

State of West Virginia  
**Division of Environmental Protection**  
**Section of Oil and Gas**  
**Well Operator's Report of Well Work**

4704502305

45-02305

Farm Name Cole & Crane Real Estate Trust  
 Location Elevation 905  
 District Unknown  
 Latitude 11940 Degree 37 Minutes 47 Seconds 30  
 Longitude 1830 East Degree 82 Minutes 0 Seconds 0  
 Company EQT Plaza  
 Suite 1700  
 625 Liberty Avenue  
 Pittsburgh, Pa 15222

Well Number 511884  
 QUAD Holden  
 County Logan, WV  
 WV

Longitude 37.75882  
 Latitude -82.00636

Agent Cecil Ray  
 Inspector Ralph Tripplett  
 Permit Issued 2/29/2008  
 Well Work Commenced 5/17/2010  
 Well Work Completed 8/30/2010

Casing & Tubing Size	Used In Drilling	Left in Well	Cement Cubic FT
13 3/8	90.00	90.00	
9 5/8	636.00	636.00	283.20
7	2141.00	2,141.00	571.10
4 1/2	7482.00	7,482.00	

Verbal Plugging \_\_\_\_\_  
 Rotary Rig X Rotary Rig \_\_\_\_\_  
 Total Depth TD: 4065' 7,519.00

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Type	From
Fresh Water	150.00
Salt Water	1,440.00
Salt Water	2,000.00

Type	From
Coal	150.00 ft. - 152.00 ft.
Coal	560.00 ft. - 562.00 ft.

**Producing Formation**

Gas: Initial Open Flow 119  
 Final Open Flow 882  
 Static Rock Pressure 830

NOTE: On back of this form put the following

- 1) Details of Perforated Intervals, fracturing or stimulating, physical change, etc.
- 2) The well log, a systematic detailed geological record of all formations including coal encountered in the well bore

For EQT Production Company  
 By Mike Butcher  
 Date 9/16/2010

03/01/2013

45.02305

Formation record

Gas Tests

<u>Formation Name</u>	<u>Top</u>	<u>Bottom</u>	<u>Thickness</u>	<u>Depth</u>	<u>Gas</u>	<u>Comments</u>
SAND AND SHALE	0.00	150.00	150.00	2,190.00		0
COAL	150.00	152.00	2.00	3,442.00		1350
SAND AND SHALE	152.00	560.00	408.00	3,442.00		2090
COAL	560.00	562.00	2.00	3,442.00		179 18/10's thru 2"
SAND AND SHALE	562.00	831.00	269.00	4,437.00		207 24/10's Thru 2"
SALT SAND	831.00	1,520.00	689.00	5,672.00		189 20/10's thru 2"
UPPER MAXTON SAND	1,613.00	1,695.00	82.00	6,630.00		133 10/10's thru 2"
MIDDLE MAXTON SAND	1,896.00	1,925.00	29.00	7,519.00		119 8/10's thru 2"
LOWER MAXTON SAND	1,996.00	2,074.00	78.00			
LITTLE LIME	2,074.00	2,124.00	50.00			
PENCIL CAVE SHALE	2,124.00	2,135.00	11.00			
BIG LIME	2,135.00	2,413.00	278.00			
WEIR SAND	2,517.00	2,582.00	65.00			
SUNBURY	2,905.00	2,937.00	32.00			
BEREA SAND	2,937.00	2,959.00	22.00			
UPPER DEVONIAN	2,942.27					
LOWER HURON	3,953.00	4,299.00	346.00			
MAVA	4,299.00					

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Questions regarding formations can  
be directed to Jonette Speranzo.  
Jsperanzo@eqt.com

03/01/2013

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Stage	Formation	Frac Type	
1	LOWER HURON	N <sup>2</sup>	
Date	From / To	# of perfs	BD Press
8/19/2010	7319 - 7519		4,811.00
Avg Rate	Max Press PSI	ISIP	Frac Gradient
98,976.00	6,299.00		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal
		1,002,092.00	

