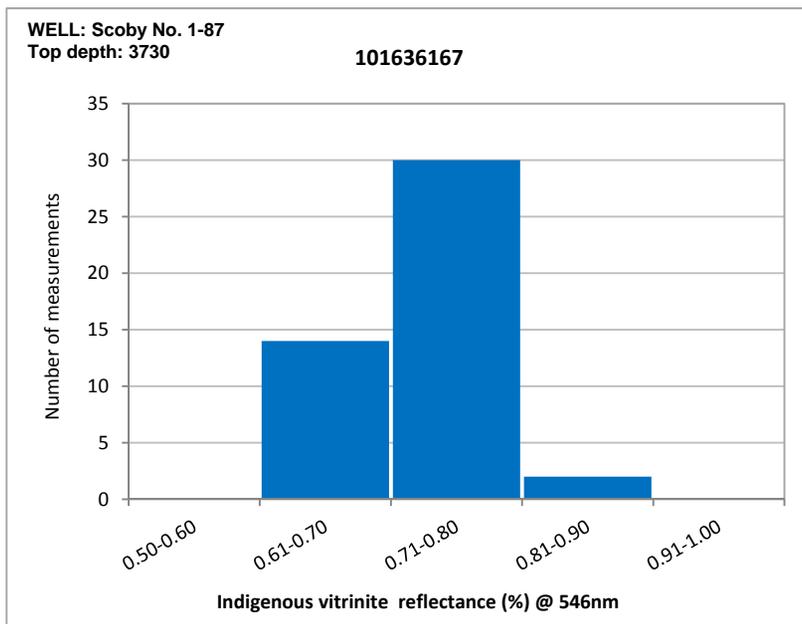


**Project: HH-73210**  
**Well: Scoby No. 1-87**



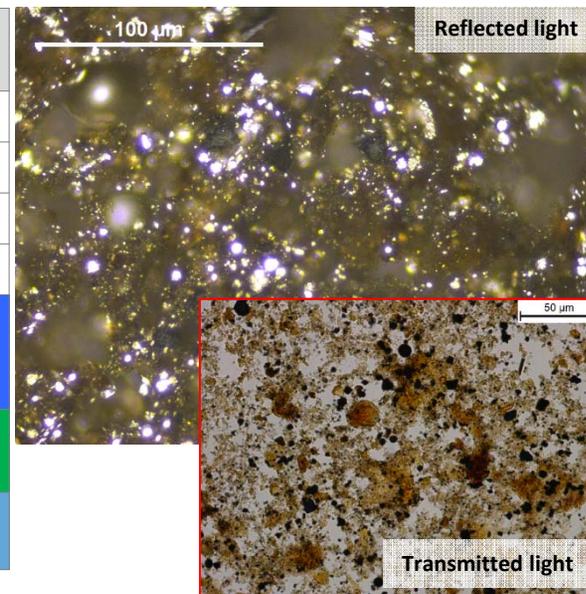
**Ordered  $R_{o,random}$  values of vitrinite**

0.62	0.62	0.62	0.65	0.66	0.66	0.67	0.67	0.68	0.68
0.68	0.69	0.70	0.70	0.71	0.71	0.71	0.71	0.72	0.72
0.72	0.72	0.73	0.73	0.73	0.74	0.74	0.74	0.74	0.75
0.75	0.75	0.76	0.76	0.76	0.77	0.78	0.78	0.78	0.78
0.78	0.79	0.80	0.80	0.81	0.84				

