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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, October 3, 2019  
WELL WORK PLUGGING PERMIT  
Vertical Plugging

ENERVEST OPERATING, L.L.C., A LIMITED LIABILITY COMPANY  
1001 FANNIN STREET  
SUITE 800  
HOUSTON, TX 77002

Re: Permit approval for MAXWELL 1-E-937  
47-033-03907-00-00

This well work permit 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 any additional specific 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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of 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.

Per 35 CSR 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- 0450.

James A. Martin  
Chief

Operator's Well Number: MAXWELL 1-E-937  
Farm Name: OLIVERIO, SALVADORE A.  
U.S. WELL NUMBER: 47-033-03907-00-00  
Vertical Plugging  
Date Issued: 10/3/2019

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

1) Date August 1, 2019  
2) Operator's  
Well No. E-937 L.C. Maxwell #1  
3) API Well No. 47-033 - 03907

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 1169' Watershed Katy Lick Run  
District Sardis County Harrison Quadrangle Wolf Summit

6) Well Operator EnerVest Operating, L.L.C. 7) Designated Agent Barry K. Lay  
Address 300 Capitol Street, Suite 200 Address Same  
Charleston, WV 25301

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Sam Ward Name TBD  
Address P.O. Box 2327 Address \_\_\_\_\_  
Buckhannon, WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:  
**See Attached Plugging Procedure**

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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 *S. J. Duv...* Date 8/8/2019

Maxwell #1-E-937  
 API# 47-033-03907  
 Elevation: 1169' KB – 10' KB  
 Latitude: 39.320271  
 Longitude: -80.427867

## Maxwell #1-E-937 Well Data

Casing: 8-5/8" 20 ppf Surface Csg @ 900' KB – Cemented to Surface  
 4-1/2" 10.5 ppf Production Csg @ 4635' KB – Est. TOC Estimate 2936'

TD: 4718'  
 Latch Down: ?' – Records show a LD but no indication of footage  
 Perforations: 3392'-3424' KB, 4522'-4533' KB  
 Coal: 140'-144', and 858'-862'  
 Fresh Water: 404', 1146', and 1292'  
 Salt Water: None known

## Maxwell #1-E-937 Procedure:

1. Notify State Inspector, Sam Ward – (304)-389-7583 – [Samuel.D.Ward@wv.gov](mailto:Samuel.D.Ward@wv.gov), 24 hours prior to commencing operations.
2. Prep Maxwell #1-E-937 location.
3. MIRU service rig, steel pits, work string of 5000' 2-3/8" EUE tbg, and other ancillary equipment.
4. Perform csg Freepoint test on 4-1/2". Compare to estimated TOC.
5. RIH w/ 2-3/8" work string to bottom, approx. 4710'.
6. PU 10' off bottom.
7. Use rig tank and pump or MIRU cement crew and circulate hole with 6% gel.
8. TOOH to 4513' and set 150' cement plug F/ 4513' T/ 4363' (perfs @ 4522'-4533'). *WOC, TAG PLUG, ADD CEMENT IF NEEDED*
9. TOOH to 4333' and circulate hole with 6% gel. *ADD GEL IF NEEDED*
10. TOOH to 3404' and set 150' cement plug F/ 3404' T/ 3254' (perfs @ 3392'-3424'). *WOC, TAG PLUG, ADD CEMENT IF NEEDED.*
11. TOOH to 3224' and circulate hole with 6% gel. *ADD GEL IF NEEDED.*
12. TOOH w/ 2-3/8" tbg.
13. RIH with 4-1/2" csg ripper and rip csg at Freepoint.
14. Once ripped, PU 3', break circulation and thru 4-1/2" csg set 150' cement plug 75' in/out of cut.
15. TOOH w/ 4-1/2" csg 30' about previous cement plug and circulate hole with 6% gel.
16. TOOH w/ 4-1/2" csg.
17. MIRU perforators and perforate all Oil, Coal, FW, and Gas shows below 8-5/8" csg. FW @ 1146' and 1292'.
18. TIH w/ 2-3/8" work string to 1342' (50' below FW @ 1292') and set 275' cement plug F/ 1342' T/ 1067'. *RECEIVED Office of Oil and Gas AUG 15 2019 WV Department of Environmental Protection*
19. TOOH with 2-3/8" work string to 975' and set 150' cement plug F/ 975' T/ 825'. (75' in/out of 8-5/8" shoe).
20. TOOH to 795' and circulate hole with 6% gel.
21. TOOH w/ 2-3/8" work string to 200' and set 200' cement plug F/ 200' T/ Surface (Surface Plug).
22. Erect a monument to WV DEP specifications (CSR 35-4-5.5 – sub "b").

