEST VIRGINIA 25045
(304) 548-6161

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

FILE No
DRAWING No. •
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1 : 10,000
PROVEN SOURCE OF ELEVATION GPS SURVEY

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 MINES

(SIGNED) Albert J. Miller
R.P.E R.P.S. 513

ALBERT J. MILLER LICENSED No. 513 STATE OF WEST VIRGINIA LAND SURVEYOR

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
NITRO, WV

DATE FEBRUARY 3 19 98
OPERATOR'S WELL No. AL-81
API WELL No. 47 039-05204
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION: ELEVATION 1331.03 WATER SHED BELCHER HOLLOW TO MORRIS FORK TO BLUE CK TO ELK RIVER
DISTRICT ELK COUNTY KANAWHA
QUADRANGLE MAMMOTH

SURFACE OWNER APPALACHIAN LAND COMPANY ACREAGE 18,977.62
OIL & GAS ROYALTY OWNER ALPINE MOUNTAIN LEASE ACREAGE 18,977.62
LEASE No.

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)

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___

TARGET FORMATION INJUN WEIR ESTIMATED DEPTH 2500'

WELL OPERATOR REED BROTHERS LTD. PARTNERSHIP
ADDRESS 1206 KANAWHA BLVD. EAST
SUITE 201 CHARLESTON, WV 25301

DESIGNATED AGENT JAMES W. REED, JR.
ADDRESS 1206 KANAWHA BLVD. EAST
SUITE 201 CHARLESTON, WV 25301

FORM IV-6 (8-78)

KAN 5204

Received
JUL 11 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

RECEIVED
Office of Oil & Gas
UIC Section
MAR 15 1999
WV Division of
Environmental Protection

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

API # 47- 39-05204

Reviewed [signature]

Well Operator's Report of Well Work

Farm name: Appalachian Land Co. Operator Well No.: AL-81

LOCATION: Elevation: 1,331.03 Quadrangle: MAMMOTH

District: ELK County: KANAWHA
Latitude: 10450 Feet South of 38 Deg. 22Min. 30 Sec.
Longitude 1500 Feet West of 81 Deg. 20 Min. 0 Sec.

Company: REED GAS, INC.
1206 KANAWHA BLVD. E., STE.301
CHARLESTON, WV 25301-0000

Agent: JAMES W REED, JR

Inspector: CARLOS HIVELY
Permit Issued: 03/09/98
Well work Commenced: 4/6/98
Well work Completed: 4/14/98
Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 2490
Fresh water depths (ft) 108'

Salt water depths (ft) 1345

Is coal being mined in area (Y/N)? N
Coal Depths (ft): 242-246

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size 13	20'	-0-	
8 5/8		412	200 SKS
5 1/2		2442	349 CU FT
2		2251	

OPEN FLOW DATA

Producing formation LOWER WEIR, LIME Pay zone depth (ft) ATTACHED
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 400 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure 275 psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

JAMES W REED, JR
For: REED GAS, INC.
By: James W. Reed Jr.
Date: 3-11-99

Received
JUL 1 1 2014
Office of Oil and Gas
Environmental Protection

WR-35
Completion Report
AL-81
Kanawha County
API# 47-039-05204

MAR 15 1999

FIRST STAGE PERFORATIONS: LOWER WEIR
2302 - 2311, 20 holes

SECOND STAGE PERFORATIONS: UPPER WEIR
2210' - 2272', 4 holes
2278' - 2283', 16holes

THIRD STAGE PERFORATIONS: BIG LIME
2077' to 2083', 16 holes

FOURTH STAGE PERFORATIONS: ROSEDALE
1093' to 1101, 16 holes

STIMULATION

Perforated Lower Weir. Pressured up on it to 3318 psi and observed breakdown. Pumped away 20,000 lbs of sand with an average treating pressure (top hole) of 1210 psi and a average treating rate of 16 bbls per minute.
Dropped frac ball in 500 gallons of 18% Hcl and followed by column of water.

Perforated upper portion of lower Weir and began pumping. No noticeable breakdown was observed and it was assumed that formation had broken under the hydrostatic weight of the hole full of water. Pumped away an additional 20,000 lbs of sand with an average rate at 16 bbls per minute with an average treating pressure of 973 psi.

Pumped down a second ball in acid as before and shot Lime perfs. Again no distinct breakdown could be seen, preassembly because of hydrostatic pressure. Pumped into Lime 16 bbls per minute with an average treating pressure of 1193 psi.

Third frac ball was dropped in acid and it was decided to pump on the seated ball before perforating in order to test pipe. No pressure buildup occurred. Well was shut in- in order to evaluate overnight before flowing back or continuing with fracture treatment.

