

Table 9 : Thermal Maturity Data for well NOCS 33/9-16

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
1090.00	cut Sh/Clst: brn gy	0.31	20	0.03	3	2.5-3.0	412	0016-4L
1170.00	cut Sh/Clst: brn gy	0.30	20	0.04	3	2.5	413	0018-1L
1290.00	cut Sh/Clst: ol gy	0.40	20	0.04	3-4	3.0-3.5	384	0021-1L
1370.00	cut Sh/Clst: ol gy	0.39	20	0.05	3-4	-	408	0023-1L
1490.00	cut Sh/Clst: ol gy	0.41	6	0.06	3-4	-	400	0026-1L
1570.00	cut Sh/Clst: ol gy	0.43	3	0.04	3-4	-	406	0028-1L
1690.00	cut Sh/Clst: brn gy to ol gy to drk y brn	0.40	11	0.03	3+4	3.5-4.0	423	0031-1L
1770.00	cut Sh/Clst: brn gy to m brn gy to m lt gy	0.45	3	0.02	0	-	374	0033-1L
1890.00	cut Sh/Clst: brn gy to m brn gy to ol gy	0.38	9	0.02	4	-	426	0036-1L
2090.00	cut Sh/Clst: m gy	0.41	20	0.04	4	4.5	421	0041-2L
2170.00	cut Sh/Clst: m gy to drk gy	0.40	6	0.04	3+4	-	416	0065-1L
2290.00	cut Sh/Clst: ol gy to m gy	0.39	2	0.04	3-4	-	412	0068-1L

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
2380.00	swc Sh/Clst: ol gy to drk gy	0.41	13	0.05	4+5	5.0	432	0045-1L
2425.00	swc Sh/Clst: drk gy	0.44	20	0.04	4	-	420	0046-1L
2520.00	swc Sh/Clst: drk gy	0.42	3	0.05	4-5	5.5	384	0047-1L
2605.00	swc Sh/Clst: drk gy	0.49	11	0.05	5	5.5-6.0	398	0050-1L
2664.00	swc Sh/Clst: brn blk	-	-	-	-	6.0(??)	426	0053-1L
2668.00	swc Sh/Clst: brn blk	0.51	15	0.08	4+5	6.0(?)	435	0054-1L
2757.50	swc Sh/Clst: brn blk	0.54	20	0.06	5	5.5-6.0	422	0058-1L
2765.00	swc Sh/Clst: brn blk	0.54	20	0.06	4+5	5.5-6.0	440	0059-1L
2778.00	cut Sh/Clst: brn blk	-	-	-	-	6.0	437	0112-6L
2800.00	swc Ca : dsk y brn	-	-	-	-	6.0(?)	433	0060-1L
2805.00	cut Sh/Clst: drk y brn to brn blk	0.50	20	0.06	4+5	-	435	0115-2L
2814.00	cut Sh/Clst: drk y brn to brn blk	-	-	-	-	5.5	435	0116-1L
2865.00	swc Sh/Clst: dsk y brn	0.53	20	0.07	4+5	5.5-6.0	434	0063-1L
2870.00	cut Coal : blk	0.54	20	0.06	5	6.0(?)	432	0123-5L

Table 10: Visual Kerogen Composition Data for well NOCS 33/9-16

Depth unit of measure: m

Depth	Typ	Lithology	L I P T %	A m P r L t	L i P D e o l	S p / P i o l	C u t e l l n	R e g i o n e l	D i n o r f i t L	A B i t L	I N E R T %	F u s i n	S e m F u e n s	I n t e r n o I	M i c r o I	S c l e t I	V I T R %	T e l l i n	C o l l i n t	V o l u m e %	A m B i t V	Sample
1090.00	cut	Sh/Clst: brn gy	80	**	**	*		*	*		5	*	**				15	*	**			0016-4L
1170.00	cut	Sh/Clst: brn gy	90	**	**	*	*	*	*		5		*				5		*			0018-1L
1290.00	cut	Sh/Clst: ol gy	90	**	**	*		*			5		*				5		*			0021-1L
1690.00	cut	Sh/Clst: brn gy to ol gy to drk y brn	95	**	**	*		*	*		TR		*				5		*			0031-1L
2090.00	cut	Sh/Clst: m gy	65	**	**	*		*			30	*	**				5	*	**			0041-2L
2380.00	swc	Sh/Clst: ol gy to drk gy	40		**	*		*	*		40		*				20	*	**	*		0045-1L
2520.00	swc	Sh/Clst: drk gy	45		**	*		*	*		35		*				20		*			0047-1L
2605.00	swc	Sh/Clst: drk gy	40		**	*		*	*		45	*	**				15	*	**			0050-1L
2664.00	swc	Sh/Clst: brn blk	70	**	**	*		*	*		10		*				20		*			0053-1L
2668.00	swc	Sh/Clst: brn blk	35	*	**	*		*			55	*	*	**			10	*	**			0054-1L
2757.50	swc	Sh/Clst: brn blk	55	**	*	*		**	*		35	*	**	**			10		*			0058-1L
2765.00	swc	Sh/Clst: brn blk	25	*	**	*		*	*		45	*	**	**			30	*	**			0059-1L

Table 10: Visual Kerogen Composition Data for well NOCS 33/9-16

Depth unit of measure: m

Depth	Typ	Lithology	L I P T %	A m o r L t %	L i p D e l %	S p / P o l l %	C u t P i c l l %	R e s i n e %	D i n o r f i t L %	A B i t L %	I N E R T %	F u s i n %	S e m F u s t %	I n D r e n %	M i c r o I %	S c l e r I %	V I T R %	T e l l i n %	C o l l i n %	V i t r i n e %	A m o r b i t %	Sample
2778.00	cut	Sh/Clst: brn blk	70	*	**	*		*	?		20	*	**				10	*	**			0112-6L
2800.00	swc	Ca : dsk y brn	85	**	**	*		*	?		10		*				5		*			0060-1L
2814.00	cut	Sh/Clst: drk y brn to brn blk	50	**		*		**	*		40	*	**				10	*	**			0116-1L
2865.00	swc	Sh/Clst: dsk y brn	55	*		**	*	*			15	*	*				30	*	*	*		0063-1L
2870.00	cut	Coal : blk	TR	*		*	*	*			15		*				85	*	*		*	0123-5L

