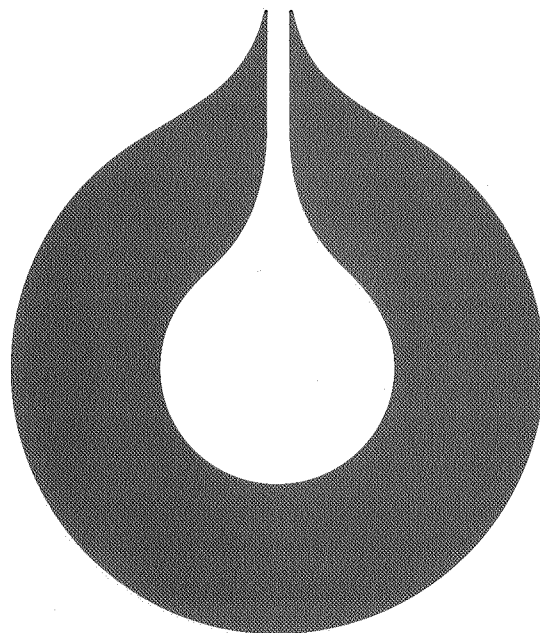


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Statoil

**"Rock-Eval"
results well 6608/11-1**

("OSA" used on Dyvi Stena)

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Key words Oil show analyser, 6608/11-1, source rocks, maturity, free hydrocarbons.

Abstract <p>The oil show analyzer, OSA, was used on rig on well 6608/11-1. Instrument quality was excellent, reporting good. An interlab. correlation on duplicate samples gave acceptable results, discrepancy was mainly due to low TOC and nearly total absence of free hydrocarbons. Together with a generally low maturity, the results gave no reason for any following -up studies.</p>
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Prepared by Steinar Ulvøen, Statoil
Coworkers A. Langmo, Statoil Gearhart Geoconsultans Ltd.
Textoperator

Approved by

27/10



Trygve Meyer, seksjonsleder

28/10



Snorre Olaussen, avdelingsleder

"Rock-Eval" results well 6608/11-1
(OSA used on Dyvi Stena)

INTRODUCTION

On request, Gerhart Geo Consultans Ltd. operated an OSA unit, oil show analyser, on Dyvi Stena while drilling well 6608/11-1, PL 128, Nordland II. This report contains Statoil's evaluation of the service given by the consultant, quality of analysis and followed by the final report and conclusions given by Gearhart.

Instrumentation on rig.

The OSA was in operation during the total drilling period. Gearhart's operator combined all available running data on the rig to give the best possible product. The equipment was in good shape. Standard samples were analysed frequently. Reporting routines were good, in spite of some addressing problems.

Interlaboratory correlation.

Most of the samples have been reanalysed at Statoil's geochemical laboratory to establish the level of reproducibility between the two instruments (Statoil's Rock-Eval II-, Leco EC12 carbonanalyser). Due to mainly very low concentrations of organic matter, the acceptable discrepancy between the results must be quite big. Table 1 lists the most important results.

As indicated in the table, TOC-percent values below 0.5 gave highly irregular results no matter what instrument used. For TOC values above .5%, the results roughly seem to be within a variation of $\pm 10\%$, somewhat above what should be expected. Associated Tmax values are mainly within an expected $\pm 4\%$ deviation. The only really high TOC value (at 1256m) gave a greater spread than acceptable, although such problems are not uncommon in cases with high organic matter contents.

As a summary, it is difficult definitely to conclude whether the spreading in the results from the instruments are within acceptable limits, mainly due to extremely low TOC values and absence of free hydrocarbons. However, on average and for the understanding of the actual source rock quality, the results are acceptable.

Consequences for well 66081/11-1

Based on the following conclusions given in the report from Gearhart, no following up studies are necessary; poor source rock quality, low maturity and the total absence of free hydrocarbons.

Table 1. Comparison of results given by the OSA (Gearhart), Statoil's Rock Eval and Leco instruments.
Well 6608/11-1

I

Dybde (m)	Statoil					
	Statoil T-max	Gearhart T-max	Leco TOC%	Gearhart TOC%	Statoil HI	Gearhart HI
1184	422	416	0.58	0.49	65	48
1190	418	413	0.74	0.75	102	89
1196	418	417	0.57	0.58	54	87
1202	441	406	0.54	0.59	70	55
1208	491	414	0.41	0.29	75	93
1214	377	406	0.27	0.17	33	194
1220	451	417	0.37	0.20	124	160
1226	411	415	0.61	0.69	159	133
1232	416	415	0.48	0.25	120	96
1238	424	419	0.56	0.38	66	65
1244	456	420	0.35	0.51	51	43
1250	434	431	1.10	1.81	72	65
1256 coal	405	394	33.60	47.18	30	28
1256	433	431	1.10	1.39	83	72
1262	433	421	0.47	0.48	123	75
1263	434	432	0.49	0.61	93	62
1274	433	439	0.89	1.91	108	97
1280	437	440	1.33	1.06	47	38
1289	435	436	0.43	0.08	74	325
1292	436	437	0.75	0.21	48	180
1298	429	432	0.28	0.17	25	82
1304	356	426	0.27	0.14	18	35
1310	341	428	0.22	0.00	31	0
1316	386	423	0.26	0.00	61	0

II

Dybde (m)	Statoil					
	Statoil T-max	Gearhart T-max	Leco TOC%	Gearhart TOC%	Statoil HI	Gearhart HI
1322	339	333	0.13	0.00	53	0
1328	358	433	0.22	0.00	4	0
1334	305	378	0.14	0.00	21	0
1340	259	368	0.06	0.00	16	0
1346	376	350	0.11	0.00	9	0
1352	302	449	0.22	0.00	22	0
1358	430	433	0.25	0.00	28	0
1364	413	428	0.26	0.00	88	0
1370	406	427	0.21	0.00	42	0
1376	363	433	0.27	0.00	33	0
1382	367	399	0.27	0.00	29	0
1388	242	300	0.27	0.00	40	0
1394	420	425	0.20	0.00	50	0
1400	404	398	0.33	0.00	75	0
1406	407	403	0.31	0.04	100	275
1412	381	362	0.13	0.00	30	0
1418	279	306	0.08	0.00	12	0
1427	353	408	0.12	0.00	41	0
1433	279	380	0.09	0.00	11	0
1442	340	421	0.11	0.00	72	0
1452	405	404	0.17	0.00	76	0
1457	411	385	0.10	0.00	40	0
1463	269	385	0.11	0.00	45	0
1472	438	433	0.20	0.01	145	0
1478	435	435	0.15	0.01	66	0
1484	372	434	0.11	0.00	81	0
1490	439	433	0.13	0.00	84	0
1496			0.20		120	
1502	435	433	0.10	0.00	70	0

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III

Dybde (m)	Statoil					
	Statoil T-max	Gearhart T-max	LECO TOC%	Gearhart TOC%	Statoil HI	Gearhart HI
1508			0.13		92	
1514	422	432	0.15	0.02	120	
1502	435	433	0.10	0.00	70	0
1508			0.13		92	
1514	422	432	0.15	0.02	86	0
1520			0.22		127	
1526	430	431	0.21	0.01	109	271
1532			0.16		100	
1538	376	433	0.10	0.00	70	0
1547	425	426	0.05	0.05	60	80
1556	338	421	0.12	0.00	25	0
1562	279	428	0.14	0.00	7	0
1571			0.16		37	
1574	279	351	0.14	0.00	14	0
1580			0.18		33	
1589			0.28		53	
1592			0.24		29	
1595	300	430	0.24	0.00	8	0