**Visual kerogen analysis (mineral matter free basis)**

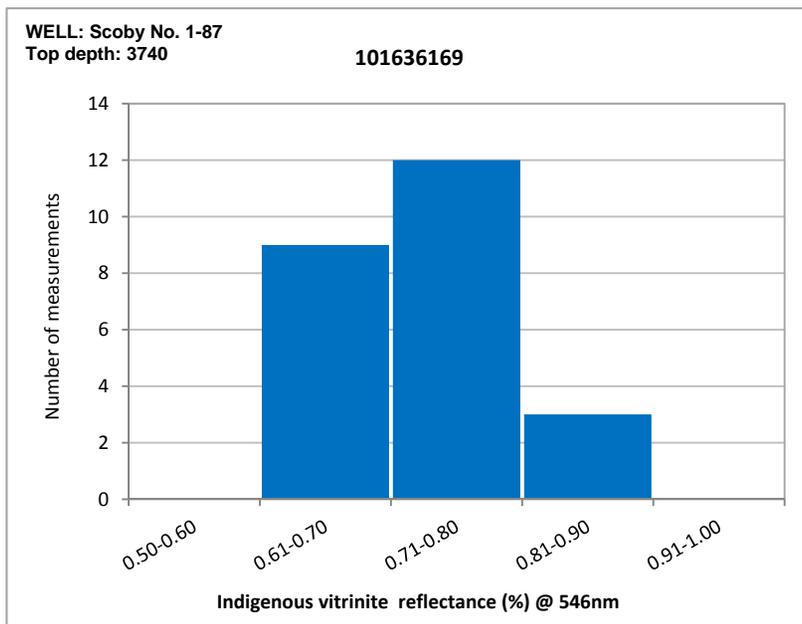
Client ID	Liptinite (%)				Vitrinite (%)	Inertinite %	Solid Bitumen (%)	Liptinite Fluores. (%)	Oil prone (%)	Gas prone (%)	Pollen/Spores	TAI (Staplin 1969)
	Alginite (%)	AOM (%)		Other Liptinite (%)								
		Fluorescent	Non Fluorescent									
373D	trace	20	45	30	3	2	trace	50	50	48	Common	2.5

<b>101636167</b>	<b>Depth = 3730-3740</b>
Minimum $R_o$ (%)	0.62
Maximum $R_o$ (%)	0.84
Number of points	46
Standard deviation	0.052
<b>Mean <math>R_o</math> value of indigenous vitrinite (%)</b>	<b>0.73</b>
<b>Mean <math>R_o</math> value of solid bitumen (%)</b>	<b>0.51</b>
<b>VRE value (%) Jacob, 1989</b>	<b>0.71</b>



**Comments:** Amorphous organic matter (amorphinite, AOM) is the dominant organic matter type. It occurs as brownish fluorescent to non-fluorescent material. There is rare orange fluorescent liptodetrinite and alginite. Vitrinite is rare and occurs as irregular particles. Solid bitumen is present as speckles and irregular particles. Based on 46 measurements, the average  $R_o$  of vitrinite is 0.73%. Reflectance of solid bitumen was also measured and based on 26 measurements, the average  $R_o$  of solid bitumen is 0.51%. Using Jacob's equation (1989), this translates into vitrinite reflectance equivalent of 0.71%. In transmitted light, structureless organic matter is yellowish brown, suggesting TAI 2.5. Pollen and spores are golden brown, assessing vitrinite reflectance at ~0.75%. These reflectance values and color of palynomorphs jointly indicate that the organic matter is mid mature and within the oil generation zone.

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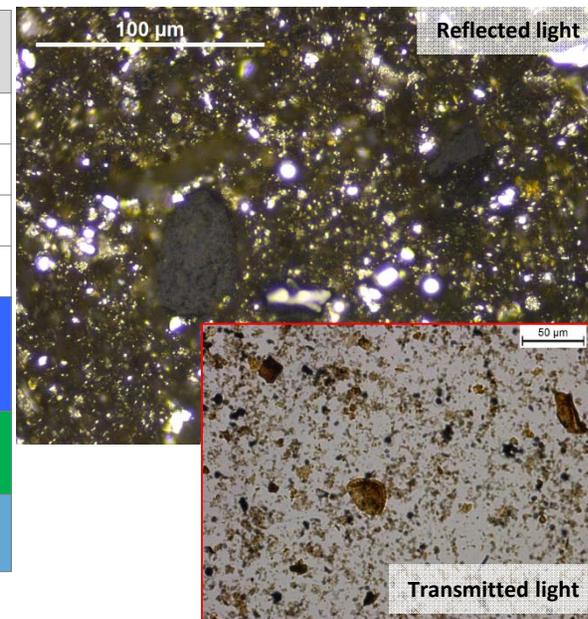
**Ordered  $R_{o,random}$  values of vitrinite**