Table 11A: Tabulation of carbon isotope data for EOM/EOM - fractions for well NOCS 33/9-16

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
1170.00	cut	Sh/Clst	-	-27.62	-27.87	-27.32	-26.84	-	0018-1
2409.00	com	Sh/Clst	-	-26.74	-25.90	-27.17	-26.42	-	0149-0
2670.00	com	Sh/Clst	-	-26.52	-27.36	-27.83	-26.76	-	0154-0
2681.00	ccp	S/Sst	-28.87 -28.77	-28.40	-27.87	-28.02	-27.66	-	0124-1
2684.00	ccp	S/Sst	-28.75 -28.64	-28.44	-27.54	-28.18	-27.74	-	0127-1
2731.00	ccp	Sltst	-	-27.44	-27.56	-28.06	-27.21	-	0144-1
2736.00	ccp	Sh/Clst	-30.78	-31.74	-25.84	-30.71	-29.13	-	0146-1
2778.00	com	Sh/Clst	-25.77	-27.40	-26.25	-25.96	-24.88	-	0151-0
2800.00	swc	Ca	-	-27.28	-25.98	-26.88	-25.82	-	0060-1
2841.00	com	S/Sst	-	-27.59	-25.51	-25.39	-24.66	-	0152-0
2870.00	cut	Coal	-25.80	-26.52	-26.03	-26.01	-25.59	-	0123-5

Table 11B: Tabulation of cv values from carbon isotope data for well NOCS 33/9-16

Depth unit of measure: m

<u>Depth</u>	<u>Typ</u>	<u>Lithology</u>	<u>Saturated</u>	<u>Aromatic</u>	<u>cv value</u>	<u>Sample</u>
1170.00	cut	Sh/Clst	-27.62	-27.87	-3.64	0018-1
2409.00	com	Sh/Clst	-26.74	-25.90	-1.50	0149-0
2670.00	com	Sh/Clst	-26.52	-27.36	-5.29	0154-0
2681.00	ccp	S/Sst	-28.40	-27.87	-1.67	0124-1
2684.00	ccp	S/Sst	-28.44	-27.54	-0.84	0127-1
2731.00	ccp	Sltst	-27.44	-27.56	-3.41	0144-1
2736.00	ccp	Sh/Clst	-31.74	-25.84	11.29	0146-1
2778.00	com	Sh/Clst	-27.40	-26.25	-0.60	0151-0
2800.00	swc	Ca	-27.28	-25.98	-0.31	0060-1
2841.00	com	S/Sst	-27.59	-25.51	1.52	0152-0
2870.00	cut	Coal	-26.52	-26.03	-2.34	0123-5

Table 12A: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 33/9-16

Depth unit of measure: m

Depth	Lithology	B/A	B/B+A	B		C/E	C/C+E	X/E	Z/E	Z/C	Z/Z+E	Q/E	E/E+F	C+D		J1		Sample
				B+E+F										C+D+E+F	D+F/C+E	J1+J2%		
1170.00	Sh/Clst	5.87	0.85	0.14		1.19	0.54	0.08	*2.05	*1.72	*0.67	0.11	0.58	0.58	0.88	26.53		0018-1
2409.00	bulk	3.29	0.77	0.18		0.49	0.33	0.05	0.08	0.15	0.07	0.09	0.80	0.37	0.35	41.26		0149-0
2670.00	bulk	16.19	0.94	0.29		0.57	0.36	0.03	-	-	-	0.04	0.66	0.37	0.52	37.48		0154-0
2681.00	S/Sst	0.91	0.48	0.14		0.44	0.30	0.07	0.17	0.39	0.15	0.14	0.93	0.31	0.09	59.79		0124-1
2684.00	S/Sst	0.91	0.48	0.13		0.42	0.29	0.07	0.17	0.40	0.14	0.11	0.93	0.30	0.09	60.27		0127-1
2731.00	Sltst	1.06	0.51	0.15		0.49	0.33	0.06	0.17	0.35	0.15	0.12	0.91	0.35	0.13	55.12		0144-1
2736.00	Sh/Clst	1.39	0.58	0.17		0.71	0.42	0.03	0.75	1.05	0.43	0.08	0.84	0.44	0.22	42.83		0146-1
2778.00	bulk	13.39	0.93	0.25		0.59	0.37	0.09	0.03	0.04	0.02	0.02	0.63	0.38	0.61	43.08		0151-0
2800.00	Ca	2.80	0.74	0.22		0.68	0.41	0.06	0.06	0.08	0.05	0.15	0.77	0.43	0.35	48.75		0060-1
2841.00	bulk	1.82	0.65	0.24		0.68	0.40	0.05	0.28	0.41	0.22	0.28	0.83	0.41	0.21	50.63		0152-0
2870.00	Coal	26.75	0.96	0.28		0.53	0.34	0.11	0.14	0.27	0.12	0.01	0.64	0.35	0.57	49.27		0123-5

* uncertain measurement due to coeluting peak

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
1170.00	Sh/Clst	0.31	26.71	55.94	1.08	0.70	0.20	0.19	0.39	0.36	0.87	0018-1
2409.00	bulk	0.70	22.48	71.11	1.49	0.85	0.65	0.50	0.55	0.29	1.59	0149-0
2670.00	bulk	0.48	13.34	53.26	1.30	0.81	0.51	0.42	0.36	0.15	0.66	0154-0
2681.00	S/Sst	0.79	49.32	75.81	1.49	0.76	0.50	0.34	0.61	0.97	3.09	0124-1
2684.00	S/Sst	0.79	48.68	76.55	1.46	0.77	0.48	0.32	0.62	0.95	3.18	0127-1
2731.00	Sltst	0.54	24.70	57.24	1.46	0.73	0.36	0.26	0.40	0.33	0.89	0144-1
2736.00	Sh/Clst	0.30	13.99	37.70	1.28	0.68	0.21	0.16	0.23	0.16	0.35	0146-1
2778.00	bulk	0.52	16.66	52.55	1.07	0.77	0.17	0.13	0.36	0.20	0.66	0151-0
2800.00	Ca	0.59	23.13	61.20	1.77	0.77	0.45	0.33	0.44	0.30	1.03	0060-1
2841.00	bulk	0.78	38.31	72.77	1.59	0.78	0.58	0.44	0.57	0.62	2.17	0152-0
2870.00	Coal	0.31	15.94	61.56	0.10	0.83	0.12	0.10	0.44	0.19	0.95	0123-5

