

COMPANY : CENOVUS ENERGY INC
LOCATION : 1AA/16-13-071-05W4/00
FORMATION : MCMURRAY
WELL NAME : CVE FCCL B16 KIRBY 16-13-71-5
DRILLING FLUID : Water Based Mud

PAGE : 1
DATE : 13-Feb-2015
W/O No : RC25195

HEAVY OIL SANDS ANALYSIS

Oil Density @ 1.000 g/cc
Grain Density @ 2.65 g/cc
OverBurden Pressure @ 800 psi

Sample	Interval		Rep Thick (m)	Dean - Stark Analysis							Small Plug Analysis						Remarks
	(m)			(Bulk Mass)				Calc. Porosity	Saturation		Permeability		Helium Porosity	Grain Density (Kg/m³)	(Pore Volume)		
	Top	Base		Oil frac	Water frac	Solids frac	Sum		Oil frac	Water frac	KMax (mD)	Kv (mD)			Oil frac	Water frac	
CORE NO. 1 437.91 - 504.40 (CUT / RECEIVED = 66.49 / 60.03 m TOTAL BOXES = 48)																	
NA	437.91	438.28	0.37	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD1
NA	438.28	438.33	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	438.33	438.52	0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	438.52	438.82	0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD2
NA	438.82	439.18	0.36	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	439.18	439.23	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	439.23	439.78	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD3
NA	439.78	439.83	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	439.83	440.24	0.41	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD4
LC	440.24	440.32	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	440.32	441.27	0.95	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	441.27	441.32	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	441.32	444.73	3.41	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	444.73	445.17	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD5
NA	445.17	445.56	0.39	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	445.56	446.06	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	446.06	446.48	0.42	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	446.48	446.53	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	446.53	447.98	1.45	-	-	-	-	-	-	-	-	-	-	-	-	-	

COMPANY : CENOVUS ENERGY INC
 LOCATION : 1AA/16-13-071-05W4/00
 FORMATION : MCMURRAY
 WELL NAME : CVE FCCL B16 KIRBY 16-13-71-5
 DRILLING FLUID : Water Based Mud

PAGE : 2
 DATE : 13-Feb-2015
 W/O No : RC25195

HEAVY OIL SANDS ANALYSIS

Oil Density @ 1.000 g/cc
 Grain Density @ 2.65 g/cc
 OverBurden Pressure @ 800 psi

Sample	Interval		Rep Thick (m)	Dean - Stark Analysis							Small Plug Analysis						Remarks
	(m)			(Bulk Mass)				Saturation		Permeability		Grain	(Pore Volume)				
	Top	Base		Oil frac	Water frac	Solids frac	Sum	Calc. Porosity	Oil frac	Water frac	KMax (mD)	Kv (mD)	Helium Porosity	Density (Kg/m³)	Oil frac	Water frac	
NA	447.98	448.03	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD6
NA	448.03	448.40	0.37	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	448.40	449.46	1.06	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	449.46	450.52	1.06	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	450.52	450.95	0.43	0.102	0.062	0.835	0.999	0.342	0.624	0.376	-	-	-	-	-	-	
2	450.95	451.43	0.48	0.057	0.099	0.839	0.995	0.330	0.363	0.637	-	-	-	-	-	-	XRD7 XRD8
3	451.43	452.01	0.58	0.050	0.099	0.848	0.997	0.318	0.337	0.663	-	-	-	-	-	-	XRD9
NA	452.01	452.06	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD10
NA	452.06	452.43	0.37	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	452.43	453.39	0.96	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	453.39	453.58	0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	453.58	453.63	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD11
NA	453.63	454.21	0.58	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	454.21	456.09	1.88	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	456.09	456.49	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	456.49	457.60	1.11	0.037	0.092	0.867	0.996	0.283	0.290	0.710	-	-	-	-	-	-	
NA	457.60	458.02	0.42	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	458.02	458.77	0.75	0.080	0.069	0.851	1.000	0.316	0.535	0.465	-	-	-	-	-	-	
NA	458.77	459.17	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	459.17	459.87	0.70	0.070	0.069	0.860	0.999	0.301	0.503	0.497	-	-	-	-	-	-	
7	459.87	460.28	0.41	0.089	0.061	0.848	0.998	0.320	0.592	0.408	-	-	-	-	-	-	

