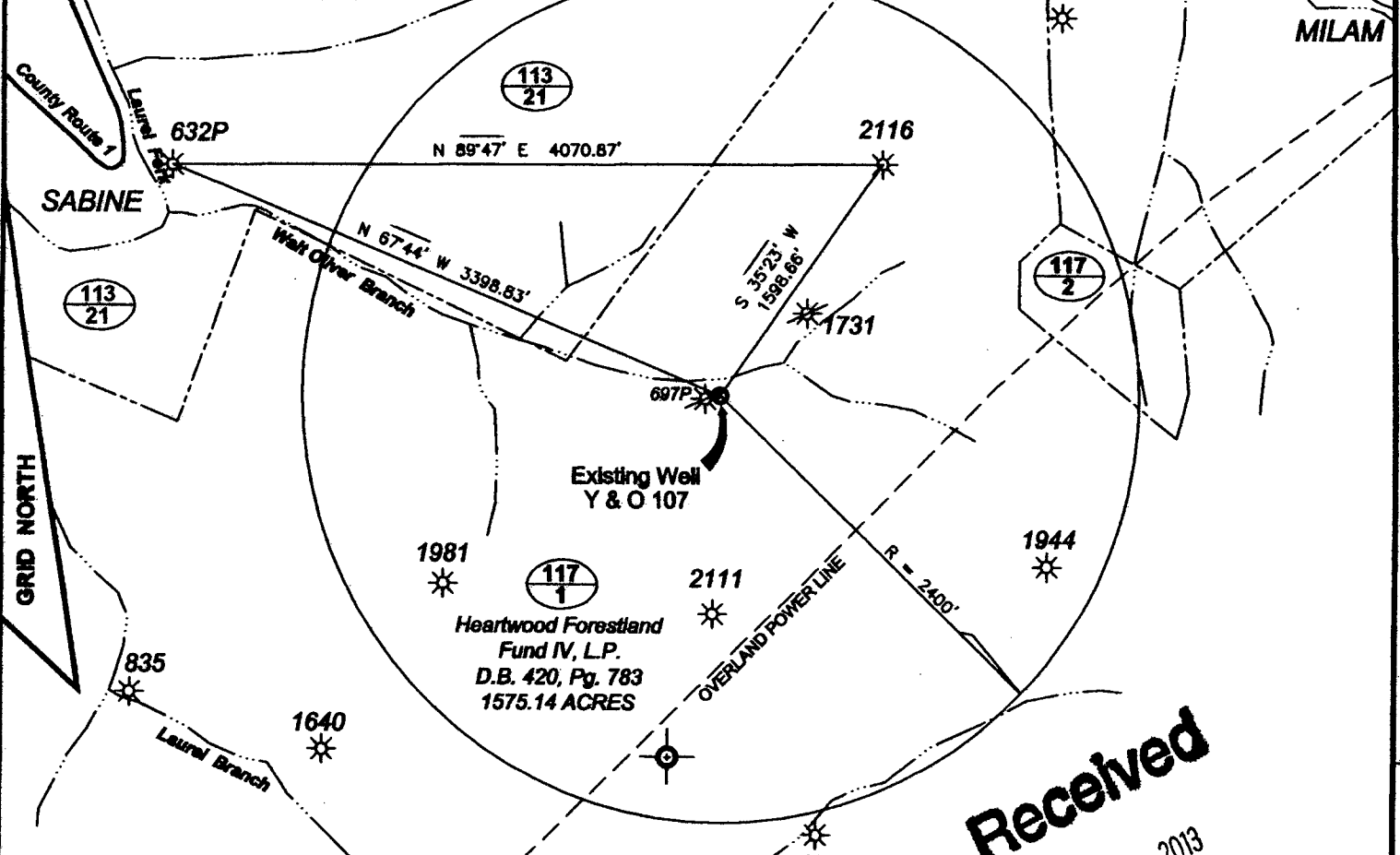


**Existing Well
Y & O 107**

Well site coordinates are:
 N: 245822.4' Latitude: 37°40'26.7"
 E: 1859014.9' Longitude: 81°29'13.6"
 West Virginia
 Coordinate System of 1927, South Zone based
 upon Differential GPS Measurements.

Plat orientation and well references are based
 upon the grid north meridian.

UTM, Zone 17, NAD 83 Coordinate
 N: 4189779.09 meters
 E: 457059.40 meters



Ownership
 Coal Owner - West Virginia Mid. Vol., Inc.
 Coal Lessee - Rockhouse Land, LLC

Legend
 * Existing Well
 - - - Surface Boundary (Approximate)
 (117/2) Taxmap/Parcel Number

Received
 OCT - 1 2013

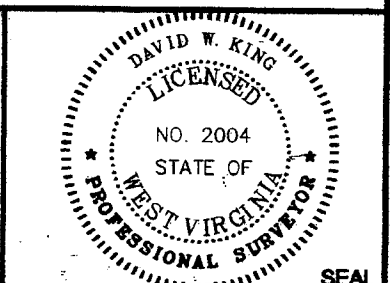
Office of Oil and Gas
 WV Dept. of Environmental Protection

Note: No known water wells within 1500' of gas well Y & O 107



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 Environmental Protection.

David W. King
 P.S. 2004



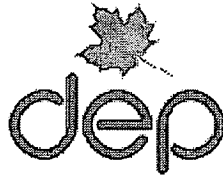
FILE NO: 246-22-0F-13
 DRAWING NO: YO-107 PLAT.DWG
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: Existing Well

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

DATE: August 12, 2013
 OPERATOR'S WELL NO. Y & O-107
 API WELL NO. 47-109-01093R
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL OTHER
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1877' WATERSHED: Walt Oliver Branch of Laurel Fork
 QUADRANGLE: Mc Graws 7 1/2' DISTRICT: Slab Fork COUNTY: Wyoming
 SURFACE OWNER: Heartwood Forestland Fund IV, L.P. ACREAGE: 1575.14
 OIL AND GAS ROYALTY OWNER: EnerVest Energy Institutional Fund XII-A, L.P. LEASE NO: ACREAGE: 31559.59
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER 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: Gordon & Ravencloff ESTIMATED DEPTH: 3660'

WELL OPERATOR: EnerVest Operating Company DESIGNATED AGENT: Barry Lay
 ADDRESS: 300 Capitol Street, Suite 200 ADDRESS: 300 Capitol Street, Suite 200
 Charleston, WV 25301 Charleston, WV 25301



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

September 04, 2014

FINAL INSPECTION REPORT

WELL PERMIT RELEASED

ENERVEST OPERATING L. L. C.,

The FINAL INSPECTION REPORT for the permit, API Well Number: 47-10901093, issued to ENERVEST OPERATING L. L. C., and listed below has been received in this office, and reclamation requirements approved. The well designated by the permit number below has been released under reclamation and will remain under your bond.

