



**CERTIFICATE OF ANALYSIS**

Preliminary Report  
 Final Report

31-Jul-12

Coal Valley Resources Inc.  
 1600 Oxford Tower  
 10235-101 Street  
 Edmonton, AB  
 T5J 3G1, Canada

WORKORDER: RC12020553

Hole: RT-11-339C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 48.2m to 55.9m  
 Plies: A,B,D1,D2

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

CUMULATIVE WEIGHT % SIZE: +12.5mm						
S.G	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	6.3	6.3	7.29	5.84	6503	0.0
S1.35 - F1.40	10.5	16.8	7.17	8.21	6319	0.0
S1.40 - F1.45	7.2	24.0	7.02	10.63	6148	0.0
S1.45 - F1.50	6.9	31.0	6.89	13.03	5960	0.0
S1.50 - F1.55	6.6	37.5	6.74	15.69	5768	0.0
S1.55 - F1.60	7.5	45.1	6.63	18.36	5561	0.0
S1.60 - F1.70	13.3	58.4	6.25	22.54	5208	-
S1.70 - F1.80	9.8	68.2	6.04	26.31	4920	-
S1.80 - F1.90	9.5	77.7	5.83	29.79	4621	-
S1.90 - F2.00	7.2	84.9	5.64	32.98	4392	-
S2.00	15.1	100.0	5.52	39.98	3830	-

D4371  
 D3172  
 D4239  
 D720

CUMULATIVE WEIGHT % SIZE: 12.5mm x 1.0mm						
S.G	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	0.2	0.2	7.19	3.58	6849	0.0
S1.30 - F1.35	24.3	24.5	7.80	3.32	6584	0.0
S1.35 - F1.40	21.2	45.7	7.50	5.69	6430	0.0
S1.40 - F1.45	10.1	55.8	7.34	7.26	6322	0.0
S1.45 - F1.50	7.7	63.6	7.23	8.69	6220	0.0
S1.50 - F1.55	5.6	69.2	7.14	9.96	6127	0.0
S1.55 - F1.60	3.4	72.6	7.09	10.92	6055	0.0
S1.60 - F1.70	6.3	78.9	6.98	13.07	5893	-
S1.70 - F1.80	4.4	83.3	6.89	14.88	5756	-
S1.80 - F1.90	3.8	87.2	6.79	16.69	5615	-
S1.90 - F2.00	3.9	91.1	6.68	18.77	5452	-
S2.00	8.9	100.0	6.36	23.56	5057	-

CUMULATIVE WEIGHT % SIZE: 1mm x 0.15mm						
S.G	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
S1.30 - F1.35	25.3	25.3	7.49	2.55	6591	0.0
S1.35 - F1.40	22.1	47.4	7.29	4.04	6490	0.0
S1.40 - F1.45	7.9	55.3	7.20	5.13	6414	0.0
S1.45 - F1.50	5.1	60.4	7.13	6.00	6352	0.0
S1.50 - F1.55	4.9	65.3	7.08	6.91	6282	0.0
S1.55 - F1.60	3.3	68.5	7.05	7.70	6222	0.0
S1.60 - F1.70	4.4	72.9	7.00	9.16	6107	-
S1.70 - F1.80	3.3	76.2	6.94	10.58	5997	-
S1.80 - F1.90	2.5	78.8	6.90	11.87	5897	-
S1.90 - F2.00	2.8	81.6	6.84	13.47	5773	-
S2.00	18.4	100.0	6.21	24.62	4821	-

**FROTH FLOTATION**

CUMULATIVE WEIGHT % SIZE 0.15mm x 0.038mm						
TIME	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
15 SEC (P2)	1.3	1.3	5.29	11.84	6311	0.0
30 SEC (P3)	0.5	1.8	-	12.15	-	0.0
60 SEC (P4)	0.3	2.2	-	12.36	-	0.0
90 SEC (P5)	0.2	2.4	-	12.56	-	0.0
Tails (T2)	2.8	5.2	-	34.34	-	0.0
Tails (T1)	94.8	100.0	-	64.25	-	0.0

**FINES**

CUMULATIVE WEIGHT % SIZE: -0.038mm		
Mois %	Ash %	CV (kcal/kg)
5.16	77.13	833

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager

Robb Trend Project

Coal Sample Results – 2012 Core Program

RT-11-420C

Arbour Seam

Sample Horizon: 35.7 to 41.3



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Coal Valley Resources Inc.  
1600 Oxford Tower  
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T5J 3G1, Canada

WORKORDER: RC12020558  
  
Hole: RT-11-420C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 35.7m to 41.3m  
Plies:

---

SIZING AFTER 20 DROPS

Size (mm)	Weight (g)	Weight %
+50	1755	8.3
-50	19295	91.7

We certify the analysis reported hereon was determined in accordance with the modified procedure for Drop Shatter Testing.

<original signed by>

Brett Warden  
Laboratory Manager



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Seam: Arbour  
Diameter: 63.5mm  
Depth: 35.7m to 41.3m  
Plies:

DRY SIZING

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	2429	11.5	11.5
-31.5+25	1351	6.4	18.0
-25+16	2488	11.8	29.8
-16+8	3318	15.8	45.5
-8+4	3023	14.4	59.9
-4+2	2851	13.5	73.4
-2	5591	26.6	100.0

ASTM Standard  
of Analysis

D4749  
(split with RSD)

\*All losses allocated to -2mm fraction

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager



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WORKORDER: RC12020558  
 Hole: RT-11-420C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 35.7m to 41.3m  
 Plies:

**WET SIZING**

**ASTM Standard  
 of Analysis**

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	783	5.0	5.0
+25	453	2.9	7.9
+16	928	5.9	13.8
+12.5	631	4.0	17.8
+8	1583	10.1	27.9
+4	2792	17.8	45.7
+2	2785	17.8	63.5
+1	2354	15.0	78.5
+0.5	1196	7.6	86.1
+0.25	678	4.3	90.5
+0.15	295	1.9	92.3
+0.063	365	2.3	94.7
+0.038	129	0.8	95.5
-0.038	706	4.5	100.0

D4749  
 (split with RSD)