Ratio1: $a / a + j$ Ratio2: $q / q + t * 100\%$ Ratio3: $2(r + s) / (q + t + 2(r + s)) * 100\%$ Ratio4: $a + b + c + d / h + k + l + n$ Ratio5: $r + s / r + s + q$ Ratio6: $u + v / u + v + q + r + s + t$ Ratio7: $u + v / u + v + i + m + n + q + r + s + t$ Ratio8: $r + s / q + r + s + t$ Ratio9: q / t Ratio10: $r + s / t$

Schlumberger

GECO-PRAKLA

GEOLAB NOR

Table 12C: Variation in Triaromatic Sterane Distribution for Well Well NOCS 33/9-16

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Ratio3</u>	<u>Ratio4</u>	<u>Ratio5</u>	<u>Sample</u>
1170.00	Sh/Clst	0.54	0.41	0.28	0.31	0.46	0018-1
2409.00	bulk	0.78	0.72	0.41	0.42	0.53	0149-0
2670.00	bulk	0.74	0.66	0.28	0.35	0.32	0154-0
2681.00	S/Sst	0.72	0.67	0.41	0.43	0.50	0124-1
2684.00	S/Sst	0.70	0.67	0.42	0.42	0.50	0127-1
2731.00	sltst	0.63	0.56	0.35	0.38	0.43	0144-1
2736.00	Sh/Clst	0.58	0.45	0.23	0.29	0.32	0146-1
2778.00	bulk	0.47	0.35	0.24	0.26	0.38	0151-0
2800.00	Ca	0.72	0.64	0.38	0.43	0.52	0060-1
2841.00	bulk	0.77	0.68	0.55	0.51	0.72	0152-0
2870.00	Coal	0.60	0.45	0.40	0.36	0.66	0123-5

Ratio1: a1 / a1 + g1

Ratio2: b1 / b1 + g1

Ratio3: a1 + b1 / a1 + b1 + c1 + d1 + e1 + f1 + g1

Ratio4: a1 / a1 + e1 + f1 + g1

Ratio5: a1 / a1 + d1

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Ratio3</u>	<u>Ratio4</u>	<u>Sample</u>
1170.00	Sh/Clst	0.32	0.18	0.18	0.15	0018-1
2409.00	bulk	0.23	0.12	0.15	0.14	0149-0
2670.00	bulk	0.17	0.12	0.11	0.11	0154-0
2681.00	S/Sst	0.41	0.32	0.29	0.26	0124-1
2684.00	S/Sst	0.73	0.57	0.61	0.54	0127-1
2731.00	Slst	0.32	0.18	0.21	0.17	0144-1
2736.00	Sh/Clst	0.16	0.07	0.10	0.07	0146-1
2778.00	bulk	0.30	0.15	0.15	0.10	0151-0
2800.00	Ca	0.32	0.18	0.19	0.15	0060-1
2841.00	bulk	0.41	0.20	0.26	0.20	0152-0
2870.00	Coal	0.39	0.12	0.12	0.09	0123-5

Ratio1: A1 / A1 + E1
 Ratio2: B1 / B1 + E1

Ratio3: A1 / A1 + E1 + G1
 Ratio4: A1+B1 / A1+B1+C1+D1+E1+F1+G1+H1+I1

Table 12E: Aromatisation of Steranes for Well NOCS 33/9-16

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Sample</u>
1170.00	Sh/Clst	0.60	0.67	0018-1
2409.00	bulk	0.91	0.29	0149-0
2670.00	bulk	0.69	0.67	0154-0
2681.00	S/Sst	0.67	0.86	0124-1
2684.00	S/Sst	0.34	1.00	0127-1
2731.00	Sltst	0.80	0.51	0144-1
2736.00	Sh/Clst	0.92	0.16	0146-1
2778.00	bulk	0.90	0.27	0151-0
2800.00	Ca	0.82	0.40	0060-1
2841.00	bulk	0.62	0.71	0152-0
2870.00	Coal	0.84	0.51	0123-5

$$\text{Ratio1: } \frac{\text{C1+D1+E1+F1+G1+H1+I1}}{\text{C1+D1+E1+F1+G1+H1+I1} + \text{c1+d1+e1+f1+g1}}$$

$$\text{Ratio2: } \text{g1} / \text{g1} + \text{I1}$$

Depth unit of measure: m

Depth	Lithology	p	q	r	s	t	a	b	z	c	Sample
		x	d	e	f	g	h	i	j1		
		j2	k1	k2	l1	l2	m1	m2			
1170.00	Sh/Clst	565121.3 132542.0 187228.6	191849.6 2046611.0 44550.5	70273.8 1722614.5 0.0	171740.1 1253117.0 0.0	39723.5 389719.1 0.0	85454.8 *6008663.0 0.0	501705.6 651998.9 0.0	*3523774.0 67623.9	2045118.0	0018-1
2409.00	bulk	313984.0 123552.0 429780.8	216128.0 604653.0 171038.8	122584.6 2324402.0 202400.0	192187.4 595314.2 115664.0	54079.9 705583.0 102935.5	198592.0 1813120.0 107581.3	652977.4 470189.6 86619.1	175664.5 301923.3	1135067.8	0149-0
2670.00	bulk	347584.5 151846.0 884519.5	198496.0 1482860.0 231956.6	80382.0 4853306.0 338211.5	323498.0 2450168.0 121751.1	49993.6 2650274.0 136244.9	187281.5 2652265.0 73931.3	3032673.0 1437944.1 59268.3	0.0 530269.5	2766267.5	0154-0
2681.00	S/Sst	726240.0 279493.0 804293.8	573696.0 191483.5 808700.0	265988.6 4090341.5 574630.5	425504.0 331562.5 538389.4	141688.9 1734114.3 354598.4	760352.0 1229968.0 546381.8	693090.5 213360.0 352722.3	703057.8 1195956.0	1785109.0	0124-1
2684.00	S/Sst	330240.0 170321.0 470407.6	271514.1 105425.3 465896.0	130400.0 2468616.0 307187.8	221824.0 196128.0 288714.7	72134.4 1067336.6 195106.3	440324.8 707820.8 277648.6	400816.0 123256.0 186790.9	412364.9 713649.0	1027920.5	0127-1