James Martin
Chief

Operator: ENERVEST OPERATING L. L. C.
Operator's Well No: Y&O COAL 107 (WYO. POCA #1
Farm Name: HEARTWOOD FORESTLAND FU
API Well Number: 47-10901093
Date Issued: 10/16/2013
Date Released: 09/04/2014

Promoting a healthy environment.

WELL PLUGGING INSPECTION & RELEASE FORM

PLUGGING COMMENCED 11/12/13
PLUGGING COMPLETED 12/19/13
VERBAL PERMISSION ON 11/11/13

OPERATOR: EnerVest
FARM: Y & O Coal
WELL NO: 107

- 1. IS COAL BEING MINED IN THE AREA? YES NO N/A
2. WERE CEMENT AND GEL MIXED AND USED IN ACCORDANCE WITH ACCEPTED INDUSTRY STANDARDS?
A. BOTTOM HOLE PLUGGED YES NO N/A
B. 100' PLUGS YES NO N/A
C. LATEX PLUGS USED FOR H2S GAS YES NO N/A
D. PROPER PLUGS THROUGH COAL SEAMS YES NO N/A
E. PROPER PLUGS SET TO PROTECT FRESHWATER YES NO N/A
F. PROPER AMOUNT OF GEL USED TO DISPLACE PLUGS YES NO N/A

Table with columns: TYPE, FROM, TO, PIPE REMOVED. Rows include Cement, Retriinger, Cement, CSBP with depth measurements.

- 3. WERE ALL CHANGES APPROVED BY INSPECTOR? YES NO
4. WAS THE EQUIPMENT USED FOR PULLING CASING PROPERLY SIZED AND RIGGED TO PULL 150% OF THE HEAVIEST STRING OF PIPE EXPECTED TO BE PULLED? YES NO
5. DID THE OPERATOR GIVE THE INSPECTOR PROPER NOTICE? YES NO
6. WERE ACCURATE PLUGGING RECORDS KEPT BY THE OPERATOR? YES NO
7. WAS A PROPER MONUMENT SET WITH API NUMBER ATTACHED? YES NO
8. DID WELL SITE AND ACCESS ROAD MEET THE FOLLOWING RECLAMATION REQUIREMENTS?
A. RECLAIMED YES NO B. FENCES REPLACED YES NO
C. MULCHED YES NO D. PROPER DRAINAGE YES NO
E. SEEDDED YES NO F. ALL EQUIPMENT REMOVED YES NO
G. PIT BACKFILLED YES NO

6/11/14
DATE RELEASED

INSPECTOR'S SIGNATURE

***NOTE: Original deposal well. Well plugged back to produce gas. Stopped by EnerVest office 6/11/14 talked to Tommy Honaker well in production producing 50 mcf. Field review location and well.

Received

RECORD ALL VISITS TO THIS WELL ON PAGE 2

JUN 12 2014

DATE	VISITS
11/12/13	Stopped by location. Gate locked. Well plugging procedure being changed by Jeff McLaughlin WVDEP as requested Trevor Shaffer with EnerVest. MIRU KM&J sevice rig. Open production valve to blow down and found well dead. Packer would not release.
11/13/13	Stopped by location talked to Bill Kelly to make sure he received new procedure. Wanted to change procedure again in afternoon. Referred to Jeff McLaughlin/Trevor Shaffer. Cut tubing 5500' attempt to pull failed. Apparent hole in tubing somewhere up hole. TIH w/cutter 4950' would not pull cut again at 4500' pull up and set in slips.
11/15/13	Stopped by location. TOOH with 2 3/8" EUE tbg. Pull 143 jts = 15 partial all tubing except last 4jts looked good. Blue Dot MU cement retainer on 1 st tbg & RIH w 2 3/8" EUE tubing run 75 jts to approx. 2400'.
11/16/13	Finish TIH w 2 3/8" EUE tbg 139jts + 1-6' pup + cement. Blue Dot set retainer 4352' cementing.
11/19/13	RIH w tolls & check TD at 4056'. FL@ 500'. MIRU Nabors pump FW to load hole & pressure test 4 1/2". Pump 75 bbl. No CIRC spsrent hole. SI well and down job to decide what to do with well.
11/20/13	Stopped by location. Job on hold. No one on location.
11/26/13	Pick up Parmaco tension packer at Miller Supply in Elkview to location. RIH with 120 jts 2 3/8" EUE tubing & packer to 3740' below Gordon zone. Set packer & pull 6000# in tension. Set inslips & MU well head. Ready to pump pressure test tmorrow. SIFN.
12/18/13	Ran in hole with tools & continued drilling on top frac plug. Drilled out top plug @ 10:00am. Run down hole & start drilling on bottom frac plug @ 3740". No sand fillup in hole. Drill on bottom plug for remainder of day. SI overnight.
12/19/13	AM well is gassing but not bringing any fluid.

Received

JUN 12 2014

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-109-01093 W County Wyoming District Slab Fork
Quad McGraws 7 1/2 Pad Name _____ Field/Pool Name _____
Farm name Heartwood Forestland Fund IV, LP Well Number Y&O #107
Operator (as registered with the OOG) EnerVest Operating LLC
Address 300 Capitol Street, Suite 200 City Charleston State WV Zip 25301

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1877 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)

Date permit issued 10/16/2013 Date drilling commenced 7/2/1989 Date drilling ceased 10/25/1989
Date completion activities began 11/12/2013 Date completion activities ceased 1/10/2014
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft + - 1130' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft + - 1380' Void(s) encountered (Y/N) depths _____
Coal depth(s) ft No Record Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) _____

RECEIVED
Office of Oil and Gas
MAY 09 2014
Reviewed by:
WV Department of
Environmental Protection

API 47- 109 - 01093 W Farm name Heartwood Forestland Fund IV, LP Well number Y&O #107

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor		20"	20'				
Surface							
Coal							
Intermediate 1		9 5/8"	1094'		36#		
Intermediate 2							
Intermediate 3							
Production		4 1/2"	6548'		11.6#		
Tubing		2 3/8"	3601				
Packer type and depth set		Parmaco Tension Packer @1471' on tbg					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal	A				509		
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	A				1501		
Tubing							

Drillers TD (ft) 6563' Loggers TD (ft) _____
 Deepest formation penetrated _____ Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) _____

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

RECEIVED
Office of Oil and Gas
 MAY 09 2014

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

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Department, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm name: HEARTWOOD FORESTRY FARM IV, LP Operator Well No.: Y 20 107

LOCATION: Elevation: 1877' Quadrangle: MCGRAW'S 7 1/2'
District: SLAB FORK County: WYOMING
Latitude: 12475 Feet South of 37 Deg. 42 Min. 30 Sec.
Longitude: 8425 Feet West of 81 Deg. 27 Min. 30 Sec.