\*All losses allocated to -0.038mm fraction

Sample was attrited in maximum 50kg lots with 18 cubes and 150 L of water or equivalent mass for 5 min @ 20 rpm

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager



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Hole: RT-11-420C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 35.7m to 41.3m  
 Piles:

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

SIZE: +12.5mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	131	4.7	7.22	6.26	6517	0.0
S1.35 - F1.40	275	9.9	6.80	12.60	6058	0.0
S1.40 - F1.45	235	8.5	6.62	16.85	5731	0.0
S1.45 - F1.50	307	11.1	6.25	22.41	5318	0.0
S1.50 - F1.55	188	6.8	5.71	27.70	4957	0.0
S1.55 - F1.60	173	6.2	5.21	33.28	4530	0.0
S1.60 - F1.70	105	3.8	4.65	36.41	4165	*
S1.70 - F1.80	358	12.9	4.15	51.09	3214	*
S1.80 - F1.90	332	12.0	3.63	55.83	2572	*
S1.90 - F2.00	345	12.5	3.05	59.96	2006	*
S2.00	324	11.7	2.44	73.51	1199	*

D4371  
 D3172  
 D4239  
 D720

SIZE: -12.5mm x +1.0mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	63	1.1	7.75	2.92	6639	0.0
S1.30 - F1.35	1595	26.5	7.72	4.44	6481	0.0
S1.35 - F1.40	1442	24.0	7.23	9.22	6194	0.0
S1.40 - F1.45	709	11.8	6.88	14.74	5781	0.0
S1.45 - F1.50	394	6.6	6.40	19.56	5426	0.0
S1.50 - F1.55	335	5.6	6.16	24.51	5039	0.0
S1.55 - F1.60	214	3.6	5.95	29.74	4628	0.0
S1.60 - F1.70	257	4.3	5.51	36.10	4136	*
S1.70 - F1.80	182	3.0	4.93	46.00	3365	*
S1.80 - F1.90	171	2.8	4.55	54.76	2689	*
S1.90 - F2.00	173	2.9	4.06	63.15	1992	*
S2.00	483	8.0	2.69	78.57	872	*

SIZE: 1mm x 0.15mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	302	28.0	7.92	2.89	6536	0.0
S1.35 - F1.40	236	21.9	7.67	5.90	6307	0.0
S1.40 - F1.45	85	7.9	7.08	11.33	5958	0.0
S1.45 - F1.50	58	5.4	6.60	15.03	5698	0.0
S1.50 - F1.55	53	4.9	6.52	17.57	5469	0.0
S1.55 - F1.60	38	3.6	6.55	21.99	5122	0.0
S1.60 - F1.70	48	4.4	5.89	31.38	4401	*
S1.70 - F1.80	36	3.3	5.52	42.11	3575	*
S1.80 - F1.90	22	2.1	4.76	51.39	2741	*
S1.90 - F2.00	28	2.6	4.31	58.08	2383	*
S2.00	173	16.0	3.68	71.92	874	*

**FROTH FLOTATION**

SIZE: 0.15mm x 0.038mm						
TIME	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
15 SEC	6	1.6	5.23	10.17	6433	0.0
30 SEC	1	0.4	5.08	11.97	NSS	0.0
60 SEC	1	0.4	4.92	12.98	NSS	0.0
90 SEC	0	0.1	NSS	14.37	NSS	0.0
Tails (T2)	5	1.5	6.49	41.70	3572	0.0
Tails (T1)	329	96.1	6.88	56.33	2199	0.0

PARAMETERS: 10% PULP DENSITY, COND. TIME 90 SECOND  
 0.667 KG/T 10:1 KERO:MIBC, DENVER CELL, 1200 RPM

**FINES**

SIZE: -0.038mm		
Mois %	Ash %	GCV (kcal/kg)
6.77	70.41	1232

NSS = Not Sufficient Sample

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 Laboratory Manager



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 Plies:

ANALYSIS

ASTM Standard  
 of Analysis

FLOAT SINK ANALYSIS

AIR-DRIED BASIS

CUMULATIVE WEIGHT % SIZE: +12.5mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	4.7	4.7	7.22	6.26	6517	0.0
S1.35 - F1.40	9.9	14.6	6.94	10.55	6207	0.0
S1.40 - F1.45	8.5	23.1	6.82	12.86	6033	0.0
S1.45 - F1.50	11.1	34.2	6.64	15.95	5801	0.0
S1.50 - F1.55	6.8	41.0	6.48	17.90	5662	0.0
S1.55 - F1.60	6.2	47.2	6.31	19.93	5512	0.0
S1.60 - F1.70	3.8	51.0	6.19	21.15	5412	-
S1.70 - F1.80	12.9	63.9	5.78	27.20	4968	-
S1.80 - F1.90	12.0	75.9	5.44	31.72	4590	-
S1.90 - F2.00	12.5	88.3	5.10	35.70	4225	-
S2.00	11.7	100.0	4.79	40.12	3871	-

D4371  
 D3172  
 D4239  
 D720

CUMULATIVE WEIGHT % SIZE: 12.5mm x 1.0mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	1.1	1.1	7.75	2.92	6639	0.0
S1.30 - F1.35	26.5	27.6	7.72	4.38	6487	0.0
S1.35 - F1.40	24.0	51.5	7.49	6.63	6351	0.0
S1.40 - F1.45	11.8	63.3	7.38	8.14	6245	0.0
S1.45 - F1.50	6.6	69.8	7.29	9.21	6168	0.0
S1.50 - F1.55	5.6	75.4	7.20	10.34	6085	0.0
S1.55 - F1.60	3.6	79.0	7.15	11.21	6019	0.0
S1.60 - F1.70	4.3	83.2	7.06	12.49	5923	-
S1.70 - F1.80	3.0	86.3	6.99	13.67	5833	-
S1.80 - F1.90	2.8	89.1	6.91	14.98	5733	-
S1.90 - F2.00	2.9	92.0	6.82	16.48	5616	-
S2.00	8.0	100.0	6.49	21.46	5235	-