0.62 0.62 0.63 0.64 0.65 0.68 0.69 0.69 0.70 0.71  
 0.71 0.72 0.72 0.73 0.75 0.75 0.76 0.77 0.77 0.79  
 0.80 0.81 0.82 0.83

**Visual kerogen analysis (mineral matter free basis)**

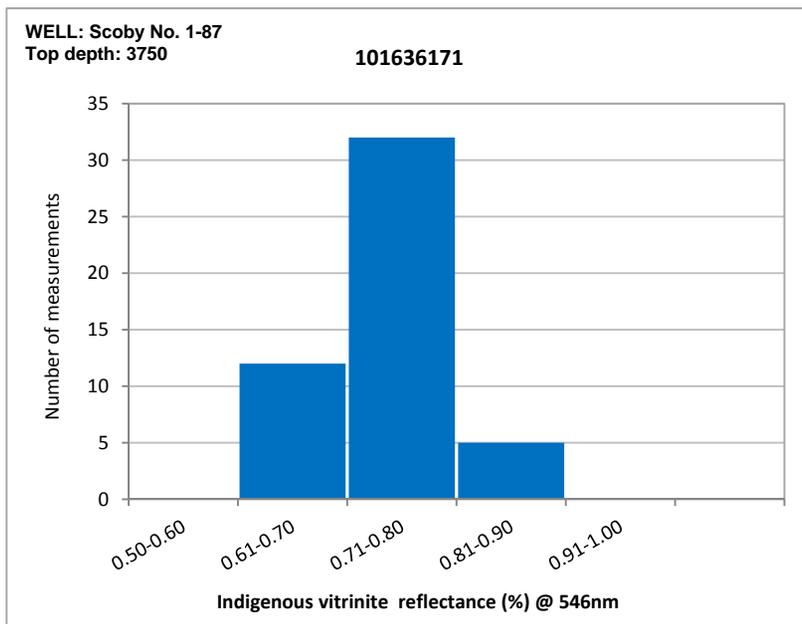
Client ID	Liptinite (%)				Vitrinite (%)	Inertinite %	Solid Bitumen (%)	Liptinite Fluores. (%)	Oil prone (%)	Gas prone (%)	Pollen/ Spores	TAI (Staplin 1969)
	Alginite (%)	AOM (%)		Other Liptinite (%)								
		Fluorescent	Non Fluorescent									
374D	trace	10	70	10	3	2	5	20	20	73	Rare	2.5

101636169	Depth = 3740-3750
Minimum $R_o$ (%)	0.62
Maximum $R_o$ (%)	0.83
Number of points	24
Standard deviation	0.064
Mean $R_o$ value of indigenous vitrinite (%)	0.72
Mean $R_o$ value of solid bitumen (%)	0.49
VRE value (%) Jacob, 1989	0.70



**Comments:** Amorphous organic matter (amorphinite, AOM) is the dominant organic matter type. It occurs as brownish fluorescent to non-fluorescent material. There is rare orange yellow to brownish fluorescent liptodetrinite. Vitrinite is rare and occurs as irregular particles. Solid bitumen is present as speckles and irregular particles. Based on 24 measurements, the average  $R_o$  of vitrinite is 0.69%. Reflectance of solid bitumen was also measured and based on 25 measurements, the average  $R_o$  of solid bitumen is 0.49%. Using Jacob's equation (1989), this translates into vitrinite reflectance equivalent of 0.70%. In transmitted light, structureless organic matter is yellowish brown, suggesting TAI 2.5. Pollen and spores are amber brown, assessing vitrinite reflectance at ~0.72%. These reflectance values and color of palynomorphs jointly indicate that the organic matter is mid mature and within the oil generation zone.

