



Release Form:

Date: 7/31/2012

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Released To: KGS - David Lafen

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Well: Wheeler East Richardson

Formation: Miss Lime

Location: Cowley County, KS

Sample Type: TS

API: 1503573586

Lat./Long.:

Wheeler East Richardson

Job No.

11-0607

Analyst

Sample Number	Depth (ft)	Comments
1	3016.00	
4	3019.00	
5	3020.00	
6	3021.00	
7	3022.00	

East Richardson 1
11-0607

Sample ID	Depth	Porosity
1	3016	0.000
4	3019	0.000
5	3020	0.000
6	3021	0.000
7	3022	0.000

Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%
Quartz	K-Feldspar	Plagioclase	Apatite	Calcite	Illite + Mica	Chlorite
52.7	1.1	1.4	0.3	41.0	3.0	0.6
36.7	0.2	0.6	0.0	59.8	2.4	0.2
43.4	0.3	0.5	0.0	53.1	2.7	0.0
53.5	0.5	0.3	0.0	42.9	2.8	0.0
21.2	0.0	0.0	0.0	75.4	3.4	0.0

Chesapeake Energy

Job # 11-0607
Well: East Richardson 1
Type: Plugs
Date: 8/8/2011

CO2/TOL Cleaned
Steady State Permeability
Klinkenberg 1000 NOB md
1.48

INPUT MEASURED VALUES			
Sample #	Sample Depth	Gr. Den. (g/cc)	Porosity (%)
1	3016	2.651	29.8
4	3019	2.661	7.7
5	3020	2.660	7.7
7	3022	2.665	6.5

Porosity versus Permeability

- ◆ PDP 1000
- ◆ Steady State

