Attachment to WCR.

Appendix 8 of WCR.

Ingleby-1

(W1038)

APPENDIX-8

VITRINITE REFLECTANCE

K.K. No.	Depth (m)	$\bar{R}_{v}$ max	Range	N	Description Including Liptinite (Exinite) Fluorescence
					HEYTESBURY FORMATION
v3682	75 SWC 24	0.21	0.16-0.34	13	Sparse liptodetrinite, yellow to orange, rare phytoplankton, yellow to orange. (Calcareous siltstone. Dom sparse, L>I>V. Liptinite and inertinite sparse, vitrinite rare. Bitumen rare, bright yellow. Oil drops rare, yellow. Mineral fluorescence pervasive, faint green to faint orange. Foram and fossil fragments common. Glauconite rare. Iron oxide abundant. Pyrite common.)
v3681	100 SWC 23	0.23	0.16-0.31	6	Sparse liptodetrinite, yellow to orange, rare phytoplankton, yellow to orange. (Calcareous siltstone. Dom sparse, L>I>V. Liptinite and inertinite sparse, vitrinite rare. Bitumen rare, bright yellow to moderate yellowish green. Oil drops rare, yellow. Mineral fluorescence pervasive, faint green to moderate orange. Foram and fossil fragments abundant. Glauconite rare. Iron oxide common. Pyrite abundant.)
v3680	100 SWC 19	0.30	0.23-0.45	10	Sparse liptodetrinite, yellow to orange, rare phytoplankton, yellow to orange. (Calcareous siltstone. Dom sparse, L>I>V. Liptinite and inertinite sparse, vitrinite rare. Bitumen rare, bright yellow to moderate yellowish green. Oil drops rare, yellow. Mineral fluorescence pervasive, faint green to moderate orange. Foram and fossil fragments major. Glauconite rare. Iron oxide common. Pyrite abundant.)
					WANGERRIP GROUP
v3679	164 SWC 17	0.31	0.23-0.37	19	Rare phytoplankton and liptodetrinite, yellow to orange, rare sporinite, yellow to dull orange. (Partly calcareous siltstone>partly calcareous claystone= sandstone. Dom sparse, V=L>I. Vitrinite and liptinite sparse, inertinite rare. Oil drops rare, yellow. Bitumen rare, bright yellow. Mineral fluorescence pervasive, faint green. Fossil fragments rare. Iron oxide common. Pyrite abundant.)

K.K. No.	Depth (m)	$\bar{R}_v$ max	Range	N	Description Including Liptinite (Exinite) Fluorescence
					EUMERALLA FORMATION
v3678	248 SWC 7	0.34	0.25-0.43	26	Sparse phytoplankton and liptodetrinite, yellow to orange, rare cutinite and sporinite, orange. (Partly calcareous claystone>partly calcareous siltstone. Dom common, L>I>V. Liptinite common, inertinite and vitrinite sparse. Bitumen rare, brown. Mineral fluorescence pervasive, moderate green to moderate greenish yellow. Fossil fragments rare. Iron oxide abundant. Pyrite common.)
v3677	313 SWC 3	0.26	0.21-0.36	26	Abundant sporinite, yellow to orange, common cutinite and liptodetrinite, yellow to orange, sparse phytoplankton, yellow to orange, rare resinite, yellow, rare suberinite, orange to dull orange. (Partly calcareous siltstone>partly calcareous claystone. Dom major, L>>V=I. Liptinite major, vitrinite and inertinite common. Bitumen rare, orange to dull orange. Mineral fluorescence pervasive, faint green. Iron oxide abundant. Pyrite common.)
					TOTAL DEPTH 331.2m