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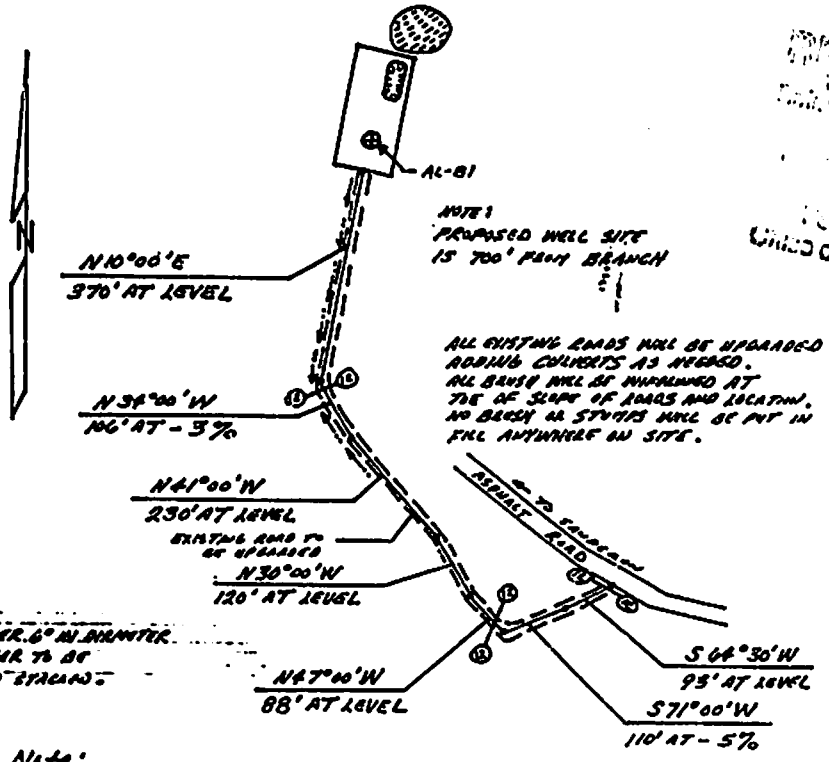
JUL 11 2014
Office of Oil and Gas
Dept. of Environmental Protection

PHOTOCOPY SECTION OF
USGS TOPOGRAPHIC MAP
QUADRANGLE MAMMOTH, WV

LEGEND
WELL SITE
ACCESS ROAD

REED BROTHERS LIMITED PARTNERSHIP WELL AL-81 MAMMOTH, QUAD.



Note:
AFTER ROAD IS CONSTRUCTED
ADDITIONAL DRAINS WILL BE
ADDED AS NEEDED.

C.H. 3-2-98

Received
JUN 1 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

WW-4A
Revised 8-07

1) Date: 6/10/14
2) Operator's Well Number
AL 81

3) API Well No.: 47 - 39 . 5204P

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:
(a) Name Appalachian Land Co
Address Blue Eagle Land Co.
700 Virginia
Charleston, WV 25302

(b) Name
Address

(c) Name
Address

5) (a) Coal Operator
Name
Address

(b) Coal Owner(s) with Declaration
Name
Address

Name
Address

(c) Coal Lessee with Declaration
Name
Address

6) Inspector Terry Urban
Address P.O. Box 1207
Clendenin WV. 25045
Telephone

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 site 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 Reed Gas, Inc.
By: James W. Reed Jr
Its: President
Address Virginia Street
Charleston, WV. 25301
Telephone 304-345-3817

Subscribed and sworn before me this 24 day of June, 2014
Connie Walker Notary Public
My Commission Expires Nov 6, 2015

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

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
CONNIE WALKER
PO BOX 235
MOUNT CARBON, WV 25139
My commission expires Nov. 6, 2015

Received
JUL 11 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

7009 1410 0001 3664 6028

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CHARLESTON, WV 25301

OFFICIAL USE

Postage	$	$0.91
Certified Fee		$3.30
Return Receipt Fee (Endorsement Required)		$2.70
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.91

0732

STONEWALL STATION CHARLESTON, WV
Postmark Here
JUL 11 2014
07/11/2014
25302-USPS

Sent To: Blue Eagle Land Co.
Street, Apt. No.; or PO Box No.: 700 Virginia St
City, State, ZIP+4: Charleston WV 25301

PS Form 3800, August 2006 — See Reverse for Instructions

Received
JUL 11 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 39 - 5204P
Operator's Well No. AL-81

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 Reed Gas Inc. OP Code _____

Watershed Middle Fork of Blue Creek Quadrangle Mammotth

Elevation 1331' County Kanawha District Elk

Description of anticipated Pit Waste: _____

Will a synthetic liner be used in the pit? _____.