COMPANY : CENOVUS ENERGY INC
 LOCATION : 1AA/16-13-071-05W4/00
 FORMATION : MCMURRAY
 WELL NAME : CVE FCCL B16 KIRBY 16-13-71-5
 DRILLING FLUID : Water Based Mud

PAGE : 3
 DATE : 13-Feb-2015
 W/O No : RC25195

HEAVY OIL SANDS ANALYSIS

Oil Density @ 1.000 g/cc
 Grain Density @ 2.65 g/cc
 OverBurden Pressure @ 800 psi

Sample	Interval		Rep Thick (m)	Dean - Stark Analysis							Small Plug Analysis						Remarks
	(m)			(Bulk Mass)				Saturation		Permeability		Helium Porosity	Grain Density (Kg/m³)	(Pore Volume)			
	Top	Base		Oil frac	Water frac	Solids frac	Sum	Calc. Porosity	Oil frac	Water frac	KMax (mD)			Kv (mD)	Oil frac	Water frac	
8	460.28	460.93	0.65	0.112	0.053	0.835	1.000	0.344	0.679	0.321	-	-	-	-	-	-	
NA	460.93	461.37	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	461.37	461.63	0.26	0.124	0.048	0.828	1.000	0.355	0.721	0.279	-	-	-	-	-	-	
10	461.63	461.88	0.25	0.028	0.102	0.866	0.996	0.285	0.217	0.783	-	-	-	-	-	-	
LC	461.88	462.13	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	462.13	462.78	0.65	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	462.78	462.83	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD12
NA	462.83	463.66	0.83	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	463.66	463.92	0.26	0.096	0.078	0.823	0.997	0.359	0.553	0.447	-	-	-	-	-	-	
NA	463.92	465.12	1.20	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	465.12	465.14	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	465.14	465.33	0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	465.33	465.67	0.34	0.082	0.096	0.821	0.999	0.366	0.462	0.538	-	-	-	-	-	-	
OB1	465.67	465.77	0.10	-	-	-	-	-	-	-	3000.	-	0.365	2620	-	-	OB Horizontal PSD1
NA	465.77	467.29	1.52	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	467.29	467.34	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	467.34	469.97	2.63	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	469.97	470.02	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD13
NA	470.02	471.11	1.09	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	471.11	471.25	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	471.25	472.24	0.99	0.072	0.066	0.858	0.996	0.299	0.525	0.475	-	-	-	-	-	-	

COMPANY : CENOVUS ENERGY INC
LOCATION : 1AA/16-13-071-05W4/00
FORMATION : MCMURRAY
WELL NAME : CVE FCCL B16 KIRBY 16-13-71-5
DRILLING FLUID : Water Based Mud

