

Evaluation of thermal maturity data from wells offshore West Greenland - recommendations for basin modelling

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Released 01.03.2006

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Introduction

In April 1999, the Government of Greenland and the Danish Ministry for Environment and Energy announced a new licensing strategy for Greenland. This strategy includes a licensing round that will be held in the year 2001 in areas offshore West Greenland between 63° and 68° N. As a consequence of this coming round as well as an ongoing open-door procedure in other areas in West Greenland, GEUS is updating an assessment of the exploration possibilities offshore West Greenland. This re-evaluation began in the spring of 1999 and is planned to be reported to the authorities in the summer of year 2000.

The re-evaluation is mainly based on seismic interpretation (in some cases reprocessing and reinterpretation) of all data available but is also planned to include basin modelling. For this purpose it is particularly important to update the knowledge on thermal maturity gradients in the basins off West Greenland. The present report summarises data obtained in the 1970's, 1980's and 1990's by the operators of past and present licences and by GGU/GEUS. Furthermore, the report presents new analytical results on carefully selected sample material from all five offshore wells in West Greenland: Kangamiut-1, Ikermiut-1, Hellefisk-1, Nukik-1 and Nukik-2 and from one relevant Canadian well: Gjoa.

Previous work

Analyses from the 1970's

The five wells offshore West Greenland were drilled in 1976 and 1977. The operators reported some organic geochemical results, mainly including TOC and R_o values and a minor number of other analyses:

Nukik-1	22 R_o	71 TAI	24 TOC	22 GC
Nukik-2	16 R_o		261 TOC	25 GC
Kangamiut-1	9 R_o	33 TAI	85 TOC	8 GC 24 light HC
Ikermiut-1	25 R_o	32 TAI	182 TOC	15 GC 83 light HC
Hellefisk-1	21 R_o	58 TAI	37 TOC	37 light HC

The work on Nukik-1 and Nukik-2 was made internally at Mobil (operator).

The work on Kangamiut-1 for Total (operator) was made by SNEAP, Pau.

The work on Ikermiut-1 for Chevron (operator) was made by Core Lab., Bray & Evans, and COPRC and internally at Chevron.

The work on Hellefisk was made internally at ARCO (operator)

With some exceptions, the number of analyses is relatively small and the detailed organic geochemical analyses must be characterised as outdated compared to recent standards. However, the TOC values recorded give good indications of the organic richness of the successions penetrated.

All reports are stored at GEUS; in many cases the actual data are not available but only summarised in figures.

At the same time and shortly after these analyses by/for the operators, GGU personnel together with KFA, Aachen as a consultants carried out independent studies on vitrinite reflectance (by E. J. Schiener and Chris Cornford), Thermal Alteration Index (TAI) as part of the palynological dating (by C. A. Croxton), TOC, GC and light HC (by D. Leythaeuser & D. Welte). Most of the data were reported (stored at GEUS), and the vitrinite reflectance values and the TAI measurements have been included in the summary paper by Rolle (1985).

Nukik-1	8 R_o	13 TAI	8 TOC	8 GC
Nukik-2	11 R_o	18 TAI	18 TOC	
Kangamiut-1	24 R_o	11 TAI	84 TOC	25 GC 84 light HC
Ikermiut-1	47 R_o	27 TAI	75 TOC	75 light HC
Hellefisk-1	18 R_o	18 TAI	48 TOC	48 light HC

In addition to the paper by Rolle (1985) results of the first phase of exploration have been summarised by Manderscheid (1980) and Henderson et al. (1981). The two latter papers, however, provide only little information on thermal maturation.

Analyses from the 1980's

In the 1980's only little analytical work was carried out on sample material from offshore West Greenland. Following the release of all licenses by the spring of 1979, the Petroleum Group at GGU collapsed shortly after. When the group was re-established in the early 1980's, the main focus was on East Greenland (in particular Jameson Land where ARCO later was awarded a license) and North Greenland (the "Nordolie" project).

