HYDRO

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GEOCHEMICAL EVALUATION OF WELL 25/11-16

BA-93-893-1

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Summary/Conclusion/Recommendation

Keywords
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1. INTRODUCTION.

The vitrinite reflectance has been determined by GeoLab UK; TOC and Rock-Eval pyrolysis analyses were carried out at Norsk Hydro Research Center, Bergen. All extractions, group type separations, gas chromatography and gas chromatography-mass spectrometry were carried out by GERG. This report was compiled at Norsk Hydro Research Center in Bergen.

A list of the samples analyzed is given in Table 1.3.

WELL	SAMPLE TYPE	DEPTH M	%20S Steranes	aa/bb Steranes	C27/C29 Steranes	%Tri/Mono Steranes	% Moret.	Ts/Tm
25/11-16	CLYST	1714	0.27	1.29	0.81	85	14.3	0.98
25/11-16	CLYST	1873	0.45	1.02	1.21	78	10.5	0.92

Table 3.6. Selected biomarker ratios

WELL	TYPE	% TOPPING LOSS	% SULPHUR	NICKEL ppm	VANADIUM ppm	Ni/V
25/1-9	RFT	23.80	0.04	1.08	0.47	2.30
25/2-10	RFT	18.60	0.21	4.44	1.94	2.29
25/5-1	DST #3B	57.00	0.16	1.24	2.52	0.49
25/6-1	DST #1	100.00	0.01	9.81	0.16	61.31
25/8-1	DST#1	23.80	0.67	6.07	18.25	0.33
25/8-4	RFT	21.00	0.43	4.62	13.67	0.34
25/11-5	DST#1	25.50	0.37	3.92	11.27	0.35
25/11-15	DST#1	21.70	0.66	5.36	15.44	0.35

Table 4.1. : Quadrant 25 oils bulk parameters.

WELL	TYPE	HEPTANE RATIO	ISO-HEPT. RATIO	PARAFINICITY	AROMATICITY
25/1-9	RFT	0.58	0.57	0.01	1.33
25/2-10	RFT	3.91	0.66	0.08	2.55
25/5-1	DST #3B	25.17	0.67	0.57	0.83
25/6-1	DST #1	28.19	0.83	0.76	0.12
25/8-1	DST#1	15.13	0.58	0.32	0.84
25/8-4	RFT	8.13	0.37	0.19	3.07
25/11-5	DST#1	2.47	0.4	0.04	3.02
25/11-15	DST#1	1.57	0.5	0.03	3.46

Table 4.2.: Molecular ratios from gasoline range hydrocarbons.

WELL	SAMPLE TYPE	DEPTH M	MPI-1	MPI-2	Rc %
25/11-6	SST	1761	0.87	0.92	0.92
25/11-6	SST	1773	0.89	0.97	0.94
25/11-6	SST	1778	0.9	0.96	0.94
25/11-6	SST	1781	0.91	0.99	0.95
25/11-6	SST	1798	0.77	0.87	0.86
25/11-6	SST	1802.5	0.8	0.88	0.88
25/11-6	SST	1807	0.8	0.9	0.88
25/1-9	RFT	2650	0.55	0.55	0.73
25/2-10	RFT	2252	0.69	0.69	0.81
25/5-1	DST #3B	2687	0.71	0.71	0.83
25/6-1	DST #1	2276	0.58	0.58	0.75
25/8-1	DST#1		0.71	0.71	0.82
25/8-4	RFT	1750	0.83	0.83	0.9
25/11-5	DST#1		0.8	0.8	0.88
25/11-15	DST#1	1688	0.83	0.83	0.9

Table 4.8. Results from GC of aromatic hydrocarbons.

WELL	SAMPLE TYPE	DEPTH M	%20S Steranes	aa/bb Steranes	C27/C29 Steranes	%Tri/Mono Steranes	% Moretane	Ts/Tm
25/11-16	SST	1761	0.62	0.46	1.16	82	4.3	1.31
25/11-16	SST	1773	0.56	0.84	1.4	84	6.1	1.19
25/11-16	SST	1778	0.57	0.86	1	86	5.6	1.09
25/11-16	SST	1781	0.55	0.86	1.18	83	5.5	1.2
25/11-16	SST	1798	0.56	0.89	0.95	85	5.6	0.96
25/11-16	SST	1802.5	0.57	0.86	0.99	84	5.7	0.85
25/11-16	SST	1807	0.57	0.87	1.02	86	5.9	0.94
25/1-9	RFT	2650	0.64	0.83	2.88	67	4.6	3.38
25/2-10	RFT	2252	0.66	0.64	1.98	76	5.5	2.77
25/5-1	DST #3B	2687	0.58	0.96	1.73	72	5.7	1.53
25/6-1	DST #1	2276	0.39	1.23	1.56	45	17.4	0.44
25/8-1	DST#1		0.56	0.9	1.51	75	6.2	1.37
25/8-4	RFT	1750	0.55	0.78	1.48	79	5.3	1.36
25/11-5	DST#1		0.56	0.91	1.16	75	6.3	1.17
25/11-15	DST#1	1688	0.58	0.78	1.51	79	5.6	1.34

Table 4.9. Selected biomarker ratios.

TABLE: 1.2

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STRATIGRAPHY, WELL NOR:25/11-16

TOP (m)	BOTTOM (m)	Simple Mean S1 (kg/t)	S2 (kg/t)	TOC (%)	HI	PI	Tmax	VRo	Weighted Mean S1 (kg/t)	S2 (kg/t)	TOC (%)	HI
145.0	1698.0	0.1	1.3	0.7	246	0.1	435		0.1	1.2	0.6	234
1698.0	1733.0	0.1	1.4	1.1	126	0.1	431		0.1	1.4	1.1	126
1733.0	1739.0											
1739.0	1767.0	0.0	0.6	0.2	317	0.0			0.0	0.6	0.2	317
1767.0	1872.0											
1872.0	1885.0	0.2	1.2	0.3	366	0.1						
1885.0	1897.0											
1698.0	1897.0	0.1	1.1	0.6	250	0.1	431		0.1	1.0	0.4	316
1897.0	1920.0											
1897.0	1920.0											

TABLE: 1.3

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ANALYSIS PROGRAMME, WELL NOR:25/11-16

Depth (m)	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
1355.00	CLYST	SWC	1									
1380.00	CLYST	SWC	1									
1408.00	CLYST	SWC	1									
1428.50	CLYST	SWC	1									
1470.00	CLYST	SWC	1									
1488.00	CLYST	SWC	1									
1505.00	CLYST	SWC	1									
1565.00	CLYST	SWC	1									
1582.00	CLYST	SWC	1									
1599.00	CLYST	SWC	1									
1616.00	CLYST	SWC	1									
1633.00	CLYST	SWC	1									
1655.00	CLYST	SWC	1									
1660.50	CLYST	SWC	1									
1665.50	CLYST	SWC	1									
1674.00	CLYST	SWC	1									
1680.00	CLYST	SWC	1									
1686.00	CLYST	SWC	1									
1691.00	CLYST	SWC	1									
1695.00	CLYST	SWC	1									
1697.00	CLYST	SWC	1									
1700.00	CLYST	SWC	1									
1714.00	CLYST	COCH	1	1	1	1	1					
1745.00	CLYST	SWC	1									
1748.00	CLYST	SWC	1									
1767.00	SST	COCH		1	1	1	1					
1773.00	SST	COCH		1	1	1	1					
1778.00	SST	COCH		1	1	1	1					
1781.00	SST	COCH		1	1	1	1					
1798.00	SST	COCH		1	1	1	1					
1802.50	SST	COCH		1	1	1	1					
1807.00	SST	COCH		1	1	1	1					
1873.00	CLYST	COCH	1	1	1	1	1					

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ANALYSIS PROGRAMME, WELL NOR:25/11-16 (cont'd)

Depth (m)	Group/Fm.	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
1925.00		LST	SWC	1									
1932.00		LST	SWC	1									
1939.00		LST	SWC	1									

R-Ev = RockEval, MPLC = Separation, SatGC = Saturated GC, Isot = Isotope, Vitr = VRo(ave)%,
Extr = Extraction, Iatr = Iatroscan, PyGC = Pyrolysis GC, Biom = Biomarkers, VisK = Visual Kerogen

TABLE: 1.3

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ANALYSIS PROGRAMME, WELL NOR:25/1-9

Depth (m)	Group/Fm.	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
2650.50			OIL		1	1		1		1			

R-Ev = RockEval, MPLC = Separation, SatGC = Saturated GC, Isot = Isotope, Vitr = VRo(ave)%,
Extr = Extraction, Iatr = Iatroscan, PyGC = Pyrolysis GC, Biom = Biomarkers, VisK = Visual Kerogen

TABLE: 1.3

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ANALYSIS PROGRAMME, WELL NOR:25/2-10S

Depth (m)	Group/Fm.	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
2252.50			OIL		1	1		1		1			

R-Ev = RockEval, MPLC = Separation, SatGC = Saturated GC, Isot = Isotope, Vitr = VRo(ave)%,
Extr = Extraction, Iatr = Iatroscan, PyGC = Pyrolysis GC, Biom = Biomarkers, VisK = Visual Kerogen

TABLE: 1.3

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ANALYSIS PROGRAMME, WELL NOR:25/5-1

Depth (m)	Group/Fm.	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
3002.00			OIL		1	1		1		1			

R-Ev = RockEval, MPLC = Separation, SatGC = Saturated GC, Isot = Isotope, Vitr = VRo(ave)%,
Extr = Extraction, Iatr = Iatroscan, PyGC = Pyrolysis GC, Biom = Biomarkers, VisK = Visual Kerogen

TABLE: 1.3

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HYDRO

ANALYSIS PROGRAMME, WELL NOR:25/6-1

Depth (m)	Group/Fm.	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
2279.70			OIL	1			1		1				

R-Ev = RockEval, MPLC = Separation, SatGC = Saturated GC, Isot = Isotope, Vitr = VRo(ave)%,
Extr = Extraction, Iatr = Iatroscan, PyGC = Pyrolysis GC, Biom = Biomarkers, VisK = Visual Kerogen

TABLE: 1.3

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HYDRO

ANALYSIS PROGRAMME, WELL NOR:25/8-1

Depth (m)	Group/Fm.	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
5782.00			OIL		1	1		1		1			

R-Ev = RockEval, MPLC = Separation, SatGC = Saturated GC, Isot = Isotope, Vitr = VRo(ave)%,
Extr = Extraction, Iatr = Iatroscan, PyGC = Pyrolysis GC, Biom = Biomarkers, VisK = Visual Kerogen

TABLE: 1.3

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HYDRO

ANALYSIS PROGRAMME, WELL NOR:25/8-4

Depth (m)	Group/Fm.	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
1750.70	LISTA I		OIL		1	1		1		1			

R-Ev = RockEval, MPLC = Separation, SatGC = Saturated GC, Isot = Isotope, Vitr = VRo(ave)%,
Extr = Extraction, Iatr = Iatroscan, PyGC = Pyrolysis GC, Biom = Biomarkers, VisK = Visual Kerogen

TABLE: 1.3

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ANALYSIS PROGRAMME, WELL NOR:25/11-5

Depth (m)	Group/Fm.	Lithology	Type	R-Ev	Extr	MPLC	Iatr	SatGC	PyGC	Isot	Biom	Vitr	VisK
5790.00			OIL		1	1		1		1			

R-Ev = RockEval, MPLC = Separation, SatGC = Saturated GC, Isot = Isotope, Vitr = VRo(ave)%,
Extr = Extraction, Iatr = Iatroscan, PyGC = Pyrolysis GC, Biom = Biomarkers, VisK = Visual Kerogen

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Sample Depth	R.o. Avg.	No. of Determinations
1355	0.32	20
1408	0.34	20
1470	0.32	20
1505	0.34	1
1582	0.42	4
1633	0.41	6
1665.5	0.40	11
1695	0.38	20
1702	0.43	15
1710	0.43	20
1717	0.42	20
1725	0.42	14
1735	0.42	4
1742 - 1745	0.45	3
1745 SWC	NDP	-
1857	0.45	2
1870	0.49	3
1890	0.50	4
1[illegible]	0.59	6

Table 2.1. Average vitrinite reflectance.

TABLE: 3.1

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ROCK EVAL SCREENING DATA, WELL NOR:25/11-16

Depth (m)	Lithology	Type	Tmax DegC	S1 kg/t	S2 kg/t	TOC %	HI	PI	Analysing Company
1355.00	CLYST	SWC	430	0.2	2.4	1.3	187	0.07	F-BERGEN
1380.00	CLYST	SWC	429	0.2	2.7	1.5	171	0.06	F-BERGEN
1408.00	CLYST	SWC	427	0.2	2.6	1.7	151	0.06	F-BERGEN
1428.50	CLYST	SWC	419	0.1	0.7	0.5	122	0.11	F-BERGEN
1470.00	CLYST	SWC		0.0	0.7	0.4	168	0.01	F-BERGEN
1488.00	CLYST	SWC		0.0	0.5	0.2	226	0.02	F-BERGEN
1505.00	CLYST	SWC		0.0	0.3	0.2	182	0.03	F-BERGEN
1565.00	CLYST	SWC	454	0.0	0.6	0.4	150	0.05	F-BERGEN
1582.00	CLYST	SWC	478	0.0	0.7	0.2	383	0.01	F-BERGEN
1599.00	CLYST	SWC		0.0	0.5	0.2	274	0.05	F-BERGEN
1616.00	CLYST	SWC		0.1	1.6	0.4	410	0.06	F-BERGEN
1633.00	CLYST	SWC		0.1	0.7	0.2	365	0.06	F-BERGEN
1655.00	CLYST	SWC		0.1	1.7	0.2	874	0.03	F-BERGEN
1660.50	CLYST	SWC		0.0	0.8	0.4	224	0.03	F-BERGEN
1665.50	CLYST	SWC	427	0.0	0.7	0.5	126	0.04	F-BERGEN
1674.00	CLYST	SWC		0.0	0.9	0.3	253	0.03	F-BERGEN
1680.00	CLYST	SWC		0.0	1.1	0.5	214	0.03	F-BERGEN
1686.00	CLYST	SWC		0.0	1.0	0.6	175	0.03	F-BERGEN
1691.00	CLYST	SWC		0.1	1.0	0.5	192	0.05	F-BERGEN
1695.00	CLYST	SWC	427	0.5	2.3	1.4	167	0.17	F-BERGEN
1697.00	CLYST	SWC	424	0.6	4.7	2.7	172	0.11	F-BERGEN
1700.00	CLYST	SWC	432	0.1	1.4	0.9	144	0.05	F-BERGEN
1714.00	CLYST	COCH	431	0.2	1.5	1.3	110	0.09	F-BERGEN
1745.00	CLYST	SWC		0.0	0.7	0.2	300	0.04	F-BERGEN
1748.00	CLYST	SWC		0.0	0.6	0.2	335	0.02	F-BERGEN
1764.75	SST	COCH	421	21.8	5.4	2.5	218	0.80	F-BERGEN
1778.00	SST	COCH	427	49.3	19.1	6.0	316	0.72	F-BERGEN
1778.50	SST	COCH	424	51.7	22.1	6.6	338	0.70	F-BERGEN
1779.00	SST	COCH	425	56.6	24.8	7.2	347	0.70	F-BERGEN
1779.50	SST	COCH	427	59.1	25.6	7.4	344	0.70	F-BERGEN
1780.00	SST	COCH	427	57.7	25.4	7.3	348	0.69	F-BERGEN
1780.50	SST	COCH	426	54.6	22.6	6.8	331	0.71	F-BERGEN
1781.00	SST	COCH	427	60.0	27.8	7.7	360	0.68	F-BERGEN