*SDW*  
*8/8/2019*



# ENERVEST OPERATING, LLC

## WELLBORE SCHEMATIC

**Well Information:**

Well Name:	Maxwell 1-E-937	Partnership:	Harvest WV
County/State:	Harrison/WV	API Number:	47-033-03907
Township:		AFE Number:	
Target:		Cost Center:	471375001
Lat:	39.320271	Pool Code:	101
Long:	-80.427867	Logger's TD:	4718'

Surveys	Hole Size	Formations	Depths (KB)	SPUD DATE: TD DATE:	Casings	Cement	Shows
				10/26/1992 11/1/1992			
				Elevation: 1169'			8-5/8" ?? ppf surf. csg @900' KB (TOC= surface) Primary: ??
		Big Lime 1465'					KB = 10'
		Big Injun 1526'					
		Fifth 2475'					
		Speechley 3050'					
		Balltown 3392' (6 Perfs: 3392'-3398') (4 Perfs: 3408'-3412') (2 Perfs: 3422'-3424')					
		Benson 4526' (12 Perfs: 4522'-4533')					Primary: 300 sks 50/50 w/ 2% gel, 10% salt 4-1/2" J-55 10.5 ppf prod. csg @ 4635' KB (Est. TOC = 2936')
	7 7/8" hole		4718'				

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<b>Completion Information</b>		Target:	Devonian	Completion Date:	11/9/1992
Top Perforation (ft):	3392'	Frac Type/Fluid:	Air	Breakdown:	psi
Bottom Perforation (ft):	4533'	Foam Quality:		Pre-ISIP:	psi
No. of Shots:	24	BD Acid Volume:	gal.	MTP:	psi
Charge (gram):		Treatment Volume:	gal.	ATP:	psi
Perf Diameter:	.39 in.	Sand mesh size	mesh	ISIP:	psi
Penetration:		Sand Volume	sacks	5-min SIP	psi
Phasing:		Ave. Treatment Rate:	bpm	10-min SIP	psi

**Remarks:** Perfs: Balltown (3392'-3424'), and Benson (4522'-4533'). Coal @ 140'-144', 858'-862'. FW @ 404', 1146', and 1292'.

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

Well Operator's Report of Well Work

Farm name: OLIVERIO, SALVADORE A. Operator Well No.: MAXWELL#1-E-937

LOCATION: Elevation: 1169.00 Quadrangle: WOLF SUMMIT

District: SARDIS County: HARRISON  
Latitude: 4780 Feet South of 39 Deg. 20Min. 0 Sec.  
Longitude 3060 Feet West of 80 Deg. 25 Min. 0 Sec.

Company: EMAX OIL COMPANY  
P. O. BOX 112  
SALEM, WV 26426-0112

Agent: JOHN T. HASKINS

Inspector: TIM BENNETT  
Permit Issued: 10/20/92  
Well work Commenced: 10/26/92  
Well work Completed: 11/1/92  
Verbal Plugging  
Permission granted on:  
Rotary x Cable Rig  
Total Depth (feet) 4718  
Fresh water depths (ft) 404  
1146, 1292  
Salt water depths (ft) 0

Is coal being mined in area (Y/N)?  
Coal Depths (ft): 140-144, 858-862

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4		129	to surface
8 5/8		900	to surface
4 1/2		4635	300 sks

OPEN FLOW DATA

Producing formation Benson, Balltown Pay zone depth (ft) 3392-4533  
Gas: Initial open flow n/t MCF/d Oil: Initial open flow n/a Bbl/d  
Final open flow 428 MCF/d Final open flow n/a Bbl/d  
Time of open flow between initial and final tests n/a Hours  
Static rock Pressure 1250 psig (surface pressure) after 72 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.

