



May 1994

**GEOCHEMICAL SOURCE SCREEN ANALYSES OF
CONVENTIONAL CORE SAMPLES**

WELL N 2/11-1

Fina Exploration Norway Inc.



ANALYSES METHODOLOGY

All analyses were performed on instrumentation co-invented and/or developed by FINA.

1. SOURCE SCREEN ANALYSES

* Rock-Eval : IFP/FINA Procedure. Rock-Eval 2 generation of equipment with TOC attachment employed. Analyses calibrated against IFP 55000 Standard. Analysis procedure conforms with that required by NIGOGA.

2. SOURCE DETAIL ANALYSES

* Soxtec Extraction Procedure. Quantified analyses fulfil NIGOGA requirements.

* Pyrolysis-Gas Chromatography : GEOFINA HYDROCARBON METER Procedure. Individual component quantified analyses calibrated against IFP 55000 Standard. Being the benchmark equipment, FINA's specification conforms and exceeds that required by NIGOGA.

3. C ISOTOPE ANALYSES

* Kerogen/Kerogen Pyrolysate D¹³C analyses : GEOCHEM/FINA AUTOPIP™ Procedure. No equivalent NIGOGA specifications. Data reported vs NBS22 at D¹³C -29.8 ppt.

Source Screen and Source Detail analyses were performed by the Exploration Geochemistry Group, Petrofina Exploration and Production, c/o Fina Research, Zone Industrielle C, B-7181 Seneffe (Feluy), Belgium.

The C Isotope Analyses were performed by THE GEOCHEM GROUP, Chester Street, Chester CH4 8RD England.

GEOCHEMICAL SOURCE ROCK EVALUATION



SUMMARY DATA FILE

Country : NORWAY
 Province/State/Region:
 Block/Lease :
 Location/Coordinates : N 56 14 16.98, E 3 27 7.05
 Well/Site : 2/11-1 (CONVERTED)
 Unique Designation : N.2/11-1M

SUMMARY WELL DATA

TD : 4691.5 M
 TDV :
 Refdat :
 BHT :

SOURCE SCREEN FILE

SOURCE DETAIL FILE

DEPTH BRT	SAMPLE NO	PERIOD /EPOCH	FORM	LITHOLOGY (ABBR)	CO3 %	VISUAL KEROGEN DESCRIPTION	TOC %	S1 KG/TN	S2 KG/TN	HI	RO %	TR	GI (S1)	GI (TSE)	TKC %	K2 KG/TN	K3 KG/TN	KPI	OI	GOPR	PARAI %	TM	TAI	TSE KG/TN	D-13C (K)	D-13C (KPY)	D-13C (TSE)
3863.87	AJT	CC					7.08	4.48	36.56	516		.11	74.9	161.7	5.98	33.15	.48	554	8	.15	9.4	440		9.67	28.94	28.40	
3864.58	AJT	CC					5.75	3.85	24.95	434		.13											438				
3865.42	AJT	CC					6.54	3.86	33.57	513		.10	71.0	150.6	5.44	29.68	.52	546	10	.16	9.2	439		8.19	28.38	28.40	
3866.72	AJT	CC					5.98	3.11	31.71	530		.09											441				
3867.58	AJT	CC					6.58	4.37	30.57	465		.13											439				
3868.70	AJT	CC					8.66	5.21	43.99	508		.11	70.1	138.8	7.43	39.90	.60	537	8	.18	9.6	439		10.31	28.59	28.62	
3869.44	AJT	CC					6.94	4.03	35.34	509		.10											440				
3871.18	AJT	CC					7.73	3.66	21.24	275		.15	52.6	196.4	6.96	19.76	.74	284	11	.16	4.9	429		13.67	29.69	29.93	
3871.77	AJT	CC					5.63	3.38	20.42	363		.14											436				
3872.79	AJT	CC					4.03	3.21	15.12	375		.18											437				
3873.45	AJT	CC					6.07	3.23	15.86	261		.17	62.6	189.0	5.16	13.36	.62	259	12	.18	4.6	434		9.75	29.43	30.08	
3873.78	AJT	CC					5.12	2.69	21.97	429		.11											439				



KEY TO SUMMARY DATA FILE PARAMETERS

TOC-Total Organic Carbon; S1-Productivity (free/thermovaporisable hydrocarbons); S2-Potential Productivity (hydrocarbons from kerogen/bitumen transformation); HI-Hydrogen Index (S2 normalised to TOC); R0 (mean vitrinite reflectance); TR-Production Index (S1 normalised to S1+S2); GI(S1)-Generation Index (100xS1 normalised to TKC); GI (TSE)-Generation Index (100xTSE normalised to TKC); Bitumen-Free Analyses : TKC-Total Kerogen Carbon; K2-Precision Potential Productivity; K3-Precision Kerogen CO2 Productivity; KPI-Kerogen Pyrolysis Index (Precision HI); OI-Precision Oxygen Index (100xK3 normalised to TKC); GPR-Gas/Oil Production ratio (kerogen pyrolysis K2 product C1-5 gas content normalised to total pyrolysate); PI-Paraffin Index (kerogen pyrolysis K2/C9+alkane/alkene product normalised to TKC); TM-Rock-Eval Tmax (deg.C); TAI-Thermal Alteration Index (1-5 scale); TSE-Total Soluble Extract (rock bitumen); D-13C (K) (KPY) (TSE) - Stable Carbon Isotope Value of Kerogen, Kerogen Pyrolysate (K2) and Rock Bitumen (TSE), respectively.