No Pit

Proposed Disposal Method For Treated Pit Wastes:
_____ Land Application
_____ Underground Injection (UIC Permit Number _____)
_____ Reuse (at API Number _____)
_____ Off Site Dispposal (Supply form WW-9 for disposal location)
_____ Other (Explain _____)

Proposed Work For Which Pit Will Be Used:
_____ Drilling _____ Swabbing
_____ Workover _____ Plugging
_____ Other (Explain _____)

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 James W. Reed, Jr.

Company Official (Typed Name) James W. Reed

Company Official Title President

Subscribed and sworn before me this 24 day of June, 2014

Connie Walker Notary Public

My commission expires Nov 6, 2015

Received
JUL 11 2014
Office of Oil and Gas
Dept. of Environmental Protection

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
CONNIE WALKER
PO BOX 235
MOUNT CARBON, WV 25139
My commission expires Nov. 6, 2015

Form WW-9

Operator's Well No. AL-81

LEGEND

Property Boundary
Road
Existing Fence
Planned Fence
Stream
Open Ditch
Rock
North N
Buildings
Water wells
Drill site

Diversion
Spring
Wet Spot
Drain Pipe with size in inches
Waterway
Cross Drain
Artificial Filter Strip
Pit: cut walls
Pit: compacted fill walls
Area for Land Application of Pit Waste

Proposed Revegetation Treatment: Acres Disturbed 1 Prevegetation pH

Lime 3 Tons/acre or to correct to pH

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

Mulch 2 Tons/acre

Seed Mixtures

Area I Seed Type	lbs/acre	Area II Seed Type	lbs/acre
Contractors Mix			

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [signature]

Comments:

Title: Inspector Oil & Gas Date: 6-30-14

Field Reviewed? (✓) Yes ( ) No

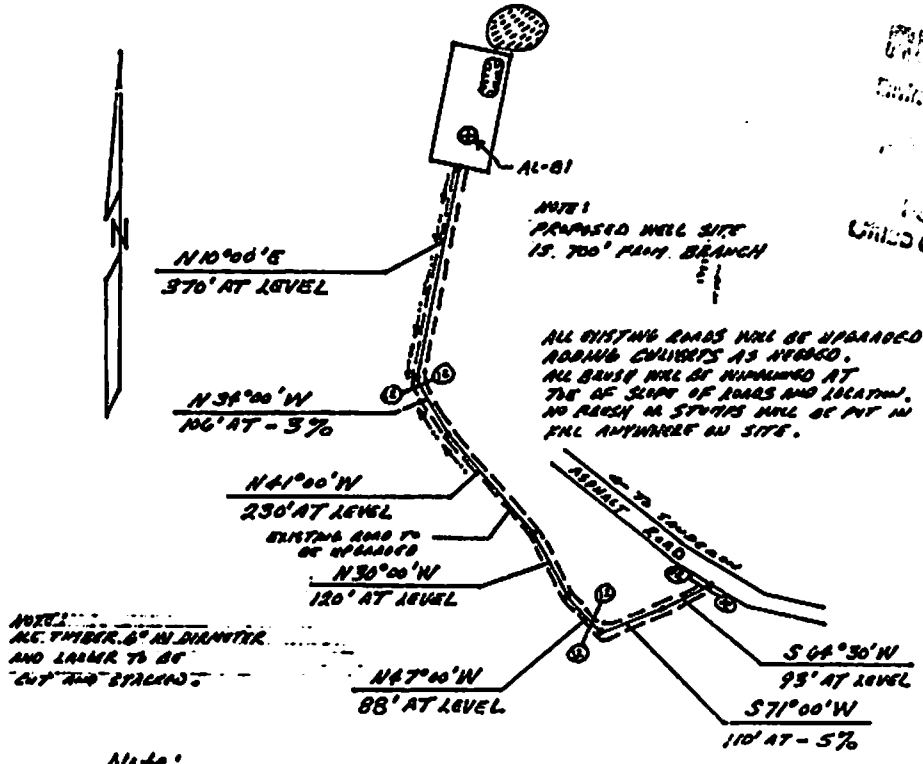
Received
JUL 11 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

4703905204

PHOTOCOPY SECTION OF
USGS TOPOGRAPHIC MAP
QUADRANGLE MAMMOTH, WV

LEGEND
WELL SITE
ACCESS ROAD

REED BROTHERS LIMITED PARTNERSHIP WELL AL-81 MAMMOTH, QUAD.



Note:
AFTER ROAD IS CONSTRUCTED
ADDITIONAL DRAINS WILL BE
ADDED AS NEEDED.