PAGE : 4
DATE : 13-Feb-2015
W/O No : RC25195

HEAVY OIL SANDS ANALYSIS

Oil Density @ 1.000 g/cc
Grain Density @ 2.65 g/cc
OverBurden Pressure @ 800 psi

Sample	Interval (m)		Rep Thick (m)	Dean - Stark Analysis							Small Plug Analysis						Remarks
				(Bulk Mass)			Sum	Calc. Porosity	Saturation		Permeability		Helium Porosity	Grain Density (Kg/m³)	(Pore Volume)		
	Oil frac	Water frac		Solids frac	Oil frac	Water frac			KMax (mD)	Kv (mD)	Oil frac	Water frac					
14	472.24	473.00	0.76	0.091	0.068	0.841	1.000	0.333	0.571	0.429	-	-	-	-	-	-	OB Horizontal & Vertical PSD2
NA	473.00	473.65	0.65	-	-	-	-	-	-	-	-	-	-	-	-	-	
OB2	473.65	473.75	0.10	-	-	-	-	-	-	-	4440.	2170.	0.362	2630	-	-	
15	473.75	473.98	0.23	0.060	0.090	0.847	0.997	0.319	0.402	0.598	-	-	-	-	-	-	
NA	473.98	474.83	0.85	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	474.83	475.28	0.45	0.078	0.073	0.849	1.000	0.320	0.518	0.482	-	-	-	-	-	-	
NA	475.28	476.10	0.82	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	476.10	477.10	1.00	0.056	0.079	0.860	0.995	0.293	0.414	0.586	-	-	-	-	-	-	
NA	477.10	480.11	3.01	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	480.11	480.85	0.74	0.041	0.091	0.864	0.996	0.288	0.314	0.686	-	-	-	-	-	-	
NA	480.85	481.19	0.34	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	481.19	481.68	0.49	0.049	0.081	0.870	1.000	0.283	0.377	0.623	-	-	-	-	-	-	
NA	481.68	483.05	1.37	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	483.05	484.18	1.13	0.067	0.065	0.866	0.998	0.287	0.510	0.490	-	-	-	-	-	-	
20CS	483.05	484.18	1.13	0.067	0.066	0.866	0.999	0.289	0.503	0.497	-	-	-	-	-	-	
NA	484.18	485.41	1.23	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	485.41	485.86	0.45	0.030	0.094	0.874	0.998	0.273	0.242	0.758	-	-	-	-	-	-	
22	485.86	486.74	0.88	0.076	0.078	0.843	0.997	0.326	0.491	0.509	-	-	-	-	-	-	
23	486.74	487.19	0.45	0.084	0.067	0.846	0.997	0.321	0.555	0.445	-	-	-	-	-	-	
24	487.19	487.50	0.31	0.073	0.062	0.865	1.000	0.293	0.539	0.461	-	-	-	-	-	-	
OB3	487.50	487.60	0.10	-	-	-	-	-	-	-	5610.	-	0.359	2630	-	-	OB Horizontal PSD3

COMPANY : CENOVUS ENERGY INC
 LOCATION : 1AA/16-13-071-05W4/00
 FORMATION : MCMURRAY
 WELL NAME : CVE FCCL B16 KIRBY 16-13-71-5
 DRILLING FLUID : Water Based Mud

PAGE : 5
 DATE : 13-Feb-2015
 W/O No : RC25195

HEAVY OIL SANDS ANALYSIS

Oil Density @ 1.000 g/cc
 Grain Density @ 2.65 g/cc
 OverBurden Pressure @ 800 psi

Sample	Interval		Rep Thick (m)	Dean - Stark Analysis							Small Plug Analysis						Remarks
	(Bulk Mass)				Saturation		Permeability		Grain Density (Kg/m³)	(Pore Volume)							
	Oil frac	Water frac		Solids frac	Sum	Calc. Porosity	Oil frac	Water frac		KMax (mD)	Kv (mD)	Helium Porosity	Oil frac	Water frac			
	Top	Base															
25	487.60	487.98	0.38	0.112	0.067	0.819	0.998	0.367	0.627	0.373	-	-	-	-	-	-	
NA	487.98	488.14	0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	488.14	488.32	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	488.32	488.82	0.50	0.058	0.079	0.858	0.995	0.297	0.421	0.579	-	-	-	-	-	-	
27	488.82	489.25	0.43	0.114	0.065	0.820	0.999	0.366	0.637	0.363	-	-	-	-	-	-	
OB4	489.25	489.35	0.10	-	-	-	-	-	-	-	5310.	3770.	0.366	2630	-	-	OB Horizontal & Vertical PSD4
28	489.35	489.77	0.42	0.119	0.057	0.821	0.997	0.362	0.677	0.323	-	-	-	-	-	-	
NA	489.77	490.07	0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	490.07	490.40	0.33	0.096	0.076	0.825	0.997	0.356	0.559	0.441	-	-	-	-	-	-	
OB5	490.40	490.50	0.10	-	-	-	-	-	-	-	>10000	-	0.369	2620	-	-	OB Horizontal PSD5
30	490.50	490.83	0.33	0.118	0.058	0.824	1.000	0.361	0.670	0.330	-	-	-	-	-	-	
NA	490.83	491.29	0.46	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	491.29	491.54	0.25	0.069	0.107	0.820	0.996	0.363	0.392	0.608	-	-	-	-	-	-	
32	491.54	492.03	0.49	0.119	0.057	0.823	0.999	0.362	0.676	0.324	-	-	-	-	-	-	
OB6	492.03	492.13	0.10	-	-	-	-	-	-	-	9040.	-	0.361	2630	-	-	OB Horizontal PSD6
33	492.13	492.59	0.46	0.108	0.075	0.816	0.999	0.372	0.591	0.409	-	-	-	-	-	-	
NA	492.59	493.47	0.88	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	493.47	493.52	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	XRD14
NA	493.52	493.78	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	493.78	494.15	0.37	0.021	0.152	0.825	0.998	0.356	0.119	0.881	-	-	-	-	-	-	
35	494.15	494.89	0.74	0.013	0.166	0.818	0.997	0.367	0.074	0.926	-	-	-	-	-	-	