Well Type: OIL _____ GAS

Company EMEREST OPERATING CO. Coal Operator WV MLD. VOL. TAX.
300 CAPITAL ST. STE 200 or Owner ROCKHOUSE LAND, LLC
CHARLESTON, WV 25301

Agent Barry Lay Coal Operator _____
Permit Issued Date 10/16/13 or Owner _____
RECEIVED
Office of Oil & Gas

AFFIDAVIT

APR 29 2014

STATE OF WEST VIRGINIA,
County of L. ANAWHA ss:

Barry Lay and CHRIS VEZEY being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and are duly licensed by the State of West Virginia as well operator, and participated in the work of plugging and filling the above well say that said work was commenced on the 25th day of November, 2013 and the well was plugged and filled in the following manner:

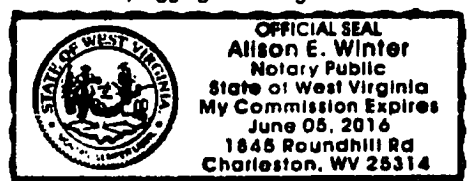
TYPE	FROM	TO	PIPE REMOVED	LEFT
CEMENT	4352'	5100'	NONE	4 1/2" @ 6548'
RETAINER	4352'	4352'	NONE	" "
CEMENT	4056'	4352'	NONE	" "
CIBP	3740'	3742'	NONE	" "

Description of monument: N/A PARTIAL PLUG and that the work of plugging and filling said well was completed on the 28th day of November, 2013.

And further deponents saith not. Barry Lay
Chris Vezey

Sworn and subscribe before me this 14th day of April, 2014

My commission expires: June 5, 2016 Alison E Winter
Notary Public



Affidavit reviewed by the Office of Oil and Gas: [Signature] Title: WV DEP
Dil4 Gas Inspector



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

PERMIT MODIFICATION APPROVAL

November 12, 2013

ENERVEST OPERATING L. L. C.
300 CAPITOL STREET, SUITE 200
CHARLESTON, WV 25301

Re: Permit Modification Approval for API Number 10901093, Well #: Y&O COAL #107 (WYO)
PARTIAL PLUGGING FOR REWORK

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

g w m

Gene Smith
Regulatory/Compliance Manager
Office of Oil and Gas

Promoting a healthy environment.

McLaughlin, Jeffrey W

From: Schaffer, Trevor <tschaffer@enervest.net>
Sent: Tuesday, November 12, 2013 2:05 PM
To: McLaughlin, Jeffrey W
Subject: RE: Y & O Coal 107 (API 10901093) Rework Modification

I accept these changes.
Thanks

From: McLaughlin, Jeffrey W [<mailto:Jeffrey.W.McLaughlin@wv.gov>]
Sent: Tuesday, November 12, 2013 1:55 PM
To: Schaffer, Trevor
Subject: Y & O Coal 107 (API 10901093) Rework Modification

Trevor,

If you have accepted the changes I made to your recent Rework Modification (referenced above), please acknowledge with a return email. Thank you.

PLEASE PROVIDE THE API # AND THE WELL NAME IN THE SUBJECT OF ANY EMAIL INQUIRY YOU MAKE.

Regards,

Jeff McLaughlin, WV DEP
Office of Oil & Gas
Phone 304-926-0499 ext. 1614

RECEIVED
Office of Oil and Gas

Y&O Coal #107
API# 47-109-01093
Wyoming County, WV

NOV 12 2013

WV Department of
Environmental Protection

Well Data

Casing: 4-1/2", 11.6# set at 6,548'
Tubing: 2-3/8" with Arrow I-X packer set at 5,691'
Disposal Perfs: 5,710' to 6,210' (Lower Devonian Shale)
Prod. Perfs: 4,380' to 4,890' (Upper Devonian Shale) & 5,060' to 5,400' (Middle Devonian Shale)

Proposed new zones: Lower Gordon (3,677' to 3,687')
Upper Gordon (3,607' to 3,617')
Ravencliff (1,362' to 1,374' & 1,400' to 1,410')

Procedure:

1. Attempted to release packer but it will not release.
2. Release from packer at On/Off tool and attempt to circulate hole.
3. Pump 10 BBI 6% gel, 15 sks Class A w/ 2% CaCl₂.
4. Displace cement w/ 3 BBI 3% gel, followed by FW to place cement plug F/ 5,475' T/ 5,675' KB.
5. POOH to 5300' & reverse circulate to clean up hole. Spot 10 BBI 6 % gel at bottom of hole.
6. Wait additional time for total of 4 hrs after plug was set.
7. Continue POOH to 5050'.
8. Pump 10 BBI 6% gel, 15 sks Class A w/ 2% CaCl₂.
9. Displace cement w/ 3 BBI 3% gel, followed by FW to place cement plug F/ 4,850' T/ 5,050' KB.
10. POOH to 4700' & reverse circulate to clean up hole. Spot 10 BBI 6 % gel at bottom of hole.
11. Wait additional time for total of 4 hrs after plug was set.
12. Continue POOH to 4380'.
13. Pump 10 BBI 6% gel, 15 sks Class A w/ 2% CaCl₂.
14. Displace cement w/ 3 BBI 3% gel, followed by FW to place cement plug F/ 4,180' T/ 4,380' KB.
15. POOH to 4000' & reverse circulate to clean up hole. Wait additional time for total of 4 hrs after plug was set. Let plugs set overnight.
16. Pressure test casing to 4,000 psi.
17. Run new CBL log under pressure
18. If bond log allows perform 3 stage foam frac completion for proposed zones
19. Flow back frac and clean up N2
20. Run tubing in well to \pm 3,600'
21. Turn well in line.