VITRINITE REFLECTANCE WORKSHEET

GAS & FUEL

WELL NAME: INGLEBY-1 SAMPLE NO. V3682 DEPTH 7541 TYPE SWC 24

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18				1.54				1.90			
.11				.47				.83				1.19				1.55				1.91			
.12				.48				.84				1.20				1.56				1.92			
.13				.49				.85				1.21				1.57				1.93			
.14				.50				.86				1.22				1.58				1.94			
.15				.51				.87				1.23				1.59				1.95			
.16	2			.52				.88				1.24				1.60				1.96			
.17	3			.53				.89				1.25				1.61				1.97			
.18	3			.54				.90				1.26				1.62				1.98			
.19				.55				.91				1.27				1.63				1.99			
.20	1			.56				.92				1.28				1.64				2.00			
.21			FGV	.57				.93				1.29				1.65				2.01			
.22				.58				.94				1.30				1.66							
.23				.59				.95				1.31				1.67							
.24	1			.60				.96				1.32				1.68							
.25				.61				.97				1.33				1.69							
.26	1			.62				.98				1.34				1.70							
.27				.63				.99				1.35				1.71							
.28				.64				1.00				1.36				1.72							
.29				.65				1.01				1.37				1.73							
.30				.66				1.02				1.38				1.74							
.31				.67				1.03				1.39				1.75							
.32				.68				1.04				1.40				1.76							
.33				.69				1.05				1.41				1.77							
.34	2			.70				1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36				.72				1.08				1.44				1.80							
.37				.73				1.09				1.45				1.81							
.38				.74				1.10				1.46				1.82							
.39				.75				1.11				1.47				1.83							
.40				.76				1.12				1.48				1.84							
.41				.77				1.13				1.49				1.85							
.42				.78				1.14				1.50				1.86							
.43				.79				1.15				1.51				1.87							
.44				.80				1.16				1.52				1.88							
.45				.81				1.17				1.53				1.89							

Organic matter Comp. (%)

Exinite	Alginite
0.2	—
Vitrinite	**Inertinite**
<0.1	0.1

Keiraville Konsultants Pty Ltd.

VITRINITE REFLECTANCE WORKSHEET

WELL NAME: GAS & FUEL / INGLEBY SAMPLE NO: V3681 DEPTH: 160m TYPE: SHALE 23

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18				1.54				1.90			
.11				.47				.83				1.19				1.55				1.91			
.12				.48				.84				1.20				1.56				1.92			
.13				.49				.85				1.21				1.57				1.93			
.14				.50				.86				1.22				1.58				1.94			
.15				.51				.87				1.23				1.59				1.95			
.16	1	11		.52				.88				1.24				1.60				1.96			
.17				.53				.89				1.25				1.61				1.97			
.18				.54				.90				1.26				1.62				1.98			
.19	1			.55				.91				1.27				1.63				1.99			
.20	1			.56				.92				1.28				1.64				2.00			
.21				.57				.93				1.29				1.65				2.01			
.22				.58				.94				1.30				1.66							
.23			FGV	.59				.95				1.31				1.67							
.24	1			.60				.96				1.32				1.68							
.25				.61				.97				1.33				1.69							
.26				.62				.98				1.34				1.70							
.27				.63				.99				1.35				1.71							
.28				.64				1.00				1.36				1.72							
.29	1			.65				1.01				1.37				1.73							
.30				.66				1.02				1.38				1.74							
.31	1	V		.67				1.03				1.39				1.75							
.32				.68				1.04				1.40				1.76							
.33				.69				1.05				1.41				1.77							
.34				.70				1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36				.72				1.08				1.44				1.80							
.37				.73				1.09				1.45				1.81							
.38				.74				1.10				1.46				1.82							
.39				.75				1.11				1.47				1.83							
.40				.76				1.12				1.48				1.84							
.41				.77				1.13				1.49				1.85							
.42				.78				1.14				1.50				1.86							
.43				.79				1.15				1.51				1.87							
.44				.80				1.16				1.52				1.88							
.45				.81				1.17				1.53				1.89							

Organic matter Comp. (%)	
Exinite	Alginite
0.2	—
Vitrinite	Inertinite
<0.1	0.1

Kelraville Konsultants Pty Ltd.