TABLE: 3.1

ROCK EVAL SCREENING DATA, WELL NOR:25/11-16 (cont'd)

Depth (m)	Lithology	Type	Tmax DegC	S1 kg/t	S2 kg/t	TOC %	HI	PI	Analysing Company
1781.50	SST	COCH	428	72.5	35.6	9.4	377	0.67	F-BERGEN
1782.00	SST	COCH	347	64.3	38.1	9.1	420	0.63	F-BERGEN
1782.50	SST	COCH	425	56.9	23.7	7.1	335	0.71	F-BERGEN
1783.00	SST	COCH	426	57.7	24.9	7.3	342	0.70	F-BERGEN
1783.50	SST	COCH	425	50.8	20.8	6.3	328	0.71	F-BERGEN
1784.00	SST	COCH	428	60.3	27.9	7.8	359	0.68	F-BERGEN
1784.50	SST	COCH	424	46.4	17.1	5.7	302	0.73	F-BERGEN
1788.30	SST	COCH	427	37.5	12.8	4.5	286	0.75	F-BERGEN
1788.70	SST	COCH	426	31.7	11.9	3.9	307	0.73	F-BERGEN
1789.10	SST	COCH	423	22.3	6.7	2.7	249	0.77	F-BERGEN
1789.50	SST	COCH	420	8.0	2.5	1.1	238	0.76	F-BERGEN
1790.50	SST	COCH	418	8.8	2.3	1.1	214	0.80	F-BERGEN
1873.00	CLYST	COCH		0.2	1.2	0.3	367	0.15	F-BERGEN
1925.00	LST	SWC		0.0	0.1	0.0	350	0.00	F-BERGEN
1932.00	LST	SWC		0.0	0.0	0.0	50		F-BERGEN
1939.00	LST	SWC		0.0	0.0	0.0	0		F-BERGEN

TABLE: 3.2

SEDIMENT EXTRACTION PERCENTAGES (GRAVIMETRIC), WELL NOR:25/11-16

Depth (m)	Lithology	Type	EOM (mg)	EOM (%)	Hydrocarbons(%) SAT	ARO	TOTAL	Non Hydrocarbons(%) POL	ASP	TOTAL
1714.00	CLYST	COCH	28.0	0.28					4.1	4.1
1873.00	CLYST	COCH	29.0	0.29					19.8	19.8

TABLE: 3.3

SEDIMENT EXTRACTION RATIOS (GRAVIMETRIC), WELL NOR:25/11-16

Depth (m)	Lithology	Type	TOC (%)	EOM/TOC (%)	SAT/TOC (%)	SAT/ARO (%)	HC/Non HC (%)
1714.00	CLYST	COCH	1.3	0.2			
1873.00	CLYST	COCH	0.3	0.9			

TABLE: 3.4

SATURATED FRACTION MOLECULAR RATIOS (SEDIMENT SAMPLES), WELL NOR:25/11-16

Depth (m)	Lithology	Type	Pristane/ nC17	Pristane/ Phytane	CPI-I	CPI-II	nC17/ nC17+nC27	Analysing Company
1714.00	CLYST	COCH	0.5	2.6	1.8			GERG
1873.00	CLYST	COCH	0.4	2.8	1.8			GERG

TABLE: 3.5

ISOTOPE ANALYSIS RESULTS (SEDIMENT SAMPLES), WELL NOR:25/11-16

Depth (m)	Lithology	Type	d13C Extr	d13C SAT	d13C ARO	d13C POL	d13C ASP	d13C Kero	Analysing Company
1714.00	CLYST	COCH	-28.40	-27.90	-27.20				GERG
1873.00	CLYST	COCH	-28.20	-28.20	-28.50				GERG

TABLE: 4.3

OIL COMPOSITION RATIOS (GRAVIMETRIC), WELL NOR:25/1-9

St.Depth (m)	En.Depth (m)	Group/Fm	Name	Hydrocarbons (%) SAT	ARO	TOTAL	Non Hydrocarbons (%) POL	ASP	TOTAL	SAT/ ARO	HC/ Non-HC
2650.50	2650.50		RFT # 2C	53.5	35.6	89.1	8.1	2.8	10.9	1.5	8.2

TABLE: 4.3

OIL COMPOSITION RATIOS (GRAVIMETRIC), WELL NOR:25/2-10S

St.Depth (m)	En.Depth (m)	Group/Fm	Name	Hydrocarbons (%) SAT	ARO	TOTAL	Non Hydrocarbons (%) POL	ASP	TOTAL	SAT/ ARO	HC/ Non-HC
2252.50	2252.50		RFT	53.8	32.5	86.3	10.6	3.1	13.7	1.7	6.3

TABLE: 4.3

OIL COMPOSITION RATIOS (GRAVIMETRIC), WELL NOR:25/5-1

St.Depth (m)	En.Depth (m)	Group/Fm	Name	Hydrocarbons (%) SAT	ARO	TOTAL	Non Hydrocarbons (%) POL	ASP	TOTAL	SAT/ ARO	HC/ Non-HC
2687.00	3002.00		DST # 3B	46.8	20.8	67.7	27.9	4.4	32.3	2.2	2.1
2687.00	3002.00		DST # 3B	51.9	31.1	83.0	12.7	4.3	17.0	1.7	4.9

TABLE: 4.3

OIL COMPOSITION RATIOS (GRAVIMETRIC), WELL NOR:25/6-1

St.Depth (m)	En.Depth (m)	Group/Fm	Name	Hydrocarbons (%) SAT	ARO	TOTAL	Non Hydrocarbons (%) POL	ASP	TOTAL	SAT/ ARO	HC/ Non-HC
2276.70	2279.70		DST # 1	49.3	8.2	57.5	38.8	3.7	42.5	6.0	1.4

TABLE: 4.3

OIL COMPOSITION RATIOS (GRAVIMETRIC), WELL NOR:25/8-1

St.Depth (m)	En.Depth (m)	Group/Fm	Name	Hydrocarbons (%) SAT	ARO	TOTAL	Non Hydrocarbons (%) POL	ASP	TOTAL	SAT/ ARO	HC/ Non-HC
5758.00	5782.00		DST # 1	41.1	39.7	80.7	15.1	4.2	19.3	1.0	4.2

TABLE: 4.3

Petroleum Geochemistry Group
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HYDRO

OIL COMPOSITION RATIOS (GRAVIMETRIC), WELL NOR:25/8-4

St.Depth (m)	En.Depth (m)	Group/Fm	Name	Hydrocarbons (%) SAT	ARO	TOTAL	Non Hydrocarbons (%) POL	ASP	TOTAL	SAT/ ARO	HC/ Non-HC
1750.70	1750.70		RFT	44.7	36.8	81.4	14.5	4.1	18.6	1.2	4.4

TABLE: 4.3

OIL COMPOSITION RATIOS (GRAVIMETRIC), WELL NOR:25/11-5

St.Depth (m)	En.Depth (m)	Group/Fm	Name	Hydrocarbons (%) SAT	ARO	TOTAL	Non Hydrocarbons (%) POL	ASP	TOTAL	SAT/ ARO	HC/ Non-HC
5740.00	5790.00		DST # 1	49.8	32.2	82.0	14.7	3.3	18.0	1.5	4.6

TABLE: 4.3

OIL COMPOSITION RATIOS (GRAVIMETRIC), WELL NOR:25/11-15

St.Depth (m)	En.Depth (m)	Group/Fm	Name	Hydrocarbons (%) SAT	ARO	TOTAL	Non Hydrocarbons (%) POL	ASP	TOTAL	SAT/ ARO	HC/ Non-HC
1688.80	1704.10		DST # 1	40.8	39.6	80.4	15.3	4.3	19.6	1.0	4.1

TABLE: 4.4

SEDIMENT EXTRACTION PERCENTAGES (GRAVIMETRIC), WELL NOR:25/11-16

Depth (m)	Lithology	Type	EOM (mg)	EOM (%)	Hydrocarbons(%) SAT	ARO	TOTAL	Non Hydrocarbons(%) POL	ASP	TOTAL
1764.75	SST	COCH	58.5	3.25						
1767.00	SST	COCH	695.0	6.95					4.3	4.3
1773.00	SST	COCH	855.0	8.55					3.8	3.8
1778.00	SST	COCH	825.0	8.25					4.2	4.2
1778.00	SST	COCH	70.9	8.65					4.9	4.9
1781.00	SST	COCH	79.1	10.99					4.7	4.7
1781.00	SST	COCH	750.0	7.50					5.1	5.1
1782.00	SST	COCH	54.5	10.90					4.4	4.4
1783.00	SST	COCH	60.0	9.84					4.5	4.5
1784.50	SST	COCH	59.5	7.35					6.4	6.4
1790.50	SST	COCH	59.2	1.34					5.1	5.1
1798.00	SST	COCH	447.0	4.47					8.4	8.4
1802.50	SST	COCH	381.0	3.81					7.5	7.5
1807.00	SST	COCH	491.0	4.91					27.6	27.6

TABLE: 4.5

Petroleum Geochemistry Group
Research Centre Bergen

HYDRO

ISOTOPE ANALYSIS RESULTS (SEDIMENT SAMPLES), WELL NOR:25/11-16

Depth (m)	Lithology	Type	d13C Extr	d13C SAT	d13C ARO	d13C POL	d13C ASP	d13C Kero	Analysing Company
1767.00	SST	COCH	-28.60	-29.10	-27.80				GERG
1773.00	SST	COCH	-28.50	-29.10	-27.80				GERG
1778.00	SST	COCH	-28.50	-29.00	-27.80				GERG
1781.00	SST	COCH	-28.50	-29.00	-27.70				GERG
1798.00	SST	COCH	-28.30	-28.80	-27.80				GERG
1802.50	SST	COCH	-28.20	-28.70	-27.90				GERG
1807.00	SST	COCH	-28.20	-28.80	-27.60				GERG

Table 4.5 Stable carbon isotope data, oil samples.

HYLAB RESULTS MANAGEMENT : ISOTOPE ANALYSIS RESULTS SELECTED FROM SCREEN

Well	Type	St.Depth	En.Depth	Oil	Extr	Sat	Aro	NSO	Asph	Pyro	Kero	Sample ID	Dup
25/1-4	OIL	0.00	0.00	-26.69		-27.53	-26.70	-26.66	-27.33			-979970564	1
25/1-9	OIL	2650.50	2650.50	-28.40		-28.60	-28.40					-979981623	1
25/2-10S	OIL	2252.50	2252.50	-28.30		-28.60	-28.00					-979981622	1
25/5-1	OIL	2687.00	3002.00	-27.69		-28.62	-27.35	-27.11	-27.83			-979981620	1
25/5-1	OIL	2687.00	3002.00	-280.28		-28.50	-27.50					-979981620	1
25/6-1	OIL	2276.70	2279.70	-27.91		-28.32	-26.55	-26.17	-27.75			-979981619	1
25/6-1	OIL	2276.70	2279.70	-27.80			-27.00					-979981619	1
25/8-1	OIL	5758.00	5782.00	-28.50		-28.90	-28.20					-979981618	1
25/8-1	OIL	5758.00	5782.00	-26.93								-979981618	1
25/8-4	OIL	1750.70	1750.70	-28.40		-28.40	-28.20					-979967396	1
25/11-5	OIL	5740.00	5790.00	-28.50		-29.19	-28.10					-979981617	1
25/11-5	OIL	5740.00	5790.00	-26.47								-979981617	1
25/11-15	OIL	1688.80	1704.10			-28.94	-28.14	-28.10	-28.17			-979979161	1
25/11-15	OIL	1688.80	1704.10	-28.40		-28.90	-28.20					-979979161	1

TABLE: 4.6

SATURATED FRACTION MOLECULAR RATIOS (SEDIMENT SAMPLES), WELL NOR:25/11-16

Depth (m)	Lithology	Type	Pristane/ nC17	Pristane/ Phytane	CPI-I	CPI-II	nC17/ nC17+nC27	Analysing Company
1767.00	SST	COCH	0.4	2.0	1.1			GERG
1773.00	SST	COCH	0.6	1.5	1.3			GERG
1778.00	SST	COCH	0.6	1.3	1.2			GERG
1781.00	SST	COCH	0.6	1.3	1.3			GERG
1798.00	SST	COCH	0.6	2.0	1.1			GERG
1802.50	SST	COCH	0.6	1.4	1.2			GERG
1807.00	SST	COCH	0.8	6.2	0.7			GERG

Table 4.7 Molecular ratios saturated hydrocarbons, oil samples.

HYLAB RESULTS MANAGEMENT : SATURATED GC ANALYSIS RESULTS SELECTED FROM SCREEN

Well	Type	St.Depth	En.Depth	Pris/Phyt	Pris/nC17	CPI	CPI(P)	Sample ID	Dup	Father ID	Type
25/1-9	OIL	2650.50	2650.50	1.6	10.2	2.6		-979981623	1		
25/2-10S	OIL	2252.50	2252.50	1.4	1.4	1.2		-979981622	1		
25/5-1	OIL	2687.00	3002.00	1.9	0.6	1.2		-979981620	1		
25/6-1	OIL	2276.70	2279.70	2.6	0.6	1.5		-979981619	1		
25/8-1	OIL	5758.00	5782.00	1.6	0.9	1.1		-979981618	1		
25/8-4	OIL	1750.70	1750.70	1.9	1.8	1.1		-979967396	1		
25/11-5	OIL	5740.00	5790.00	1.3	1.0	1.1		-979981617	1		
25/11-15	OIL	1688.80	1704.10	1.6	1.0	0.9	0.8	-979979161	1		
25/11-15	OIL	1688.80	1704.10	1.8	1.0	1.5		-979979161	1		

I Vitrinite reflectance readings.