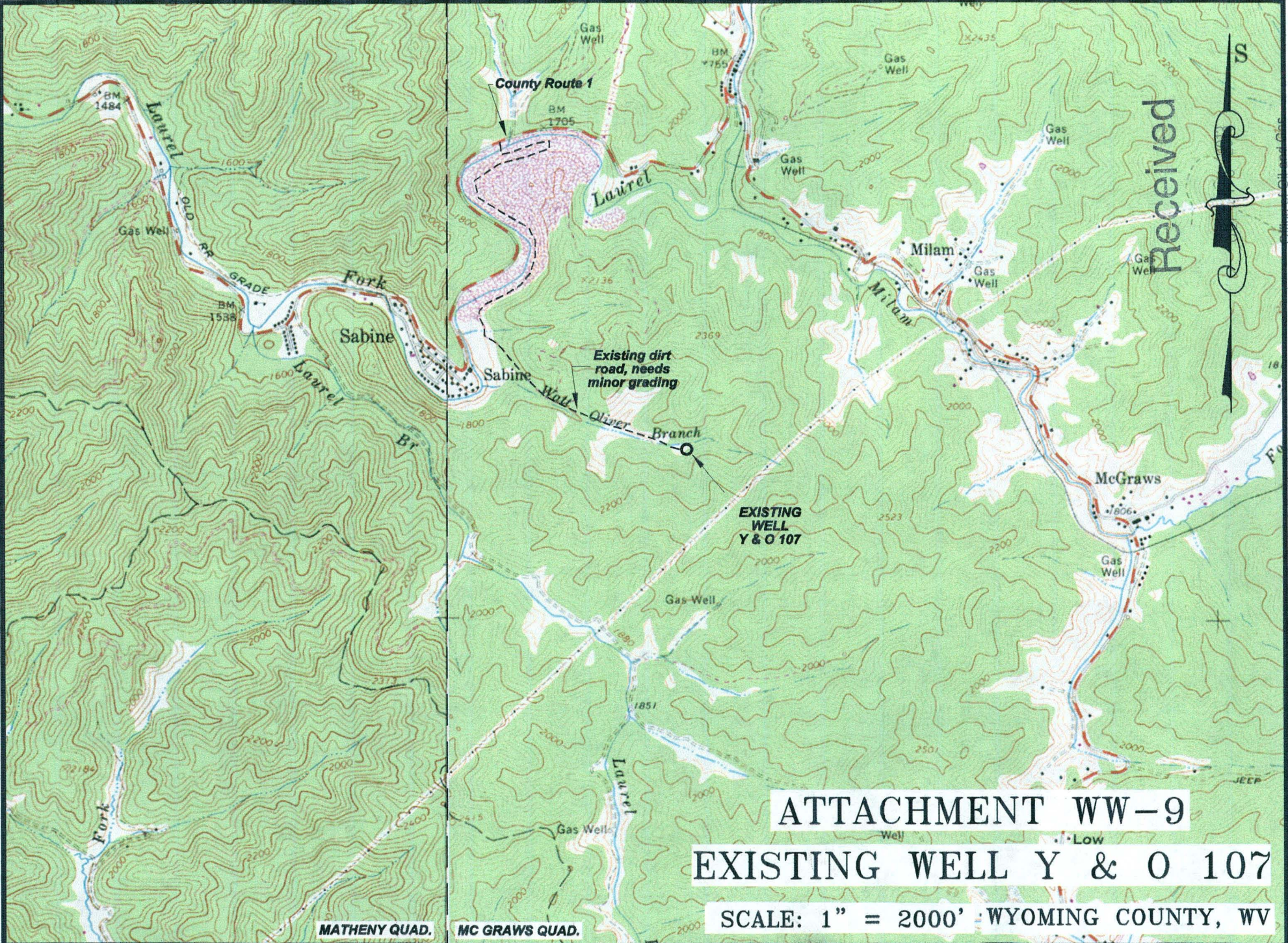
WV DEP, Office of Oil and Gas Comments from Jeff McLaughlin, Technical Analyst

Gel must be fresh water with a minimum of 6 % Bentonite.

Cement plugs must be Class A Cement with no more than 3% CaCl₂ and no other additives.

4a.** After setting first cement plug on top of packer, WOC for eight hours and tag plug to check placement. If plug is set, continue on with rest of procedure.

10901010601



Received



ATTACHMENT WW-9
EXISTING WELL Y & O 107

SCALE: 1" = 200' WYOMING COUNTY, WV

MATHENY QUAD.

MC GRAWS QUAD.



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 16, 2013

WELL WORK PERMIT

Re-Work

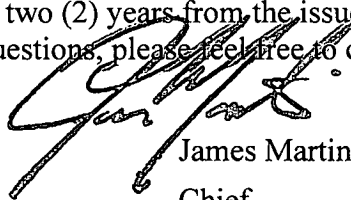
This permit, API Well Number: 47-10901093, issued to ENERVEST OPERATING L. L. C., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: Y&O COAL #107 (WYO. POCA #
Farm Name: HEARTWOOD FORESTLAND FU

API Well Number: 47-10901093

Permit Type: Re-Work

Date Issued: 10/16/2013

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. The WR- 35 needs to note the partial plugging of this well addressing the active UIC permit.

WW - 2B
(Rev. 8/10)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: EnerVest Operating, L.L.C. 109 07 466
Operator ID County District Quadrangle

2) Operator's Well Number: Y&O Coal #107 API # 47-109-01093 3) Elevation: 1877'

4) Well Type: (a) Oil _____ or Gas X
(b) If Gas: Production X / Underground Storage _____
Deep _____ / Shallow X

5) Proposed Target Formation(s): Ravenclyff/Gordon Proposed Target Depth: 1362'-1400' 3607'-3637'

6) Proposed Total Depth: 6563 Feet Formation at Proposed Total Depth: Devonian Shale

7) Approximate fresh water strata depths: + - 1130'

8) Approximate salt water depths: + - 1380'

9) Approximate coal seam depths: No Record

10) Approximate void depths,(coal, Karst, other): None Recorded

11) Does land contain coal seams tributary to active mine? None Recorded

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
Abandon Lower Devonian Shale disposal zone (5710'-6210') & Upper Devonian Shale producing zone 4330'-5400' with cement.
Complete and fracture stimulate the Gordon 3607' to 3637' and Ravenclyff 1362'-1410'.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	20"				20'	
Fresh Water						
Coal						
Intermediate	9-5/8"		36#		1094'	509
Production	4-1/2"		11.6#		6548'	1501
Tubing						Received
Liners						

Packers: Kind: _____
Sizes: _____
Depths Set _____

SEP 16 2013

10401093 R

PARTIAL PLUGGING

Y&O Coal #107
API# 47-109-01093
Wyoming County, WV

RECEIVED
Office of Oil and Gas

OCT 16 2013

WV Department of
Environmental Protection

Well Data

Casing: 4-1/2", 11.6# set at 6,548'
Tubing: 2-3/8" with Arrow I-X packer set at 5,691'
Disposal Perfs: 5,710' to 6,210' (Lower Devonian Shale)
Prod. Perfs: 4,380' to 4,890' (Upper Devonian Shale) & 5,060' to 5,400' (Middle Devonian Shale)

Proposed new zones: Lower Gordon (3,677' to 3,687')
Upper Gordon (3,607' to 3,617')
Ravencliff (1,362' to 1,374' & 1,400' to 1,410')

Procedure:

1. Pull tubing and packer
2. Set cement plug from PBTD to \pm 3,800'
3. Set CIBP on top of cement plug
4. Pressure test casing
5. Run new CBL log under pressure
6. If bond log allows perform 3 stage foam frac completion for proposed zones
7. Flow back frac and clean up N2
8. Run tubing in well to \pm 3,600'
9. Turn well in line.