CUMULATIVE WEIGHT % SIZE: 1mm x 0.15mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	28.0	28.0	7.92	2.89	6536	0.0
S1.35 - F1.40	21.9	49.8	7.81	4.21	6435	0.0
S1.40 - F1.45	7.9	57.7	7.71	5.18	6370	0.0
S1.45 - F1.50	5.4	63.1	7.62	6.03	6313	0.0
S1.50 - F1.55	4.9	68.0	7.54	6.85	6252	0.0
S1.55 - F1.60	3.6	71.6	7.49	7.61	6196	0.0
S1.60 - F1.70	4.4	76.0	7.40	8.99	6092	-
S1.70 - F1.80	3.3	79.3	7.32	10.37	5986	-
S1.80 - F1.90	2.1	81.4	7.25	11.42	5904	-
S1.90 - F2.00	2.6	84.0	7.16	12.88	5793	-
S2.00	16.0	100.0	6.60	22.33	5006	-

FROTH FLOTATION

CUMULATIVE WEIGHT % SIZE 0.15mm x 0.038mm						
TIME	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
15 SEC (P2)	1.6	1.6	5.23	10.17	6433	0.0
30 SEC (P3)	0.4	2.0	5.20	10.49	-	0.0
60 SEC (P4)	0.4	2.4	5.16	10.91	-	0.0
90 SEC (P5)	0.1	2.5	-	11.00	-	0.0
Tails (T2)	1.5	3.9	-	22.45	-	0.0
Tails (T1)	96.1	100.0	-	55.00	-	0.0

FINES

CUMULATIVE WEIGHT % SIZE: -0.038mm		
Mois %	Ash %	CV (kcal/kg)
6.77	70.41	1232

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager

Robb Trend Project

Coal Sample Results – 2012 Core Program

RT-11-495C

Arbour Seam

Sample Horizon: 49.0 to 57.0



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WORKORDER: RC12020550

Hole: RT-11-495C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 49.0m to 57.0m  
Plies: A,B,D1,D2

Raw Analysis

	Wt (g)	Mois%	Ash%	VM%	F.C.%	S%	CV (kcal/kg)	Cl %	RD	ARD
Raw Coal	24850	6.47	22.78	30.72	40.03	0.22	5017	0.01	1.55	1.48

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager



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Depth: 49.0m to 57.0m  
Plies: A,B,D1,D2

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SIZING AFTER 20 DROPS

Size (mm)	Weight (g)	Weight %
+50	2993	12.0
-50	21857	88.0

We certify the analysis reported hereon was determined in accordance with the modified procedure for Drop Shatter Testing.

<original signed by>

Brett Warden  
Laboratory Manager



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Diameter: 63.5mm  
Depth: 49.0m to 57.0m  
Plies: A,B,D1,D2

DRY SIZING

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	4444	17.9	17.9
-31.5+25	1798	7.2	25.1
-25+16	3258	13.1	38.2
-16+8	3907	15.7	54.0
-8+4	3196	12.9	66.8
-4+2	3381	13.6	80.4
-2	4866	19.6	100.0

ASTM Standard  
of Analysis

D4749  
(split with RSD)

\*All losses allocated to -2mm fraction

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 Depth: 49.0m to 57.0m  
 Plies: A,B,D1,D2

WET SIZING

ASTM Standard  
 of Analysis

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	1568	8.4	8.4
+25	975	5.2	13.6
+16	1765	9.5	23.1
+12.5	1008	5.4	28.5
+8	2028	10.9	39.4
+4	2832	15.2	54.6
+2	2959	15.9	70.5
+1	2302	12.4	82.8
+0.5	1241	6.7	89.5
+0.25	663	3.6	93.0
+0.15	287	1.5	94.6
+0.063	347	1.9	96.4
+0.038	113	0.6	97.1
-0.038	549	2.9	100.0

D4749  
 (split with RSD)

\*All losses allocated to -0.038mm fraction

Sample was attrited in maximum 50kg lots with 18 cubes and 150 L of water or equivalent mass for 5 min @ 20 rpm

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 Laboratory Manager



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Hole: RT-11-495C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 49.0m to 57.0m  
 Plies: A,B,D1,D2

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

AIR-DRIED BASIS

SIZE: +12.5mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	6	0.1	7.24	2.68	6586	0.5
S1.30 - F1.35	415	7.9	6.95	5.39	6531	0.0
S1.35 - F1.40	903	17.1	6.46	9.77	6218	0.0
S1.40 - F1.45	1058	20.0	5.76	16.12	5820	0.0
S1.45 - F1.50	595	11.3	5.96	20.51	5392	0.0
S1.50 - F1.55	434	8.2	5.52	23.76	4955	0.0
S1.55 - F1.60	400	7.6	4.92	31.29	4542	0.0
S1.60 - F1.70	768	14.5	4.58	35.39	4205	*
S1.70 - F1.80	164	3.1	3.86	42.53	3403	*
S1.80 - F1.90	233	4.4	3.31	42.69	2722	*
S1.90 - F2.00	154	2.9	3.18	48.50	2450	*
S2.00	154	2.9	2.29	74.93	1113	*

D4371  
 D3172  
 D4239  
 D720

SIZE: -12.5mm x +1.0mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	81	1.6	6.90	2.90	6715	0.0
S1.30 - F1.35	1660	32.8	7.11	3.85	6579	0.0
S1.35 - F1.40	1042	20.6	6.57	8.86	6242	0.0
S1.40 - F1.45	620	12.2	6.23	13.86	5882	0.0
S1.45 - F1.50	336	6.6	5.82	19.12	5509	0.0
S1.50 - F1.55	243	4.8	5.59	23.42	5165	0.0
S1.55 - F1.60	157	3.1	5.07	28.47	4802	0.0
S1.60 - F1.70	210	4.1	4.78	35.20	4205	*
S1.70 - F1.80	130	2.6	4.38	43.62	3527	*
S1.80 - F1.90	105	2.1	3.86	52.07	2949	*
S1.90 - F2.00	80	1.6	3.38	59.54	2326	*
S2.00	400	7.9	2.72	73.12	1089	*