* coeluting peak



Table 12F: Raw GCMS triterpane data (peak height) SIR for Well NOCS 33/9-16

Depth unit of measure: m

Depth	Lithology	p	q	r	s	t	a	b	z	c	Sample	
		x		d	e	f		g	h	i		j1
		j2	k1	k2	l1	l2	m1	m2				
2731.00	Slst	446227.3	293199.9	141142.9	270599.4	75804.4	450620.8	478384.0	419309.3	1210939.5	0144-1	
		154886.5	246530.3	2468417.0	238675.0	954745.6	730476.0	156054.0	617336.0			
		502578.3	417046.5	351424.0	258795.4	215328.0	295792.2	259191.5				
2736.00	Sh/Clst	869532.0	329728.0	306666.5	421008.3	146656.0	718937.5	997908.0	3056274.0	2899427.0	0146-1	
		134007.5	815468.0	4066780.0	748134.4	1356548.8	1308352.0	460955.8	689996.0			
		921018.1	865216.0	1199828.9	536000.0	824685.0	1230890.3	1889913.4				
2778.00	bulk	537563.5	321856.0	244704.3	910816.3	93483.5	577194.0	7730585.5	373405.5	8798124.0	0151-0	
		1279148.0	5818608.0	14851991.0	8642198.0	10425163.0	9404880.0	4371980.0	3636506.0			
		4805032.0	1829051.8	2907545.8	1308928.0	2191725.0	1596587.0	2745728.0				
2800.00	Ca	1044236.8	563559.0	240525.8	534226.4	152486.4	497678.5	1393297.6	219365.8	2598494.5	0060-1	
		225147.0	1131776.0	3796154.5	1114763.0	1732586.6	1675074.0	736124.0	599652.6			
		630391.3	311682.6	323931.4	168338.6	157495.3	143797.1	109610.2				
2841.00	bulk	289938.3	165253.3	78556.8	139601.5	39086.6	128494.2	233966.8	167443.5	406147.3	0152-0	
		29088.8	87812.5	598517.4	124391.3	238274.1	198471.0	66461.0	112570.8			
		109757.4	61322.9	57686.3	37154.0	31650.9	31807.6	23186.0				

Depth unit of measure: m

Depth	Lithology	p	q	r	s	t	a	b	z	c	Sample
		x	d	e	f	g	h	i	j1		
		j2	k1	k2	l1	l2	m1	m2			
2870.00	Coal	0.0	124404.8	115202.1	1655584.0	0.0	563488.0	15071008.0	3461206.0	12957662.0	0123-5
		2638176.0	7446452.5	24617720.0	13940010.0	14445824.0	12110424.0	7581780.0	6919808.0		
		7124512.0	1790511.5	2412023.5	949311.3	1184525.8	334879.7	341151.7			

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample
		h	i	j	k	l	m	n	o		
		p	q	r	s	t					
1170.00	Sh/Clst	252969.6	78726.4	128224.0	73553.0	29694.1	89514.6	47197.6	37261.8	137642.9	0018-1
		95789.4	45851.4	280075.9	101660.5	37169.1	24597.5	62296.6	80375.9		
		113504.8	211925.1	273493.7	230101.9	581441.9					
2409.00	bulk	1050997.3	265696.1	640471.6	461669.1	199460.8	195203.2	402528.0	282586.0	220910.5	0149-0
		325972.3	263834.2	277520.4	293818.1	134067.5	109396.7	252551.9	198279.9		
		165766.6	70464.0	222639.8	163221.4	243042.3					
2670.00	bulk	937383.6	272347.4	681154.3	470752.0	229815.5	197890.4	386536.6	313571.2	246130.8	0154-0
		459122.8	245234.8	751507.8	384009.5	172818.8	110484.0	194953.3	177294.7		
		350804.6	97638.3	263485.1	153439.5	634271.8					
2681.00	S/Sst	1192071.3	538673.3	1765803.8	1108672.0	472061.9	446147.3	743875.3	476661.0	521851.2	0124-1
		989954.4	732857.9	468810.8	730578.1	322869.1	319801.9	503395.0	558164.4		
		196009.0	335709.5	578152.0	488530.0	345027.4					
2684.00	S/Sst	617387.1	261000.7	922980.0	598745.5	246672.5	240160.5	413401.8	265792.0	277535.7	0127-1
		538015.7	407839.7	238947.0	390921.6	164081.0	172288.8	280940.4	306018.2		
		103052.6	178630.7	309984.0	288832.0	188313.1					

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample
		h		i	j	k	l	m	n	o	
		p	q	r	s	t					
2731.00	sltst	715438.1	285913.4	1235360.1	852414.0	374893.8	340523.8	580840.5	474257.9	439888.1	0144-1
		681728.1	453797.4	1032823.8	581517.8	273158.1	261925.9	383810.7	321864.8		
		613575.6	258686.0	412520.0	288504.0	788507.3					
2736.00	Sh/Clst	1999089.5	661898.5	3606252.5	2919669.0	1248768.0	1086220.0	2108292.0	2012065.0	2057331.3	0146-1
		1954291.3	971789.0	8241916.5	1900176.0	1074769.8	1272924.5	2018097.8	799031.0		
		5145600.0	1071012.5	1892894.0	424038.5	6586752.0					
2778.00	bulk	2465258.8	515103.5	5930166.5	4836443.5	3003679.8	2352746.8	2753664.0	1939534.8	2458171.0	0151-0
		5958479.0	2260854.0	5374956.5	4986840.5	2463415.0	1373784.9	1589765.3	1272325.3		
		2566113.0	1534275.0	3589088.0	1508576.0	7672488.0					
2800.00	Ca	1147688.8	380634.8	1686412.3	1209210.1	582624.0	511506.5	555794.5	365714.5	474642.5	0060-1
		909330.5	556734.0	1189397.1	710165.1	280896.0	252864.0	351552.0	340416.0		
		358720.0	242189.7	504589.8	321467.5	805014.4					
2841.00	bulk	246551.1	97163.7	270000.0	171543.8	65591.6	68575.8	102241.3	61354.7	77018.9	0152-0
		158485.6	100819.0	76833.3	108750.4	42046.3	32884.0	53624.6	62794.2		
		24397.4	41013.0	84026.9	59037.3	66040.9					