1A01093 R

Farm name: GEORGIA-PACIFIC CORP. Operator Well No.: Y & O 107

LOCATION: Elevation: 1877.00 Quadrangle: MCGRAWS

District: SLAB FORK County: WYOMING
Latitude: 12475 Feet South of 37 Deg. 42Min. 30 Sec.
Longitude 8425 Feet West of 81 Deg. 27 Min. 30 Sec.

Company: SONAT EXPLORATION CO.
P. O. BOX 766
CHARLESTON, WV 25323-0000

Agent: DANA R. BLACKSHIRE

Inspector: RODNEY G. DILLON
Permit Issued: 05/23/89
Well work Commenced: 7/2/89
Well work Completed: 10/25/89
Verbal Plugging
Permission granted on:
Rotary Cable Rig
Total Depth (feet) 6563'
Fresh water depths (ft) ±1130'
Salt water depths (ft) ±1380'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
20"	20'	20'	
9-5/8"	1094'KB	1094'KB	509
4-1/2"	6548'KB	6548'KB	1501
2-3/8" tbg.		3991'KB	

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

OPEN FLOW DATA

4380-4890'
5060-5400'

Producing formation Devonian Shale Pay zone depth (ft) 5710-6210'
Gas: Initial open flow 49 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 39 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 24 Hours
Static rock Pressure 1400 psig (surface pressure) after 48 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.

Julie Ward
For: SONAT EXPLORATION CO.

By: Julie Ward
Date: 11/22/89

WYOM 1093

Foam and 85,000 lbs 20/40 sand.

Middle Devonian Shale: Perforated 5060-5400'. Pumped 500 gals 9% HCL + 1 gal A-200 + 5 gal U-42 followed by 1000 gals 25% Methanol + additives. Pumped 100,000 SCF Nitrogen to establish injection at 36,000 SCFM. Frac'd with 59,500 gals Foam and 110,000 lbs 20/40 sand.

Lower Devonian Shale: Perforated 5710-6210'. Pumped 500 gals 9% HCL + 1 gal A-200 + 5 gal U-42 followed by 1000 gals 25% Methanol + additives. Pumped 160,000 SCF Nitrogen to establish injection. Frac'd with 1000 gal 25% Methanol prepad + 48,000 gals Foam and 70,000 lbs 20/40 sand.

- 2. The well log which is a systematic detailed geological record of all formations, including coal encountered by the wellbore.

<u>FORMATION</u>	<u>TOP FEET</u>	<u>BOTTOM FEET</u>
Princeton	1194'	1244'
Ravencliff	1358'	1414'
Avis	1422'	1470'
Maxon	2152'	2250'
Little Lime	2270'	2438'
Berera	3456'	3474'
Gordon	3598'	3630'

Note: Did not run any coal logs.



DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

6828

CK# 268682
\$650.00

10901093R

WW-2A
(Rev. 6-07)

1). Date: August 21st, 2013
2.) Operator's Well Number Y&O Coal #107
State 47- County 109 Permit 01093
3.) API Well No.:

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

4) Surface Owner(s) to be served:
(a) Name Heartwood Forestland Fund IV, L.P. ✓
Address 19045 Stone Mountain Rd.
Abington, VA 24210
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Ross Eller
Address 121 Brierhill Drive
Beckley, WV 25801
Telephone 304-932-6844
5) (a) Coal Operator
Name None
Address _____
(b) Coal Owner(s) with Declaration
Name No Declaration of Record
Address _____
(c) Coal Lessee with Declaration ✓
Name Rockhouse Land, LLC
Address PO Box 1169
Pikeville, KY 41501-1169

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

OR
 x Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through on the above named parties by:

 Personal Service (Affidavit attached)
 x Certified Mail (Postmarked postal receipt attached)
 Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

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, 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 and imprisonment.

Well Operator EnerVest Operating, L.L.C.
By: Barry K. Lay *Barry K. Lay*
Its: Vice President - General Manager
Address 300 Capitol Street, Suite 200
Charleston, WV 25301
Telephone 304-343-5505

Subscribed and sworn before me this 21st day of August, 2013

[Signature]

Notary Public

Received



Office of Oil and Gas
WV Dept. of Environmental Protection

10901093 R

WW-2A1
(Rev. 1/11)

Operator's Well Number Y&O Coal #107

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
EnerVest Energy Funds XII-A, L.P.	EnerVest Operating, L.L.C.	12.5%	462/400
EnerVest Energy Institutional Fund XII-WIB, L.P.			
EnerVest Energy Fund XII-WIC, L.P.			

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Received

Well Operator:
By: Its:

EnerVest Operating, L.L.C. SEP 16 2013
Barry K. King Sr. VP : GM
 Office of Oil and Gas
 WV Dept. of Environmental Protection

WW-2B1
(5-12)

Well No. Y&O Coal #107

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name Sturm Environmental Services
Sampling Contractor _____

Well Operator EnerVest Operating, L.L.C.
Address 300 Capitol Street, Suite 200
Charleston, WV 25301
Telephone 304-343-5505

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

Received

SEP 16 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

WW-9
(5/13)

Page _____ of _____
API Number 47 - _____ - _____
Operator's Well No. Y & O 107

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EnerVest Operating LLC OP Code _____

Watershed (HUC 10) Walt Oliver Branch of Laurel Fork Quadrangle McGraws, WV 7.5'

Elevation 1877 County Wyoming District Slab Fork

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: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- _____ Land Application
- Underground Injection (UIC Permit Number WP-400 (47-109-02703) LC-19 (47-109-01433))
- _____ 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.