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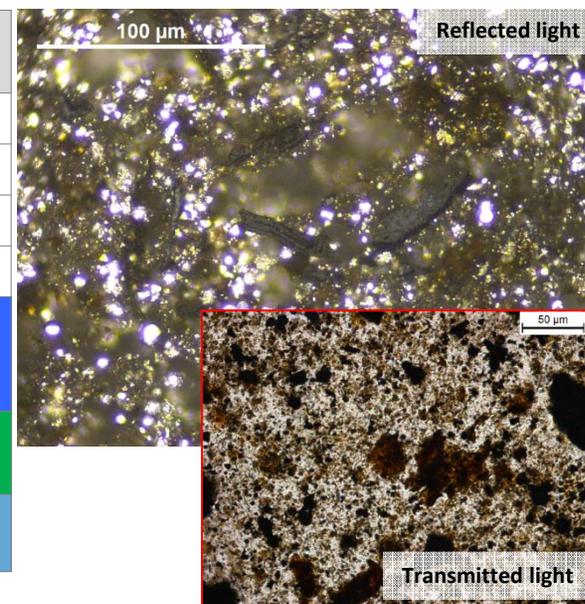
**Ordered  $R_{o,random}$  values of vitrinite**

0.63	0.64	0.66	0.66	0.68	0.68	0.69	0.69	0.69	0.70
0.70	0.70	0.71	0.72	0.72	0.72	0.72	0.72	0.72	0.73
0.74	0.74	0.74	0.74	0.74	0.74	0.75	0.75	0.75	0.75
0.75	0.75	0.76	0.76	0.76	0.76	0.77	0.78	0.78	0.78
0.79	0.79	0.79	0.79	0.81	0.81	0.83	0.84	0.86	

**Visual kerogen analysis (mineral matter free basis)**

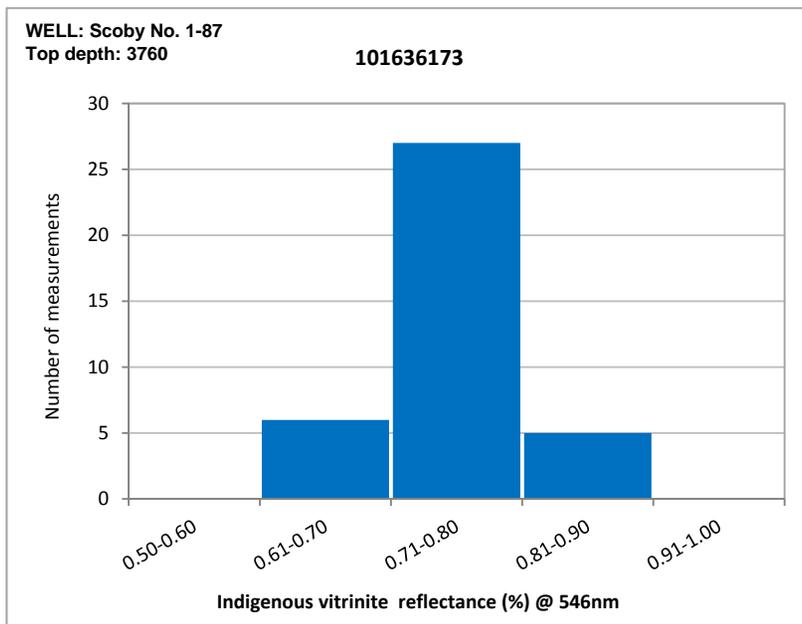
Client ID	Liptinite (%)				Vitrinite (%)	Inertinite %	Solid Bitumen (%)	Liptinite Fluores. (%)	Oil prone (%)	Gas prone (%)	Pollen/Spores	TAI (Staplin 1969)
	Alginite (%)	AOM (%)		Other Liptinite (%)								
		Fluorescent	Non Fluorescent									
375D	trace	5	75	5	7	3	5	10	10	82	Rare	2.5

<b>101636171</b>	<b>Depth = 3750-3760</b>
Minimum $R_o$ (%)	0.63
Maximum $R_o$ (%)	0.86
Number of points	49
Standard deviation	0.050
<b>Mean <math>R_o</math> value of indigenous vitrinite (%)</b>	<b>0.74</b>
<b>Mean <math>R_o</math> value of solid bitumen (%)</b>	<b>0.52</b>
<b>VRE value (%) Jacob, 1989</b>	<b>0.72</b>



**Comments:** Amorphous organic matter (amorphinite, AOM) is the dominant organic matter type. It occurs as brownish fluorescent to non-fluorescent material. There is rare orange yellow to brownish fluorescent liptodetrinite. Vitrinite is rare and occurs as irregular particles. Solid bitumen is present as speckles and irregular particles. Based on 49 measurements, the average  $R_o$  of vitrinite is 0.74%. Reflectance of solid bitumen was also measured and based on 15 measurements, the average  $R_o$  of solid bitumen is 0.52%. Using Jacob's equation (1989), this translates into vitrinite reflectance equivalent of 0.72%. In transmitted light, structureless organic matter is yellowish brown, suggesting TAI 2.5. Pollen and spores are golden brown, assessing vitrinite reflectance at ~0.72%. These reflectance values suggest that the organic matter is mid mature and within the oil generation zone.