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For: EMAX OIL COMPANY

By: *John T. Haskins*  
Date: 12/18/92  
WV Department of Environmental Protection

Benson perforated from 4522-4533 with 12 holes. Water fraced with 55,000# sand in 513 bbl water.

Balltown perforated from 3392-3398 with 6 holes and 3408-3412 with 4 holes, 3422-3424 with 2 hole  
Water fraced with 40,000# sand in 424 bbl water.

Sand & Shale	0	140
Coal	140	144
Sand & shale	144	858
Coal	858	862
Sand & Shale	862	1465
Big Lime	1465	1526
Big Injun	1526	1634
Sand & Shale	1634	2475
Fifth Sand	2475	2496
Sand & Shale	2496	3050
Speechley	3050	3188
Sand & Shale	3188	3392
Balltown	3392	3424
Sand & Shale	3424	4526
Benson	4526	4534
Sand & Shale	4534	4718 TD

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Select County: (033) Harrison Select datatypes: (Check All)
Enter Permit #: 03907
Get Data Reset
Location Production Plugging
Owner/Completion Stratigraphy Sample
Pay/Show/Water Logs Btm Hole Loc

- Table Descriptions
County Code Translations
Permit Numbering Series
Usage Notes
Contact Information
Disclaimer
WVGES Main
Pipeline-Plus, New

WV Geological & Economic Survey:

Well: County = 33 Permit = 03907

Report Time: Thursday, February 14, 2019 10:43:20 AM

Location Information: View Map

Table with columns: API, COUNTY, PERMIT, TAX, DISTRICT, QUAD\_75, QUAD\_15, LAT\_DD, LON\_DD, UTME, UTMN

There is no Bottom Hole Location data for this well

Owner Information:

Table with columns: API, CMP\_DT, SUFFIX, STATUS, SURFACE\_OWNER, WELL\_NUM, CO\_NUM, LEASE, LEASE\_NUM, MINERAL\_OWN, OPERATOR\_AT\_COMPLETION, PROP\_VD, PROP\_TRGT\_FM, TFM\_EST\_PR

Completion Information:

Table with columns: API, CMP\_DT, SPUD\_DT, ELEV, DATUM, FIELD, DEEPEST\_FM, DEEPEST\_FMT, INITIAL\_CLASS, FINAL\_CLASS, TYPE, RIG, CMP\_MTHD, TVD, TMD, NEW\_FTG, KOD, G\_BEF, G\_AFT

Pay/Show/Water Information:

Table with columns: API, CMP\_DT, ACTIVITY, PRODUCT, SECTION, DEPTH\_TOP, FM\_TOP, DEPTH\_BOT, FM\_BOT, G\_BEF, G\_AFT, O\_BEF, O\_AFT, WATER\_QNTY

Production Gas Information: (Volumes in Mcf) \* 2018 data are incomplete at this time

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_GAS, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production Oil Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil \* 2018 data are incomplete at this time

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_OIL, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production NGL Information: (Volumes in Bbl) \*\* some operators may have reported NGL under Oil \* 2018 data are incomplete at this time

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_NGL, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Production Water Information: (Volumes in Gallons) \* 2018 data are incomplete at this time

Table with columns: API, PRODUCING\_OPERATOR, PRD\_YEAR, ANN\_WTR, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DCM

Stratigraphy Information:

Table with columns: API, SUFFIX, FM, FM\_QUALITY, DEPTH\_TOP, DEPTH\_QUALITY, THICKNESS, THICKNESS\_QUALITY, ELEV, DATUM

Wireline (E-Log) Information:

Table with columns: API, LOG\_TOP, LOG\_BOT, DEEPEST\_FML, LOGS\_AVAIL, SCAN, DIGITIZED, GR\_TOP, GR\_BOT, D\_TOP, D\_BOT, N\_TOP, N\_BOT, I\_TOP, I\_BOT, T\_TOP, T\_BOT, S\_TOP, S\_BOT, O\_TOP, O\_BOT, INCH2, INCH5

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Downloadable Log Images: We advise you to save the log image file to your PC for viewing. To do so, right-click the .tif image of interest and select the save option. Then you can direct the file to a location of your choice. Please note these images vary in size and some may take several minutes to download, especially if using a 56k or slower dialup connection.