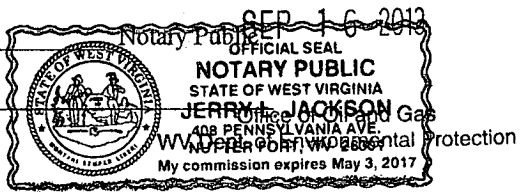
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is 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 *Barry Lay*
Company Official (Typed Name) Barry Lay
Company Official Title Vice President - General Manager

Received

Subscribed and sworn before me this 21st day of August, 2013

Jerry Jackson
My commission expires May 3, 2017



Proposed Revegetation Treatment: Acres Disturbed 1 Prevegetation pH 6.0

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 700 lbs/acre (500 lbs minimum)

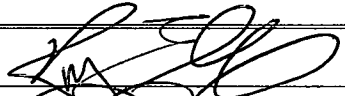
Mulch 2 Tons/acre

Seed Mixtures

Seed Type	Area I		Seed Type	Area II	
		lbs/acre			lbs/acre
KY-31		40	Orchard Grass		15
Alsike Clover		10	Alsike Clover		5
Annual Rye		5			
Red Top		2			

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments: _____

Title: Oil Gas Inspector Date: 9/12/13

Field Reviewed? Yes No

Received

SEP 16 2013

AREA INSTRUCTIONS**WELL NO. Y & O 107**

Begin at the intersection of Wyoming County Routes 5 and 1 at Ravenscliff, WV and proceed west on Route 1 .8 mile to a bridge on the left. Cross the bridge and follow the existing route as shown on the attached topo map. There is a gate with a lock that you can acquire a key to from Mr. Tom Honaker at the Ravenscliff office or by calling 1-304-294-6767.

This road is used to access several wells in the area and is in good condition to the proposed activity.

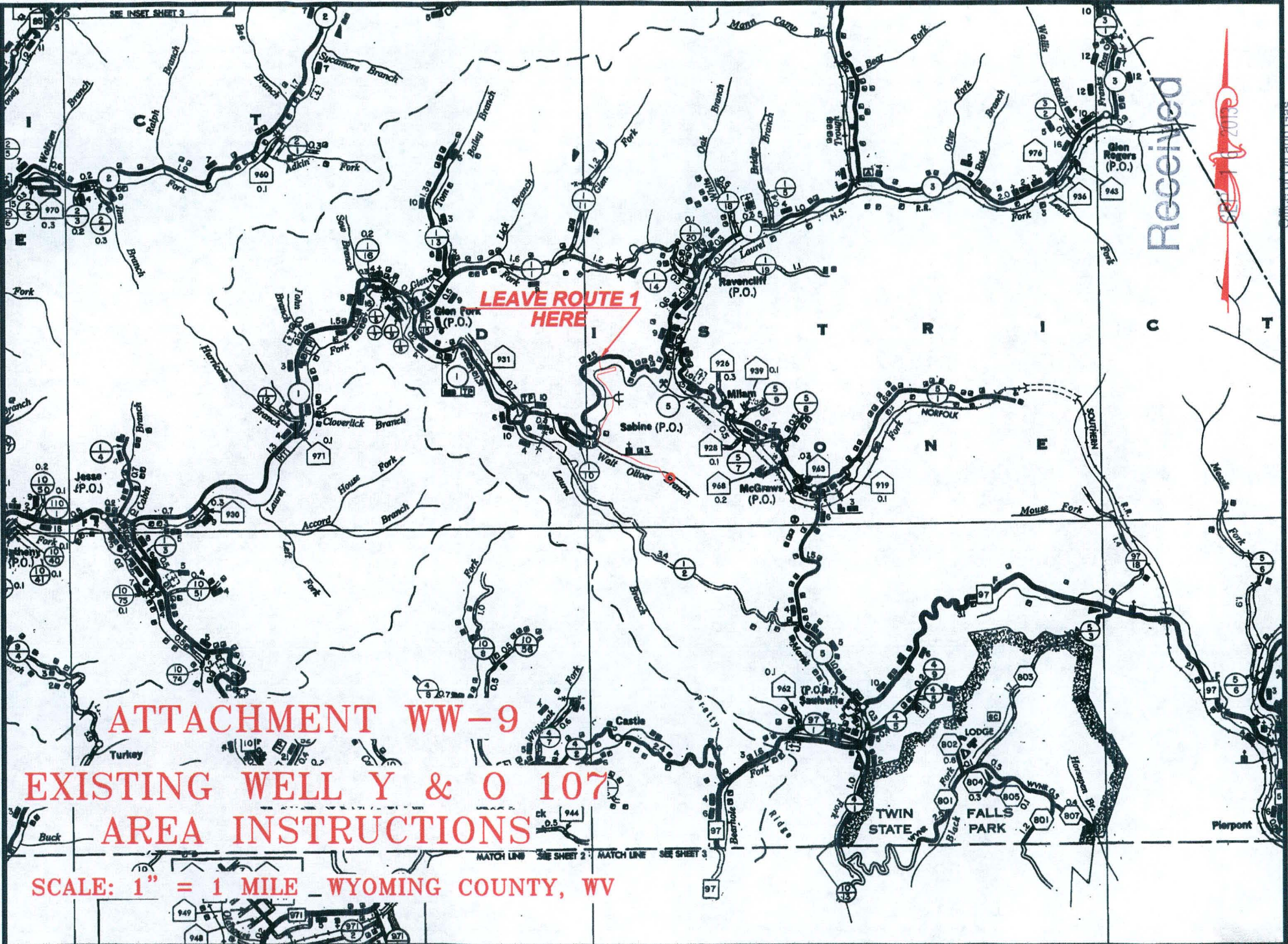
The proposed activity will require grading on the road and clearing the site of grass and some small brush. Excavation to build the site will not be required. Care **MUST** be taken to insure that no material enters the small stream next to the site. The access will not require any more than grading to complete this activity. The road drains well and does not have any significant grades.

Received

SEP 16 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

10901093R



COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Wyoming
Operator EnerVest Operating, L.L.C. Operator's Well Number Y&O Coal #107

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator ____ / owner ____ / lessee X / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date

Company Name Rockhouse Land LLC, by Rhino Energy, WV LLC, its Manager
By its Hubert Payne Vice President Date _____
X [Signature] 10-1-13
Signature Date

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Office of Oil and Gas
OCT 03 2013
WV Department of
Environmental Protection

tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if such surface tract is to be utilized for road or other land disturbance described in the Erosion and Sediment Control Plan referred to above; and (iii) except as and when not required by the laws of West Virginia and the rules of the West Virginia Department of Mines, any coal operator operating coal seams beneath the oil and gas leasehold upon which said well is or is to be located as well as the owner(s) and lessee(s), if any of such coal seams.

Each person so entitled to file comments, including yourself, may request notice of the permit decision if and when you file comments and may further request that the Administrator furnish you with a list of persons who are capable and qualified to test water supplies.

We remain available should you have any questions regarding this matter.

Sincerely,
EnerVest Operating, L.L.C.