SIZE: 1mm x 0.15mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	7	0.5	4.93	4.07	6925	0.5
S1.35 - F1.40	789	52.1	7.76	3.99	6460	0.0
S1.40 - F1.45	154	10.1	7.02	10.42	6003	0.0
S1.45 - F1.50	85	5.6	6.74	14.93	5676	0.0
S1.50 - F1.55	79	5.2	6.61	17.66	5454	0.0
S1.55 - F1.60	47	3.1	6.21	22.06	5120	0.0
S1.60 - F1.70	59	3.9	5.57	31.38	4396	*
S1.70 - F1.80	38	2.5	5.05	41.38	3606	*
S1.80 - F1.90	19	1.3	4.45	48.71	2928	*
S1.90 - F2.00	25	1.6	4.20	55.58	2462	*
S2.00	213	14.1	2.65	71.01	805	*

**FROTH FLOTATION**

SIZE: 0.15mm x 0.038mm						
TIME	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
15 SEC	20	5.8	5.84	9.38	6278	0.0
30 SEC	6	1.8	6.08	9.76	3876	0.0
60 SEC	5	1.5	6.17	10.57	6056	0.0
90 SEC	3	1.0	6.34	11.60	5996	0.0
Tails (T2)	18	5.3	6.47	23.55	4919	0.0
Tails (T1)	288	84.7	6.54	35.42	3857	0.0

PARAMETERS: 10% PULP DENSITY, COND. TIME 90 SECOND  
 0.667 KG/T 10:1 KERO:MIBC, DENVER CELL, 1200 RPM

**FINES**

SIZE: -0.038mm		
Mois %	Ash %	GCV (kcal/kg)
5.49	57.31	2214

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal

<original signed by>

Brett Warden  
 Laboratory Manager



**CERTIFICATE OF ANALYSIS**

Preliminary Report  
 Final Report

31-Jul-12

Coal Valley Resources Inc.  
 1600 Oxford Tower  
 10235-101 Street  
 Edmonton, AB  
 T5J 3G1, Canada

WORKORDER: RC12020550

Hole: RT-11-495C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 49.0m to 57.0m  
 Plies: A,B,D1,D2

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

CUMULATIVE WEIGHT % SIZE: +12.5mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	0.1	0.1	7.24	2.68	6586	0.5
S1.30 - F1.35	7.9	8.0	6.95	5.35	6532	0.0
S1.35 - F1.40	17.1	25.1	6.62	8.37	6318	0.0
S1.40 - F1.45	20.0	45.1	6.24	11.81	6097	0.0
S1.45 - F1.50	11.3	56.4	6.18	13.55	5956	0.0
S1.50 - F1.55	8.2	64.6	6.10	14.85	5829	0.0
S1.55 - F1.60	7.6	72.1	5.97	16.57	5694	0.0
S1.60 - F1.70	14.5	86.7	5.74	19.73	5444	-
S1.70 - F1.80	3.1	89.8	5.67	20.52	5374	-
S1.80 - F1.90	4.4	94.2	5.56	21.55	5250	-
S1.90 - F2.00	2.9	97.1	5.49	22.36	5165	-
S2.00	2.9	100.0	5.40	23.89	5047	-

D4371  
 D3172  
 D4239  
 D720

CUMULATIVE WEIGHT % SIZE: 12.5mm x 1.0mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	1.6	1.6	6.90	2.90	6715	0.0
S1.30 - F1.35	32.8	34.4	7.10	3.81	6585	0.0
S1.35 - F1.40	20.6	54.9	6.90	5.70	6457	0.0
S1.40 - F1.45	12.2	67.2	6.78	7.18	6352	0.0
S1.45 - F1.50	6.6	73.8	6.69	8.26	6276	0.0
S1.50 - F1.55	4.8	78.6	6.63	9.18	6208	0.0
S1.55 - F1.60	3.1	81.7	6.57	9.92	6155	0.0
S1.60 - F1.70	4.1	85.9	6.48	11.14	6061	-
S1.70 - F1.80	2.6	88.4	6.42	12.08	5987	-
S1.80 - F1.90	2.1	90.5	6.36	13.00	5917	-
S1.90 - F2.00	1.6	92.1	6.31	13.80	5856	-
S2.00	7.9	100.0	6.03	18.49	5479	-

CUMULATIVE WEIGHT % SIZE: 1mm x 0.15mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	0.5	0.5	4.93	4.07	6925	0.5
S1.35 - F1.40	52.1	52.5	7.74	3.99	6464	0.0
S1.40 - F1.45	10.1	62.7	7.62	5.03	6389	0.0
S1.45 - F1.50	5.6	68.3	7.55	5.85	6330	0.0
S1.50 - F1.55	5.2	73.5	7.48	6.68	6269	0.0
S1.55 - F1.60	3.1	76.6	7.43	7.31	6222	0.0
S1.60 - F1.70	3.9	80.5	7.34	8.47	6134	-
S1.70 - F1.80	2.5	83.0	7.27	9.47	6057	-
S1.80 - F1.90	1.3	84.3	7.23	10.06	6010	-
S1.90 - F2.00	1.6	85.9	7.17	10.93	5942	-
S2.00	14.1	100.0	6.53	19.38	5220	-

**FROTH FLOTATION**

CUMULATIVE WEIGHT % SIZE 0.15mm x 0.038mm						
TIME	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
15 SEC (P2)	5.8	5.8	5.84	9.38	6278	0.0
30 SEC (P3)	1.8	7.6	5.90	9.47	5701	0.0
60 SEC (P4)	1.5	9.1	5.94	9.65	5758	0.0
90 SEC (P5)	1.0	10.1	5.98	9.84	5782	0.0
Tails (T2)	5.3	15.3	6.15	14.57	5485	0.0
Tails (T1)	84.7	100.0	6.48	32.22	4106	0.0

**FINES**

CUMULATIVE WEIGHT % SIZE: -0.038mm		
Mois %	Ash %	CV (kcal/kg)
5.49	57.31	2214

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager

Robb Trend Project

Coal Sample Results – 2012 Core Program

RT-11-544C

Arbour Seam

Sample Horizon: 70.1 to 78.3



CERTIFICATE OF ANALYSIS

Preliminary Report 30-Jul-12  
Final Report

Coal Valley Resources Inc.  
1600 Oxford Tower  
10235-101 Street  
Edmonton, AB  
T5J 3G1, Canada

