

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

API 47-059-02256 County MINGO District MAGNOLIA
Quad MATEWAN Pad Name _____ Field/Pool Name _____
Farm name LOGAN COAL & TIMBER CORP. Well Number 2374
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) 1389.9 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

Date permit issued 9/15/2014 Date drilling commenced 6/30/2015 Date drilling ceased 7/08/2015
Date completion activities began 8/18/2015 Date completion activities ceased 8/24/2015
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

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

Office of Oil and Gas

OCT 06 2015

Freshwater depth(s) ft NONE Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1930' Void(s) encountered (Y/N) depths Department of
Coal depth(s) ft N Cavern(s) encountered (Y/N) depths Environmental Protection
Is coal being mined in area (Y/N) N

Reviewed by: R 10/30/2015

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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"	960'	New	LS	878', 477', 80'	Yes 2 bbls
Coal							
Intermediate 1	8 7/8"	7"	2623'	New	LS	NONE	Yes 12 bbls
Intermediate 2							
Intermediate 3							
Production	6 3/8"	4 1/2"	4842'	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	300	15.5	1.18	354	Surface	8
Coal							
Intermediate 1	Class A	100, 215	15.6, 12.3	1.18, 1.84	118, 395.6	Surface	8
Intermediate 2							
Intermediate 3							
Production	Class A	160	13.6	1.90	304	500' up in 7"	8
Tubing							

Drillers TD (ft) 4860 Loggers TD (ft) 4868
 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 4800.70', 4632.30', 4463.80'
4295.50, 4127.10', 3958.70', 3790.30', 3621.80', 3453.40' and 3285'

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 #2374

API#47-5902256

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	8			
SAND	8	43			
SAND/SHALE	43	253			
SAND	253	310			
SAND/SHALE	310	795			
SAND	795	818			
SAND/SHALE	818	1020			
SAND	1020	1080			
SAND/SHALE	1080	1110			
SAND	1110	1174			
SAND/SHALE	1174	1295			
SAND	1295	1470			
SAND/SHALE	1470	1532			
SAND	1532	1650			
SAND/SHALE	1650	1710			
SAND	1710	1770			
SAND/SHALE	1770	1845			
SAND	1845	1920			
SAND/SHALE	1920	1950			
SAND	1950	2050			
SHALE/LIME	2050	2080			
RED ROCK/SHALE	2080	2275			
SAND/SHALE	2275	2430			
SHALE/SLATE/LIME	2430	2460			
SHALE/SLATE	2460	2490			
SAND/SLATE/RED ROCK	2490	2550			
SHALE	2550	2570			
LITTLE LIME	2570	2620			
BIG LIME	2620	2875			
INJUN	2875	2968			
WEIR	2968	3490			

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10/30/2015