COMPANY : CENOVUS ENERGY INC
 LOCATION : 1AA/16-13-071-05W4/00
 FORMATION : MCMURRAY
 WELL NAME : CVE FCCL B16 KIRBY 16-13-71-5
 DRILLING FLUID : Water Based Mud

PAGE : 6
 DATE : 13-Feb-2015
 W/O No : RC25195

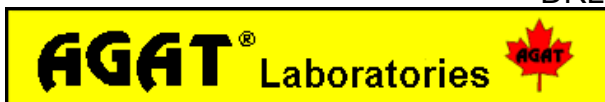
HEAVY OIL SANDS ANALYSIS

Oil Density @ 1.000 g/cc
 Grain Density @ 2.65 g/cc
 OverBurden Pressure @ 800 psi

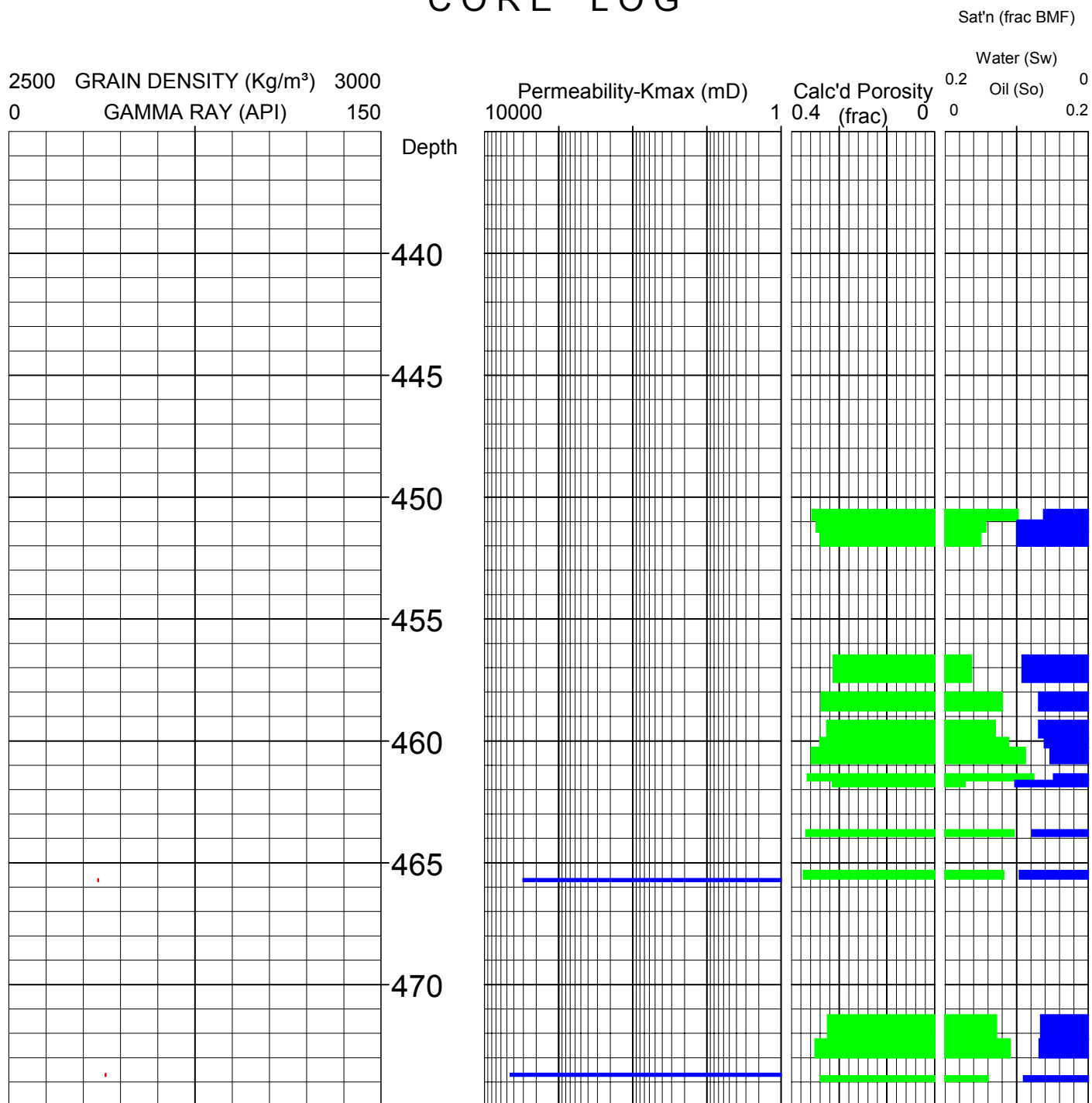
Sample	Interval		Rep Thick (m)	Dean - Stark Analysis							Small Plug Analysis						Remarks
				(Bulk Mass)				Saturation		Permeability		Grain	(Pore Volume)				
	Oil frac	Water frac		Solids frac	Sum	Calc. Porosity	Oil frac	Water frac	KMax (mD)	Kv (mD)	Helium Porosity	Density (Kg/m³)	Oil frac	Water frac			
NA	494.89	495.37	0.48	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	495.37	495.84	0.47	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	495.84	496.47	0.63	0.016	0.163	0.821	1.000	0.366	0.090	0.910	-	-	-	-	-	-	
37	496.47	496.97	0.50	0.000	0.178	0.817	0.995	0.366	0.000	1.000	-	-	-	-	-	-	