Table 12G: Raw GCMS sterane data (peak height) SIR for Well NOCS 33/9-16

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample
		h	i	j	k	l	m	n	o		
		p	q	r	s	t					
2870.00	Coal	1395007.5	198361.5	428664.3	307176.6	334955.5	216554.5	1572899.3	940420.8	1139114.0	0123-5
		5474898.0	973557.6	941037.3	3829397.3	2371285.5	783829.3	1328213.4	812970.6		
		970026.6	988720.0	3071969.5	1895154.5	5215334.0					

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
1170.00	Sh/Clst	19700.0	11284.0	14626.0	23095.1	16294.4	10251.3	16528.2	0018-1
2409.00	bulk	27753.7	20731.4	6904.0	24979.5	16500.5	13287.9	7883.0	0149-0
2670.00	bulk	220589.9	154624.0	103258.8	470842.7	106699.7	217992.9	79240.2	0154-0
2681.00	S/Sst	191654.5	153484.5	52753.8	192146.9	97109.6	77661.3	75269.2	0124-1
2684.00	S/Sst	222231.7	192338.7	52587.8	225175.0	114794.0	92362.0	94301.8	0127-1
2731.00	Sltst	144145.2	108092.3	48955.4	188002.5	74349.8	76867.5	83392.3	0144-1
2736.00	Sh/Clst	55676.4	33176.0	40771.2	117705.3	35228.2	59729.4	40459.0	0146-1
2778.00	bulk	33027.1	20067.1	25900.1	53877.9	29052.5	26758.1	37231.9	0151-0
2800.00	Ca	68971.0	46067.9	30759.4	64044.1	31058.9	34186.0	26446.8	0060-1
2841.00	bulk	22446.7	14172.6	0.0	8751.0	4380.6	10369.8	6557.5	0152-0
2870.00	Coal	36360.9	20322.4	0.0	18659.6	29503.8	10778.2	24638.0	0123-5

Table 12I: Raw GCMS monoaromatic sterane data (peak height) for Well NOCS 33/9-16

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	h1	i1	Sample
1170.00	Sh/Clst	13983.7	6554.2	10952.4	11866.0	29883.9	0.0	32417.6	27546.7	8164.9	0018-1
2409.00	bulk	83752.7	36722.8	49047.9	41430.9	272738.5	38343.2	191222.6	130303.8	19112.3	0149-0
2670.00	bulk	171230.7	109564.2	181469.2	160104.5	839086.7	260603.0	561534.6	163188.0	39475.3	0154-0
2681.00	S/Sst	216786.5	145804.7	181574.5	133125.4	306313.0	52552.1	223140.3	100512.2	12095.3	0124-1
2684.00	S/Sst	231815.1	117527.3	64556.2	38334.0	87822.3	11817.7	62989.6	26948.5	0.0	0127-1
2731.00	Sltst	265027.0	120330.8	215578.3	248830.0	559510.7	55824.7	411622.0	287183.0	80436.8	0144-1
2736.00	Sh/Clst	195427.1	80439.3	173890.0	459548.2	995394.9	63014.5	826158.4	760756.2	213265.4	0146-1
2778.00	bulk	121414.4	51495.0	181404.5	161886.0	286870.0	38520.0	427382.0	289650.0	98708.9	0151-0
2800.00	Ca	96914.6	47002.1	102619.3	118850.0	209774.7	38645.7	202960.2	129020.1	39681.0	0060-1
2841.00	bulk	9212.3	3379.9	5761.7	4312.0	13115.3	0.0	13054.0	10427.2	2619.4	0152-0
2870.00	Coal	34543.5	7186.0	0.0	0.0	54219.0	33063.4	206603.2	131037.3	24143.6	0123-5

DATA REPORT

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CONTRACT NO: DTJ 020215

TITLE

Well 33/9-G-4H. Analysis of oil and mud sample.

Well 33/9-15 and -16. Analysis of 3 corechips.

AUTHOR(S)

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PAGE

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Table 8a: MPLC Bulk Composition: Weight of Oil and Fraction for NOCS 33/9-G-4H

Well	Description	Whole oil (mg)	Light (mg)	Topped (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	Sample
33/9-G-4H	FMT	108.7	16.3	92.4	62.9	19.3	0.6	9.6	82.2	10.2	S47/0001
33/9-G-4H	MUD	-		100.9	95.2	0.2	0.6	4.8	95.5	5.4	S47/0002

Table 8b: MPLC Bulk Composition: Comparison of topped oil (%) for NOCS 33/9-G-4H

<u>Well</u>	<u>Description</u>	<u>Sat</u>	<u>Aro</u>	<u>Asph</u>	<u>NSO</u>	<u>Total</u>	<u>HC</u>	<u>Non-HC</u>	<u>Recov. MPLC</u>	<u>Recov. Asph</u>	<u>Sample</u>
33/9-G-4H	FMT	68.03	20.88	0.65	10.44	100.00	88.91	11.09	0.94	0.90	S47/0001
33/9-G-4H	MUD	94.38	0.24	0.59	4.79	100.00	94.61	5.39	1.07	0.91	S47/0002

Table 8c: MPLC Bulk Composition: Ratios in topped oil for NOCS 33/9-G-4H

Well	Description	Sat	HC	Asp	Sample
		Aro	Non-HC	NSO	
33/9-G-4H	FMT	3.26	8.02	0.06	S47/0001
33/9-G-4H	MUD	394.00	17.57	0.12	S47/0002

Table 8f: Iatroscan TLC Bulk Composition: Rel. percentages of sep. fractions for NOCS 33/9-G-4H

<u>Well</u>	<u>Description</u>	<u>Sat HC</u>	<u>Aro HC</u>	<u>NSO</u>	<u>Asp</u>	<u>Total</u>	<u>HC</u>	<u>Non-HC</u>	<u>Recov. Iatr.</u>	<u>Recov. Asp</u>	<u>Sample</u>
33/9-G-4H	FMT	78.76	12.20	8.38	0.65	100.00	90.97	9.03	0.98	0.90	S47/0001
33/9-G-4H	MUD	91.99	-	7.42	0.59	100.00	91.99	8.01	0.73	0.91	S47/0002