Sample ID: 25/11-16 1355
R.o. Aver.: 0.32 (20)
Lithology: Silty shale - 100%
Phytoclast Content: Low
Vitrinite: 90%
Inertinite: 10%
Exinite: -
UV fluorescence: Spores - low - y; Carbonate - low - y
Bitumen: Stain - mod; wisps - mod
VR populations: 1
Mineralogy: Forams
General Comments: -
0.34
0.34
0.36
0.32
0.31
0.29
0.32
0.31
0.28
0.26
0.28
0.35
0.30
0.37
0.31
0.31
0.43
0.26
0.36
0.28

Sample ID: 25/11-16 1408
R.o. Aver.: 0.34 (20)
Lithology: Silty shale - 100%
Ph oclast Content: Low
Vitrinite: 80%
Inertinite: 20%
Exinite: -
UV fluorescence: Algae - trace - g/y; spores - low - y
Bitumen: Stain - mod/strong; wisps + blebs - mod/rich
VR populations: 1
Mineralogy: -
General Comments: -
0.27
0.39
0.27
0.30
0.29
0.34
0.34
0.39
0.30
0.28
0.39
0 1
0.33
0.30
0.33
0.36
0.38
0.45
0.44
0.27

Sample ID: 25/11-16 1470
R.o. Aver.: 0.32 (20)
Lithology: Shale - 100%
Phytoclast Content: Low
Vitrinite: 50%
Inertinite: 50%
Exinite: -
UV fluorescence: Spores - trace - y-y/o
Bitumen: Stain - light/mod; wisps - mod
VR populations: 1
Mineralogy: Iron oxide specks
General Comments: -
0.34
0.31
0.33
0.29
0.31
0.30
0.33
0.27
0.44
0.43
0.30
0.[illegible]3
0.[illegible]4
0.29
0.27
0.25
0.31
0.30
0.29
0.36

Sample ID: 25/11-16 1505
R.o. Aver.: 0.34 (1)
Lithology: Clay Ironstone - 100%
Phytoclast Content: Virtually barren
Vitrinite: One
Inertinite: Trace
Exinite: -
UV fluorescence: Spores - low y + y/o
Bitumen: Stain - trace; wisps - trace
VR populations: 1
Mineralogy: Siderite rich; Iron oxide traces
General Comments: -
0.34

Sample ID: 25/11-16 1582
R.o. Aver.: 0.42 (4)
Lithology: Shale - 100%
Phytoclast Content: Trace
Vitrinite: Trace
Inertinite: Trace
Exinite: -
UV fluorescence: Spores - low - y/o
Bitumen: Stain - light
VR populations: 1
Mineralogy: Iron oxide specks
General Comments: Phytoclasts very degraded
0.40
0.35
0.46
0.47

Sample ID: 25/11-16 1633
R.o. Aver.: 0.41 (6)
Lithology: Shale - 100%
Phytoclast Content: Trace
Vitrinite: Trace
Inertinite: Trace
Exinite: -
UV fluorescence: Spores - low - y + y/o
Bitumen: Stain - light; wisps - low
VR populations: 1
Mineralogy: Iron oxide specks
General Comments: Phytoclasts degraded
0.43
0.35
0.41
0.45
0.44
0.40

Sample ID: 25/11-16 1665.5
R.o. Aver.: 0.40 (11)
Lithology: Shale - 100%
Phytoclast Content: Low
Vitrinite: Trace
Inertinite: 100%
Exinite: -
UV fluorescence: Spores - mod - y + L.O.
Bitumen: Stain - light/mod; wisps - low
VR populations: 1
Mineralogy: Iron oxide specks
General Comments: -
0.40
0.35
0.38
0.47
0.41
0.37
0.41
0.43
0.42
0.36
0.38

Sample ID: 25/11-16 1695
R.o. Aver.: 0.38 (20)
Lithology: Shale - 100%
Phytoclast Content: Low - moderate
Vitrinite: 10%
Inertinite: 90%
Exinite: -
UV fluorescence: Algae - trace - y; Spores - mod - y-y/o
Bitumen: Stain - light/mod; wisps + blebs - mod/rich
VR populations: 1
Mineralogy:
General Comments: -
0.31
0.35
0.33
0.48
0.39
0.30
0.35
0.42
0.40
0.43
0.35
0.42
0.
0.39
0.38
0.42
0.39
0.38
0.34
0.41

Sample ID: 25/11-16 1702
R.o. Aver.: 0.43 (15)
Lithology: Shale - 90%; Cement - 10%
Pl oclast Content: Low
Vitrinite: Trace
Inertinite: 100%
Exinite: -
UV fluorescence: Spores - mod - y-y/o
Bitumen: Stain - light; wisps - mod
VR populations: 1
Mineralogy: Iron oxide specks
General Comments: -
0.54
0.41
0.47
0.38
0.44
0.42
0.48
0.33
0.34
0.41
0.41
0 3
0.54
0.42
0.45

Sample ID: 25/11-16 1710
R.o. Aver.: 0.43 (20)
Lithology: Shale - 100%
Photoclast Content: Low - moderate
Vitrinite: 10%
Inertinite: 90%
Exinite: -
UV fluorescence: Spores - mod - y/o
Bitumen: Stain - light; wisps - mod/rich
VR populations: 1
Mineralogy: Iron oxide specks - rather pyritic
General Comments: -
0.40
0.42
0.49
0.46
0.37
0.48
0.46
0.40
0.41
0.45
0.45
0.42
0.43
0.45
0.36
0.44
0.40
0.43
0.44
0.47

Sample ID: 25/11-16 1717
R.o. Aver.: 0.42 (20)
Lithology: Shale - 70%; Carbonate - 20%; Sand grains - 10%
Phytoclast Content: Low
Vitrinite: 10%
Inertinite: 90%
Exinite: -
UV fluorescence: Dino. - low - y; Spores - low/mod - y-y/o
Bitumen: Stain - light; wisps - mod/rich in shale
VR populations: 1
Mineralogy: Iron oxide specks
General Comments: -
0.45
0.43
0.46
0.41
0.41
0.38
0.38
0.39
0.43
0.35
0.40
0.42
0.37
0.36
0.49
0.42
0.48
0.48
0.43
0.41

Sample ID: 25/11-16 1725
R.o. Aver.: 0.42 (14)
Lithology: Shale - 100%; Coarse carbonate - trace
Phytoclast Content: Low
Vitrinite: Trace
Inertinite: 100%
Exinite: -
UV fluorescence: Spores - mod - y-y/o
Bitumen: Stain - light; wisps - mod/rich
VR populations: 1
Mineralogy: Rather pyritic; Iron oxide specks
General Comments: -
0.45
0.38
0.38
0.39
0.43
0.44
0.37
0.36
0.41
0.46
0.51
0.41
0.42
0.43

Sample ID: 25/11-16 1735
R.o. Aver.: 0.42 (4)
Lithology: Shale - 100%
Photoclast Content: Trace
Vitrinite: Trace
Inertinite: 100%
Exinite: -
UV fluorescence: Spores - mod - y-y/o
Bitumen: Stain - light; wisps - mod/rich
VR populations: 1
Mineralogy: Pyritic;Iron oxide specks
General Comments: -
0.40
0.43
0.43
0.43

Sample ID: 25/11-16 1745
R.o. Aver.: 0.45 (3)
Lithology: Shale - 90%; Calcite fragments - 10%; Sand grains - trace
Phytoclast Content: Trace
Vitrinite: 3%
Inertinite: 100%
Exinite: -
UV fluorescence: Algal wisps - trace - y; Spores - trace - y-y/o
Bitumen: Stain - nil - light; wisps - very low
VR populations: 1
Mineralogy: Iron oxide specks; glauconite
General Comments: -
0.46
0.39
0.40

Sample ID: 25/11-16 1745 SWC
R.o. Aver.: NDP
Lithology: Shale - 100%
Phytoclast Content: Very low
Vitrinite: -
Inertinite: 100%
Exinite: -
UV fluorescence: Spores - trace - y-y/o
Bitumen: Virtually no staining or wisps
VR populations: -
Mineralogy: Shale white
General Comments: -

Sample ID: 25/11-16 1857
R.o. Aver.: 0.45 (2)
Lithology: Sandstone - 80%; Shale - 20%
Phytoclast Content: Trace
Vitrinite: Two
Inertinite: 100%
Exinite: -
UV fluorescence: Spores - trace - y-y/o
Bitumen: Stain - light; wisps - mod in a few shale cuttings
VR populations: 1
Mineralogy: Iron oxide staining in most shale cuttings; glauconite traces
General Comments: Phytoclasts in shale
0.44
0.46

Sample ID: 25/11-16 1870
R.o. Aver.: 0.49 (3)
Lithology: Sandstone - 80%; Shale - 20%
Ph oclast Content: Trace
Vitrinite: 3
Inertinite: Trace
Exinite: -
UV fluorescence: Algae - trace - g/y; spores - trace - y
Bitumen: Stain - light; wisps - low in a few shale cuttings
VR populations: 1
Mineralogy: Iron oxide staining in some shale cuttings
General Comments: Readings on a single shale cutting
0.51
0.47
0.50

Sample ID: 25/11-16 1890
R.o. Aver.: 0.50 (4)
Lithology: Sandstone - 70%; Shale - 30%
Phytoclast Content: Trace
Vitrinite: Trace
Inertinite: Trace
Exinite: -
UV fluorescence: Spores - low - y + L.O.; Carbonate - low - y
Bitumen: Stain - light; wisps - low in shale
VR populations: 1
Mineralogy: Iron oxide specks + light staining
General Comments: -
0.51
0.54
0.47
0.47

Sample ID: 25/11-16 1897
R.o. Aver.: 0.59 (6)
Lithology: Sandstone - 60%; shale - 40%
Phytoclast Content: Very low
Vitrinite: Trace
Inertinite: 100%
Exinite: -
UV fluorescence: Spores - low - y/o
Bitumen: Stain - light; wisps - mod in shale
VR populations: 1
Mineralogy: Iron oxide specks + staining
General Comments: -
0.56
0.62
0.54
0.57
0.66
0.61

Well I.D.: Norsk Hydro 25/11-16

Sample Depth	R.o. Avg.	No. of Determinations
1355	0.32	20
1408	0.34	20
1470	0.32	20
1505	0.34	1
1582	0.42	4
1633	0.41	6
1665.5	0.40	11
1695	0.38	20
1702	0.43	15
1710	0.43	20
1717	0.42	20
1725	0.42	14
1735	0.42	4
1742 - 1745	0.45	3
1745 SWC	NDP	-
1857	0.45	2
1870	0.49	3
1890	0.50	4
1[illegible]	0.59	6

25/11-16

BA-93-893-1

Norsk Hydro Sediments

Sample Inventory

GERG File Number	Sample Description	Depth
X2076	25/11-16 Core #2 (core chips)	1714 m
X2081	25/11-16 Core #5	1761 m
X2086	25/11-16 Core #6	1773 m
X2091	25/11-16 Core #6	1778 m
X2096	25/11-16 Core #6	1781 m
X2101	25/11-16 Core #8	1798 m
X2106	25/11-16 Core #8	1802.5 m
X2111	25/11-16 Core #9	1807 m
X2116	25/11-16 Core #12	1873 m

Norsk-Hydro Sediments
Summary of All Biomarker Analyses

File #	Description	Total Concetrations of Biomarkers					Percent Composition of Biomarkers						
		Diterp (ppm)	Triterp (ppm)	Regular Steranes (ppm)	Mono-Aromat Steranes (ppm)	Tri-Aromat Steranes (ppm)	Diterp (%)	Triterp (%)	Regular Steranes (%)	Mono-Aromat Steranes (%)	Tri-Aromat Steranes (%)	% Tot Arom /Tot Ster +Arom Ster (%)	% Reg Ster /Tot Ster (%)
X2076	25/11-16 Core #2 (Core Chips) 1714 m	68	128	237	40	38	13.2	25.1	46.4	7.8	7.5	24.87	24.5
X2081	25/11-16 Core #5 1761 m	8	46	245	88	66	1.8	10.1	54.0	19.4	14.6	38.64	43.6
X2086	25/11-16 Core #6 1773 m	24	75	200	72	56	5.6	17.6	46.8	16.8	13.2	39.03	31.8
X2091	25/11-16 Core #6 1778 m	26	102	266	95	77	4.7	18.0	46.9	16.8	13.7	39.36	30.5
X2096	25/11-16 Core #6 1781 m	26	78	197	71	56	6.1	18.1	45.9	16.7	13.2	39.40	27.8
X2101	25/11-16 Core #8 1798 m	23	130	311	140	104	3.3	18.4	43.9	19.8	14.6	43.98	37.1
X2106	25/11-16 Core #8 1802.5 m	21	85	238	181	125	3.3	13.0	36.6	27.9	19.3	56.32	32.4
X2111	25/11-16 Core #9 1807 m	22	93	238	183	131	3.2	13.9	35.7	27.5	19.7	56.93	34.2
X2116	25/11-16 Core #12 1873 m	64	66	220	4	8	17.8	18.2	60.8	1.1	2.1	5.02	10.0

Norsk-Hydro Sediments
Terpane Concentrations (m/z=191)

File #	Description	C20 Diterp Peak A (ppm)	C21 Diterp B (ppm)	C22 Diterp C (ppm)	C23 Diterp D (ppm)	C24 Diterp E (ppm)	C25 Diterp #1 (ppm)	Unknown #2 (ppm)	Unknown #3 (ppm)	C24 Tetra-Cyclic #4 (ppm)	C26 Tricyc #5 (ppm)	C26 Tricyc #6 (ppm)	Unknown #7 (ppm)
X2076	25/11-16 Core #2 (Core Chips)	17.29	15.59	4.95	11.89	11.84	6.01	2.06	1.42	4.81	1.90	1.87	1.72
X2081	25/11-16 Core #5 1761 m	0.98	1.42	0.65	1.54	1.65	2.01	0.10	0.05	1.76	0.71	0.47	0.32
X2086	25/11-16 Core #6 1773 m	2.74	4.39	2.05	5.82	4.60	4.18	0.62	0.54	3.50	1.41	1.65	0.96
X2091	25/11-16 Core #6 1778 m	2.94	4.67	1.87	6.49	5.37	5.15	0.29	0.58	4.38	1.37	1.51	1.46
X2096	25/11-16 Core #6 1781 m	3.69	4.79	2.08	5.87	5.31	4.26	0.45	0.36	3.85	1.10	1.70	0.95
X2101	25/11-16 Core #8 1798 m	2.21	4.20	1.60	5.58	4.72	4.81	0.00	0.35	4.69	1.34	1.86	1.25
X2106	25/11-16 Core #8 1802.5 m	2.46	3.59	1.35	5.10	4.58	4.14	0.00	0.35	3.99	1.21	1.16	0.92
X2111	25/11-16 Core #9 1807 m	2.14	3.48	1.27	5.59	4.72	4.31	0.23	0.44	4.08	1.30	1.70	1.01
X2116	25/11-16 Core #12 1873 m	16.18	18.26	3.75	12.19	9.83	4.16	0.59	1.58	3.29	1.46	2.13	1.18

Norsk-Hydro Sediments

Terpane Concentrations (m/z=191)

File #	Description	Unknown Peak #8 (ppm)	C28 Tricyc 9 (ppm)	C28 Tricyc #10 (ppm)	C29 Tricyc #11 (ppm)	C29 Tricyc #12 (ppm)	C27 Hopane TS #13 (ppm)	C27 Hopane TM #14 (ppm)	C27 Hopane #15 (ppm)	Unknown #16 (ppm)	C28 Hopane #17 (ppm)	Unknown #18 (ppm)	C29 Hopane #19 (ppm)
X2076	25/11-16 Core #2 (Core Chips)	1.47	0.75	4.53	2.81	3.27	5.60	5.72	2.77	2.75	4.02	0.97	16.05
X2081	25/11-16 Core #5 1761 m	1.04	0.65	1.03	1.35	1.26	2.68	2.05	2.16	0.88	2.69	0.33	4.99
X2086	25/11-16 Core #6 1773 m	1.37	0.57	0.99	2.17	2.03	3.66	3.07	1.03	0.57	4.29	0.48	7.11
X2091	25/11-16 Core #6 1778 m	2.19	1.09	1.58	3.05	3.21	5.60	5.14	0.86	0.86	5.84	0.79	10.98
X2096	25/11-16 Core #6 1781 m	0.98	0.78	1.33	1.95	2.27	3.61	3.00	0.53	0.69	4.47	0.44	7.15
X2101	25/11-16 Core #8 1798 m	3.33	1.02	1.84	2.69	3.51	5.80	6.02	0.96	0.81	9.50	0.66	14.10
X2106	25/11-16 Core #8 1802.5 m	1.79	0.68	1.21	2.00	2.26	3.88	4.55	0.82	0.35	6.07	0.72	8.52
X2111	25/11-16 Core #9 1807 m	1.67	0.77	1.37	1.93	2.42	3.86	4.09	0.90	0.74	6.08	0.44	8.98
X2116	25/11-16 Core #12 1873 m	0.56	0.62	1.17	1.41	3.12	3.17	3.44	0.65	1.31	0.87	1.02	8.96