A limited number of samples from Ikermiut-1 (51), Kangamiut-1 (29), and Nukik-2 (10) were analysed by Rock-Eval/TOC screening at the DGU-GGU source rock laboratory in the mid-eighties. The results were not reported at that time, but the Tmax values were later published by Chalmers & Pulvertaft (1993, their fig. 2). These data also formed the background for a preliminary basin modelling study that was carried out in 1992. Results of this study were included in the paper by Chalmers et al. (1993). The actual data are stored on GEUS.

Analyses from the 1990's

A re-evaluation of the exploration possibilities offshore West Greenland started from around 1988. The first phase mainly involved seismic reprocessing and reinterpretation followed by acquisition of new data by GGU in 1990–92. At the same time new petroleum geological field work on Nuussuaq started which led to the discovery of oil seepage in 1992.

The subsequent activities have – among many other studies – included numerous organic geochemical analyses. By far the most of these data are from cores and surface samples of sediments and oil-impregnated basalts from the Disko–Nuussuaq–Svartenhuk Halvø onshore area. A very large database comprising all these onshore data exists at GEUS and many of the results have been reported and published (contact Flemming G. Christiansen or Jørgen Bojesen-Koefoed for details).

A minor number of samples (three from Kangamiut-1, four from Ikermiut-1, and one from Nukik-2) were analysed by GC-MS in 1993 as part of a preliminary basin modelling study. These samples were selected from the same material that was analysed by Rock-Eval/TOC screening in the mid-eighties. The data have not been reported but are stored at GEUS.

In addition to the studies by GEUS, the operators of the Fylla and Sisimiut West licenses have made some analytical studies. However, Phillips – as operator of the Sisimiut West license, made an apatite fission track study that also included some vitrinite reflectance measurements. The apatite fission track study was carried out by Geotrack who used Kei-

raville Konsultant, Australia as consultant for the vitrinite measurements (Geotrack 1999). A total of 75 Rmax values were reported including measurements from Nukik-1 (10), Nukik-2 (11), Kangamiut-1 (13), Ikermiut-1 (15), Hellefisk-1 (12), and the Candian well Gjoa G-37 (14).

New analytical results and reinterpretation of older results

The present analytical programme was initiated in the summer of 1999.

The samples for the present analytical programme were carefully selected from mudstone intervals with a presumed high content of organic material (based on lithological interpretation by Rolle, 1985) and direct evaluation of petrophysical log data that has been loaded on a Landmark system using StratWorks.

A total of 131 samples were analysed by Rock Eval/TOC screening (see Tables). Following a preliminary evaluation of these data a minor number of samples (26) were selected for GC and GC/MS analyses and for measurements of vitrinite reflectance (26). Furthermore, most of the samples used by Geotrack (1999) in their recent study were repolished and remeasured (66) (see Tables). Relevant data are shown in the tables and figures enclosed. All original data are stored at GEUS.

Unfortunately, it has not been possible to locate any of the polished samples that were measured in the 1970's. A considerable amount of time has been spent searching for these polished samples, that have been seen at GGU some years ago. A repolishing followed by remeasuring of selected samples would have been very useful.

Gjoa G-37

Rock-Eval/TOC screening

No data available.

Vitrinite reflectance, R_o

Geotrack samples (14) were remounted, repolished, and measured by GEUS.

Biological markers

No data available.

Evaluation of maturation gradient

Vitrinite reflectance data show minor scatter, but a maturity trend may be constructed with some confidence (Figure). The top of the oil window, defined as $R_o = 0.50\%$, is found at approximately 3000 m b. rfl.