Table 9a: Quantative Analysis of Saturated Fraction, FMT Oil, Well NOCS 33/9-G-4H

sample	nC15	nC16	iC18	nC17	Pr	nC18	Ph	nC19	nC20	nC21	nC22	nC23
	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat
33/9-G-4H - FMT OIL	8,435	* 285,110	3,546	7,278	5,990	6,128	4,061	4,822	3,765	3,520	2,926	2,300
33/9-G-4H - MUD	-	-	-	-	-	-	-	-	-	-	-	-

* Unreliable probably due to additive

Table 9a: Quantative Analysis of Saturated Fraction, FMT Oil, Well NOCS 33/9-G-4H

nC24	nC25	nC26	nC27	nC28	nC29	nC30	nC31	nC32	nC33	nC34	Sum alk
mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat	mg/g sat
1,985	1,918	1,353	0,944	0,861	0,572	0,438	0,312	0,269	0,311	0,000*	*346,845
-	-	-	-	-	-	-	-	-	-	-	-

**Unreliable due to anomalously high nC16 value.

Table 9b: Saturated Hydrocarbon Ratios (peak area) for NOCS 33/9-G-4H

<u>Well</u>	<u>Description</u>	<u>Pristane</u> <u>nC17</u>	<u>Pristane</u> <u>Phytane</u>	<u>Pristane/nC17</u> <u>Phytane/nC18</u>	<u>Phytane</u> <u>nC18</u>	<u>CPI1</u>	<u>nC17</u> <u>nC17+nC27</u>	<u>Sample</u>
33/9-G-4H	FMT	0.82	1.47	1.24	0.66	1.05	0.89	S47/0001
33/9-G-4H	MUD	-	-	-	-	-	-	S47/0002

Table 9ca: Aromatic Hydrocarbon Ratios (peak area) for NOCS 33/9-G-4H

Well	Description	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
33/9-G-4H	FMT	0.99	1.39	0.32	0.91	1.08	0.89	1.05	-	-	-	S47/0001
33/9-G-4H	MUD	-	-	-	-	-	-	-	-	-	-	S47/0002

Table 9cb: Aromatic Hydrocarbon Ratios (peak area) for NOCS 33/9-G-4H

<u>Well</u>	<u>Description</u>	<u>F1</u>	<u>F2</u>	<u>Sample</u>
33/9-G-4H	FMT	0.48	0.20	S47/0001
33/9-G-4H	MUD	-	-	S47/0002

Table 10a: Tabulation of carbon isotope data on oils for NOCS 33/9-G-4H

Well	Descript.	Whole oil	Topped oil	Saturated	Aromatic	NSO	Asphaltenes	Sample
33/9-G-4H	FMT	-	-29.72	-29.97	-29.33	-28.53		S47/0001
33/9-G-4H	MUD	-	-30.77	-30.68	*	-27.26	-28.03	S47/0002

*Insufficient of fraction for analysis (two runs performed)

Table 10b: Tabulation of cv values from carbon isotope data for NOCS 33/9-G-4H

<u>Well</u>	<u>Descript.</u>	<u>Saturated</u>	<u>Aromatic</u>	<u>cv value</u>	<u>Sample</u>
33/9-G-4H	FMT	-29.97	-29.33	-0.94	S47/0001
33/9-G-4H	MJD	-30.68	*	-	S47/0002

*Insufficient of fraction for analysis (two runs performed)

Table 11a: Variation in Triterpane Distribution (peak height) SIR for NOCS 33/9-G-4H

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Rat.10	Rat.11	Rat.12	Rat.13	Rat.14	Sample
33/9-G-4H	FMT	0.76	0.43	0.11	0.44	0.31	0.06	0.19	0.43	0.16	0.07	0.93	0.32	0.10	60.85	S47/0001
33/9-G-4H	MJD	0.85	0.46	0.13	0.53	0.35	0.06	0.14	0.26	0.12	0.26	0.90	0.36	0.13	54.17	S47/0002

List of Triterpane Distribution Ratios

Ratio 1: $27Tm / 27Ts$

Ratio 2: $27Tm / 27Tm+27Ts$

Ratio 3: $27Tm / 27Tm+30a\beta+30\beta a$

Ratio 4: $29a\beta / 30a\beta$

Ratio 5: $29a\beta / 29a\beta+30a\beta$

Ratio 6: $30d / 30a\beta$

Ratio 7: $28a\beta / 30a\beta$

Ratio 8: $28a\beta / 29a\beta$

Ratio 9: $28a\beta / 28a\beta+30a\beta$

Ratio 10: $24/3 / 30a\beta$

Ratio 11: $30a\beta / 30a\beta+30\beta a$

Ratio 12: $29a\beta+29\beta a / 29a\beta+29\beta a+30a\beta+30\beta a$

Ratio 13: $29\beta a+30\beta a / 29a\beta+30a\beta$

Ratio 14: $32a\beta S / 32a\beta S+32a\beta R$ (%)

Table 11b: Variation in Sterane Distribution (peak height) SIR for NOCS 33/9-G-4H

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
33/9-G-4H	FMT	0.63	45.20	76.45	0.90	0.78	0.36	0.25	0.62	0.82	2.96	S47/0001
33/9-G-4H	MUD	0.09	36.16	62.55	1.42	0.70	0.46	0.36	0.46	0.57	1.31	S47/0002

List of Sterane Distribution Ratios

Ratio 1: $27d\beta S / 27d\beta S + 27aaR$

Ratio 2: $29aaS / 29aaS + 29aaR$ (%)

Ratio 3: $2 * (29\beta\beta R + 29\beta\beta S) / (29aaS + 29aaR + 2 * (29\beta\beta R + 29\beta\beta S))$ (%)

Ratio 4: $27d\beta S + 27d\beta R + 27daR + 27daS / 29d\beta S + 29d\beta R + 29daR + 29daS$

Ratio 5: $29\beta\beta R + 29\beta\beta S / 29\beta\beta R + 29\beta\beta S + 29aaS$

Ratio 6: $21a + 22a / 21a + 22a + 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 7: $21a + 22a / 21a + 22a + 28daS + 28aaS + 29daR + 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 8: $29\beta\beta R + 29\beta\beta S / 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 9: $29aaS / 29aaR$