**Project: HH-73210**  
**Well: Scoby No. 1-87**



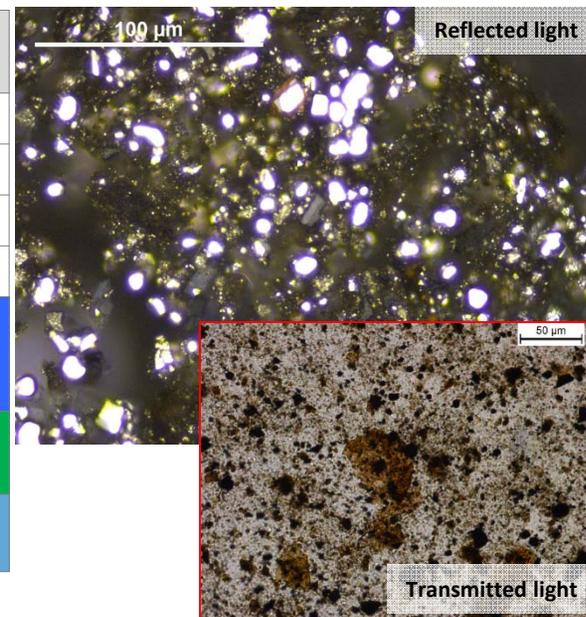
**Ordered  $R_{o,random}$  values of vitrinite**

0.63	0.63	0.64	0.67	0.68	0.69	0.71	0.72	0.72	0.73
0.73	0.73	0.73	0.74	0.74	0.74	0.75	0.75	0.75	0.75
0.75	0.75	0.75	0.77	0.77	0.78	0.78	0.78	0.78	0.78
0.78	0.80	0.80	0.81	0.82	0.82	0.83	0.84		

**Visual kerogen analysis (mineral matter free basis)**

Client ID	Liptinite (%)				Vitrinite (%)	Inertinite %	Solid Bitumen (%)	Liptinite Fluores. (%)	Oil prone (%)	Gas prone (%)	Pollen/Spores	TAI (Staplin 1969)
	Alginite (%)	AOM (%)		Other Liptinite (%)								
		Fluorescent	Non Fluorescent									
376D	trace	5	80	5	6	2	2	10	10	86	Rare	2.5

<b>101636173</b>	<b>Depth = 3760-3770</b>
Minimum $R_o$ (%)	0.63
Maximum $R_o$ (%)	0.84
Number of points	38
Standard deviation	0.052
<b>Mean <math>R_o</math> value of indigenous vitrinite (%)</b>	<b>0.75</b>
<b>Mean <math>R_o</math> value of solid bitumen (%)</b>	<b>0.54</b>
<b>VRE value (%) Jacob, 1989</b>	<b>0.73</b>



**Comments:** Amorphous organic matter (amorphinite, AOM) is the dominant organic matter type. It occurs as brownish fluorescent to non-fluorescent material. There is rare orange yellow to brownish fluorescent liptodetrinite. Vitrinite is rare and occurs as irregular particles. Solid bitumen is present as speckles and irregular particles. Based on 38 measurements, the average  $R_o$  of vitrinite is 0.75%. Reflectance of solid bitumen was also measured and based on 27 measurements, the average  $R_o$  of solid bitumen is 0.54%. Using Jacob's equation (1989), this translates into vitrinite reflectance equivalent of 0.73%. In transmitted light, structureless organic matter is yellowish brown, suggesting TAI 2.5. Pollen and spores are amber brown, assessing vitrinite reflectance at ~0.75%. These reflectance values and color of palynomorphs jointly indicate that the organic matter is amid mature and within the oil generation zone.