Norsk-Hydro Sediments

Terpane Concentrations (m/z=191)

File #	Description	C29 Norhop Peak #20 (ppm)	Diahopane F (ppm)	C29 Moretane #21 (ppm)	C30 Oleanane #22 (ppm)	C30 Hopane #23 (ppm)	C30 Moretane #24 (ppm)	Unknown #25 (ppm)	Unknown #26 (ppm)	C31 Hopane 22S #27 (ppm)	C31 Hopane 22R #28 (ppm)	C31 Moretane #29 (ppm)	Gammacerene G (ppm)
X2076	25/11-16 Core #2 (Core Chips)	2.65	2.15	4.70	1.40	19.53	6.56	0.89	0.29	5.10	7.69	6.72	0.93
X2081	25/11-16 Core #5 1761 m	0.85	1.12	0.86	0.56	7.77	0.66	0.32	0.34	3.12	2.07	0.16	0.51
X2086	25/11-16 Core #6 1773 m	2.10	2.08	1.84	0.00	11.42	1.42	0.03	0.84	5.27	3.97	0.91	1.16
X2091	25/11-16 Core #6 1778 m	2.64	3.34	2.53	0.10	16.35	2.16	0.12	1.30	6.89	4.95	0.40	1.54
X2096	25/11-16 Core #6 1781 m	1.91	1.69	1.69	0.21	11.02	1.37	0.08	1.06	5.03	3.63	0.77	1.09
X2101	25/11-16 Core #8 1798 m	3.56	3.68	2.94	0.67	22.73	2.63	0.62	1.32	9.38	6.40	1.10	1.87
X2106	25/11-16 Core #8 1802.5 m	1.74	1.86	1.94	0.12	13.52	1.56	0.05	0.83	5.95	4.13	0.86	1.09
X2111	25/11-16 Core #9 1807 m	2.64	1.93	2.13	0.31	14.93	1.77	0.06	0.96	6.76	4.78	1.05	1.30
X2116	25/11-16 Core #12 1873 m	1.63	0.65	2.12	0.87	9.78	3.15	0.51	0.33	4.08	4.40	1.25	0.63

Norsk-Hydro Sediments
Terpane Concentrations (m/z=191)

File #	Description	C32 Hopane 22S Peak #30 (ppm)	C32 Hopane 22R #31 (ppm)	C32 Moretane #32 (ppm)	C31 bb Homohop #33 (ppm)	C33 Hopane 22S #34 (ppm)	C33 Hopane 22R #35 (ppm)	C34 Hopane 22S #36 (ppm)	C34 Hopane 22R #37 (ppm)	C35 Hopane 22S #38 (ppm)	C35 Hopane 22R #39 (ppm)
X2076	25/11-16 Core #2 (Core Chips)	3.51	2.39	0.28	4.81	3.04	1.93	1.33	1.24	2.43	1.85
X2081	25/11-16 Core #5 1761 m	2.02	1.32	0.30	0.20	1.34	0.83	1.06	0.53	0.87	0.23
X2086	25/11-16 Core #6 1773 m	3.51	2.54	0.42	0.33	2.88	1.97	1.66	0.98	1.61	1.18
X2091	25/11-16 Core #6 1778 m	4.27	3.17	0.56	0.47	3.58	2.39	1.81	1.19	1.78	1.46
X2096	25/11-16 Core #6 1781 m	3.53	2.43	0.43	3.59	3.59	2.06	1.81	1.22	1.70	1.15
X2101	25/11-16 Core #8 1798 m	6.12	4.09	0.64	0.23	5.61	2.85	2.55	1.50	2.38	1.53
X2106	25/11-16 Core #8 1802.5 m	4.16	2.87	0.43	0.27	3.69	2.05	1.94	1.24	1.78	1.16
X2111	25/11-16 Core #9 1807 m	4.66	3.34	0.55	0.26	4.27	2.39	2.12	1.22	1.98	1.44
X2116	25/11-16 Core #12 1873 m	2.39	2.20	0.39	1.20	1.27	1.00	0.52	0.91	0.64	0.75

Norsk-Hydro Sediments

Terpane Percent Compositions (m/z=191)

File #	Description	C20 Diterp Peak A (%)	C21 Diterp B (%)	C22 Diterp C (%)	C23 Diterp D (%)	C24 Diterp E (%)	C25 Diterp #1 (%)	Unknown #2 (%)	Unknown #3 (%)	C24 Tetra-Cyclic #4 (%)	C26 Tricyc #5 (%)	C26 Tricyc #6 (%)	Unknown #7 (%)
X2076	25/11-16 Core #2 (Core Chips)	8.1	7.3	2.3	5.6	5.5	2.8	1.0	0.7	2.3	0.9	0.9	0.8
X2081	25/11-16 Core #5 1761 m	1.6	2.4	1.1	2.6	2.8	3.4	0.2	0.1	2.9	1.2	0.8	0.5
X2086	25/11-16 Core #6 1773 m	2.5	4.1	1.9	5.4	4.3	3.9	0.6	0.5	3.2	1.3	1.5	0.9
X2091	25/11-16 Core #6 1778 m	2.1	3.3	1.3	4.6	3.8	3.7	0.2	0.4	3.1	1.0	1.1	1.0
X2096	25/11-16 Core #6 1781 m	3.3	4.3	1.8	5.2	4.7	3.8	0.4	0.3	3.4	1.0	1.5	0.8
X2101	25/11-16 Core #8 1798 m	1.3	2.5	1.0	3.3	2.8	2.9	0.0	0.2	2.8	0.8	1.1	0.7
X2106	25/11-16 Core #8 1802.5 m	2.1	3.1	1.2	4.4	4.0	3.6	0.0	0.3	3.5	1.1	1.0	0.8
X2111	25/11-16 Core #9 1807 m	1.7	2.8	1.0	4.5	3.8	3.5	0.2	0.4	3.3	1.0	1.4	0.8
X2116	25/11-16 Core #12 1873 m	11.4	12.9	2.6	8.6	6.9	2.9	0.4	1.1	2.3	1.0	1.5	0.8

Norsk-Hydro Sediments

Terpane Percent Compositions (m/z=191)

File #	Description	Unknown Peak #8 (%)	C28 Tricyc 9 (%)	C28 Tricyc #10 (%)	C29 Tricyc #11 (%)	C29 Tricyc #12 (%)	C27 Hopane TS #13 (%)	C27 Hopane TM #14 (%)	C27 Hopane #15 (%)	Unknown #16 (%)	C28 Hopane #17 (%)	Unknown #18 (%)	C29 Hopane #19 (%)
X2076	25/11-16 Core #2 (Core Chips)	0.7	0.4	2.1	1.3	1.5	2.6	2.7	1.3	1.3	1.9	0.5	7.5
X2081	25/11-16 Core #5 1761 m	1.7	1.1	1.7	2.3	2.1	4.5	3.4	3.6	1.5	4.5	0.6	8.3
X2086	25/11-16 Core #6 1773 m	1.3	0.5	0.9	2.0	1.9	3.4	2.8	1.0	0.5	4.0	0.4	6.6
X2091	25/11-16 Core #6 1778 m	1.6	0.8	1.1	2.2	2.3	4.0	3.7	0.6	0.6	4.2	0.6	7.8
X2096	25/11-16 Core #6 1781 m	0.9	0.7	1.2	1.7	2.0	3.2	2.7	0.5	0.6	4.0	0.4	6.3
X2101	25/11-16 Core #8 1798 m	2.0	0.6	1.1	1.6	2.1	3.5	3.6	0.6	0.5	5.7	0.4	8.4
X2106	25/11-16 Core #8 1802.5 m	1.6	0.6	1.1	1.7	2.0	3.4	4.0	0.7	0.3	5.3	0.6	7.4
X2111	25/11-16 Core #9 1807 m	1.3	0.6	1.1	1.6	1.9	3.1	3.3	0.7	0.6	4.9	0.4	7.2
X2116	25/11-16 Core #12 1873 m	0.4	0.4	0.8	1.0	2.2	2.2	2.4	0.5	0.9	0.6	0.7	6.3

Norsk-Hydro Sediments

Terpane Percent Compositions (m/z=191)

File #	Description	C29 Norhop Peak #20 (%)	Diahopane F (%)	C29 Moretane #21 (%)	C30 Oleanane #22 (%)	C30 Hopane #23 (%)	C30 Moretane #24 (%)	Unknown #25 (%)	Unknown #26 (%)	C31 Hopane 22S #27 (%)	C31 Hopane 22R #28 (%)	C31 Moretane #29 (%)	Gammacerene G (%)
X2076	25/11-16 Core #2 (Core Chips)	1.2	1.0	2.2	0.7	9.1	3.1	0.4	0.1	2.4	3.6	3.1	0.4
X2081	25/11-16 Core #5 1761 m	1.4	1.9	1.4	0.9	13.0	1.1	0.5	0.6	5.2	3.5	0.3	0.9
X2086	25/11-16 Core #6 1773 m	1.9	1.9	1.7	0.0	10.6	1.3	0.0	0.8	4.9	3.7	0.8	1.1
X2091	25/11-16 Core #6 1778 m	1.9	2.4	1.8	0.1	11.7	1.5	0.1	0.9	4.9	3.5	0.3	1.1
X2096	25/11-16 Core #6 1781 m	1.7	1.5	1.5	0.2	9.8	1.2	0.1	0.9	4.5	3.2	0.7	1.0
X2101	25/11-16 Core #8 1798 m	2.1	2.2	1.8	0.4	13.6	1.6	0.4	0.8	5.6	3.8	0.7	1.1
X2106	25/11-16 Core #8 1802.5 m	1.5	1.6	1.7	0.1	11.8	1.4	0.0	0.7	5.2	3.6	0.7	0.9
X2111	25/11-16 Core #9 1807 m	2.1	1.6	1.7	0.2	12.0	1.4	0.0	0.8	5.4	3.8	0.8	1.0
X2116	25/11-16 Core #12 1873 m	1.2	0.5	1.5	0.6	6.9	2.2	0.4	0.2	2.9	3.1	0.9	0.4

Norsk-Hydro Sediments

Terpane Percent Compositions (m/z=191)

File #	Description	C32 Hopane 22S Peak #30 (%)	C32 Hopane 22R #31 (%)	C32 Moretane #32 (%)	C31 bb Homohop #33 (%)	C33 Hopane 22S #34 (%)	C33 Hopane 22R #35 (%)	C34 Hopane 22S #36 (%)	C34 Hopane 22R #37 (%)	C35 Hopane 22S #38 (%)	C35 Hopane 22R #39 (%)
X2076	25/11-16 Core #2 (Core Chips)	1.6	1.1	0.1	2.3	1.4	0.9	0.6	0.6	1.1	0.9
X2081	25/11-16 Core #5 1761 m	3.4	2.2	0.5	0.3	2.2	1.4	1.8	0.9	1.5	0.4
X2086	25/11-16 Core #6 1773 m	3.3	2.4	0.4	0.3	2.7	1.8	1.5	0.9	1.5	1.1
X2091	25/11-16 Core #6 1778 m	3.0	2.3	0.4	0.3	2.6	1.7	1.3	0.8	1.3	1.0
X2096	25/11-16 Core #6 1781 m	3.1	2.2	0.4	3.2	3.2	1.8	1.6	1.1	1.5	1.0
X2101	25/11-16 Core #8 1798 m	3.7	2.4	0.4	0.1	3.4	1.7	1.5	0.9	1.4	0.9
X2106	25/11-16 Core #8 1802.5 m	3.6	2.5	0.4	0.2	3.2	1.8	1.7	1.1	1.5	1.0
X2111	25/11-16 Core #9 1807 m	3.7	2.7	0.4	0.2	3.4	1.9	1.7	1.0	1.6	1.2
X2116	25/11-16 Core #12 1873 m	1.7	1.6	0.3	0.8	0.9	0.7	0.4	0.6	0.5	0.5

Norsk-Hydro Sediments

Total % Compositions & Selected Terpane Ratios (m/z=191)

File #	Description	Total Concentration		% Compositions of Triterpanes				Ratios								
		Diterpanes	Triterpanes	Tricyclics	Hopanes	Moretanes	TS/TM	Hopanes		S/R+S					Hopane/Moretane	
		(ppm)	(ppm)	(%)	(%)	(%)		C28/C30	C30/C29	C31	C32	C33	C34	C35	C29/C29	C30/C30
X2076	25/11-16 Core #2 (Core Chips)	68	128	11.8	73.2	14.3	0.98	0.21	1.22	0.40	0.59	0.61	0.52	0.57	3.41	2.98
X2081	25/11-16 Core #5 1761 m	8	46	11.9	82.6	4.3	1.31	0.35	1.56	0.60	0.60	0.62	0.67	0.79	5.80	11.77
X2086	25/11-16 Core #6 1773 m	24	75	11.7	80.6	6.1	1.19	0.38	1.61	0.57	0.58	0.59	0.63	0.58	3.86	8.04
X2091	25/11-16 Core #6 1778 m	26	102	11.6	81.3	5.6	1.09	0.36	1.49	0.58	0.57	0.60	0.60	0.55	4.34	7.57
X2096	25/11-16 Core #6 1781 m	26	78	11.8	81.3	5.5	1.20	0.41	1.54	0.58	0.59	0.64	0.60	0.60	4.23	8.04
X2101	25/11-16 Core #8 1798 m	23	130	9.4	83.6	5.6	0.96	0.42	1.61	0.59	0.60	0.66	0.63	0.61	4.80	8.64
X2106	25/11-16 Core #8 1802.5 m	21	85	10.1	83.0	5.7	0.85	0.45	1.59	0.59	0.59	0.64	0.61	0.61	4.39	8.67
X2111	25/11-16 Core #9 1807 m	22	93	10.2	82.5	5.9	0.94	0.41	1.66	0.59	0.58	0.64	0.63	0.58	4.22	8.44
X2116	25/11-16 Core #12 1873 m	64	66	15.0	73.5	10.5	0.92	0.09	1.09	0.48	0.52	0.56	0.36	0.46	4.23	3.10

Norsk-Hydro Sediments
Sterane Concentrations (m/z=217)