Ratio 10: $29\beta\beta R + 29\beta\beta S / 29aaR$

Table 11c: Raw triterpane data (peak height) m/z 191 SIR for NOCS 33/9-G-4H

Well	Descript.	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	300	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
33/9-G-4H	FMT	1654.8	1235.3	500.0	966.8	316.9	2843.1	2164.4	3201.8	462.8	S47/0001
		7467.1	2883.3	983.8	1161.2	0.0	16899.6	1271.0	0.0	5958.3	
		4062.2	3705.7	2384.0	2613.0	1583.0	1252.3	779.7	1004.0	588.2	
33/9-G-4H	MUD	45.7	25.6	13.8	25.6	5.1	19.9	16.9	13.7	6.7	S47/0002
		53.1	16.2	5.7	8.7	0.0	99.5	11.3	0.0	34.5	
		31.9	19.1	16.2	19.4	11.3	12.0	11.3	13.5	12.0	

Table 11d: Raw sterane data (peak height) m/z 217 SIR for NOCS 33/9-G-4H

Well	Descript.	21a	22a	27dBS	27dBR	27daR	27daS	28dBS	28dBR	28daR*	Sample
		29dBS*	28daS*	27aaR	29dBR	29daR	28aaS	29daS*	28BS		
		28aaR	29aaS	29BSR	29BS	29aaR					
33/9-G-4H	FMT	3826.3	1733.1	4600.9	3024.4	945.9	971.6	2112.2	1048.8	2124.5	S47/0001
		5288.7	3039.0	2698.5	2137.9	749.9	1111.1	2408.2	2778.6		
		974.7	1714.9	3483.0	2673.1	2078.9					
33/9-G-4H	MUD	30.6	14.5	28.0	32.3	10.6	8.7	10.9	6.0	145.6	S47/0002
		32.1	10.2	284.6	9.6	4.4	6.8	9.9	9.2		
		8.4	10.6	13.6	10.9	18.7					

* 28daR coel with 27aaS, 29dBS coel with 27BSR, 28daS coel with 27BS, 29daS coel with 28BSR

Table 11e: Raw sterane data (peak height) m/z 218 SIR for NOCS 33/9-G-4H

Well	Descript.	27 β BR	27 β BS	28 β BR	28 β BS	29 β BR	29 β BS	30 β BR	30 β BS	Sample
33/9-G-4H	FMT	6084.4	4414.6	3926.5	4144.6	4919.9	4624.6	1066.6	956.8	S47/0001
33/9-G-4H	MUD	28.4	20.4	15.5	18.1	16.6	14.6	4.9	5.0	S47/0002

Table 11f: Raw triterpane data (peak height) m/z 177 SIR for NOCS 33/9-G-4H

Well	Descript.	25nor28a β	25nor30a β	Sample
33/9-G-4H	FMT	4267.5	270.0	S47/0001
33/9-G-4H	MUD	12.9	5.3	S47/0002

Table 11g: Amount of triterpanes (ppb) m/z 191 SIR for NOCS 33/9-G-4H

Well	Descript.	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	300	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
33/9-G-4H	FMT	28638.3	21378.5	8653.3	16731.8	5483.7	49203.7	37458.1	55413.1	8009.5	S47/0001
		129230.6	49899.9	17027.0	20097.3	0.0	292474.7	21996.2	0.0	103117.9	
		70302.9	64132.5	41259.5	45221.9	27396.8	21673.9	13494.1	17376.2	10179.4	
33/9-G-4H	MUD	560.5	313.8	169.5	313.1	62.1	244.2	206.7	167.3	82.0	S47/0002
		650.9	198.3	69.9	106.5	0.0	1218.4	139.0	0.0	422.7	
		390.7	233.9	197.9	238.1	137.9	147.2	139.0	165.6	146.7	

Table 11h: Amount of steranes (ppb) m/z 217 SIR for NOCS 33/9-G-4H

Well	Descript.	21a	22a	27dBS	27dBR	27daR	27daS	28dBS	28dBR	28daR*	Sample	
		29dBS*	28daS*	27aaR	29dBR	29daR	28aaS	29daS*	28BS			
		28aaR	29aaS	29BR	29BS	29aaR						

33/9-G-4H	FMT	66221.2	29993.7	79625.6	52342.7	16371.1	16814.5	36554.3	18151.8	36768.4	S47/0001	
		91530.3	52595.3	46702.2	37000.2	12978.1	19230.2	41677.1	48087.6			
		16869.5	29678.8	60279.3	46263.0	35978.2						
33/9-G-4H	MJD	374.5	178.0	343.6	396.3	130.1	106.3	133.0	73.8	1783.2	S47/0002	
		393.6	124.4	3486.3	117.0	53.7	83.3	121.3	112.3			
		102.8	129.7	166.4	133.1	228.9						

* 28daR coel with 27aaS, 29dBS coel with 27BR, 28daS coel with 27BS, 29daS coel with 28BR

Table 11i: Amount of standard and weight of sample for NOCS 33/9-G-4H

<u>Well</u>	<u>Descript.</u>	<u>Standard</u>	<u>Amount</u>	<u>Weight</u>	<u>Sample</u>
33/9-G-4H	FMT	6420.1	1.400	12.6	S47/0001
33/9-G-4H	MUD	2900.5	1.400	39.4	S47/0002

Table 12a: Variation in Triaromatic Sterane Distribution (peak height) for NOCS 33/9-G-4H

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
33/9-G-4H	FMT	0.48	0.50	0.25	0.22	0.30	S47/0001
33/9-G-4H	MUD	0.46	0.44	0.21	0.21	0.26	S47/0002

Ratio1: $a1 / a1 + g1$

Ratio2: $b1 / b1 + g1$

Ratio3: $a1 + b1 / a1 + b1 + c1 + d1 + e1 + f1 + g1$

Ratio4: $a1 / a1 + e1 + f1 + g1$

Ratio5: $a1 / a1 + d1$

Table 12b: Variation in Monoaromatic Sterane Distribution (peak height) for NOCS 33/9-G-4H

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Sample
33/9-G-4H	FMT	0.31	0.21	0.20	0.18	S47/0001
33/9-G-4H	MUD	0.15	0.08	0.10	0.08	S47/0002

Ratio1: A1 / A1 + E1
 Ratio2: B1 / B1 + E1

Ratio3: A1 / A1 + E1 + G1
 Ratio4: A1+B1 / A1+B1+C1+D1+E1+F1+G1+H1+I1

Table 12c: Aromatisation of Steranes (peak height) for NOCS 33/9-G-4H

<u>Well</u>	<u>Descript.</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Sample</u>
33/9-G-4H	FMT	0.45	0.88	S47/0001
33/9-G-4H	MUD	0.70	0.77	S47/0002

