

PM

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

API 47 - 059 - 02244 County MINGO District LEE
Quad DELBARTON Pad Name _____ Field/Pool Name _____
Farm name CAMBRA, SUSAN & FRANK Well Number 2224
Operator (as registered with the OOG) QUALITY NATURAL GAS, LLC
Address P.O. BOX 480 City ALLEN State KY Zip 41601

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) 997.9 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

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Office of Oil and Gas


NOV 02 2015

Date permit issued 4/24/2014 Date drilling commenced 7/14/2015 Date drilling ceased 7/21/2015
Date completion activities began 9/8/2015 Date completion activities ceased 9/8/2015
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

WV Department of
Environmental Protection

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

Freshwater depth(s) ft NONE ENCOUNTERED Open mine(s) (Y/N) depths N
Salt water depth(s) ft NONE ENCOUNTERED Void(s) encountered (Y/N) depths N
Coal depth(s) ft 132-135', 180-183' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:  12/04/2015

API 47-059 - 02244 Farm name CAMBRA, SUSAN & FRANK Well number 2224

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	17 1/2"	13 3/8"	42'	New	LS		
Surface	12 1/4"	9 5/8"	277'	New	LS	79', 237'	Yes - 4 bbls
Coal							
Intermediate 1	8 7/8"	7"	2242'	New	LS	NONE	Yes - 11 bbls
Intermediate 2							
Intermediate 3							
Production	6 3/8"	4 1/2"	4255'	New	L-65		No - 500' up in 7"
Tubing							
Packer type and depth set							

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	Class A						
Surface	Class A	100	15.5	1.18	118	Surface	8
Coal							
Intermediate 1	Class A	100, 160	15.6, 12.3	1.18, 1.84	118, 294.4	Surface	8
Intermediate 2							
Intermediate 3							
Production	Class A	150	13.6	1.90	285	500' up in 7"	8
Tubing							

Drillers TD (ft) 4290 Loggers TD (ft) 1296
 Deepest formation penetrated HARRELL SHALE 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
For drilling purposes only.

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING 4087.70, 3920.90, 3754.10,
3587.30, 3420.50, 3253.70, 3088.90, 2920.10, 2753.30 and 2586.30

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 _____

WELL #2224

API# 47-5902244

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, H2S, ETC)
FILL	0	20			
SAND	20	90			
SAND/SHALE	90	132			
COAL	132	135			
SAND/SHALE	135	180			
COAL	180	183			
SAND	183	300			
SAND/SHALE	300	480			
SAND	480	510			
SAND/SHALE	510	750			
SAND	750	1050			
SAND/SHALE	1050	1140			
SAND	1140	1170			
SAND/SHALE	1170	1505			
SAND	1505	1670			
SAND/SHALE/RED ROCK	1670	1860			
RED ROCK/SHALE/SLATE	1860	2025			
SAND LIME	2025	2100			
RED ROCK/SAND/SLATE	2100	2153			RECEIVED
LITTLE LIME	2153	2235			Office of Oil and Gas
BIG LIME	2235	2470			NOV 02 2015
INJUN	2470	2530			WV Department of
WEIR	2530	3025			Environmental Protection
COFFEE SHALE	3025	3065			
BEREA	3065	3118			
BROWN SHALE	3118	3170			
GRAY SHALE	3170	3370			
BROWN SHALE	3370	3485			
GRAY SHALE	3485	3855			
BROWN SHALE	3855	4170			
HARRELL SHALE	4170	4296			

12/04/2015