**Quick Reference Guide for Log File Names** For more info about WVGES scanned logs click [here](#)

FILENAME  
4703303907g.tif

**geologic log types:**

d density (includes bulk density, compensated density, density, density porosity, grain density, matrix density, etc.)  
e photoelectric adsorption (PE or Pe, etc.)  
g gamma ray  
i induction (includes dual induction, medium induction, deep induction, etc.)  
l laterolog  
m dipmeter  
n neutron (includes neutron porosity, sidewall neutron--SWN, etc.)  
o other<sup>1</sup>  
s sonic or velocity  
t temperature (includes borehole temperature, BHT, differential temperature, etc.)  
z spontaneous potential or potential

**mechanical log types:**

b cement bond  
c caliper  
o other<sup>1</sup>  
p perforation depth control or perforate

<sup>1</sup>other logs may include, but are not limited to, such curves as audio, bit size, CCL--casing collar locator, continuous meter, directional survey, gas detector, guard, NCTL--Nuclear Cement Top Locator, radioactive tracer, tension

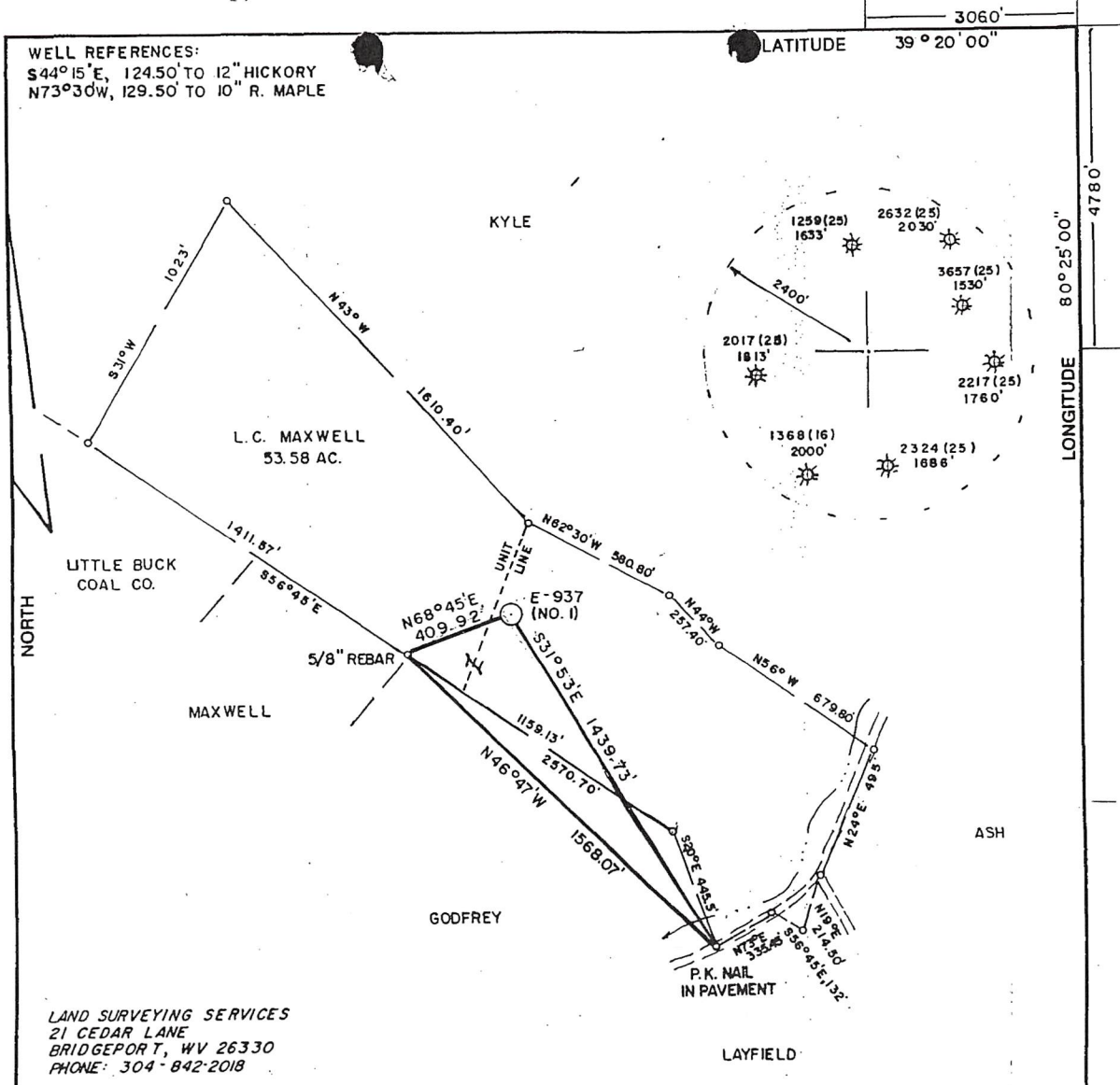
There is no Plugging data for this well

There is no Sample data for this well

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WELL REFERENCES:  
 S44°15'E, 124.50' TO 12" HICKORY  
 N73°30'W, 129.50' TO 10" R. MAPLE

LATITUDE 39° 20' 00"

LONGITUDE 80° 25' 00"

LAND SURVEYING SERVICES  
 21 CEDAR LANE  
 BRIDGEPORT, WV 26330  
 PHONE: 304-842-2018

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 2200' N.W. OF LOCATION ELEV. 1543'

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 ENERGY.  
 (SIGNED) \_\_\_\_\_  
 R.P.E. \_\_\_\_\_ I.L.S. 674  
 STEPHEN D. LOSH

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 AUG 15 2019  
 WV Department of Environmental Protection  
 PLACE SEAL HERE

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION

DATE JULY 20, 1992  
 OPERATOR'S WELL NO. E-937  