File #	Description	C21 Sterane Peak A (ppm)	C21 Sterane #1 (ppm)	C21 Sterane B (ppm)	C22 Sterane #2 (ppm)	C27 Diaster #3 (ppm)	C27 Diaster #4 (ppm)	Diaster #5 (ppm)	Diaster #6 (ppm)	Diaster #7 (ppm)	C27 Diaster #8 (ppm)	C27 Diaster 9 (ppm)	C28 Diaster #10 (ppm)	C28 Diaster #11 (ppm)	C28 Diaster #12 (ppm)	C28 Diaster #13 (ppm)
X2076	25/11-16 Core #2 (Core Chips)	44.11	43.44	16.02	19.98	9.43	7.30	0.10	0.13	1.97	2.84	3.81	6.01	3.57	1.24	2.07
X2081	25/11-16 Core #5 1761 m	6.41	29.96	6.26	14.07	10.13	6.12	0.33	0.64	0.13	3.11	5.31	7.29	8.33	1.52	7.03
X2086	25/11-16 Core #6 1773 m	15.11	17.10	10.89	11.76	13.80	10.84	0.06	0.14	1.40	3.44	4.22	7.02	5.79	0.48	1.80
X2091	25/11-16 Core #6 1778 m	15.80	17.81	12.68	12.60	22.40	14.94	0.04	0.12	1.92	5.14	6.67	11.33	8.86	1.99	4.57
X2096	25/11-16 Core #6 1781 m	16.79	20.00	9.34	12.60	13.80	11.35	0.53	0.35	1.15	3.39	3.89	6.63	5.08	0.75	2.19
X2101	25/11-16 Core #8 1798 m	14.11	15.86	11.26	12.31	23.32	16.79	0.12	0.22	2.22	6.09	6.81	11.72	9.47	1.84	4.75
X2106	25/11-16 Core #8 1802.5 m	14.33	18.61	8.55	12.92	18.91	12.99	0.02	0.22	1.51	4.57	6.61	8.52	7.13	1.20	4.31
X2111	25/11-16 Core #9 1807 m	15.17	16.69	10.89	13.10	18.50	12.49	0.03	0.27	1.73	4.37	4.93	5.63	5.58	1.42	3.60
X2116	25/11-16 Core #12 1873 m	59.76	50.36	27.27	20.25	6.45	4.21	0.17	0.39	0.79	0.81	1.87	1.87	2.21	0.56	0.53

Norsk-Hydro Sediments
Sterane Concentrations (m/z=217)

File #	Description	C28 Diaster Peak #14 (ppm)	C28 Diaster #15 (ppm)	Diaster (?) #16 (ppm)	C27 aaaS + Diaster+ #17 (ppm)	C27 abbR Diaster #18 (ppm)	C27 abbS Sterane #19 (ppm)	Diaster (?) #20 (ppm)	Diaster (?) #21 (ppm)	C27 aaaR Sterane #22 (ppm)	C29 Diaster #23 (ppm)	Diaster (?) #24 (ppm)	Diaster (?) #25 (ppm)	C28 aaaS Sterane #26 (ppm)	Diaster (?) #27 (ppm)	C28 abbR Sterane #28 (ppm)
X2076	25/11-16 Core #2 (Core Chips)	1.81	2.75	0.69	5.22	3.18	2.58	0.24	0.17	7.02	4.10	2.30	0.45	1.09	1.49	3.45
X2081	25/11-16 Core #5 1761 m	1.94	3.93	2.87	5.52	20.62	11.26	0.12	0.11	3.29	9.04	4.02	2.86	2.60	1.54	10.02
X2086	25/11-16 Core #6 1773 m	2.76	5.20	0.74	6.76	11.54	4.94	0.06	0.12	3.55	9.78	2.75	3.22	1.21	2.36	3.39
X2091	25/11-16 Core #6 1778 m	3.37	5.26	1.03	9.68	6.71	6.85	0.18	0.09	5.23	16.49	4.96	4.70	1.99	3.64	5.42
X2096	25/11-16 Core #6 1781 m	2.69	4.12	1.91	6.61	4.09	4.82	0.16	0.05	3.84	11.30	3.06	3.20	1.20	2.35	3.29
X2101	25/11-16 Core #8 1798 m	3.86	5.42	1.50	13.09	9.38	9.48	0.24	0.10	6.57	20.45	5.78	5.68	2.79	5.31	7.41
X2106	25/11-16 Core #8 1802.5 m	2.96	4.23	1.30	8.99	6.25	6.64	0.04	0.03	5.02	13.98	3.62	3.93	2.07	2.99	4.99
X2111	25/11-16 Core #9 1807 m	3.60	4.71	1.50	9.71	7.99	6.37	0.10	0.10	4.67	13.90	3.33	4.11	2.31	4.04	5.47
X2116	25/11-16 Core #12 1873 m	1.30	1.37	6.89	2.67	1.52	2.73	0.16	0.14	1.86	2.13	0.76	0.56	0.52	0.31	2.03

Norsk-Hydro Sediments

Sterane Concentrations (m/z=217)

File #	Description	C28 abbS Sterane Peak #29 (ppm)	Diaster (?) #30 (ppm)	C28 aaaR Sterane #31 (ppm)	Diaster (?) #32 (ppm)	C29 aaaS Sterane #33 (ppm)	C29 abbR Sterane #34 (ppm)	C29 abbS Sterane #35 (ppm)	Diaster (?) #36 (ppm)	C29 aaaR Sterane #37 (ppm)	C30 Sterane (?) #38 (ppm)	C30 Sterane (?) #39 (ppm)	C30 Sterane (?) #40 (ppm)	C30 Sterane (?) #41 (ppm)
X2076	25/11-16 Core #2 (Core Chips)	2.54	2.01	6.04	0.43	3.36	6.96	2.80	0.43	9.19	1.25	1.07	0.73	1.68
X2081	25/11-16 Core #5 1761 m	8.56	3.54	2.49	0.70	6.80	13.03	11.02	0.60	4.23	0.90	2.44	2.84	1.02
X2086	25/11-16 Core #6 1773 m	4.17	3.46	2.08	1.29	4.95	5.82	4.65	0.72	3.86	1.70	1.62	1.96	1.37
X2091	25/11-16 Core #6 1778 m	6.20	5.21	2.85	2.05	7.48	8.81	6.44	0.87	5.62	1.57	2.43	2.11	1.71
X2096	25/11-16 Core #6 1781 m	4.47	3.63	2.10	1.12	4.59	5.39	4.30	0.56	3.70	1.59	1.56	1.78	1.21
X2101	25/11-16 Core #8 1798 m	8.42	6.47	4.43	2.38	10.61	12.59	8.79	1.38	8.46	3.62	3.39	3.69	2.50
X2106	25/11-16 Core #8 1802.5 m	5.13	4.45	2.94	1.76	7.22	8.56	6.01	0.81	5.37	1.45	2.07	2.30	2.04
X2111	25/11-16 Core #9 1807 m	5.40	4.20	2.95	1.70	7.42	8.54	6.48	0.93	5.67	1.59	2.21	2.58	2.11
X2116	25/11-16 Core #12 1873 m	0.80	0.15	0.92	6.65	1.62	2.83	0.72	0.25	2.01	0.11	0.51	0.72	0.46

Norsk-Hydro Sediments

Sterane Percent Compositions (m/z=217)

File #	Description	C21 Sterane Peak A (%)	C21 Sterane #1 (%)	C21 Sterane B (%)	C22 Sterane #2 (%)	C27 Diaster #3 (%)	C27 Diaster #4 (%)	Diaster #5 (%)	Diaster #6 (%)	Diaster #7 (%)	C27 Diaster #8 (%)	C27 Diaster 9 (%)	C28 Diaster #10 (%)	C28 Diaster #11 (%)	C28 Diaster #12 (%)	C28 Diaster #13 (%)
X2076	25/11-16 Core #2 (Core Chips)	18.6	18.3	6.8	8.4	4.0	3.1	0.0	0.1	0.8	1.2	1.6	2.5	1.5	0.5	0.9
X2081	25/11-16 Core #5 1761 m	2.6	12.3	2.6	5.8	4.1	2.5	0.1	0.3	0.1	1.3	2.2	3.0	3.4	0.6	2.9
X2086	25/11-16 Core #6 1773 m	7.6	8.6	5.4	5.9	6.9	5.4	0.0	0.1	0.7	1.7	2.1	3.5	2.9	0.2	0.9
X2091	25/11-16 Core #6 1778 m	5.9	6.7	4.8	4.7	8.4	5.6	0.0	0.0	0.7	1.9	2.5	4.3	3.3	0.7	1.7
X2096	25/11-16 Core #6 1781 m	8.5	10.2	4.8	6.4	7.0	5.8	0.3	0.2	0.6	1.7	2.0	3.4	2.6	0.4	1.1
X2101	25/11-16 Core #8 1798 m	4.5	5.1	3.6	4.0	7.5	5.4	0.0	0.1	0.7	2.0	2.2	3.8	3.0	0.6	1.5
X2106	25/11-16 Core #8 1802.5 m	6.0	7.8	3.6	5.4	8.0	5.5	0.0	0.1	0.6	1.9	2.8	3.6	3.0	0.5	1.8
X2111	25/11-16 Core #9 1807 m	6.4	7.0	4.6	5.5	7.8	5.2	0.0	0.1	0.7	1.8	2.1	2.4	2.3	0.6	1.5
X2116	25/11-16 Core #12 1873 m	27.1	22.9	12.4	9.2	2.9	1.9	0.1	0.2	0.4	0.4	0.8	0.8	1.0	0.3	0.2

Norsk-Hydro Sediments

Sterane Percent Compositions (m/z=217)

File #	Description	C28 Diaster Peak #14 (%)	C28 Diaster #15 (%)	Diaster (?) #16 (%)	C27 aaaS + Diaster #17 (%)	C27 abbR Diaster #18 (%)	C27 abbS Sterane #19 (%)	Diaster (?) #20 (%)	Diaster (?) #21 (%)	C27 aaaR Sterane #22 (%)	C29 Diaster #23 (%)	Diaster (?) #24 (%)	Diaster (?) #25 (%)	C28 aaaS Sterane #26 (%)	Diaster (?) #27 (%)	C28 abbR Sterane #28 (%)
X2076	25/11-16 Core #2 (Core Chips)	0.8	1.2	0.3	2.2	1.3	1.1	0.1	0.1	3.0	1.7	1.0	0.2	0.5	0.6	1.5
X2081	25/11-16 Core #5 1761 m	0.8	1.6	1.2	2.3	8.4	4.6	0.0	0.0	1.3	3.7	1.6	1.2	1.1	0.6	4.1
X2086	25/11-16 Core #6 1773 m	1.4	2.6	0.4	3.4	5.8	2.5	0.0	0.1	1.8	4.9	1.4	1.6	0.6	1.2	1.7
X2091	25/11-16 Core #6 1778 m	1.3	2.0	0.4	3.6	2.5	2.6	0.1	0.0	2.0	6.2	1.9	1.8	0.7	1.4	2.0
X2096	25/11-16 Core #6 1781 m	1.4	2.1	1.0	3.4	2.1	2.5	0.1	0.0	2.0	5.7	1.6	1.6	0.6	1.2	1.7
X2101	25/11-16 Core #8 1798 m	1.2	1.7	0.5	4.2	3.0	3.1	0.1	0.0	2.1	6.6	1.9	1.8	0.9	1.7	2.4
X2106	25/11-16 Core #8 1802.5 m	1.2	1.8	0.5	3.8	2.6	2.8	0.0	0.0	2.1	5.9	1.5	1.7	0.9	1.3	2.1
X2111	25/11-16 Core #9 1807 m	1.5	2.0	0.6	4.1	3.4	2.7	0.0	0.0	2.0	5.8	1.4	1.7	1.0	1.7	2.3
X2116	25/11-16 Core #12 1873 m	0.6	0.6	3.1	1.2	0.7	1.2	0.1	0.1	0.8	1.0	0.3	0.3	0.2	0.1	0.9

Norsk-Hydro Sediments

Sterane Percent Compositions (m/z=217)

File #	Description	C28 abbS Sterane Peak #29 (%)	Diaster (?) #30 (%)	C28 aaaR Sterane #31 (%)	Diaster (?) #32 (%)	C29 aaaS Sterane #33 (%)	C29 abbR Sterane #34 (%)	C29 abbS Sterane #35 (%)	Diaster (?) #36 (%)	C29 aaaR Sterane #37 (%)	C30 Sterane (?) #38 (%)	C30 Sterane (?) #39 (%)	C30 Sterane (?) #40 (%)	C30 Sterane (?) #41 (%)
X2076	25/11-16 Core #2 (Core Chips)	1.1	0.8	2.5	0.2	1.4	2.9	1.2	0.2	3.9	0.5	0.5	0.3	0.7
X2081	25/11-16 Core #5 1761 m	3.5	1.4	1.0	0.3	2.8	5.3	4.5	0.2	1.7	0.4	1.0	1.2	0.4
X2086	25/11-16 Core #6 1773 m	2.1	1.7	1.0	0.6	2.5	2.9	2.3	0.4	1.9	0.9	0.8	1.0	0.7
X2091	25/11-16 Core #6 1778 m	2.3	2.0	1.1	0.8	2.8	3.3	2.4	0.3	2.1	0.6	0.9	0.8	0.6
X2096	25/11-16 Core #6 1781 m	2.3	1.8	1.1	0.6	2.3	2.7	2.2	0.3	1.9	0.8	0.8	0.9	0.6
X2101	25/11-16 Core #8 1798 m	2.7	2.1	1.4	0.8	3.4	4.1	2.8	0.4	2.7	1.2	1.1	1.2	0.8
X2106	25/11-16 Core #8 1802.5 m	2.2	1.9	1.2	0.7	3.0	3.6	2.5	0.3	2.3	0.6	0.9	1.0	0.9
X2111	25/11-16 Core #9 1807 m	2.3	1.8	1.2	0.7	3.1	3.6	2.7	0.4	2.4	0.7	0.9	1.1	0.9
X2116	25/11-16 Core #12 1873 m	0.4	0.1	0.4	3.0	0.7	1.3	0.3	0.1	0.9	0.0	0.2	0.3	0.2

Norsk-Hydro Sediments

Total % Composition & Selected Regular Sterane Ratios (m/z=217)

File #	Description	Total % Composition						======== S/R+S =========			======== aa/bb =========		
		Diasteranes	C21+C22	Regular Steranes C27	C28	C29	C30						
		(%)	(%)	(%)	(%)	(%)	(%)	C29	C28	C27	C29	C28	C27
X2076	25/11-16 Core #2 (Core Chips)	23.3	52.1	7.6	5.5	9.4	2.0	0.27	0.15	0.43	1.29	1.19	2.13
X2081	25/11-16 Core #5 1761 m	33.2	23.2	16.6	9.7	14.3	2.9	0.62	0.51	0.63	0.46	0.27	0.28
X2086	25/11-16 Core #6 1773 m	40.7	27.4	13.4	5.4	9.6	3.3	0.56	0.37	0.66	0.84	0.44	0.63
X2091	25/11-16 Core #6 1778 m	47.3	22.2	10.7	6.2	10.7	2.9	0.57	0.41	0.65	0.86	0.42	1.10
X2096	25/11-16 Core #6 1781 m	42.4	29.9	9.9	5.6	9.1	3.1	0.55	0.36	0.63	0.86	0.43	1.17
X2101	25/11-16 Core #8 1798 m	45.7	17.2	12.4	7.4	13.0	4.2	0.56	0.39	0.67	0.89	0.46	1.04
X2106	25/11-16 Core #8 1802.5 m	44.7	22.9	11.3	6.4	11.4	3.3	0.57	0.41	0.64	0.86	0.50	1.09
X2111	25/11-16 Core #9 1807 m	42.3	23.5	12.1	6.8	11.8	3.6	0.57	0.44	0.68	0.87	0.48	1.00
X2116	25/11-16 Core #12 1873 m	18.4	71.6	4.0	1.9	3.3	0.8	0.45	0.36	0.59	1.02	0.51	1.07

