

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

API 47-087-04757 County ROANE District SMITHFIELD  
Quad LOONEYVILLE 7.5' Pad Name STARR, J.H. Field/Pool Name CLOVER  
Farm name FISHER, FREDDIE ET AL Well Number 117  
Operator (as registered with the OOG) H.G. ENERGY LLC  
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4,284,844 M Easting 474,986 M  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing 4,284,632 M Easting 474,820 M

Elevation (ft) 1,064' 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)  
N/A

Date permit issued 2/27/15 Date drilling commenced 8/18/15 Date drilling ceased 8/21/15  
Date completion activities began 8/31/15 Date completion activities ceased 9/3/15  
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 None Open mine(s) (Y/N) depths None  
Salt water depth(s) ft 1760' Void(s) encountered (Y/N) depths None  
Coal depth(s) ft None Cavern(s) encountered (Y/N) depths None  
Is coal being mined in area (Y/N) N

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Reviewed by:

10/30/2015

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Well number 117

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	507'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2531'	New	J-55		Y
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 50 sks to surface on 7" surface cement job. Circulated Est. 50 sks to surface on 4 1/2" cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Reg Neat	130	15.6	1.18	154	Surface	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50:50 Pozmix	100/125	13.2/14.2	1.64/1.27	164/186	46'	8
Tubing							

Drillers TD (ft) 2600'      Loggers TD (ft) 2554'

Deepest formation penetrated Big Injun      Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 600'

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 \_\_\_\_\_

20 Centralizers every 88 from bottom on 4 1/2", Centralizer placed mid string on 7"

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 \_\_\_\_\_

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**PERFORATION RECORD**

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	8/31/15	2403'	2410'	28	Big Injun

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	9/3/15	5	637	977	442	2,500	150	

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Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS
Big Injun	? TVD 2390' 2421' MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump  
 SHUT-IN PRESSURE Surface \_\_\_\_\_ psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs  
 OPEN FLOW Gas \_\_\_\_\_ mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ bpd GAS MEASURED BY  
 Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
Sand/Shale	0	1570	0	1618	
Sand	1570	1589	1618	1640	
Shale	1589	1618	1640	1674	
Sand	1618	1820	1674	1949	
Shale	1820	1837	1949	1974	
Sand	1837	1912	1974	2096	
Little Lime	1912	1950	2096	2154	
Pencil Cave	1950	1960	2154	2168	
Big Lime	1960	2086	2168	2350	
Keener	2086	2112	2350	2390	
Big Injun	2112	2132	2390	2421	Drilled directional S 38° W a distance of 822'
Shale	2132	2257	2421	2600	
TD	2257		2600		

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling  
 Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Weatherford International  
 Address 777 North River Avenue City Weston State WV Zip 26452

Cementing Company Universal Services  
 Address 14 Sewer Plant Rd City Buckhannon State WV Zip 26201

Stimulating Company Producers Service Corp.  
 Address 109 South Graham Street City Zanesville State OH Zip 43701

Please insert additional pages as applicable.

Completed by Roger Heldman Telephone 304-420-1107  
 Signature *Roger Heldman* Title Operations Manager Date 9/30/15 **Received Office of Oil & Gas**

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry **OCT 08 2015**

10/30/2015

87.04757



Prepared by:  
 Producers Service Corp  
 Daniel L Graham  
 109 S. Graham St.  
 Zanesville, OH 43702  
 740-454-6253

Prepared for:  
 G Energy  
 Justin Hendershot  
 04-481-7342

INVOICE #: 18889  
 WELL NAME: J H Starr #117  
 COUNTY/STATE: Roane/WV  
 TOWNSHIP/FIELD: Clover Field  
 DATE of SERVICE: 9/3/2015  
 CUSTOMER PO#:

Description	Notes	Amount	Units	Unit Cost	Total Cost
FLUID PUMP CHARGE 0-3000 PSI MIN CHARGE 4 HRS		1	EA		
BLENDER CHARGE 0-10 BPM		1	EA		
MILEAGE CHARGE PER UNIT ONE WAY	2 Units @150Miles	250	MI		
IC ACID 15%		0.5	GAL		
PRO HIB II		2	HR		
ACID DELIVERY		15	GAL		
PRO CLA LOK (KCL SUBSTITUTE)		5	GAL		
PRO NE-21		150	LB		
PRO GEL 4		50	LB		
BUFFER I		50	LB		
BUFFER II		1	LB		
BIO CLEAR 750		15	LB		
AP BREAKER		10	GAL		
BXL-A		10	GAL		
BXL-10C		25	CWT		
SAND 20/40 OTTAWA		100	TMILE		
SAND DELIVERY / TON MILES		1	STAGE		
DATA VAN					

Customer Approval: \_\_\_\_\_

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