C.H. 3-2-98

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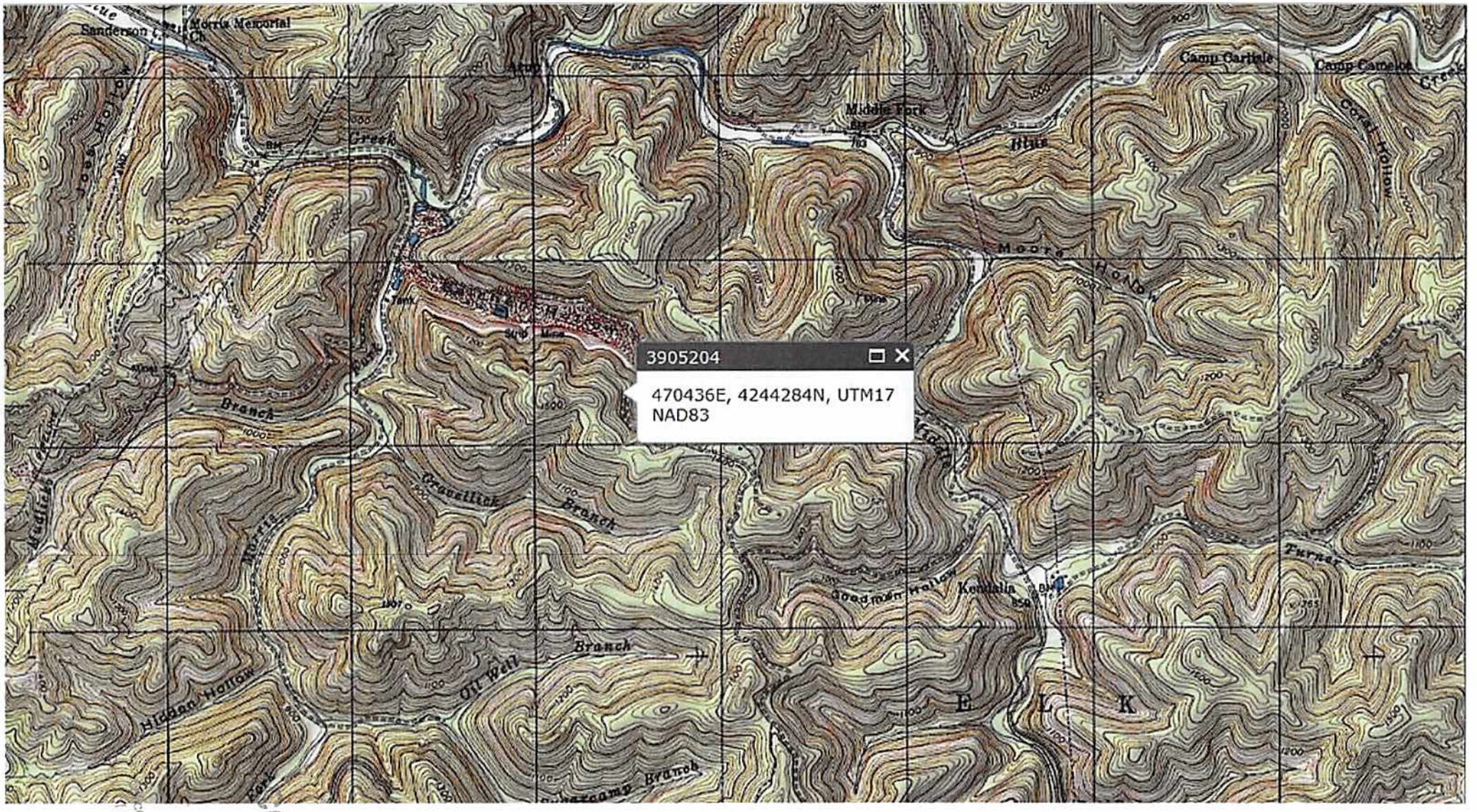

Received
1 1 2014
ce of Oil and Gas
Environmental Protection

WW-7
8-30-06

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

API: 47-39-5204 **WELL NO.:** A1-81

FARM NAME: Applachian Land Co.

RESPONSIBLE PARTY NAME: James W. Reed Jr.

COUNTY: Kanawha **DISTRICT:** Elk

QUADRANGLE: Mammoth

SURFACE OWNER: Applachian Land Co.

ROYALTY OWNER: Pine Mountain Oil & Gas

UTM GPS NORTHING: 4244284

UTM GPS EASTING: 470436.1 **GPS ELEVATION:** 1331

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 ____: Post Processed Differential ____

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.

Steve Hackworth — Contractor — 6-[illegible]
Signature — Title — Date

Received
JUL 11 2014
Office of Oil and Gas
WV Dept. of Environmental Protection