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Definitions of Selected Biomarker Parameters

Triterpanes (Peak numbers in m/z=191)

Total Diterpanes = Sum of #1 to #8

* Total Triterpanes = Sum of #9 to #39

* % Tricyclics = (#9+#10+#11+#12)*100.0/Total Triterpanes

* % Hopanes = (#13+#15#+17+#19+#23+#27+#28+#30+#31
+ Sum of #34 to #39)*100.0/Total Triterpanes

* % Moretanes = (#21+#24+#29+#32)*100.0/Total Triterpanes

% Unknown = (#16+#18+#20+#25+#26+#33)*100.0/Total Triterpanes

TS/TM = #13/#14

Hopanes C28/C29 = #16/#19

Hopanes C30/C29 = #23/#19

S/(S+R) C31 = #27/(#27+#28)

C32 = #30/(#30+#31)

C33 = #34/(#34+#35)

C34 = #36/(#36+#37)

C35 = #38/(#38+#39)

Hopane/Moretane

C29/C29 = #19/#21

C30/C30 = #23/#24

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* Used in ternary plots

Definitions of Selected Biomarker Parameters

Steranes (Peak numbers in m/z=217)

* Total Steranes = Sum of #1 to #41

% Diasteranes = (Sum of of #3 to #16 +#20+#21+#23+#24+#25+#27 +#30+#32+#36)*100.0/TOTAL

* % C21+C22 = (#1+#2)*100.0/Total Steranes

* % C27 = (#17+#18+#19+#22)*100.0/Total Steranes

* % C28 = (#26+#28+#29+#31)*100.0/Total Sternaes

* % C29 = (#33+#34+#35+#37)*100.0/Total Sternaes

* % C30 = (#38+#39+#40+#41)*100.0/Total Sternaes

S/(S+R) C29 = (#33)/(#33+#37)

C28 = (#26)/(#26+#31)

C27 = (#17)/(#17+#22)

aaa/abb C29 = (#33+#37)/(#34+#35)

C28 = (#26+#31)/(#28+#29)

C27 = (#17+#22)/(#18+#19)

* % of aaa 20R C27 = #22*100.0/(#22+#31+#37)

* % of aaa 20R C28 = #31*100.0/(#22+#31+#37)

* % of aaa 20R C29 = #37*100.0/(#22+#31+#37)

* Used in ternary plots

Definitions of Selected Biomarker Parameters

Monoaromatized Steranes (Peak numbers in m/z=253)

* Total = Sum of #1 to #17

(C21+C22)/(C27toC29) = (#1+#2)/Sum of #5 to #17

% of C21/(C21+C28) = #1*100.0/(#1+#11)

Triaromatized Sterane (Peak numbers in m/z=231)

* Total = Sum of #1 to #7

(C20+C21)/(C26toC28) = (#1+#2)/Sum of #3 to #7

% of C20/(C20+C27) = #1*100.0/(#1+#4)

% of C21/(C21+C28) = #2*100.0/(#2+#7)

Tri-/Mono-aromatized Ratios

231(C27)/231(C27)+253(C28) = #4(231)/(#4(231)+#9(253))

231(C28)/231(C28)+253(C29) = #7(231)*100/(#7(231)+#15(253)+#17(253)

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* Used in ternary plots

File #	Description	C21 Sterane Peak A (ppm)	C21 Sterane Peak #1 (ppm)	C21 Sterane Peak B (ppm)	C22 Sterane #2 (ppm)	C27 Diaster #3 (ppm)	C27 Diaster #4 (ppm)	Diaster #5 (ppm)	Diaster #6 (ppm)	Diaster #7 (ppm)	C27 Diaster #8 (ppm)
>X2026	25/1-9	8.56	7.15	6.00	4.45	10.46	7.68	0.15	0.18	1.62	2.74
>X2031	25/2-10	8.64	8.60	7.37	6.93	16.75	11.30	0.25	0.35	2.31	4.18
>X2046	25/5-1	8.71	8.08	7.21	6.50	20.24	13.71	0.19	0.42	1.76	4.83
>X2051	25/6-1	0.87	0.73	0.56	0.42	0.82	0.52	0.04	0.05	0.10	0.26
>X2056	25/8-1	27.75	31.75	22.28	26.56	35.45	26.36	0.68	1.94	4.57	9.32
>X2061	25/8-4	18.25	22.05	11.01	16.13	26.11	18.00	0.65	2.52	2.52	6.02
>X2066	25/11-5	15.56	19.59	13.25	14.52	32.89	27.28	1.93	2.38	3.59	9.91
>X2071	25/11-15	22.36	24.83	12.26	20.93	27.80	21.33	1.26	0.43	4.38	7.37

File #	Description	C27 Diaster 9 (ppm)	C28 Diaster #10 (ppm)	C28 Diaster #11 (ppm)	C28 Diaster #12 (ppm)	C28 Diaster #13 (ppm)	C28 Diaster #14 (ppm)	C28 Diaster Peak #15 (ppm)	Diaster (?) #16 (ppm)	C27 aaaS + Diaster #17 (ppm)	C27 abbR + Diaster #18 (ppm)
>X2026	25/1-9	3.04	5.00	3.02	0.17	0.09	2.91	2.40	1.64	3.14	6.94
>X2031	25/2-10	5.85	7.72	5.34	0.72	1.23	6.13	6.13	0.82	4.57	12.75
>X2046	25/5-1	5.65	8.41	6.08	1.25	2.06	2.89	5.22	1.16	6.04	17.17
>X2051	25/6-1	0.27	0.33	0.35	0.04	0.02	0.29	0.30	0.00	0.47	1.04
>X2056	25/8-1	13.15	18.62	14.17	2.50	4.31	24.79	24.79	3.66	14.57	28.29
>X2061	25/8-4	7.37	10.79	10.08	0.85	2.81	3.76	10.88	1.51	9.97	18.89
>X2066	25/11-5	11.64	10.25	10.08	2.03	5.18	5.63	9.15	2.63	17.81	34.41
>X2071	25/11-15	10.58	13.30	9.32	0.66	3.48	3.40	12.20	2.20	11.68	22.32

File #	Description	C27 abbS Sterane #19 (ppm)	Diaster (?) #20 (ppm)	Diaster (?) #21 (ppm)	C27 aaaR Sterane #22 (ppm)	C29 Diaster #23 (ppm)	Diaster (?) #24 (ppm)	Diaster (?) #25 (ppm)	C28 aaaS Sterane #26 (ppm)	Diaster (?) #27 (ppm)	C28 abbR Sterane #28 (ppm)
>X2026	25/1-9	1.64	0.42	0.04	0.88	3.95	1.46	1.87	0.25	1.55	0.70
>X2031	25/2-10	4.01	0.17	0.06	1.64	8.58	3.37	2.86	0.51	3.07	2.23
>X2046	25/5-1	4.76	0.51	0.02	2.44	11.17	4.29	3.35	0.71	4.72	2.76
>X2051	25/6-1	0.24	0.08	0.00	0.24	0.96	0.32	0.25	0.11	0.39	0.14
>X2056	25/8-1	10.48	0.07	0.00	6.87	17.27	7.55	7.72	2.43	8.22	7.79
>X2061	25/8-4	6.83	0.10	0.10	4.30	13.09	4.61	4.86	1.45	5.02	4.86
>X2066	25/11-5	12.27	0.18	0.42	8.29	33.34	9.63	10.70	3.21	7.30	10.97
>X2071	25/11-15	7.29	0.24	0.21	4.99	15.09	5.03	6.16	1.88	4.55	5.99

File #	Description	C28 abbS Sterane Peak #29 (ppm)	Diaster (?) #30 (ppm)	C28 aaaR Sterane #31 (ppm)	Diaster (?) #32 (ppm)	C29 aaaS Sterane #33 (ppm)	C29 abbR Sterane #34 (ppm)	C29 abbS Sterane #35 (ppm)	Diaster (?) #36 (ppm)	C29 aaaR Sterane #37 (ppm)	C30 Sterane (?) #38 (ppm)
>X2026	25/1-9	1.44	0.86	0.47	0.18	1.25	1.38	0.99	0.12	0.71	0.34
>X2031	25/2-10	3.35	3.62	0.99	0.45	2.98	3.78	3.24	0.34	1.53	0.41
>X2046	25/5-1	3.59	4.75	1.12	0.52	4.95	5.39	3.51	0.32	3.60	1.14
>X2051	25/6-1	0.21	0.30	0.16	0.12	0.27	0.37	0.20	0.01	0.43	0.04
>X2056	25/8-1	10.36	9.76	3.98	2.27	10.48	12.32	8.56	1.37	8.35	3.94
>X2061	25/8-4	5.51	5.65	2.31	1.17	6.49	8.74	6.47	0.93	5.33	2.60
>X2066	25/11-5	14.28	11.38	6.73	0.00	16.76	19.17	13.77	1.62	13.11	5.66
>X2071	25/11-15	6.38	6.97	3.07	2.21	7.81	9.63	7.66	1.11	5.62	2.11

File #	Description	C30 Sterane (?) #39 (ppm)	C30 Sterane (?) #40 (ppm)	C30 Sterane (?) #41 (ppm)
>X2026	25/1-9	0.33	0.36	0.31
>X2031	25/2-10	0.85	0.83	0.42
>X2046	25/5-1	1.41	1.22	0.60
>X2051	25/6-1	0.10	0.11	0.03
>X2056	25/8-1	3.15	4.08	3.11
>X2061	25/8-4	2.32	2.53	1.74
>X2066	25/11-5	6.20	4.63	4.81
>X2071	25/11-15	2.33	3.17	1.98

File #	Description	C21 Sterane Peak A (%)	C21 Sterane Peak #1 (%)	C21 Sterane Peak B (%)	C22 Sterane #2 (%)	C27 Diaster #3 (%)	C27 Diaster #4 (%)	Diaster #5 (%)	Diaster #6 (%)	Diaster #7 (%)
>X2026	25/1-9	8.7	7.2	6.1	4.5	10.6	7.8	0.2	0.2	1.6
>X2031	25/2-10	5.2	5.1	4.4	4.1	10.0	6.8	0.1	0.2	1.4
>X2046	25/5-1	4.5	4.2	3.7	3.3	10.4	7.1	0.1	0.2	0.9
>X2051	25/6-1	6.9	5.8	4.5	3.3	6.5	4.1	0.3	0.4	0.8
>X2056	25/8-1	5.7	6.5	4.6	5.5	7.3	5.4	0.1	0.4	0.9
>X2061	25/8-4	6.1	7.4	3.7	5.4	8.8	6.1	0.2	0.8	0.8
>X2066	25/11-5	3.4	4.2	2.9	3.1	7.1	5.9	0.4	0.5	0.8
>X2071	25/11-15	6.5	7.2	3.6	6.1	8.1	6.2	0.4	0.1	1.3

File #	Description	C27 Diaster #8 (%)	C27 Diaster 9 (%)	C28 Diaster #10 (%)	C28 Diaster #11 (%)	C28 Diaster #12 (%)	C28 Diaster #13 (%)	C28 Diaster #14 (%)	C28 Diaster Peak #15 (%)	Diaster (?) #16 (%)	C27 aaaS + Diaster #17 (%)
>X2026	25/1-9	2.8	3.1	5.1	3.1	0.2	0.1	2.9	2.4	1.7	3.2
>X2031	25/2-10	2.5	3.5	4.6	3.2	0.4	0.7	3.7	3.7	0.5	2.7
>X2046	25/5-1	2.5	2.9	4.3	3.1	0.6	1.1	1.5	2.7	0.6	3.1
>X2051	25/6-1	2.1	2.1	2.6	2.8	0.3	0.2	2.3	2.4	0.0	3.7
>X2056	25/8-1	1.9	2.7	3.8	2.9	0.5	0.9	5.1	5.1	0.8	3.0
>X2061	25/8-4	2.0	2.5	3.6	3.4	0.3	0.9	1.3	3.7	0.5	3.4
>X2066	25/11-5	2.1	2.5	2.2	2.2	0.4	1.1	1.2	2.0	0.6	3.8
>X2071	25/11-15	2.1	3.1	3.9	2.7	0.2	1.0	1.0	3.6	0.6	3.4

File #	Description	C27 abbR + Diaster #18 (%)	C27 abbS Sterane #19 (%)	Diaster (?) #20 (%)	Diaster (?) #21 (%)	C27 aaaR Sterane #22 (%)	C29 Diaster #23 (%)	Diaster (?) #24 (%)	Diaster (?) #25 (%)	C28 aaaS Sterane #26 (%)	Diaster (?) #27 (%)
>X2026	25/1-9	7.0	1.7	0.4	0.0	0.9	4.0	1.5	1.9	0.3	1.6
>X2031	25/2-10	7.6	2.4	0.1	0.0	1.0	5.1	2.0	1.7	0.3	1.8
>X2046	25/5-1	8.8	2.4	0.3	0.0	1.3	5.7	2.2	1.7	0.4	2.4
>X2051	25/6-1	8.3	1.9	0.6	0.0	1.9	7.6	2.5	2.0	0.9	3.1
>X2056	25/8-1	5.8	2.2	0.0	0.0	1.4	3.6	1.6	1.6	0.5	1.7
>X2061	25/8-4	6.4	2.3	0.0	0.0	1.4	4.4	1.6	1.6	0.5	1.7
>X2066	25/11-5	7.4	2.6	0.0	0.1	1.8	7.2	2.1	2.3	0.7	1.6
>X2071	25/11-15	6.5	2.1	0.1	0.1	1.5	4.4	1.5	1.8	0.5	1.3

File #	Description	C28 abbR Sterane #28 (%)	C28 abbS Sterane Peak #29 (%)	Diaster (?) #30 (%)	C28 aaaR Sterane #31 (%)	Diaster (?) #32 (%)	C29 aaaS Sterane #33 (%)	C29 abbR Sterane #34 (%)	C29 abbS Sterane #35 (%)	Diaster (?) #36 (%)	C29 aaaR Sterane #37 (%)
>X2026	25/1-9	0.7	1.5	0.9	0.5	0.2	1.3	1.4	1.0	0.1	0.7
>X2031	25/2-10	1.3	2.0	2.2	0.6	0.3	1.8	2.3	1.9	0.2	0.9
>X2046	25/5-1	1.4	1.8	2.4	0.6	0.3	2.5	2.8	1.8	0.2	1.9
>X2051	25/6-1	1.1	1.7	2.4	1.3	1.0	2.1	2.9	1.6	0.1	3.4
>X2056	25/8-1	1.6	2.1	2.0	0.8	0.5	2.2	2.5	1.8	0.3	1.7
>X2061	25/8-4	1.6	1.9	1.9	0.8	0.4	2.2	2.9	2.2	0.3	1.8
>X2066	25/11-5	2.4	3.1	2.5	1.4	0.0	3.6	4.1	3.0	0.3	2.8
>X2071	25/11-15	1.7	1.9	2.0	0.9	0.6	2.3	2.8	2.2	0.3	1.6

