# 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 W	yoming District Slab Fork
Quad McGraws 7 1/2 Pad Name	Field/Pool Name
arm name Heartwood Forestland Fund IV, LP	Well Number Y&O #107
perator (as registered with the OOG) EnerVest Op	perating LLC
	ty Charleston State WV Zip 25301
Top hole Northing  Landing Point of Curve Northing	s-drilled plat, profile view, and deviation survey  Easting Easting Easting
4077	Well □New ■ Existing Type of Report □Interim ■Final
ermit Type 🗆 Deviated 🗀 Horizontal 🗀 H	Horizontal 6A   Vertical Depth Type   Deep   Shallow
ype of Operation   Convert   Deepen   Dril	l ■ Plug Back □ Redrilling □ Rework □ Stimulate
	□ Secondary Recovery □ Solution Mining □ Storage □ Other
rilled with □ Cable ■ Rotary rilling Media Surface hole ■ Air □ Mud □ Fresh Water □ fud Type(s) and Additive(s)	esh Water Intermediate hole  Air  Mud  Fresh Water  Brine
•	g commenced 7/2/1989 Date drilling ceased 10/25/1989
ate completion activities began 11/12/2013	Date completion activities ceased 1/10/2014
erbal plugging (Y/N) N Date permission	granted Granted by
ease note: Operator is required to submit a plugging	application within 5 days of verbal permission to plug
eshwater depth(s) ft +- 1130'	Open mine(s) (Y/N) depths
It water depth(s) ft +- 1380'	Void(s) encountered (Y/N) depths and Cas
oal depth(s) ft No Record	Cavern(s) encountered (Y/N) depths
coal being mined in area (Y/N)	
	Reviewed by:  MAY Department of  Environmental Protection  05/23/20

Rev. 8/23/13		1							
API 47- 109	01093 \	W Farm r	name_Heartwo	od Forestlar	nd Fund	IV, LP_W	ell number <u>Y</u>	&O #107	
CASING	Hole	Casing		New or	Grade		Basket	Did gam	ent circulate (Y/ N)
STRINGS	Size	Size	Depth	Used	wt/ft		Depth(s)		le details below*
Conductor		20"	20'						
Surface									
Coal	_						_		
Intermediate 1		9 5/8"	1094'			36#			-
Intermediate 2									
Intermediate 3									
Production		4 1/2"	6548'		1	1.6#			
Tubing		2 3/8"	3601						
Packer type and d	epth set	Parmaco Tensior	Packer @1471	on tbg	<u>'                                    </u>				
Comment Details									
CEMENT	Class/Typ			•	Yield	Volum	e Cer	ment	WOC
DATA Conductor	of Cemen	nt of Sac	ks wt (p	pg) ( f	t ³/sks)	( <u>ft <sup>1</sup></u> )	Тор	(MD)	(hrs)
Surface									<del></del>
Coal	_								
Intermediate 1	A					509			
						1			
Intermediate 2									
Intermediate 3									
Production	A					1501			
Tubing									
Drillers TD (ft	·) 6563'			Loggers T	(ft) (T				
•	-	ed							
-	-				(4,)				
				-			<del>_</del> _		<u> </u>
Kick off depth	(ft)								
Check all wire	line logs run	□ caliper □ neutron	□ density □ resistivity		ed/directi a ray		induction temperature	□sonic	
Well cored	Yes A No	Conventi	ional Side	ewall	w	ere cutting	gs collected	□ Yes □	No
DESCRIBE T	HE CENTRA	LIZER PLACEM	ENT USED FO	OR EACH C	ASING S	TRING _			
									-
WAS WELL O	COMPLETED	AS SHOT HOL	E □ Yes 🛔	No DI	ETAILS				-n /==>
WAS WELL O	COMPLETED	OPEN HOLE?	□ Yes ■ N	No DET	AILS _		Off		EIVED III and Gas
WERE TRAC	ERS USED	□ Yes ■ No	TYPE OF T	TRACER(S)	USED			MAY 0	9 2014
								N/ Dane	rtmant of

API 47- 109 - 01093 W

Farm name Heartwood Forestland Fund IV, LP Well number Y&O #107

#### PERFORATION RECORD

Stage		Perforated from	Perforated to	Number of	
No.	Perforation date	MD ft.	MD ft.	Perforations	Formation(s)
1	12-10-13	3674	3684	40	Gordon
2	12-10-13	3605	3615	40	Gordon
3	12-10-13	1363	1373	21	Ravencliff
3	12-10-13	1400	1400	21	Ravencliff

Please insert additional pages as applicable.

#### STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	12/10/13		1762	1976	596	40,352	286	423,909 SCF
2	12/10/13	19.5	1455	1221	358	40,159	279	271,685 SCF
3	12/10/13	21	1674	1831	1569	40,204	299	252,579 SCF
								- Pre-1
							A.C. MI	11.
					_		Cifice o	On and Ga
							L	
							MAY	U 5 7014

Please insert additional pages as applicable.

## 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 FORE	STURPO FORD IV,	LPOperator Well No.: Y	0 107	
LOCATION: 1	Elevation: 18	ירר	Quadrangle: Me G	14x 71/21	
	District: SLAI				
			of 37 Deg. 42 Min.		
- 1	_ongitude:	Feet West o	of <u>81</u> Deg. <u>27</u> Min.	Sec.	
Well Type: OI	L GAS	_			
Company	NEWEST OPEN 300 CAPITOLS CHARLESTONIL	or. Ste 200 or Ow W 25301		E LAND, LIC	_
Agent	BARRYLA	coal or Ow	Operator		
Permit Issued		c/12			-
	10/1	(13			
STATE OF WE	ST VIDCINIA		AFFIDAVIT		
	nauha ss:		,		
		0 1/	1-01/		
Barry L			being first of	duly sworn according to la	aw depose
well operator, a	y are experienced in nd participated in the	the work of plugging work of plugging	g and filling oil and gas wells and and filling the above well say t	were employed by the abo	ve named
the 25 74	_ day of Name	Ren., 20/2, and th	e well was plugged and filled	in the following manner:	enced on
TYPE	FROM 4352'	TO	PIPE REMOVED	LEFT	,
RETAINER	4352'	4354'	NONE	42 (2.6548	
CEMENT	4056'	43521	Nont	20 20	
CIBP	3740	3742'	NONE	11 11	
Description of	monument:	A PARTIAL	PLUG and	d that the work of plugging	and filling
said well was co	mpleted on the 287	W day of Nove	mgen , 20 13.	a under the Work of plugging	OFFICIAL SEAL
		R	Ja -	OF WEST DA	Alison E. Winter
And further de	eponents saith not.	Dair	- lang		Motory Public
		( Street	8.1/m		June 05, 2016
		Vlh	Part III	C C	1845 Roundhill Rd hasleston, WV 25314
Sworn and su	bscribe before me th	is 14 day of 1	1Pril 20/14	1/4	
My commission	expires: Aune	5,2016	Mison &	Viatland	CONTRACTO AS
	0	1 - 0 . 4	Notary Public	1 100	partment of
A F.C. 1			Annual Contract		ntal Pretection
Affidavit reviewe	d by the Office of Oil	and Gas:		Title:	05/00/00/
					05/23/2014