WORKORDER: RC12020425

Hole: RT-11-544C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 70.1m to 78.3m  
Plies: A,B,C,D1,D2

Raw Analysis

	Wt (g)	Mois%	Ash%	VM%	F.C.%	S%	CV (kcal/kg)	Cl %	RD	ARD
Raw Coal	28100	5.32	25.58	29.08	40.02	0.24	4965	0.01	1.54	1.50

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager



CERTIFICATE OF ANALYSIS

Preliminary Report  
Final Report

30-Jul-12

Coal Valley Resources Inc.  
1600 Oxford Tower  
10235-101 Street  
Edmonton, AB  
T5J 3G1, Canada

WORKORDER: RC12020425

Hole: RT-11-544C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 70.1m to 78.3m  
Plies: A,B,C,D1,D2

---

SIZING AFTER 20 DROPS

Size (mm)	Weight (g)	Weight %
+50	1587	5.6
-50	26513	94.4

We certify the analysis reported hereon was determined in accordance with the modified procedure for Drop Shatter Testing.

<original signed by>

Brett Warden  
Laboratory Manager



CERTIFICATE OF ANALYSIS

Preliminary Report  
Final Report

30-Jul-12

Coal Valley Resources Inc.  
1600 Oxford Tower  
10235-101 Street  
Edmonton, AB  
T5J 3G1, Canada

WORKORDER: RC12020425

Hole: RT-11-544C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 70.1m to 78.3m  
Plies: A,B,C,D1,D2

DRY SIZING

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	3610	12.8	12.8
-31.5+25	1410	5.0	17.9
-25+16	3209	11.4	29.3
-16+8	3928	14.0	43.3
-8+4	3420	12.2	55.4
-4+2	5228	18.6	74.0
-2	7294	26.0	100.0

ASTM Standard  
of Analysis

D4749  
(split with RSD)

\*All losses allocated to -2mm fraction

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager



CERTIFICATE OF ANALYSIS

Preliminary Report  
 Final Report

30-Jul-12

Coal Valley Resources Inc.  
 1600 Oxford Tower  
 10235-101 Street  
 Edmonton, AB  
 T5J 3G1, Canada

WORKORDER: RC12020425  
 Hole: RT-11-544C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 70.1m to 78.3m  
 Plies: A,B,C,D1,D2

WET SIZING

ASTM Standard  
 of Analysis

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	945	4.5	4.5
+25	669	3.2	7.7
+16	1596	7.6	15.3
+12.5	1084	5.2	20.4
+8	2062	9.8	30.3
+4	3113	14.8	45.1
+2	4100	19.5	64.6
+1	3258	15.5	80.1
+0.5	1747	8.3	88.4
+0.25	821	3.9	92.3
+0.15	327	1.6	93.9
+0.063	526	2.5	96.4
+0.038	280	1.3	97.7
-0.038	475	2.3	100.0

D4749  
 (split with RSD)

\*All losses allocated to -0.038mm fraction

Sample was attrited in maximum 50kg lots with 18 cubes and 150 L of water or equivalent mass for 5 min @ 20 rpm

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager



**CERTIFICATE OF ANALYSIS**

Preliminary Report  
 Final Report

30-Jul-12

Coal Valley Resources Inc.  
 1600 Oxford Tower  
 10235-101 Street  
 Edmonton, AB  
 T5J 3G1, Canada

WORKORDER: RC12020425

Hole: RT-11-544C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 70.1m to 78.3m  
 Plies: A,B,C,D1,D2

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

SIZE: +12.5mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	201	4.7	6.55	5.96	6569	0.0
S1.35 - F1.40	688	16.1	5.66	8.94	6323	0.0
S1.40 - F1.45	874	20.5	5.18	14.24	5946	0.0
S1.45 - F1.50	671	15.7	4.96	19.15	5535	0.0
S1.50 - F1.55	220	5.2	4.49	23.91	5151	0.0
S1.55 - F1.60	97	2.3	5.07	31.03	4676	0.0
S1.60 - F1.70	311	7.3	4.39	37.16	4184	*
S1.70 - F1.80	325	7.6	4.26	51.13	3155	*
S1.80 - F1.90	263	6.2	3.69	53.19	2815	*
S1.90 - F2.00	283	6.6	4.07	64.98	1817	*
S2.00	340	8.0	3.17	79.40	958	*

D4371  
 D3172  
 D4239  
 D720

SIZE: -12.5mm x +1.0mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	7	0.2	6.21	3.21	6784	0.0
S1.30 - F1.35	857	18.3	6.82	3.44	6608	0.0
S1.35 - F1.40	1325	28.3	6.30	7.37	6335	0.0
S1.40 - F1.45	488	10.4	5.71	13.15	5958	0.0
S1.45 - F1.50	391	8.3	5.50	17.99	5600	0.0
S1.50 - F1.55	250	5.3	6.03	22.85	5189	0.0
S1.55 - F1.60	169	3.6	5.74	28.99	4707	0.0
S1.60 - F1.70	222	4.7	5.32	35.97	4196	*
S1.70 - F1.80	176	3.8	4.96	46.39	3374	*
S1.80 - F1.90	167	3.6	4.70	56.32	2660	*
S1.90 - F2.00	187	4.0	4.42	65.50	1858	*
S2.00	442	9.4	3.13	78.82	802	*

SIZE: 1mm x 0.15mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	226	20.4	7.34	2.67	6641	0.0
S1.35 - F1.40	328	29.6	7.10	5.28	6402	0.0
S1.40 - F1.45	124	11.2	6.50	11.08	6011	0.0
S1.45 - F1.50	67	6.0	6.19	15.39	5722	0.0
S1.50 - F1.55	66	5.9	6.32	17.82	5464	0.0
S1.55 - F1.60	39	3.6	6.18	23.29	5041	0.0
S1.60 - F1.70	55	5.0	5.70	32.44	4358	*
S1.70 - F1.80	38	3.4	5.20	43.70	3515	*
S1.80 - F1.90	21	1.9	4.81	52.08	2875	*
S1.90 - F2.00	25	2.2	4.56	59.69	2264	*
S2.00	120	10.8	2.77	70.81	764	*