LC	496.97	497.03	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	
38	497.03	497.52	0.49	0.000	0.182	0.815	0.997	0.372	0.001	0.999	-	-	-	-	-	-	
NA	497.52	503.60	6.08	-	-	-	-	-	-	-	-	-	-	-	-	-	
LC	503.60	503.67	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	
NA	503.67	504.40	0.73	-	-	-	-	-	-	-	-	-	-	-	-	-	

COMPANY : CENOVUS ENERGY INC
 LOCATION : 1AA/16-13-071-05W4/00
 WELL : CVE FCCL B16 KIRBY 16-13-71-5
 FORMATION : MCMURRAY
 FIELD :
 JOB : RC25195
 DEPTH SCALE 1 : 240

RECOVERY : 60.03(m)
 CORED INTERVAL : 437.91-504.10
 DRLG. FLD. : Water Based Mud
 ELEVATION : KB:
 GRD :
 DATE : 13-Feb-2015

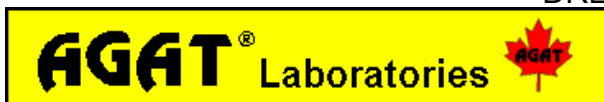


CORE LOG



COMPANY : CENOVUS ENERGY INC
 LOCATION : 1AA/16-13-071-05W4/00
 WELL : CVE FCCL B16 KIRBY 16-13-71-5
 FORMATION : MCMURRAY
 FIELD :
 JOB : RC25195
 DEPTH SCALE 1 : 240

RECOVERY : 60.03(m)
 CORED INTERVAL : 437.91-504.10
 DRLG. FLD. : Water Based Mud
 ELEVATION : KB:
 GRD :
 DATE : 13-Feb-2015



CORE LOG

