



OLJEDIREKTORATET
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**Additional Introspect Data
From Well 1/3-9**

March 1999

**by
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B499-2029-1

AMOCO
AMOCO

Table 1 Iatroscan Data*

Depth (m)	4277.83	4277.88	4277.93	4277.95
Saturates mg/gm	28.25	23.90	17.24	14.77
Aromatics mg/gm	1.11	2.05	2.17	1.36
Resin A mg/gm	0.71	0.65	0.78	0.57
Resin B mg/gm	0.94	1.38	1.86	0.41
Total extract mg/gm	31.01	27.98	22.05	17.11
Saturates %wt	91.11	85.42	78.18	86.32
Aromatics %wt	3.57	7.31	9.86	7.93
Resin A %wt	2.28	2.32	3.54	3.33
Asphaltenes %wt	3.03	4.94	8.43	2.42

Depth (m)	4304.82	4304.87	4304.92	4304.95
Saturates mg/gm	9.05	5.28	10.09	5.64
Aromatics mg/gm	1.35	0.49	0.97	0.86
Resin A mg/gm	0.57	0.23	0.42	0.14
Resin B mg/gm	0.25	0.21	0.38	1.19
Total extract mg/gm	11.21	6.21	11.85	7.83
Saturates %wt	80.66	84.94	85.12	71.93
Aromatics %wt	12.02	7.93	8.16	11.02
Resin A %wt	5.11	3.77	3.55	1.83
Asphaltenes %wt	2.21	3.35	3.18	15.22

* substituted samples in italics

Appendix - Iatrosan Method

Appendix

Iatroscan Analysis

A small quantity of crushed rock (2-5gms) was extracted (10 mins ultrasonic bath) with a dichloromethane/methanol mix. An aliquot (0.5-1.ul) was separated by Thin Layer Chromatography (TLC), in duplicate, on thin quartz rods coated with a layer of sintered silica gel. The sample was separated into hydrocarbon types using a three stage solvent development and drying sequence:

heptane - 60mls, 30minutes, 90% rod length, oven dried at 50C for 2minutes

toluene - 60mls, 12 minutes 55% rod length, oven dried at 50C for 3minutes

dichloromethane:methanol - 60mls (9:1vol), 4minutes 25% rod length, oven dried at 50C for 2 minutes

Finally the eluted rods were directly scanned through the Iatroscan flame ionisation detector at 40sec/scan and the signal amplified to produce a chromatogram.

The four resolved peaks, labelled saturate hydrocarbons, aromatic hydrocarbons, Resin A and Resin B (the latter equating to but not identical with n-heptane insoluble asphaltenes) were identified and quantified with reference to a standard blend containing squalene (saturates), methyl anthracene aromatics) and 1-dodecanol (resins A and B)

Equipment

Instrument	Iatroscan TH-10 MkIV (series II)		
TLC rods	Chromarod-SIII (silica, pore diameter 60A, particle size 5um)		
Solvents	Extraction	Dichloromethane: methanol (93:7 vol%)	
	Development	heptane	
		toluene	
		chloroform:methanol	(9:1vol)