**FROTH FLOTATION**

SIZE: 0.15mm x 0.038mm						
TIME	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
15 SEC	4	1.0	5.47	10.48	NSS	NSS
30 SEC	2	0.6	NSS	12.21	NSS	NSS
60 SEC	1	0.2	NSS	12.49	NSS	NSS
90 SEC	1	0.3	NSS	13.11	NSS	NSS
Tails (T2)	8	2.2	6.78	27.17	4712	0.0
Tails (T1)	345	95.8	7.57	50.86	2610	0.0

PARAMETERS: 10% PULP DENSITY, COND. TIME 90 SECOND  
 0.667 KG/T 10:1 KERO:MIBC, DENVER CELL, 1200 RPM

**FINES**

SIZE: -0.038mm		
Mois %	Ash %	GCV (kcal/kg)
6.52	66.63	1399

NSS = Not Sufficient Sample

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager



**CERTIFICATE OF ANALYSIS**

Preliminary Report  
 Final Report

30-Jul-12

Coal Valley Resources Inc.  
 1600 Oxford Tower  
 10235-101 Street  
 Edmonton, AB  
 T5J 3G1, Canada

WORKORDER: RC12020425

Hole: RT-11-544C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 70.1m to 78.3m  
 Piles: A, B, C, D1, D2

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

AIR-DRIED BASIS

CUMULATIVE WEIGHT % SIZE: +12.5mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	4.7	4.7	6.55	5.96	6569	0.0
S1.35 - F1.40	16.1	20.8	5.86	8.27	6379	0.0
S1.40 - F1.45	20.5	41.3	5.52	11.23	6164	0.0
S1.45 - F1.50	15.7	57.0	5.37	13.41	5991	0.0
S1.50 - F1.55	5.2	62.1	5.30	14.28	5921	0.0
S1.55 - F1.60	2.3	64.4	5.29	14.87	5877	0.0
S1.60 - F1.70	7.3	71.7	5.20	17.14	5705	-
S1.70 - F1.80	7.6	79.3	5.11	20.40	5481	-
S1.80 - F1.90	6.2	85.4	5.00	22.76	5270	-
S1.90 - F2.00	6.6	92.0	4.94	25.80	5022	-
S2.00	8.0	100.0	4.80	30.06	4698	-

D4371  
 D3172  
 D4239  
 D720

CUMULATIVE WEIGHT % SIZE: 12.5mm x 1.0mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	0.2	0.2	6.21	3.21	6784	0.0
S1.30 - F1.35	18.3	18.5	6.81	3.44	6609	0
S1.35 - F1.40	28.3	46.8	6.50	5.82	6443	0
S1.40 - F1.45	10.4	57.2	6.36	7.15	6355	0
S1.45 - F1.50	8.3	65.5	6.25	8.53	6259	0
S1.50 - F1.55	5.3	70.9	6.23	9.61	6178	0
S1.55 - F1.60	3.6	74.5	6.21	10.55	6107	0
S1.60 - F1.70	4.7	79.2	6.16	12.08	5992	-
S1.70 - F1.80	3.8	83.0	6.10	13.63	5874	-
S1.80 - F1.90	3.6	86.6	6.04	15.40	5741	-
S1.90 - F2.00	4.0	90.6	5.97	17.61	5569	-
S2.00	9.4	100.0	5.70	23.39	5119	-

CUMULATIVE WEIGHT % SIZE: 1mm x 0.15mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	20.4	20.4	7.34	2.67	6641	0.00
S1.35 - F1.40	29.6	50.0	7.20	4.22	6500	0.00
S1.40 - F1.45	11.2	61.2	7.07	5.47	6410	0.00
S1.45 - F1.50	6.0	67.2	6.99	6.36	6348	0.00
S1.50 - F1.55	5.9	73.1	6.94	7.29	6277	0.00
S1.55 - F1.60	3.6	76.7	6.90	8.03	6219	0.00
S1.60 - F1.70	5.0	81.7	6.83	9.52	6106	-
S1.70 - F1.80	3.4	85.1	6.76	10.89	6002	-
S1.80 - F1.90	1.9	86.9	6.72	11.78	5935	-
S1.90 - F2.00	2.2	89.2	6.67	12.97	5844	-
S2.00	10.8	100.0	6.24	19.24	5293	-

**FROTH FLOTATION**

CUMULATIVE WEIGHT % SIZE 0.15mm x 0.038mm						
TIME	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
15 SEC (P2)	1.0	1.0	5.47	10.48	-	-
30 SEC (P3)	0.6	1.6	-	11.10	-	-
60 SEC (P4)	0.2	1.7	-	11.23	-	-
90 SEC (P5)	0.3	2.0	-	11.49	-	-
Tails (T2)	2.2	4.2	-	19.74	-	-
Tails (T1)	95.8	100.0	-	49.55	-	-

**FINES**

CUMULATIVE WEIGHT % SIZE: -0.038mm		
Mois %	Ash %	CV (kcal/kg)
6.52	66.63	1399

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal

<original signed by>

Brett Warden  
 Laboratory Manager

Robb Trend Project

Coal Sample Results – 2012 Core Program

RT-11-612C

Arbour Seam

Sample Horizon: 40.02 to 48.8



CERTIFICATE OF ANALYSIS

Preliminary Report 31-Jul-12  
Final Report

Coal Valley Resources Inc.  
1600 Oxford Tower  
10235-101 Street  
Edmonton, AB  
T5J 3G1, Canada

WORKORDER: RC12020555

Hole: RT-11-612C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 40.02m to 48.8m  
Plies: A,B,C,D1,D2

Raw Analysis

	Wt (g)	Mois%	Ash%	VM%	F.C.%	S%	CV (kcal/kg)	Cl %	RD	ARD
Raw Coal	32100	6.19	31.27	27.86	34.68	0.23	4480	0.01	1.59	1.54

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager



CERTIFICATE OF ANALYSIS

Preliminary Report  
Final Report

31-Jul-12

Coal Valley Resources Inc.  
1600 Oxford Tower  
10235-101 Street  
Edmonton, AB  
T5J 3G1, Canada

WORKORDER: RC12020555  
  
Hole: RT-11-612C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 40.02m to 48.8m  
Plies: A,B,C,D1,D2

---

SIZING AFTER 20 DROPS

Size (mm)	Weight (g)	Weight %
+50	1595	5.0
-50	30505	95.0

We certify the analysis reported hereon was determined in accordance with the modified procedure for Drop Shatter Testing.

