



Release Form:

Date: 7/31/2012

Released By: Alyssa Wickard

Released To: KGS - David Lafen

Contact: Alyssa Wickard
Phone: 405-935-3594
E-mail: alyssa.wickard@chk.com

Well: Shell Oil C.D. Williams

Formation: Miss Lime

Location: Harper County, KS

Sample Type: TS

API: 1507700120

Lat./Long.:

Froetschner A1-18

Job No.

11-0505

Analyst

Sample Number	Depth (ft)	Comments
1	4763.30	
2	4766.80	
3	4818.80	
4	4824.30	
5	4838.30	
6	4842.10	
7	4847.80	
8	4856.50	
9	4860.90	
10	4866.80	
11	4874.60	

CD Williams 1
11-0533

Sample ID	Depth	Porosity
1	4763.3	0.234
2	4766.8	0.279
3	4818.8	0.173
4	4824.3	0.053
5	4838.3	0.385
6	4842.1	0.322
7	4847.8	0.186
8	4856.5	0.259
9	4860.9	0.150
10	4866.8	0.219
11	4874.6	0.279

Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%
Quartz	K-Feldspar	Plagioclase	Apatite	Pyrite	Calcite	Dolomite	Illite + Mica
30.5	0.6	0.5	0.3	0.5	54.5	10.1	2.9
32.6	0.3	0.6	0.0	0.5	50.6	11.0	4.5
31.0	0.6	0.4	0.6	0.3	58.0	5.2	3.9
31.5	0.4	0.7	0.0	0.5	45.7	13.6	7.7
31.1	0.6	0.5	0.0	0.5	38.9	19.2	9.2
30.9	0.3	1.0	0.0	0.4	48.8	9.9	8.7
31.8	0.5	0.6	0.6	0.2	55.5	4.9	6.0
16.1	1.2	1.4	0.0	0.2	67.4	6.6	7.2
34.0	0.5	0.6	0.0	0.3	46.0	10.8	7.8
27.1	0.6	0.8	0.0	0.3	47.9	12.7	10.5
33.0	0.1	0.7	0.0	0.5	44.5	10.9	10.3

Chesapeake Energy

Job # 11-0533
 Well: CD Williams #1
 Type: Plugs
 Date: 7/13/2011

C02/TOL Cleaned - 240°F Dried

				Pulse-Decay Permeability, 400 psi test pressure 1000 psi NES md	Pulse-Decay Permeability, 400 psi test pressure 2000 psi NES md
Sample Number	Sample Depth	Gr. Den. (g/cc)	Porosity (%)		
1	4763.3	2.663	0.2	0.000061	0.000030
2	4766.8	2.667	0.3	0.000043	0.000014
3	4818.8	2.653	0.2	0.000020	0.000001
4	4824.3	2.637	0.1	0.000072	0.000046
5	4838.3	2.674	0.4	0.000029	0.000028
6	4842.1	2.673	0.3	0.000014	0.000001
7	4847.8	2.690	0.2	0.000018	0.000009
8	4856.5	2.686	0.3	0.000053	0.000010
9	4860.9	2.664	0.1	0.000017	0.000006
10	4866.8	2.674	0.2	0.000139	0.000015
11	4874.6	2.663	0.3	0.000014	0.000001

Porosity versus Permeability

- ◆ PDP 1000
- ◆ PDP 2000