File #	Description	C30 Sterane (?) #38 (%)	C30 Sterane (?) #39 (%)	C30 Sterane (?) #40 (%)	C30 Sterane (?) #41 (%)
>X2026	25/1-9	0.3	0.3	0.4	0.3
>X2031	25/2-10	0.2	0.5	0.5	0.3
>X2046	25/5-1	0.6	0.7	0.6	0.3
>X2051	25/6-1	0.3	0.8	0.9	0.2
>X2056	25/8-1	0.8	0.6	0.8	0.6
>X2061	25/8-4	0.9	0.8	0.9	0.6
>X2066	25/11-5	1.2	1.3	1.0	1.0
>X2071	25/11-15	0.6	0.7	0.9	0.6

File #	Description	Total % Composition						S/R+S		
		Diasteranes	Regular Steranes C21+C22	C27	C28	C29	C30	C29	C28	C27
		(%)	(%)	(%)	(%)	(%)	(%)			
>X2026	25/1-9	52.2	26.5	12.7	2.9	4.4	1.4	0.64	0.35	0.78
>X2031	25/2-10	54.8	18.9	13.7	4.2	6.9	1.5	0.66	0.34	0.74
>X2046	25/5-1	53.2	15.7	15.6	4.2	9.0	2.2	0.58	0.39	0.71
>X2051	25/6-1	46.3	20.5	15.8	4.9	10.1	2.2	0.39	0.41	0.66
>X2056	25/8-1	49.1	22.3	12.4	5.1	8.2	2.9	0.56	0.38	0.68
>X2061	25/8-4	46.9	22.7	13.5	4.8	9.1	3.1	0.55	0.39	0.70
>X2066	25/11-5	45.1	13.6	15.7	7.6	13.5	4.6	0.56	0.32	0.68
>X2071	25/11-15	46.4	23.4	13.5	5.0	8.9	2.8	0.58	0.38	0.70

File #	Description	aa/bb			TOTAL STERANES (ppm)	#3 TOTAL C21+C22 STERANES (ppm)	#4 TOTAL C27(R+S) STERANES (ppm)	#5 C27(R) /C29(R) Ratio	#6 DIAST INDEX	ppr C27 (ppm)
		C29	C28	C27						
>X2026	25/1-9	0.83	0.34	0.47	99	11.6	4.02	1.24	4.51	12.6
>X2031	25/2-10	0.64	0.27	0.37	167	15.53	6.21	1.07	4.52	23.0
>X2046	25/5-1	0.96	0.29	0.39	194	14.58	8.48	0.68	4.00	30.4
>X2051	25/6-1	1.23	0.77	0.55	13	1.15	0.71	0.56	1.89	2.0
>X2056	25/8-1	0.90	0.35	0.55	486	58.31	21.44	0.82	2.88	60.2
>X2061	25/8-4	0.78	0.36	0.55	297	38.18	14.27	0.81	3.09	40.0
>X2066	25/11-5	0.91	0.39	0.56	464	34.11	26.1	0.63	2.31	72.8
>X2071	25/11-15	0.78	0.40	0.56	344	45.76	16.67	0.89	2.95	46.3

File #	Descriptionn	OF REG STER FOR TERN C28 (ppm)	C29 (ppm)	C30 (ppm)	ppm OF aaa20R STER FOR TERN C27 (ppm)	C28 (ppm)	C29 (ppm)
>X2026	25/1-9	2.9	4.3	1.3	1	0	1
>X2031	25/2-10	7.1	11.5	2.5	2	1	2
>X2046	25/5-1	8.2	17.5	4.4	2	1	4
>X2051	25/6-1	0.6	1.3	0.3	0	0	0
>X2056	25/8-1	24.6	39.7	14.3	7	4	8
>X2061	25/8-4	14.1	27.0	9.2	4	2	5
>X2066	25/11-5	35.2	62.8	21.3	8	7	13
>X2071	25/11-15	17.3	30.7	9.6	5	3	6

File #	Description	C20 Diterp Peak A (ppm)	C21 Diterp B (ppm)	C22 Diterp C (ppm)	C23 Diterp D (ppm)	C24 Diterp E (ppm)	C25 Diterp #1 (ppm)	Unknown #2 (ppm)
		5	7	9	11	15	34	26
>X2026	25/1-9	2.06	2.46	1.59	2.72	2.72	2.29	0.41
>X2031	25/2-10	1.91	2.47	1.33	3.68	3.45	3.42	0.32
>X2046	25/5-1	1.82	2.92	1.24	4.17	3.05	2.76	0.20
>X2051	25/6-1	0.34	0.35	0.14	0.19	0.25	0.09	0.02
>X2056	25/8-1	5.36	8.33	3.98	11.66	10.59	9.85	0.54
>X2061	25/8-4	3.35	5.16	2.33	7.63	7.04	6.42	0.27
>X2066	25/11-5	3.30	4.51	2.15	6.47	6.25	6.67	0.33
>X2071	25/11-15	4.90	6.62	2.39	9.52	8.62	7.91	0.00

File #	Description	Unknown #3 (ppm)	C24 Tetra-Cyclic #4 (ppm)	C26 Tricyc #5 (ppm)	C26 Tricyc #6 (ppm)	Unknown Peak #7 (ppm)	Unknown #8 (ppm)	C28 Tricyc 9 (ppm)
		6	80	42	10	72	15	38
>X2026	25/1-9	0.41	1.57	0.98	0.88	0.37	1.30	0.63
>X2031	25/2-10	0.46	2.62	1.52	1.52	1.12	1.95	0.78
>X2046	25/5-1	0.56	3.74	0.99	1.03	0.98	1.92	0.75
>X2051	25/6-1	0.25	0.15	0.10	0.05	0.08	0.11	0.09
>X2056	25/8-1	1.12	8.83	4.01	3.68	2.46	2.73	2.05
>X2061	25/8-4	0.98	6.03	2.35	3.29	1.46	3.50	1.66
>X2066	25/11-5	0.62	5.50	2.40	2.86	1.89	2.74	2.58
>X2071	25/11-15	1.00	7.11	2.88	3.26	2.10	4.51	2.06

File #	Description	C28 Tricyc #10 (ppm)	C29 Tricyc #11 (ppm)	C29 Tricyc #12 (ppm)	C27 Hopane TS #13 (ppm)	C27 Hopane TM #14 (ppm)	C27 Hopane #15 (ppm)	Unknown #16 (ppm)
		18	73	20	170	406	44	235
>X2026	25/1-9	0.68	1.59	1.20	3.21	0.95	0.67	0.52
>X2031	25/2-10	1.24	2.89	2.56	5.85	2.11	0.55	0.80
>X2046	25/5-1	1.57	2.83	1.89	6.12	3.99	1.10	0.77
>X2051	25/6-1	0.06	0.17	0.16	0.18	0.41	0.02	0.06
>X2056	25/8-1	3.74	6.26	6.67	13.53	9.89	3.43	2.53
>X2061	25/8-4	2.47	3.74	4.07	9.06	6.68	1.88	1.40
>X2066	25/11-5	4.46	6.97	7.91	14.32	12.27	1.58	3.83
>X2071	25/11-15	2.82	4.79	5.08	10.01	7.45	2.02	1.68

File #	Description	C28 Hopane #17 (ppm)	Unknown Peak #18 (ppm)	C29 Hopane #19 (ppm)	C29 Norhop #20 (ppm)	Diahopane Peak F (ppm)	C29 Moretane #21 (ppm)	C30 Oleanane #22 (ppm)
		84	60	758	212		487	108
>X2026	25/1-9	0.83	0.33	2.76	0.99	1.16	0.47	0.15
>X2031	25/2-10	0.82	0.00	7.15	2.42	2.40	1.20	0.09
>X2046	25/5-1	3.05	0.76	14.67	1.37	4.15	2.14	0.31
>X2051	25/6-1	0.39	0.04	0.87	0.13	0.22	0.45	0.03
>X2056	25/8-1	11.50	1.43	24.44	8.10	5.21	5.69	1.26
>X2061	25/8-4	6.22	0.96	15.34	3.46	3.91	2.60	0.12
>X2066	25/11-5	13.28	2.30	36.11	7.94	7.95	6.68	0.53
>X2071	25/11-15	7.42	0.72	15.81	5.79	4.41	3.71	0.76

File #	Description	C30 Hopane #23 (ppm)	C30 Moretane #24 (ppm)	Unknown #25 (ppm)	Unknown #26 (ppm)	C31 Hopane 22S #27 (ppm)	C31 Hopane 22R #28 (ppm)	C31 Moretane Peak #29 (ppm)
		1177	129	131	389	375	489	278
>X2026	25/1-9	4.04	0.63	0.07	0.16	1.65	1.34	0.26
>X2031	25/2-10	10.56	1.54	0.11	0.27	3.18	2.68	0.54
>X2046	25/5-1	19.82	2.76	0.11	0.35	7.94	5.28	0.83
>X2051	25/6-1	1.29	0.51	0.05	0.04	0.54	0.57	0.32
>X2056	25/8-1	32.45	4.69	0.80	0.47	11.82	8.51	2.20
>X2061	25/8-4	21.44	3.04	0.55	0.00	8.02	6.13	1.07
>X2066	25/11-5	48.34	7.55	1.71	3.21	18.51	14.30	1.11
>X2071	25/11-15	23.02	3.11	0.75	0.58	8.64	6.04	1.38

File #	Description	Gammacerene Peak G (ppm)	C32 Hopane 22S #30 (ppm)	C32 Hopane 22R #31 (ppm)	C32 Moretane #32 (ppm)	C31 bb Homohop #33 (ppm)	C33 Hopane 22S #34 (ppm)	C33 Hopane 22R #35 (ppm)
			157	215	36	87	89	96
>X2026	25/1-9	0.22	1.12	0.84	0.03	0.07	0.78	0.47
>X2031	25/2-10	1.42	2.17	1.61	0.12	0.09	1.26	1.16
>X2046	25/5-1	1.70	4.63	3.42	0.19	0.10	2.83	2.10
>X2051	25/6-1	0.07	0.39	0.42	0.16	0.04	0.23	0.19
>X2056	25/8-1	2.91	7.30	5.54	0.26	0.50	6.09	4.04
>X2061	25/8-4	1.61	4.93	3.97	0.23	0.49	3.89	2.83
>X2066	25/11-5	5.32	12.01	8.13	1.86	1.31	8.76	5.95
>X2071	25/11-15	3.58	5.99	4.37	0.27	0.45	4.87	3.38

File #	Description	C34 Hopane 22S #36 (ppm)	C34 Hopane 22R #37 (ppm)	C35 Hopane 22S #38 (ppm)	C35 Hopane 22R #39 (ppm)	C20 Diterp Peak A (%)	C21 Diterp B (%)	C22 Diterp C (%)
		68	74	7	3	0.1	0.1	0.1
>X2026	25/1-9	0.59	0.48	0.37	0.39	4.17	4.98	3.22
>X2031	25/2-10	0.79	0.65	0.75	0.41	2.22	2.87	1.55
>X2046	25/5-1	2.32	1.30	1.56	1.55	1.40	2.25	0.96
>X2051	25/6-1	0.03	0.08	0.08	0.05	3.25	3.35	1.34
>X2056	25/8-1	3.52	2.79	2.99	2.20	1.93	3.00	1.43
>X2061	25/8-4	2.28	1.39	2.09	1.52	1.87	2.88	1.30
>X2066	25/11-5	4.19	2.20	3.65	2.38	1.02	1.39	0.66
>X2071	25/11-15	2.73	1.64	2.45	1.61	2.33	3.15	1.14

File #	Description	C23 Diterp D (%)	C24 Diterp E (%)	C25 Diterp #1 (%)	Unknown #2 (%)	Unknown #3 (%)	C24 Tetra-Cyclic #4 (%)	C26 Tricyc #5 (%)
		0.2	0.2	0.5	0.4	0.1	1.2	0.6
>X2026	25/1-9	5.50	5.50	4.63	0.83	0.83	3.18	1.98
>X2031	25/2-10	4.28	4.01	3.98	0.37	0.54	3.05	1.77
>X2046	25/5-1	3.22	2.35	2.13	0.15	0.43	2.88	0.76
>X2051	25/6-1	1.82	2.39	0.86	0.19	2.39	1.43	0.96
>X2056	25/8-1	4.19	3.81	3.54	0.19	0.40	3.18	1.44
>X2061	25/8-4	4.27	3.94	3.59	0.15	0.55	3.37	1.31
>X2066	25/11-5	1.99	1.92	2.05	0.10	0.19	1.69	0.74
>X2071	25/11-15	4.53	4.10	3.76	0.00	0.48	3.38	1.37

File #	Description	C26 Tricyc #6 (%)	Unknown Peak #7 (%)	Unknown #8 (%)	C28 Tricyc 9 (%)	C28 Tricyc #10 (%)	C29 Tricyc #11 (%)	C29 Tricyc #12 (%)
		0.1	1.1	0.2	0.6	0.3	1.1	0.3
>X2026	25/1-9	1.78	0.75	2.63	1.28	1.38	3.22	2.43
>X2031	25/2-10	1.77	1.30	2.27	0.91	1.44	3.36	2.98
>X2046	25/5-1	0.79	0.76	1.48	0.58	1.21	2.18	1.46
>X2051	25/6-1	0.48	0.76	1.05	0.86	0.57	1.63	1.53
>X2056	25/8-1	1.32	0.89	0.98	0.74	1.35	2.25	2.40
>X2061	25/8-4	1.84	0.82	1.96	0.93	1.38	2.09	2.28
>X2066	25/11-5	0.88	0.58	0.84	0.79	1.37	2.15	2.43
>X2071	25/11-15	1.55	1.00	2.15	0.98	1.34	2.28	2.42

File #	Description	C27 Hopane TS #13 (%)	C27 Hopane TM #14 (%)	C27 Hopane #15 (%)	Unknown #16 (%)	C28 Hopane #17 (%)	Unknown Peak #18 (%)	C29 Hopane #19 (%)
		2.5	5.9	0.6	3.4	1.2	0.9	11.1
>X2026	25/1-9	6.50	1.92	1.36	1.05	1.68	0.67	5.59
>X2031	25/2-10	6.81	2.46	0.64	0.93	0.95	0.00	8.32
>X2046	25/5-1	4.72	3.08	0.85	0.59	2.35	0.59	11.32
>X2051	25/6-1	1.72	3.92	0.19	0.57	3.73	0.38	8.32
>X2056	25/8-1	4.87	3.56	1.23	0.91	4.14	0.51	8.79
>X2061	25/8-4	5.07	3.73	1.05	0.78	3.48	0.54	8.58
>X2066	25/11-5	4.41	3.78	0.49	1.18	4.09	0.71	11.11
>X2071	25/11-15	4.76	3.54	0.96	0.80	3.53	0.34	7.52

File #	Description	C29 Norhop #20 (%)	Diahopane Peak F (%)	C29 Moretane #21 (%)	C30 Oleanane #22 (%)	C30 Hopane #23 (%)	C30 Moretane #24 (%)	Unknown #25 (%)
		3.1		7.1	1.6	17.2	1.9	1.9
>X2026	25/1-9	2.00	2.35	0.95	0.30	8.18	1.28	0.14
>X2031	25/2-10	2.82	2.79	1.40	0.10	12.29	1.79	0.13
>X2046	25/5-1	1.06	3.20	1.65	0.24	15.29	2.13	0.08
>X2051	25/6-1	1.24	2.10	4.30	0.29	12.33	4.88	0.48
>X2056	25/8-1	2.91	1.87	2.05	0.45	11.67	1.69	0.29
>X2061	25/8-4	1.93	2.19	1.45	0.07	11.99	1.70	0.31
>X2066	25/11-5	2.44	2.45	2.06	0.16	14.88	2.32	0.53
>X2071	25/11-15	2.75	2.10	1.76	0.36	10.95	1.48	0.36