SIP Detail  
5 Min:  
10 Min:  
15 Min:

Stage	Formation	Frac Type	
2	LOWER HURON	N <sup>2</sup>	
Date	From / To	# of perfs	BD Press
8/19/2010	7033 - 7319		3,904.00
Avg Rate	Max Press PSI	ISIP	Frac Gradient
102,573.00	6,003.00		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal
	7.10	1,003,421.00	

SIP Detail  
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10 Min:  
15 Min:

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Stage	Formation	Frac Type	
3	LOWER HURON	N <sup>2</sup>	
Date	From / To	# of perfs	BD Press
8/19/2010	6792 - 7033		3,861.00
Avg Rate	Max Press PSI	ISIP	Frac Gradient
104,760.00	5,768.00		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal
	5.30	1,002,898.00	

SIP Detail  
5 Min:  
10 Min:  
15 Min:

Stage	Formation	Frac Type				
4	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	6507 - 6792		3,596.00	5,419.00	5 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		10 Min:	
103,353.00	5,534.00				15 Min:	
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	5.70	1,003,655.00				

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Stage	Formation	Frac Type				
5	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	6221 - 6507		3,649.00	5,648.00	5 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		10 Min:	
105,667.00	5,683.00	3,691.00			15 Min:	
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	5.40	1,004,707.00				

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Stage	Formation	Frac Type				
6	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	5980 - 6221		3,690.00	5,498.00	5 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		10 Min:	
105,092.00	5,587.00				15 Min:	
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	6.50	1,002,328.00				

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Completion Attachment Well Treatment Summary

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Stage	Formation	Frac Type				SIP Detail
7	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	5695 - 5980		3,701.00	5,415.00	5 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
104,916.00	5,444.00			10 Min:		
				15 Min:		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	5.60	1,004,067.00				

Stage	Formation	Frac Type				SIP Detail
8	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	5409 - 5695		3,738.00	5,301.00	5 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
102,628.00	5,355.00			10 Min:		
				15 Min:		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	5.40	1,002,652.00				

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Stage	Formation	Frac Type				SIP Detail
9	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	5168 - 5409		3,645.00	5,245.00	5 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
105,140.00	5,279.00			10 Min:		
				15 Min:		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	5.90	1,004,821.00				

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Stage	Formation	Frac Type				
10	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	4883 - 5168		3,653.00	5,059.00	5 Min:	
					10 Min:	
					15 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
104,167.00	5,180.00					
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	5.30	1,002,532.00				

Stage	Formation	Frac Type				
11	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	4598 - 4883		3,557.00	4,851.00	5 Min:	
					10 Min:	
					15 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
103,129.00	4,879.00					
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	6.30	1,002,058.00				

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Stage	Formation	Frac Type				
12	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail	
8/19/2010	4356 - 4598		3,632.00	5,164.00	5 Min:	
					10 Min:	
					15 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
103,911.00	5,316.00					
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	2.70	1,002,473.00				

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Stage	Formation	Frac Type				
13	LOWER HURON	N <sup>2</sup>				
Date	From / To	# of perms	BD Press	ATP Psi	SIP Detail	
8/19/2010	4071 - 4356		3,426.00	4,602.00	5 Min:	
					10 Min:	
					15 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
102,558.00	4,629.00	2,985.00				
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
	5.50	1,002,891.00				

Stage	Formation	Frac Type				
14	BIG LIME	N <sup>2</sup>				
Date	From / To	# of perms	BD Press	ATP Psi	SIP Detail	
9/15/2010	2321 - 2331		5,949.00	3,687.00	5 Min: 2657	
					10 Min:	
					15 Min:	
Avg Rate	Max Press PSI	ISIP	Frac Gradient			
29,160.00	3,995.00	3,182.00	1.46			
Sand Proppant	Water-bbl	SCF N2	Acid-Gal			
2,265,340.00	229.96	570,976.00	2.00			

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