 API WELL NO. \_\_\_\_\_ MAX WELL NO. 1 - \_\_\_\_\_  
47 033 03907  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS," PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1169 WATERSHED KATY LICK RUN  
 DISTRICT SARDIS COUNTY HARRISON  
 QUADRANGLE WOLF SUMMIT 7.5 min.  
 SURFACE OWNER MARY & RUSSELL RICHARDS ACREAGE 50  
 OIL & GAS ROYALTY OWNER L. C. MAXWELL LEASE ACREAGE 39.95  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG   
 TARGET FORMATION BENSON ESTIMATED DEPTH 4650  
 WELL OPERATOR EMAX OIL COMPANY DESIGNATED AGENT JOHN HASKINS  
 ADDRESS P. O. BOX 112 ADDRESS P. O. BOX 112  
SALEM, WV 26426 SALEM, WV 26426

FORM WV-6

COUNTY NAME PERMIT

47-033-03907 P

WW-4A  
Revised 6-07

1) Date: August 1, 2019  
2) Operator's Well Number  
E-937 L.C. Maxwell

3) API Well No.: 47 - 033 - 03907

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

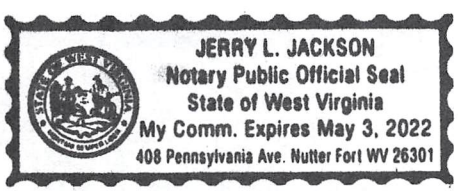
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Russel E. &amp; Mary Richards, et als</u>	Name _____
Address <u>1904 State Park Rd.</u>	Address _____
<u>Harrisville, WV 26362-7631</u>	_____
(b) Name <u>Bradley Max &amp; Loretta Louise Hinerman</u>	(b) Coal Owner(s) with Declaration
Address <u>52 Hinerman Meadow Drive</u>	Name _____
<u>Clarksburg, WV 26301-6592</u>	Address _____
(c) Name <u>Larry Kyle, et als</u> <u>Frances O. Phares, et als</u>	Name _____
Address <u>2827 Sardis Road</u> <u>235 East Main Street</u>	Address _____
<u>Clarksburg, WV 26301</u> <u>Clarksburg, WV 25301</u>	_____
6) Inspector <u>Sam Ward</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 2327</u>	Name _____
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>304-389-7583</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 EnerVest Operating, L.L.C.  
 By: Barry K. Lay  
 Its: Senior Vice President and General Manager  
 Address 300 Capitol Street, Suite 200  
Charleston, WV 25301  
 Telephone 304-343-5505