Jerry L. Jackson, CPL
Senior District Landman

Enclosures

cc: File

7007 2680 0002 2646 883E

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7007 2680 0002 2646 883E

SEP 16 2013
Postmark Here

Sent To: Rockhouse Land LLC
 Street, Apt. No. or PO Box No.: P.O. Box 1169
 City, State, ZIP+4: Pikeville, KY 41501-1169

PS Form 3800, August 2006 See Reverse for Instructions

Received

SEP 16 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

Persons who may file such comments are: (i) the owners of record of the surface of the tract on which the well is or is to be located, and (ii) the owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if such surface tract is to be utilized for road or other land disturbance described in the Erosion and Sediment Control Plan referred to above; and (iii) except as and when not required by the laws of West Virginia and the rules of the West Virginia Department of Mines, any coal operator operating coal seams beneath the oil and gas leasehold upon which said well is or is to be located as well as the owner(s) and lessee(s), if any of such coal seams.

Each person so entitled to file comments, including yourself, may request notice of the permit decision if and when you file comments and may further request that the Administrator furnish you with a list of persons who are capable and qualified to test water supplies.

We remain available should you have any questions regarding this matter.

Sincerely,
EnerVest Operating, L.L.C.



Jerry L. Jackson, CPL
Senior District Landman

Enclosures

cc: File

7007 2680 0002 2646 8840

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.17

HORNER
Postmark Here
SEP 13 2013

Sent To: Hickwood Forest Fund IV, L.P.
Street, Apt. No., or PO Box No.: 19045 Stone Mountain Road
City, State, ZIP+4: Abingdon, VA 24210

PS Form 3800, August 2006 See Reverse for Instructions

Received

SEP 16 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

To: Jackson, Jerry; Stevens, Jeff; Cook, Timothy
Subject: FW: (47-109-01093) Y & O Coal #107 Rework Permit

Guys, Please see the email below and what we need to do the work. Thanks

Barry

RECEIVED
Office of Oil and Gas

OCT 16 2013

From: McLaughlin, Jeffrey W [<mailto:Jeffrey.W.McLaughlin@wv.gov>]
Sent: Wednesday, October 16, 2013 1:39 PM
To: Lay, Barry
Cc: Peterson, James A; Smith, Gene C
Subject: (47-109-01093) Y & O Coal #107 Rework Permit

WV Department of
Environmental Protection

Barry,

The above-referenced well seems to be a UIC well with injections made as recent as January 2013. I believe that you will have to submit to us a partial plugging procedure and it will need to be more detailed than the description currently proposed on the WW-2B. I am copying Jamie Peterson on this email as he oversees the UIC program and I would welcome his comments. After you develop your partial plugging procedure you may email the proposal for my review.

PLEASE PROVIDE THE API # AND THE WELL NAME IN THE SUBJECT OF ANY EMAIL INQUIRY YOU MAKE.

Regards,

Jeff McLaughlin, WV DEP
Office of Oil & Gas
Phone 304-926-0499 ext. 1614

McLaughlin, Jeffrey W

From: Jackson, Jerry <jjackson@enervest.net>
Sent: Wednesday, October 16, 2013 2:46 PM
To: McLaughlin, Jeffrey W
Cc: Cook, Timothy; Lay, Barry; Stevens, Jeff
Subject: RE: (47-109-01093) Y & O Coal #107 Rework Permit
Attachments: Y&O Coal #107 Partial Plug and Recomplete Procedure.doc

RECEIVED
Office of Oil and Gas

OCT 16 2013

WV Department of
Environmental Protection

Jeff,

Per your request to Barry Lay regarding the subject rework permit application, Tim Cook of our Charleston engineering department has submitted a more detailed procedure for your consideration. Please feel free to contact Tim in the event you should have further questions at 304-414-8207.

Thank you in advance for your help in this matter.

Jerry



ENERVEST

JERRY L. JACKSON, CPL
SR. DISTRICT LANDMAN
ENERVEST OPERATING, LLC
1064 OLD RT. 33
WESTON, WV 26452

304-517-1102 Ext. *50412
Cell 304-539-2956
Fax 304-517-1107

From: Cook, Timothy
Sent: Wednesday, October 16, 2013 2:36 PM
To: Lay, Barry; Jackson, Jerry; Stevens, Jeff
Subject: RE: (47-109-01093) Y & O Coal #107 Rework Permit

We have not used the subject well for disposal since taking over operations and PVA had not used it as such for several years prior to that.

Jerry

Attached is a more detailed procedure that you may want to submit.

Tim

From: Lay, Barry
Sent: Wednesday, October 16, 2013 1:42 PM

Nottingham, Justin E

From: Nottingham, Justin E
Sent: Tuesday, September 17, 2013 9:42 AM
To: Barry K. Lay (blay@enervest.net)
Subject: 47-103-01093 coordinates
Attachments: 47-109-01093 original coordinates.JPG; 47-109-01093 new coordinates.JPG;
47-109-01093 topo distance.JPG

Barry,

While entering the application for well work on well # 47-109-01093, I found that the coordinates are mapping over 200 meters to the south of the point where the well is marked on the topo. I have attached screen shots of the points that the coordinates are mapping on the mapping program that is used on our database. We will also need a new mylar plat with the correct coordinates on it. If you have any questions then feel free to contact me.

Thanks,
Justin

Justin E. Nottingham

West Virginia Department of Environmental Protection

Office of Oil and Gas

Environmental Technician

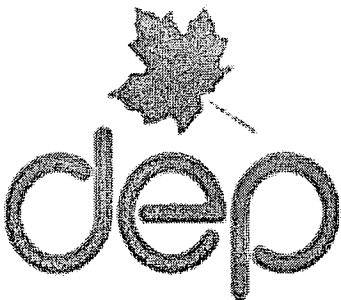
601 57th Street, S.E.

Charleston, WV 25304

(304)-926-0499 (Ext. 1650)

(304)-926-0452 (fax)

Justin.E.Nottingham@wv.gov



NOV OK

PARTIAL Operator: ENERVEST OPERATING L. L. C.
PLUG API: 10901093
FOR WELL No: Y&O COAL #107 (WYO. POCA #10
VIC Reviewed by: gwm Date: 10/16/2013
NEED 15 Day End of Comment: 10/01/13

Check # 268682
\$ 650.00

CHECKLIST FOR FILING A PERMIT
Re-Work

I
NOW

- WW-2B
- Inspector signature on WW-2B
- Completion / Well Records of Previous Work PROVIDED BY OOEG
- WW-2A (Notarized)
- Certified Mail Receipts, Waivers, or Affidavits of Personal Service
- Surface Owner Waiver
- Coal Owner / Lessee /Operator Waiver
- WW-2A-1 (Signed) Showing Book/Page Number and Royalty Percentage
- WW-9 (Page 1 & 2) (Notarized)
- More than 5,000 bbls
- Inspector Signature on WW-9
- Reclamation plan
- Topographic Map of location of well
- Mylar Plat (Signed Sealed) (Surface owner on plat matches WW-2A)
- Bond
- Company is Registered with the SOS
- Worker's Compensation / Unemployment Insurance account is OK
- \$650.00 check (\$550.00 if no pit)
- Mine Data ALREADY MINE
- Addendum
- Professional Engineer/Company has COA