<original signed by>

Brett Warden  
Laboratory Manager



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WORKORDER: RC12020555  
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Seam: Arbour  
Diameter: 63.5mm  
Depth: 40.02m to 48.8m  
Plies: A,B,C,D1,D2

DRY SIZING

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	4718	14.7	14.7
-31.5+25	1565	4.9	19.6
-25+16	2901	9.0	28.6
-16+8	3918	12.2	40.8
-8+4	3546	11.0	51.9
-4+2	5056	15.8	67.6
-2	10396	32.4	100.0

**ASTM Standard  
of Analysis**

D4749  
(split with RSD)

\*All losses allocated to -2mm fraction

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager



**CERTIFICATE OF ANALYSIS**

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31-Jul-12

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 T5J 3G1, Canada

WORKORDER: RC12020555  
 Hole: RT-11-612C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 40.02m to 48.8m  
 Plies: A,B,C,D1,D2

**WET SIZING**

**ASTM Standard  
 of Analysis**

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	1465	6.1	6.1
+25	1073	4.5	10.6
+16	1790	7.5	18.1
+12.5	1034	4.3	22.4
+8	2118	8.8	31.2
+4	2916	12.2	43.4
+2	3629	15.1	58.6
+1	3397	14.2	72.7
+0.5	2071	8.6	81.4
+0.25	1257	5.2	86.6
+0.15	555	2.3	88.9
+0.063	1025	4.3	93.2
+0.038	427	1.8	95.0
-0.038	1197	5.0	100.0

D4749  
 (split with RSD)

**\*All losses allocated to -0.038mm fraction**

Sample was attrited in maximum 50kg lots with 18 cubes and 150 L of water or equivalent mass for 5 min @ 20 rpm

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager



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WORKORDER: RC12020555

Hole: RT-11-612C  
 Seam: Arbour  
 Diameter: 63.5mm  
 Depth: 40.02m to 48.8m  
 Plies: A,B,C,D1,D2

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

SIZE: +12.5mm						
S.G.	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	474	8.9	7.03	5.30	6548	0.0
S1.35 - F1.40	833	15.6	7.36	9.14	6106	0.0
S1.40 - F1.45	732	13.8	6.85	14.95	5810	0.0
S1.45 - F1.50	449	8.4	6.19	21.37	5330	0.0
S1.50 - F1.55	363	6.8	5.45	27.54	4903	0.0
S1.55 - F1.60	305	5.7	4.95	31.83	4544	0.0
S1.60 - F1.70	626	11.8	4.73	39.70	4009	*
S1.70 - F1.80	570	10.7	4.12	43.17	3635	*
S1.80 - F1.90	285	5.4	3.86	55.47	2777	*
S1.90 - F2.00	423	7.9	3.05	67.12	2011	*
S2.00	261	4.9	2.41	82.82	726	*

D4371  
 D3172  
 D4239  
 D720

SIZE: -12.5mm x +1.0mm						
S.G.	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	9	0.2	6.48	3.23	6866	0.0
S1.30 - F1.35	1145	26.0	7.77	3.68	6557	0.0
S1.35 - F1.40	936	21.3	7.17	8.31	6228	0.0
S1.40 - F1.45	477	10.8	6.84	13.85	5867	0.0
S1.45 - F1.50	280	6.4	6.30	19.12	5483	0.0
S1.50 - F1.55	207	4.7	6.12	24.51	5067	0.0
S1.55 - F1.60	164	3.7	5.93	29.60	4692	0.0
S1.60 - F1.70	267	6.1	5.28	37.61	4057	*
S1.70 - F1.80	198	4.5	4.82	45.90	3353	*
S1.80 - F1.90	151	3.4	4.26	55.02	2675	*
S1.90 - F2.00	116	2.6	3.93	63.23	2113	*
S2.00	451	10.2	3.43	77.91	805	*

SIZE: 1mm x 0.15mm						
S.G.	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	234	23.4	7.63	2.72	6546	0.0
S1.35 - F1.40	191	19.1	7.33	5.85	6266	0.0
S1.40 - F1.45	72	7.2	6.90	11.67	5896	0.0
S1.45 - F1.50	44	4.4	6.47	15.88	5600	0.0
S1.50 - F1.55	36	3.6	7.07	19.27	5311	0.0
S1.55 - F1.60	27	2.7	6.89	24.21	4929	0.0
S1.60 - F1.70	36	3.6	6.49	32.78	4248	*
S1.70 - F1.80	31	3.1	5.92	42.40	3510	*
S1.80 - F1.90	23	2.3	5.65	50.44	2667	*
S1.90 - F2.00	21	2.1	5.14	58.25	2173	*
S2.00	285	28.5	3.53	82.08	478	*

**FROTH FLOTATION**

SIZE: 0.15mm x 0.038mm						
TIME	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
15 SEC	7	4.2	6.28	11.39	6073	0.0
30 SEC	2	1.4	NSS	13.51	NSS	0.0
60 SEC	1	0.7	NSS	14.07	NSS	0.0
90 SEC	1	0.9	NSS	17.58	NSS	0.0
Tails (T2)	10	6.2	6.14	62.28	1879	0.0
Tails (T1)	139	86.6	6.35	62.88	1791	0.0
PARAMETERS: 10% PULP DENSITY, COND. TIME 90 SECOND 0.667 KG/T 10:1 KERO MIBC, DENVER CELL, 1200 RPM						