File #	Description	Unknown #26 (%)	C31 Hopane 22S #27 (%)	C31 Hopane 22R #28 (%)	C31 Moretane Peak #29 (%)	Gammacerene Peak G (%)	C32 Hopane 22S #30 (%)	C32 Hopane 22R #31 (%)
		5.7	5.5	7.1	4.1		2.3	3.1
>X2026	25/1-9	0.32	3.34	2.71	0.53	0.45	2.27	1.70
>X2031	25/2-10	0.31	3.70	3.12	0.63	1.65	2.53	1.87
>X2046	25/5-1	0.27	6.12	4.07	0.64	1.31	3.57	2.64
>X2051	25/6-1	0.38	5.16	5.45	3.06	0.67	3.73	4.02
>X2056	25/8-1	0.17	4.25	3.06	0.79	1.05	2.63	1.99
>X2061	25/8-4	0.00	4.48	3.43	0.60	0.90	2.76	2.22
>X2066	25/11-5	0.99	5.70	4.40	0.34	1.64	3.70	2.50
>X2071	25/11-15	0.28	4.11	2.87	0.66	1.70	2.85	2.08

File #	Description	C32 Moretane #32 (%)	C31 bb Homohop #33 (%)	C33 Hopane 22S #34 (%)	C33 Hopane 22R #35 (%)	C34 Hopane 22S #36 (%)	C34 Hopane 22R #37 (%)	C35 Hopane 22S #38 (%)
		0.5	1.3	1.3	1.4	1.0	1.1	0.1
>X2026	25/1-9	0.06	0.14	1.58	0.95	1.19	0.97	0.75
>X2031	25/2-10	0.14	0.10	1.47	1.35	0.92	0.76	0.87
>X2046	25/5-1	0.15	0.08	2.18	1.62	1.79	1.00	1.20
>X2051	25/6-1	1.53	0.38	2.20	1.82	0.29	0.76	0.76
>X2056	25/8-1	0.09	0.18	2.19	1.45	1.27	1.00	1.08
>X2061	25/8-4	0.13	0.27	2.17	1.58	1.27	0.78	1.17
>X2066	25/11-5	0.57	0.40	2.70	1.83	1.29	0.68	1.12
>X2071	25/11-15	0.13	0.21	2.32	1.61	1.30	0.78	1.17

File #	Description	C35 Hopane 22R #39 (%)	centration Diterpanes (ppm)	Triterpanes (ppm)	% Compositions of Triterpanes Tricyclics (%)	Hopanes (%)	Moretanes (%)	TS/TM
		0.0	81	5642	3.6	80.0	16.5	0.42
>X2026	25/1-9	0.79	13.84	30.28	19.68	75.00	4.59	3.38
>X2031	25/2-10	0.48	16.26	61.94	16.97	75.25	5.49	2.77
>X2046	25/5-1	1.20	15.96	103.98	8.71	83.96	5.69	1.53
>X2051	25/6-1	0.48	1.36	8.27	7.62	74.12	17.41	0.44
>X2056	25/8-1	0.79	49.77	206.01	12.82	79.53	6.23	1.37
>X2061	25/8-4	0.85	31.93	131.66	13.35	80.15	5.27	1.36
>X2066	25/11-5	0.73	29.35	272.88	9.96	81.79	6.30	1.17
>X2071	25/11-15	0.77	39.96	151.04	13.83	78.19	5.61	1.34

File #	Description	Ratios								
		Hopanes		S/R+S					ne/Moretane	
		C28/C30	C30/C29	C31	C32	C33	C34	C35	C29/C29	C30/C30
		0.07	1.55	0.43	0.42	0.48	0.48	0.71	1.56	9.12
>X2026	25/1-9	0.21	1.46	0.55	0.57	0.62	0.55	0.49	5.87	6.41
>X2031	25/2-10	0.08	1.48	0.54	0.57	0.52	0.55	0.65	5.96	6.86
>X2046	25/5-1	0.15	1.35	0.60	0.58	0.57	0.64	0.50	6.86	7.18
>X2051	25/6-1	0.30	1.48	0.49	0.48	0.55	0.27	0.62	1.93	2.53
>X2056	25/8-1	0.35	1.33	0.58	0.57	0.60	0.56	0.58	4.30	6.92
>X2061	25/8-4	0.29	1.40	0.57	0.55	0.58	0.62	0.58	5.90	7.05
>X2066	25/11-5	0.27	1.34	0.56	0.60	0.60	0.66	0.61	5.41	6.40
>X2071	25/11-15	0.32	1.46	0.59	0.58	0.59	0.62	0.60	4.26	7.40

File #	Description	Carotane (ppm)	TOTAL DITERP (ppm)	TOTAL TRITERP (ppm)	#10 Tricycl Ratio	#11 Extended HOPANES Ratio	#12 C28 HOPANES Ratio	#13 Oleanane Ratio
		5.0	81	5642	0.29	14.60	0.07	0.09
>X2026	25/1-9	0.06	13.84	30.28	2.36	1.41	0.21	0.04
>X2031	25/2-10	0.19	16.26	61.94	1.42	1.24	0.08	0.01
>X2046	25/5-1	0.12	15.96	103.98	0.73	1.16	0.15	0.02
>X2051	25/6-1	0.09	1.36	8.27	0.78	0.85	0.30	0.02
>X2056	25/8-1	0.18	49.77	206.01	1.20	1.22	0.35	0.04
>X2061	25/8-4	0.19	31.93	131.66	1.33	1.02	0.29	0.01
>X2066	25/11-5	0.40	29.35	272.88	0.62	1.06	0.27	0.01
>X2071	25/11-15	0.18	39.96	151.04	1.46	1.08	0.32	0.03

File #	Description	#14 TS/TM	#15 C30 HOPANE (ppm)	'ANE TERNARY TRICYCLICS (ppm)	HOPANES (ppm)	MORETANES (ppm)
		0.42	1177.0	201	4511	930
>X2026	25/1-9	3.38	4.04	5.96	22.71	1.39
>X2031	25/2-10	2.77	10.56	10.51	46.61	3.40
>X2046	25/5-1	1.53	19.82	9.06	87.30	5.92
>X2051	25/6-1	0.44	1.29	0.63	6.13	1.44
>X2056	25/8-1	1.37	32.45	26.41	163.85	12.84
>X2061	25/8-4	1.36	21.44	17.58	105.53	6.94
>X2066	25/11-5	1.17	48.34	27.18	223.18	17.20
>X2071	25/11-15	1.34	23.02	20.89	118.10	8.47

Norsk-Hydro Well #25 Oils
Monoaromatized Steranes (m/z=253)

File #	Description	Concentrations of Monoaromatized Steranes (m/z=253)									
		C21 Peak #1 (ppm)	C22 #2 (ppm)	Unknown #3 (ppm)	Unknown #4 (ppm)	C27 bS #5 (ppm)	Unknown #6 (ppm)	C27 bR #7 (ppm)	C27 aS #8 (ppm)	C28 bS #9 (ppm)	C27+C28 aR+aS #10 (ppm)
A2026	25/1-9	0.39	0.19	0.02	1.09	0.20	0.82	1.21	0.33	0.43	0.50
A2031	25/2-10	0.39	0.22	0.27	2.15	0.36	1.65	2.52	0.53	0.66	1.25
A2046	25/5-1	0.77	0.56	0.58	4.13	0.79	3.44	5.55	1.04	1.04	3.12
A2051	25/6-1	0.06	0.01	0.10	0.12	0.05	0.10	0.27	0.10	0.06	0.29
A2056	25/8-1	3.19	1.28	1.50	11.99	3.86	8.88	14.21	4.57	2.58	5.24
A2061	25/8-4	1.75	0.65	0.87	6.99	2.05	5.15	9.08	2.67	1.47	3.82
A2066	25/11-5	0.22	0.77	1.05	8.74	2.85	6.34	10.80	3.49	1.80	4.05
A2071	25/11-15	2.39	0.84	1.25	9.57	3.21	7.16	11.90	3.88	2.09	4.75

File #	Description	C28 bR #11 (ppm)	C29 bS #12 (ppm)	C29 (?) #13 (ppm)	C29 (?) #14 (ppm)	C29 bR #15 (ppm)	C28 aR #16 (ppm)	C29 aR #17 (ppm)
A2026	25/1-9	0.82	1.37	0.02	0.43	0.21	0.37	0.43
A2031	25/2-10	1.60	1.78	0.08	0.88	0.38	0.50	0.61
A2046	25/5-1	2.52	2.15	0.23	2.23	0.40	0.65	0.77
A2051	25/6-1	0.15	0.06	0.02	0.21	0.10	0.06	0.06
A2056	25/8-1	6.44	6.36	1.27	3.90	1.84	1.96	2.21
A2061	25/8-4	3.73	4.13	0.86	2.62	1.24	1.38	1.45
A2066	25/11-5	4.29	4.59	0.76	2.59	1.30	1.37	1.32
A2071	25/11-15	4.48	4.84	1.18	3.27	1.77	1.83	1.85

Norsk-Hydro Well #25 Oils
Monoaromatized Steranes (m/z=253)

File #	Description	Percent Compositions of Monoaromatized Steranes									
		C21 Peak #1 (%)	C22 #2 (%)	Unknown #3 (%)	Unknown #4 (%)	C27 bS #5 (%)	Unknown #6 (%)	C27 bR #7 (%)	C27 aS #8 (%)	C28 bS #9 (%)	C27+C28 aR+aS #10 (%)
A2026	25/1-9	4.42	2.15	0.23	12.34	2.27	9.29	13.70	3.74	4.87	5.66
A2031	25/2-10	2.46	1.39	1.71	13.58	2.27	10.42	15.92	3.35	4.17	7.90
A2046	25/5-1	2.57	1.87	1.94	13.78	2.64	11.48	18.52	3.47	3.47	10.41
A2051	25/6-1	3.30	0.55	5.49	6.59	2.75	5.49	14.84	5.49	3.30	15.93
A2056	25/8-1	3.92	1.57	1.85	14.75	4.75	10.93	17.48	5.62	3.17	6.45
A2061	25/8-4	3.51	1.30	1.74	14.01	4.11	10.32	18.19	5.35	2.95	7.65
A2066	25/11-5	0.38	1.37	1.86	15.52	5.06	11.26	19.17	6.20	3.20	7.19
A2071	25/11-15	3.61	1.27	1.89	14.44	4.84	10.81	17.96	5.86	3.15	7.17

File #	Description	C28 bR #11 (%)	C29 bS #12 (%)	C29 (?) #13 (%)	C29 (?) #14 (%)	C29 bR #15 (%)	C28 aR #16 (%)	C29 aR #17 (%)
A2026	25/1-9	9.29	15.52	0.23	4.87	2.38	4.19	4.87
A2031	25/2-10	10.11	11.24	0.51	5.56	2.40	3.16	3.85
A2046	25/5-1	8.41	7.17	0.77	7.44	1.33	2.17	2.57
A2051	25/6-1	8.24	3.30	1.10	11.54	5.49	3.30	3.30
A2056	25/8-1	7.92	7.82	1.56	4.80	2.26	2.41	2.72
A2061	25/8-4	7.47	8.27	1.72	5.25	2.48	2.76	2.91
A2066	25/11-5	7.62	8.15	1.35	4.60	2.31	2.43	2.34
A2071	25/11-15	6.76	7.30	1.78	4.94	2.67	2.76	2.79

Norsk-Hydro Well #25 Oils
Triaromatized Steranes (m/z=231)

File #	Description	Concentrations of Triaromatized Steranes: C-20 Peak #1 (ppm)	C-21 #2 (ppm)	C-26 #3 (ppm)	C-27* #4 (ppm)	C-28 #5 (ppm)	C-27/28 #6 (ppm)	C-28* #7 (ppm)
A2026	25/1-9	5.67	3.01	0.37	0.87	0.55	0.56	0.36
A2031	25/2-10	6.84	4.55	0.81	2.12	1.24	1.46	1.08
A2046	25/5-1	9.69	4.57	0.87	2.69	1.67	1.86	1.50
A2051	25/6-1	0.26	0.25	0.02	0.05	0.03	0.03	0.04
A2056	25/8-1	23.07	13.34	3.01	7.96	3.62	5.83	4.63
A2061	25/8-4	15.30	9.27	2.14	5.77	2.71	3.92	3.01
A2066	25/11-5	15.97	9.16	2.05	5.46	2.66	4.04	3.20
A2071	25/11-15	16.02	9.60	2.89	8.06	3.54	5.50	4.29

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File #	Description	Percent composition of Triaromatized Steranes: C-20 Peak #1 (%)	C-21 #2 (%)	C-26 #3 (%)	C-27* #4 (%)	C-28 #5 (%)	C-27/28 #6 (%)	C-28* #7 (%)
A2026	25/1-9	49.78	26.43	3.25	7.64	4.83	4.92	3.16
A2031	25/2-10	37.79	25.14	4.48	11.71	6.85	8.07	5.97
A2046	25/5-1	42.41	20.00	3.81	11.77	7.31	8.14	6.56
A2051	25/6-1	38.24	36.76	2.94	7.35	4.41	4.41	5.88
A2056	25/8-1	37.54	21.71	4.90	12.95	5.89	9.49	7.53
A2061	25/8-4	36.32	22.01	5.08	13.70	6.43	9.31	7.15
A2066	25/11-5	37.54	21.53	4.82	12.83	6.25	9.50	7.52
A2071	25/11-15	32.10	19.24	5.79	16.15	7.09	11.02	8.60

. #25 Oils

Selected Ratios of Mono & Triaromatized Steranes

File #	Description	Monoaromatized Sterane C21+22/ C27-29	Monoaromatized Sterane C21/ C21+28 (%)	Triaromatized Steranes C20+21/ C26-28	Triaromatized Steranes C20/ C20+C27 (%)	Triaromatized Steranes C21/ C21+28 (%)
A2026	25/1-9	0.08	32.23	3.20	86.70	89.32
A2031	25/2-10	0.05	19.60	1.70	76.34	80.82
A2046	25/5-1	0.06	23.40	1.66	78.27	75.29
A2051	25/6-1	0.05	28.57	3.00	83.87	86.21
A2056	25/8-1	0.07	33.13	1.45	74.35	74.23
A2061	25/8-4	0.06	31.93	1.40	72.62	75.49
A2066	25/11-5	0.02	4.77	1.44	74.52	74.11
A2071	25/11-15	0.06	34.79	1.06	66.53	69.11

to be extrac

Tri/Monoaromatized Steranes

File #	Description	DTAS (%)	231(C27)/ 231(C27)+253(C28) (%)	231(C28)/ 231(C28)+253(C29) (%)	
A2026	25/1-9	76.21	66.92	36.00	
A2031	25/2-10	62.93	76.26	52.17	
A2046	25/5-1	62.41	72.12	56.18	
A2051	25/6-1	75.00	45.45	20.00	
A2056	25/8-1	59.24	75.52	53.34	
A2061	25/8-4	58.33	79.70	52.81	
A2066	25/11-5	59.07	75.21	54.98	
A2071	25/11-15	51.34	79.41	54.24	