VITRINITE REFLECTANCE WORKSHEET

GAS & FUEL

WELL NAME: Killarney-1 SAMPLE NO.: V3680 DEPTH: 152 m TYPE: SWC 19

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18				1.54				1.90			
.11				.47				.83				1.19				1.55				1.91			
.12				.48				.84				1.20				1.56				1.92			
.13				.49				.85				1.21				1.57				1.93			
.14				.50				.86				1.22				1.58				1.94			
.15				.51				.87				1.23				1.59				1.95			
.16				.52				.88				1.24				1.60				1.96			
.17				.53				.89				1.25				1.61				1.97			
.18				.54				.90				1.26				1.62				1.98			
.19				.55				.91				1.27				1.63				1.99			
.20				.56				.92				1.28				1.64				2.00			
.21				.57				.93				1.29				1.65				2.01			
.22				.58				.94				1.30				1.66							
.23	2	↑		.59				.95				1.31				1.67							
.24	2			.60				.96				1.32				1.68							
.25	1			.61				.97				1.33				1.69							
.26				.62				.98				1.34				1.70							
.27				.63				.99				1.35				1.71							
.28				.64				1.00				1.36				1.72							
.29	1			.65				1.01				1.37				1.73							
.30			FGV	.66				1.02				1.38				1.74							
.31				.67				1.03				1.39				1.75							
.32	1			.68				1.04				1.40				1.76							
.33				.69				1.05				1.41				1.77							
.34				.70				1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36				.72				1.08				1.44				1.80							
.37	1			.73				1.09				1.45				1.81							
.38				.74				1.10				1.46				1.82							
.39				.75				1.11				1.47				1.83							
.40	1			.76				1.12				1.48				1.84							
.41				.77				1.13				1.49				1.85							
.42				.78				1.14				1.50				1.86							
.43				.79				1.15				1.51				1.87							
.44				.80				1.16				1.52				1.88							
.45	1	↓		.81				1.17				1.53				1.89							

Organic matter Comp. (%)

Exinite	Alginite
0.2	—
Vitrinite	**Inertinite**
<0.1	0.1

Keiraville Konsultants Pty Ltd.

GAS & FUEL

VITRINITE REFLECTANCE WORKSHEET

WELL NAME: INGLESBY-1 SAMPLE NO. V3679 DEPTH 164 m TYPE SWC 17

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18				1.54				1.90			
.11				.47				.83				1.19				1.55				1.91			
.12				.48				.84				1.20				1.56				1.92			
.13				.49				.85				1.21				1.57				1.93			
.14				.50				.86				1.22				1.58				1.94			
.15				.51				.87				1.23				1.59				1.95			
.16				.52				.88				1.24				1.60				1.96			
.17				.53				.89				1.25				1.61				1.97			
.18				.54				.90				1.26				1.62				1.98			
.19				.55				.91				1.27				1.63				1.99			
.20				.56				.92				1.28				1.64				2.00			
.21				.57				.93				1.29				1.65				2.01			
.22				.58				.94				1.30				1.66							
.23	1	↑		.59				.95				1.31				1.67							
.24				.60				.96				1.32				1.68							
.25	1			.61				.97				1.33				1.69							
.26				.62				.98				1.34				1.70							
.27	1			.63				.99				1.35				1.71							
.28	3			.64				1.00				1.36				1.72							
.29	1			.65				1.01				1.37				1.73							
.30	2			.66				1.02				1.38				1.74							
.31	2		FGV	.67				1.03				1.39				1.75							
.32	2			.68				1.04				1.40				1.76							
.33	1			.69				1.05				1.41				1.77							
.34	1			.70				1.06				1.42				1.78							
.35	2			.71				1.07				1.43				1.79							
.36				.72				1.08				1.44				1.80							
.37	2	↓		.73				1.09				1.45				1.81							
.38				.74				1.10				1.46				1.82							
.39				.75				1.11				1.47				1.83							
.40				.76				1.12				1.48				1.84							
.41				.77				1.13				1.49				1.85							
.42				.78				1.14				1.50				1.86							
.43				.79				1.15				1.51				1.87							
.44				.80				1.16				1.52				1.88							
.45				.81				1.17				1.53				1.89							

Organic matter Comp. (%)

Exinite	Alginite
0.1	—
Vitrinite	**Inertinite**
0.1	<0.1

Keiraville Konsultants Pty Ltd.