**FINES**

SIZE: -0.038mm		
Mois %	Ash %	GCV (kcal/kg)
5.31	78.30	640

NSS = Not Sufficient Sample

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager



**CERTIFICATE OF ANALYSIS**

Preliminary Report  
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31-Jul-12

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 Plies: A, B, C, D1, D2

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

CUMULATIVE WEIGHT % SIZE: +12.5mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	8.9	8.9	7.03	5.30	6548	0.0
S1.35 - F1.40	15.6	24.6	7.24	7.75	6266	0.0
S1.40 - F1.45	13.8	38.3	7.10	10.33	6103	0.0
S1.45 - F1.50	8.4	46.8	6.94	12.32	5963	0.0
S1.50 - F1.55	6.8	53.6	6.75	14.26	5828	0.0
S1.55 - F1.60	5.7	59.3	6.57	15.96	5704	0.0
S1.60 - F1.70	11.8	71.1	6.27	19.89	5424	-
S1.70 - F1.80	10.7	81.8	5.99	22.94	5189	-
S1.80 - F1.90	5.4	87.2	5.86	24.94	5041	-
S1.90 - F2.00	7.9	95.1	5.62	28.47	4788	-
S2.00	4.9	100.0	5.46	31.13	4589	-

D4371  
 D3172  
 D4239  
 D720

CUMULATIVE WEIGHT % SIZE: 12.5mm x 1.0mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	0.2	0.2	6.48	3.23	6866	0.0
S1.30 - F1.35	26.0	26.2	7.76	3.68	6580	0.0
S1.35 - F1.40	21.3	47.5	7.50	5.75	6411	0.0
S1.40 - F1.45	10.8	58.3	7.37	7.26	6310	0.0
S1.45 - F1.50	6.4	64.7	7.27	8.42	6229	0.0
S1.50 - F1.55	4.7	69.4	7.19	9.51	6150	0.0
S1.55 - F1.60	3.7	73.1	7.13	10.54	6076	0.0
S1.60 - F1.70	6.1	79.2	6.98	12.61	5921	-
S1.70 - F1.80	4.5	83.7	6.87	14.40	5783	-
S1.80 - F1.90	3.4	87.1	6.77	16.00	5660	-
S1.90 - F2.00	2.6	89.8	6.68	17.39	5556	-
S2.00	10.2	100.0	6.35	23.59	5069	-

CUMULATIVE WEIGHT % SIZE: 1mm x 0.15mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	23.4	23.4	7.63	2.72	6546	0.0
S1.35 - F1.40	19.1	42.5	7.50	4.13	6420	0.0
S1.40 - F1.45	7.2	49.7	7.41	5.23	6344	0.0
S1.45 - F1.50	4.4	54.1	7.33	6.09	6283	0.0
S1.50 - F1.55	3.6	57.7	7.32	6.92	6222	0.0
S1.55 - F1.60	2.7	60.5	7.30	7.70	6164	0.0
S1.60 - F1.70	3.6	64.0	7.25	9.09	6057	-
S1.70 - F1.80	3.1	67.1	7.19	10.63	5940	-
S1.80 - F1.90	2.3	69.4	7.14	11.95	5832	-
S1.90 - F2.00	2.1	71.5	7.08	13.30	5724	-
S2.00	28.5	100.0	6.07	32.89	4230	-

**FROTH FLOTATION**

CUMULATIVE WEIGHT % SIZE 0.15mm x 0.038mm						
TIME	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
15 SEC (P2)	4.2	4.2	6.28	11.39	6073	0.0
30 SEC (P3)	1.4	5.6	-	11.91	-	0.0
60 SEC (P4)	0.7	6.4	-	12.16	-	0.0
90 SEC (P5)	0.9	7.2	-	12.82	-	0.0
Tails (T2)	6.2	13.4	-	35.72	-	0.0
Tails (T1)	86.6	100.0	-	59.23	-	0.0

**FINES**

CUMULATIVE WEIGHT % SIZE: -0.038mm		
Mois %	Ash %	CV (kcal/kg)
5.31	78.30	640

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager

Robb Trend Project

Coal Sample Results – 2012 Core Program

RT-11-672C

Arbour Seam

Sample Horizon: 32.5 to 42.0



CERTIFICATE OF ANALYSIS

Preliminary Report 30-Jul-12  
Final Report

Coal Valley Resources Inc.  
1600 Oxford Tower  
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T5J 3G1, Canada

WORKORDER: RC12020427

Hole: RT-11-672C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 32.5m TO 42.0m  
Plies: A,B,C,D1,D2

Raw Analysis

	Wt (g)	Mois%	Ash%	VM%	F.C.%	S%	CV (kcal/kg)	Cl %	RD	ARD
Raw Coal	29840	5.73	29.18	28.57	36.52	0.21	4659	0.01	1.58	1.53

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager

ALS LABORATORY GROUP – COAL DIVISION

RICHMOND BC CANADA

11191 Coppersmith Place, Richmond BC V7A 5H1 Canada

Tel: +1 604 241 3166 Fax: +1 604 241 3126 Email: adrian.reifenstein@alsglobal.com



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WORKORDER: RC12020427

Hole: RT-11-672C  
Seam: Arbour  
Diameter: 63.5mm  
Depth: 32.5m TO 42.0m  
Plies: A,B,C,D1,D2

SIZING AFTER 20 DROPS

Size (mm)	Weight (g)	Weight %
+50	2717	9.1
-50	27123	90.9

We certify the analysis reported hereon was determined in accordance with the modified procedure for Drop Shatter Testing.

<original signed by>

Brett Warden  
Laboratory Manager



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Seam: Arbour  
Diameter: 63.5mm  
Depth: 32.5m TO 42.0m  
Plies: A,B,C,D1,D2

DRY SIZING

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	5160	17.3	17.3
-31.5+25	2252	7.5	24.8
-25+16	3394	11.4	36.2
-16+8	4452	14.9	51.1
-8+4	3407	11.4	62.6
-4+2	3657	12.3	74.8
-2	7517	25.2	100.0

**ASTM Standard  
of Analysis**

D4749  
(split with RSD)

\*All losses allocated to -2mm fraction

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<original signed by>

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Laboratory Manager