Subscribed and sworn before me this 6<sup>th</sup> day of August 2019  
[Signature] Notary Public  
 My Commission Expires May 3, 2022

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

WW-9  
(5/16)

API Number 47 - 033 - 03907  
Operator's Well No. \_\_\_\_\_

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EnerVest Operating, L.L.C. OP Code 30-9999

Watershed (HUC 10) Katy Lick Run Quadrangle Wolf Summit

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

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: No Pit To Be Built (Portable Containment Equipment)

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection ( UIC Permit Number \_\_\_\_\_)
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain No Pit To Be Built. Any well effluent will be contained in tanks and properly disposed of offsite.)

*SDW  
8/8/2019*

Will closed loop system be used? If so, describe: \_\_\_\_\_

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. \_\_\_\_\_

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

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

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Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. At discretion of Contractor.

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

WV Department of  
Environmental Protection

-Landfill or offsite name/permit number? \_\_\_\_\_

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, 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 *Barry K Lay*

Company Official (Typed Name) Barry K. Lay

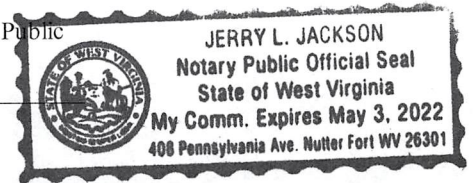
Company Official Title Senior Vice President and General Manager

Subscribed and sworn before me this 6<sup>th</sup> day of August, 2019

*[Signature]*

Notary Public

My commission expires May 3, 2022



47-033-03907P

Form WW-9

Operator's Well No. \_\_\_\_\_

Proposed Revegetation Treatment: Acres Disturbed 2.00 Prevegetation pH 6.5

Lime according to ph test Tons/acre or to correct to pH 7.0

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchard Grass	25	Orchard Grass	25
Birdsfoot Treefoil	15	Birdsfoot Treefoil	15
Ladino Clover	10	Ladino Clover	10

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. J. Dwan

Comments: \_\_\_\_\_

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OOG Inspector  
Title: Land Manager Jay Dwan

Date: 8/8/2019  
8/01/2019

Field Reviewed? ( ) Yes ( X ) No

N/A

WW-9- GPP  
Rev. 5/16

Page 1 of 2  
API Number 47 - 033 - 03907  
Operator's Well No. \_\_\_\_\_

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

Operator Name: EnerVest Operating, L.L.C.  
Watershed (HUC 10): Katy Lick Run Quad: Wolf Summit  
Farm Name: \_\_\_\_\_

- 1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

Plugging of shallow well. All residual fluids will be captured in portable flowback tanks for proper disposal.

- 2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

Plugging of shallow well. All residual fluids will be captured in portable flowback tanks for proper disposal.

- 3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Closest Water Body: Katy Lick Run 1,473' +

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- 4. Summarize all activities at your facility that are already regulated for groundwater protection.

[Empty box for activity summary]

- 5. Discuss any existing groundwater quality data for your facility or an adjacent property.