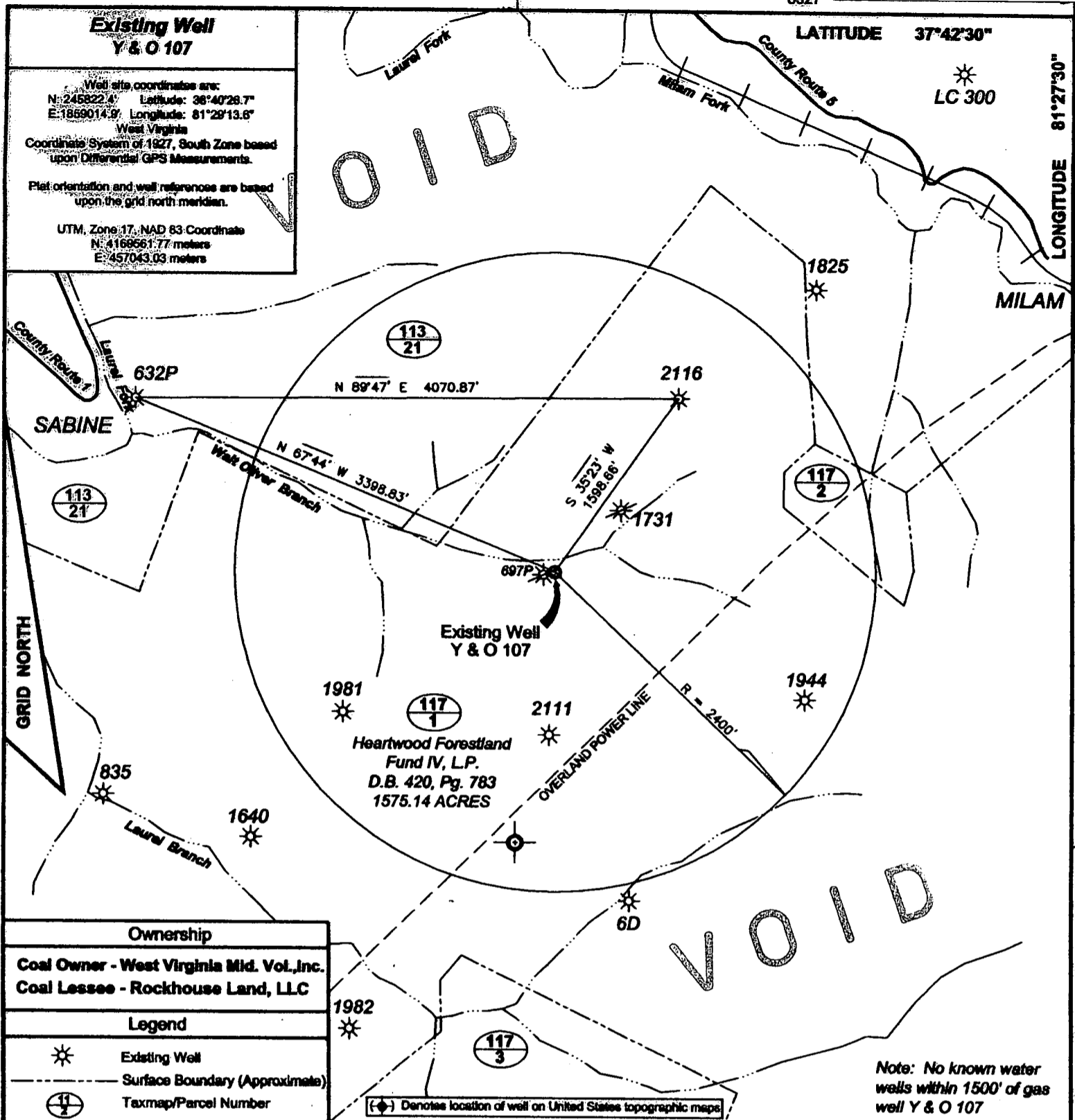
**Existing Well
Y & O 107**

Well site coordinates are:
 N: 245822.4' Latitude: 38°40'28.7"
 E: 1869014.9' Longitude: 81°29'13.6"

West Virginia
 Coordinate System of 1927, South Zone based
 upon Differential GPS Measurements.

Plat orientation and well references are based
 upon the grid north meridian.

UTM, Zone 17, NAD 83 Coordinate
 N: 4169561.77 meters
 E: 457043.03 meters



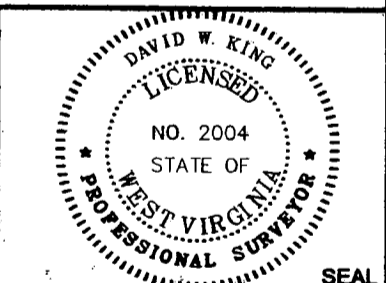
Ownership	
Coal Owner - West Virginia Mid. Vol., Inc. Coal Lessee - Rockhouse Land, LLC	
Legend	
	Existing Well
	Surface Boundary (Approximate)
	Taxmap/Parcel Number

Note: No known water wells within 1500' of gas well Y & O 107



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 Environmental Protection.

David W. King
 P.S. 2004



FILE NO: 248-22-SF-13
 DRAWING NO: YO-107 PLAT.DWG
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY:
 1:2500
 PROVEN SOURCE OF ELEVATION:
 Existing Well

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

DATE: August 12, 2013
 OPERATOR'S WELL NO. Y & O-107
 API WELL NO.
 47 - 109 - 01093
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL OTHER
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1877' WATERSHED: Walt Oliver Branch of Laurel Fork
 QUADRANGLE: Mc Graws 7 1/2' DISTRICT: Slab Fork COUNTY: Wyoming
 SURFACE OWNER: Heartwood Forestland Fund IV, L.P. ACREAGE: 1575.14
 OIL AND GAS ROYALTY OWNER: EnerVest Energy Institutional Fund XII-A, L.P. LEASE NO: ACREAGE: 31559.59
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER 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: Gordon & Ravenciff ESTIMATED DEPTH: 3660'

WELL OPERATOR: EnerVest Operating Company DESIGNATED AGENT: Barry Lay
 ADDRESS: 300 Capitol Street, Suite 200 ADDRESS: 300 Capitol Street, Suite 200
 Charleston, WV 25301 Charleston, WV 25301