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WV GEOLOGICAL SURVEY
MORGANTOWN, WV

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

API 47 - 087 - 04749 County ROANE District SMITHFIELD
Quad LOONEYVILLE 7.5' Pad Name KINKEAD, S.B. Field/Pool Name CLOVER
Farm name SNODGRASS, REVA ET AL Well Number 108
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 4,285,361 M Easting 475,282 M
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing 4,285,227 M Easting 475,151 M

Elevation (ft) 1,110' 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

Waterflood injector

Date permit issued 12/17/14 Date drilling commenced 1/6/15 Date drilling ceased 1/8/15
Date completion activities began 2/4/15 Date completion activities ceased 2/12/15
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 1720' 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

Reviewed by:

Clover Rush Run (197) 8-0

API 47-087 - 04749 Farm name SNODGRASS, REVA ET AL Well number 108

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	12 1/4"	11 5/8"	30'	Used	LS		Sand In
Surface	8 3/4"	7"	558'	New	LS	64'	Y
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2411.8'	New	J-55		N
Tubing							
Packer type and depth set							

Comment Details Circulated Est. 50 sks to surface on 7" surface cement job. Did not circulate cement to surface on 4 1/2" cement job.

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	Reg Neat	140	15.6	1.18	165	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	36'	8
Tubing							

Drillers TD (ft) 2450' Loggers TD (ft) 2451'
 Deepest formation penetrated Big Injun Plug back to (ft) N/A
 Plug back procedure N/A

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Kick off depth (ft) 550'

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

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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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Big Injun	2167'- 2184'	TVD 2274'- 2294' MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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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
 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 ₂ S, ETC)
Sand/Shale	0	1192	0	1205	
Sand	1192	1284	1205	1302	
Shale	1284	1414	1302	1440	
Sand	1414	1638	1440	1686	
Shale	1638	1692	1686	1744	
Sand	1692	1972	1744	2056	
Little Lime	1972	2000	2056	2088	
Pencil Cave	2000	2012	2088	2100	
Big Lime	2012	2140	2100	2236	
Keener	2140	2167	2236	2274	
Big Injun	2167	2184	2274	2294	Drilled directional S 45° W a distance of 542'
Shale	2184	2323	2294	2450	
TD	2323		2450		

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 Hall 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 Haldman Telephone 304-420-1107
 Signature  Title Operations Manager Date 3/3/15

Prepared for:
H G Energy



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

INVOICE #: 18123
WELL NAME: S B Kinkead #108
STATE & COUNTY: WV/Roane
TOWNSHIP/FIELD: Clover
DATE of SERVICE: 2/12/2014
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 @ 150 Miles	300	MI		
IC ACID 15%		250	GAL		
PRO HIB II		0.5	GAL		
ACID DELIVERY		2	HR		
PRO CLA LOK (KCL SUBSTITUTE)		15	GAL		
PRO NE-21		5	GAL		
PRO GEL 4		150	LB		
BUFFER I		50	LB		
BUFFER II		50	LB		
PRO CLA LOK (KCL SUBSTITUTE)		15	GAL		
AP BREAKER		15	LB		
BXL-A		10	GAL		
BXL-10C		10	GAL		
SAND 20/40 OTTAWA		25	CWT		
SAND DELIVERY / TON MILES		100	TMILE		
BIO CLEAR 750		2	LB		
DATA VAN		1	STAGE		

Customer Approval: _____