N/A

[Empty rectangular box for text entry]

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

[Empty rectangular box for text entry]

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

[Empty rectangular box for text entry]

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

[Empty rectangular box for text entry]

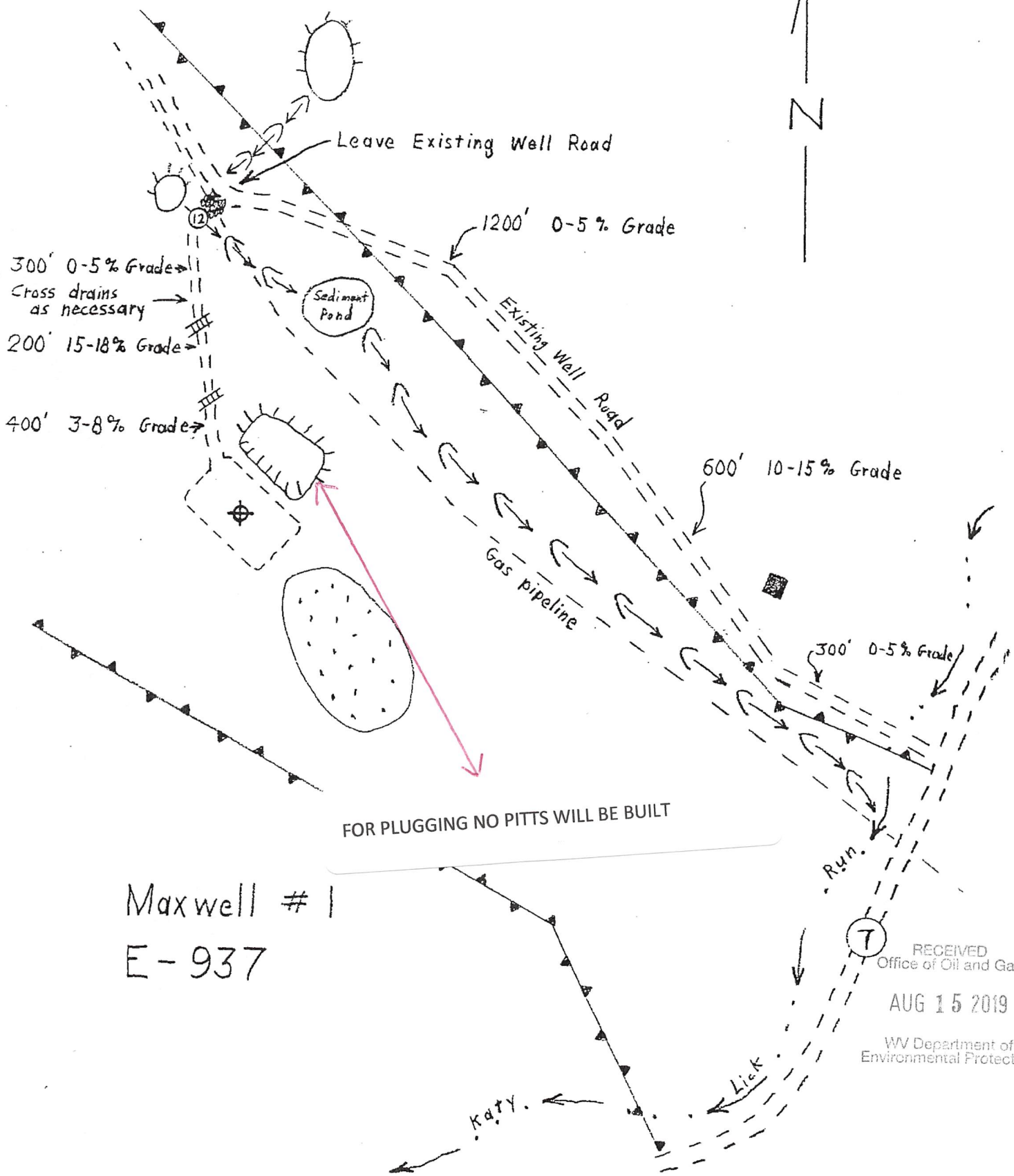
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Signature: [Handwritten Signature]