CONFIDENTIAL

VITRINITE REFLECTANCE WORKSHEET

WELL NAME: INGLEBY-1 SAMPLE NO: V.3678 DEPTH: 2418 m TYPE: SWC 7

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18				1.54				1.90			
.11				.47				.83				1.19				1.55				1.91			
.12				.48				.84				1.20				1.56				1.92			
.13				.49				.85				1.21				1.57				1.93			
.14				.50				.86				1.22				1.58				1.94			
.15				.51				.87				1.23				1.59				1.95			
.16				.52				.88				1.24				1.60				1.96			
.17				.53				.89				1.25				1.61				1.97			
.18				.54				.90				1.26				1.62				1.98			
.19				.55				.91				1.27				1.63				1.99			
.20				.56				.92				1.28				1.64				2.00			
.21				.57				.93				1.29				1.65				2.01			
.22				.58				.94				1.30				1.66							
.23				.59				.95				1.31				1.67							
.24				.60				.96				1.32				1.68							
.25	1			.61				.97				1.33				1.69							
.26	1			.62				.98				1.34				1.70							
.27	1			.63				.99				1.35				1.71							
.28	3			.64				1.00				1.36				1.72							
.29	2			.65				1.01				1.37				1.73							
.30	1			.66				1.02				1.38				1.74							
.31	3			.67				1.03				1.39				1.75							
.32				.68				1.04				1.40				1.76							
.33				.69				1.05				1.41				1.77							
.34	1		FGV	.70				1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36	2			.72				1.08				1.44				1.80							
.37				.73				1.09				1.45				1.81							
.38	4			.74				1.10				1.46				1.82							
.39	1			.75				1.11				1.47				1.83							
.40				.76				1.12				1.48				1.84							
.41	1			.77				1.13				1.49				1.85							
.42	2			.78				1.14				1.50				1.86							
.43	3			.79				1.15				1.51				1.87							
.44				.80				1.16				1.52				1.88							
.45				.81				1.17				1.53				1.89							

Organic matter Comp.(%)	
Exinite	Alginite
0.6	—
Vitrinite	Inertinite
0.1	0.4

Kelraville Konsultants Pty Ltd.

VITRINITE REFLECTANCE WORKSHEET

WELL NAME. [illegible] 1 SAMPLE NO. V3677 DEPTH. 313 M TYPE. Sec 3

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18				1.54				1.90			
.11				.47				.83				1.19				1.55				1.91			
.12				.48				.84				1.20				1.56				1.92			
.13				.49				.85				1.21				1.57				1.93			
.14				.50				.86				1.22				1.58				1.94			
.15				.51				.87				1.23				1.59				1.95			
.16				.52				.88				1.24				1.60				1.96			
.17				.53				.89				1.25				1.61				1.97			
.18				.54				.90				1.26				1.62				1.98			
.19				.55				.91				1.27				1.63				1.99			
.20				.56				.92				1.28				1.64				2.00			
.21	2	↑		.57				.93				1.29				1.65				2.01			
.22	3			.58				.94				1.30				1.66							
.23	4			.59				.95				1.31				1.67							
.24	3			.60				.96				1.32				1.68							
.25	1			.61				.97				1.33				1.69							
.26			FGV	.62				.98				1.34				1.70							
.27	3			.63				.99				1.35				1.71							
.28	2			.64				1.00				1.36				1.72							
.29	1			.65				1.01				1.37				1.73							
.30	3			.66				1.02				1.38				1.74							
.31	2			.67				1.03				1.39				1.75							
.32	1			.68				1.04				1.40				1.76							
.33				.69				1.05				1.41				1.77							
.34				.70				1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36	1	↓		.72				1.08				1.44				1.80							
.37				.73				1.09				1.45				1.81							
.38				.74				1.10				1.46				1.82							
.39				.75				1.11				1.47				1.83							
.40				.76				1.12				1.48				1.84							
.41				.77				1.13				1.49				1.85							
.42				.78				1.14				1.50				1.86							
.43				.79				1.15				1.51				1.87							
.44				.80				1.16				1.52				1.88							
.45				.81				1.17				1.53				1.89							

Organic matter Comp.(%)

Exinite	Alginite
10.0	—
Vitrinite	**Inertinite**
1.0	1.0

Keiraville Konsultants Pty Ltd.