Ratio1:
$$\frac{C1+D1+E1+F1+G1+H1+I1}{C1+D1+E1+F1+G1+H1+I1 + c1+d1+e1+f1+g1}$$

Ratio2: $g1 / g1 + I1$

Table 12d: Raw triaromatic sterane data (peak height) m/z 231 for NOCS 33/9-G-4H

Well	Descript.	a1	b1	c1	d1	e1	f1	g1	Sample
33/9-G-4H	FMT	10599.3	11573.8	6196.2	24801.1	12511.0	12880.0	11389.3	S47/0001
33/9-G-4H	MUD	447.5	418.2	270.2	1260.0	604.1	564.0	532.6	S47/0002

Table 12e: Raw monoaromatic sterane data (peak height) m/z 253 for NOCS 33/9-G-4H

Well	Descript.	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
33/9-G-4H	FMT	7498.7	4541.5	8469.6	6993.2	16849.0	2549.8	12322.1	7470.1	1494.2	S47/0001
33/9-G-4H	MUD	432.2	210.4	1057.3	899.2	2435.5	303.6	1658.9	962.9	155.3	S47/0002

Table 13A: Light Hydrocarbons from Whole Oil GC for NOCS 33/9-G-4H

<u>Well</u>	<u>Description</u>	<u>iC4</u>	<u>nC4</u>	<u>iC5</u>	<u>nC5</u>	<u>2,2DMC4</u>	<u>2,3DMC4</u>	<u>2MC5</u>	<u>3MC5</u>	<u>nC6</u>	<u>MCyC5</u>	<u>Benz</u>	<u>Sample</u>
33/9-G-4H	FMT	-	-	-	-	0.06	0.49	-	-	4.94	2.95	0.76	S47/0001

Table 13B: Light Hydrocarbons from Whole Oil GC for NOCS 33/9-G-4H

Well	Description	CyC6	2MC6	3MC6	1,3ci- DMCyC5	1,3tr- DMCyC5	1,2tr- DMCyC5	nC7	MCyC6	Tol	nC8	p/m- Xylene	Sample
33/9-G-4H	FMT	3.39	2.86	2.22	0.80	0.73	1.76	5.87	7.26	2.21	6.31	1.39	S47/0001

THOMPSON'S INDICES

$$A = \frac{\text{Benzene}}{nC6}$$

$$B = \frac{\text{Toluene}}{nC7}$$

$$X = \frac{\text{p/m-xylene}}{nC8}$$

$$W = \frac{\text{Benzene} * 10}{\text{CyC6}}$$

$$C = \frac{nC6 + nC7}{\text{CyC6} + \text{MCyC6}}$$

$$I = \frac{2MC6 + 3MC6}{1,3ciDMCy5 + 1,3trDMCy5 + 1,2trDMCy5}$$

$$F = \frac{nC7}{\text{MCyC6}}$$

$$H = \frac{nC7 * 100}{\text{CyC6} + 2MC6 + 2,3DMC4 + 3MC6 + 1,3ciDMCy5 + 1,3trDMCy5 + 1,2trDMCy5 + nC7 + \text{MCyC6}}$$

$$U = \frac{\text{CyC6}}{\text{MCyC5}}$$

$$R = \frac{nC7}{2MC6}$$

$$S = \frac{nC6}{2,2DMC4}$$

Table 13C: Thompson's indices for NOCS 33/9-G-4H

Well	Description	A	B	X	W	C	I	F	H	U	R	S	Sample
33/9-G-4H	FMT	0.15	0.38	0.22	2.24	1.02	1.54	0.81	23.13	1.15	2.05	82.33	S47/0001

Table 17: Physical parameters for NOCS 33/9-G-4H

Well	Descript.	Sulphur (wt %)	Ni (ppm)	V (ppm)	°API	Sample
33/9-G-4H	FMT				40.60	S47/0001

n.e. = Insufficient material for analysis
n.d. = Not detected
n.a. = Not analyzed due to high water content

Table 5: Rock-Eval table for well NOCS 33/9-15

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2736.00	ccp		bulk	17.16	11.58	-	-	-	-	-	28.7	0.60	329	0003-0B
2776.00	ccp		bulk	11.11	2.90	-	-	-	-	-	14.0	0.79	323	0004-0B

Table 5B: Rock-Eval table for well BLACK VEN MARL

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1.00	n/a		bulk	0.33	19.50	-	-	-	-	-	19.8	0.02	421	0215-0B

Table 8a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 33/9-15

Depth unit of measure: m

Depth	Typ	Lithology	Rock Extracted (g)	EOM (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	TOC (e) (%)	Sample
2736.00	ccp	bulk	7.2	209.2	88.2	61.0	10.4	49.6	149.3	59.9	1.68	0003-0B
2776.00	ccp	bulk	8.2	121.9	67.8	27.7	4.6	21.9	95.5	26.4	0.66	0004-0B

Table 8b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 33/9-15

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2736.00	ccp	bulk	29095	12272	8489	1441	6892	20762	8333	0003-0B
2776.00	ccp	bulk	14793	8224	3360	553	2656	11584	3209	0004-0B

Table 8c: MPLC Bulk Composition: Concentration of EOM and Fraction (mg/g TOC(e)) for well NOCS 33/9-15

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2736.00	ccp	bulk	1731.90	730.49	505.34	85.79	410.28	1235.83	496.07	0003-0B
2776.00	ccp	bulk	2241.47	1246.08	509.10	83.85	402.43	1755.19	486.28	0004-0B

Table 8d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 33/9-15

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	Total	HC	Non-HC	Recov. MPLC	Recov. Asph	Sample
2736.00	ccp	bulk	42.18	29.18	4.95	23.69	100.00	71.36	28.64	0.76	1.00	0003-0B
2776.00	ccp	bulk	55.59	22.71	3.74	17.95	100.00	78.31	21.69	0.94	1.02	0004-0B

Table 8e: MPLC Bulk Composition: Ratios for well NOCS 33/9-15

Depth unit of measure: m

Depth	Typ	Lithology	Sat	HC	Asp	Sample
			Aro	Non-HC	NSO	
2736.00	ccp	bulk	1.45	2.49	0.21	0003-0B
2776.00	ccp	bulk	2.45	3.61	0.21	0004-0B