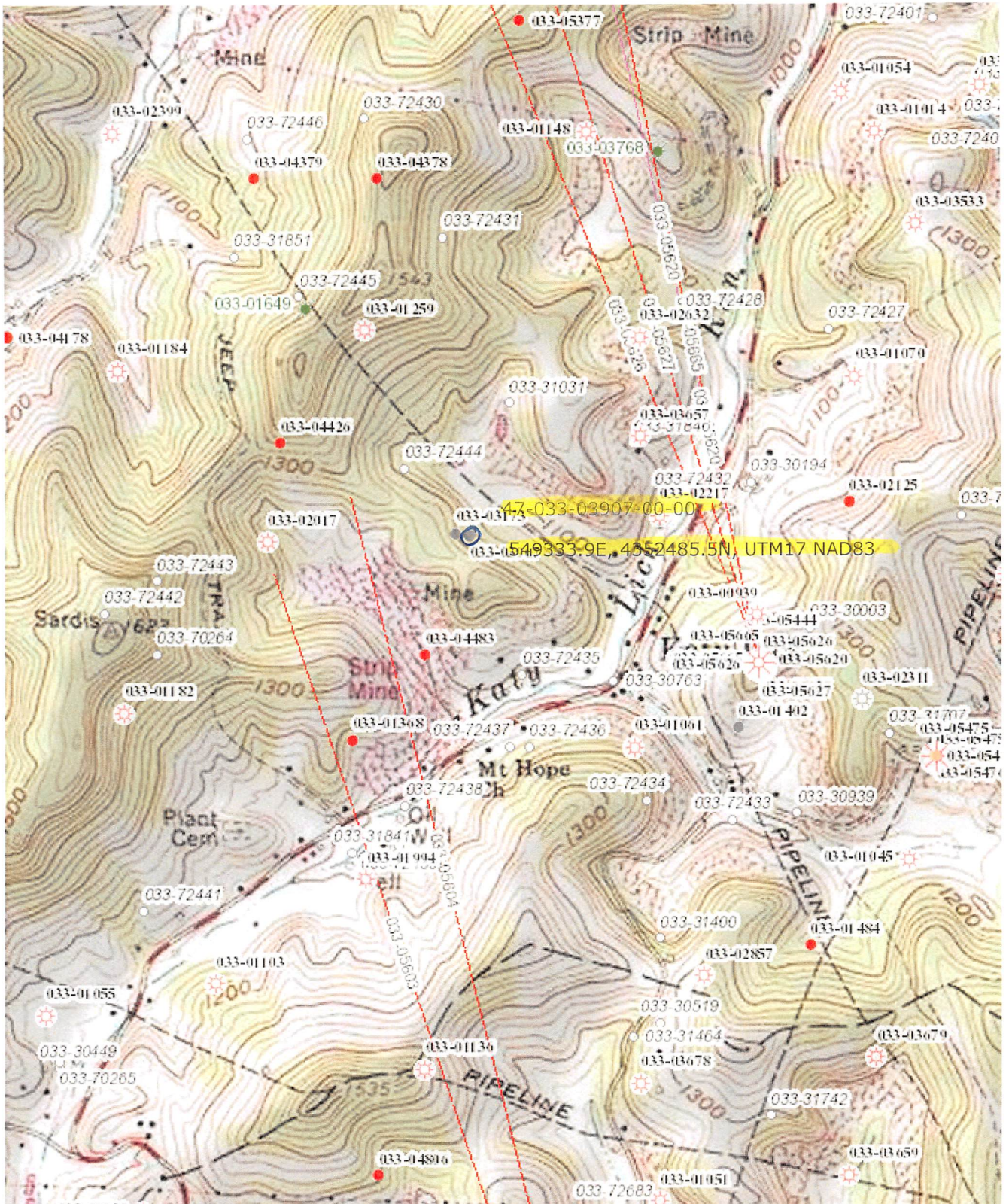
Date: 8/8/2019



Maxwell # 1  
E-937

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WW-7  
8-30-06



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

API: 47-033-03907 WELL NO.: E-937 L.C. Maxwell #1

FARM NAME: Mary & Russell Richards, et al

RESPONSIBLE PARTY NAME: Jerry L. Jackson

COUNTY: Harrison DISTRICT: Sardis

QUADRANGLE: Wolf Summit

SURFACE OWNER: Russell E. & Mary L. Richards, et al

ROYALTY OWNER: L.C. Maxwell, et al

UTM GPS NORTHING: 4352485.5

UTM GPS EASTING: 549333.9 GPS ELEVATION: 1169'

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.

  
Signature

Land Manager  
Title

8/01/2019  
Date

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