Hellefisk-1

Rock-Eval/TOC screening

26 prewashed cutting samples covering the range 1902–2515 m b. rfl. (L. Eocene) were subjected to Rock-Eval/TOC analysis (Table). TOC is generally <1% except for seven samples, one of which reaches a TOC of 6.08%. Pyrolysis yields (S2) are invariably low (<6 mg/g, generally <1 mg/g), and hydrogen indices (HI) are <100. Tmax data show some scatter due to low pyrolysis yields, but excluding obviously spurious data, values in the range 420–433 °C are observed, showing a fairly well-constrained maturation trend, and indicating pre-oil window maturity. Based on the screening data obtained, four samples were selected for further studies following preparation (washing) from the original cutting samples. However, due to poor sample quality, only three of these samples could be analysed.

Vitrinite reflectance, R_o

Vitrinite reflectance data are available from three sources (Table). A data set comprising 14 samples was produced by the former GGU. 11 Geotrack samples were remounted, re-polished, and measured by GEUS. Three samples selected for further studies based on screening results (see above) were measured by GEUS.

Biological markers

The biological marker data are not very informative, and the characteristics of the three samples analysed are somewhat variable. However, based on combined evidence from GC_{FID}, triterpane and sterane data all three samples seem to represent marine mudrocks carrying some terrigenous organic matter. Biological marker maturity parameters indicate pre-oil window maturity.

Evaluation of maturation gradient

Most of the existing GGU vitrinite reflectance data are obviously erroneous, indicating unrealistically high levels of thermal maturity. A careful scrutiny of all data, and combination information from all data types available, allow a maturity trend to be constructed with

some confidence (Figure). Based on extrapolation of the trend, the top of the oil window, defined as $R_o = 0.50\%$, is found between 2500 and 3000 m b. rfl., and hence below TD.

Ikermiut-1

Rock-Eval/TOC screening

27 prewashed cutting samples covering the range 1551–3607 m b. rfl. (L. Eocene – ? Cenomanian) were subjected to Rock-Eval/TOC analysis (Table). The Lower Eocene age part of the succession (1470–2010 m b.rfl.) shows low TOC (<1 %), very low pyrolysis (S2) yields (< 0.50 mg/g), and Hydrogen Indices < 50. The Santonian – Upper Paleocene age part of the succession (2010–2811 m b.rfl.) shows slightly higher values of TOC (0.5 – 2 %), low pyrolysis (S2) yields (< 1.50 mg/g), and Hydrogen Indices < 100. The Cenomanian – Turonian age part of the succession (2811 – TD m b.rfl.) shows comparatively high values of TOC (1.5–3%, generally > 2%), low pyrolysis (S2) yields (1.5–4 mg/g), and Hydrogen indices in the range 50–150. Tmax data show some scatter due to low pyrolysis yields, but excluding obviously spurious data, values in the range 420–445°C are observed, showing a somewhat irregular maturation trend, which seems to include a reversal close to the unconformity approximately 2700 m b. rfl. Based on the screening data obtained, 12 samples were selected for further studies following preparation (washing) from the original cutting samples.

Vitrinite reflectance, R_o

Vitrinite reflectance data are available from three sources (Table). A dataset comprising 34 samples was produced by the former GGU. 14 Geotrack samples were remounted, repolished, and measured by GEUS. 12 samples selected for further studies based on screening results (see above) were measured by GEUS.

Biological markers

Based on combined evidence from GC_{FID}, triterpane and sterane data, all samples seem to represent marine mudrocks carrying variable proportions of terrigenous organic matter. Worth of note is the very high proportion of 28,30-bisnorhopane present in the Turonian part of the succession. High levels of 28,30-bisnorhopane have been observed in Turonian shale source rocks from Ellesmere Island (Canada), and in the Itilli oil type from the Disko – Nuussuaq – Svartenhuk area (Bojesen-Koefod *et al.* 1999). The Itilli oil is presumably sourced from Cenomanian – Turonian source rocks. Biological marker maturity parameters generally show increasing trends with depth from near the unconformity at approximately 2700 m b. rfl. In the shallower part of the drilled succession, biological marker maturity parameters show rather poor trends if any at all. Based on biomarker parameters, the oil window is entered at approximately 3000 m b. rfl.

Evaluation of maturation gradient

A number of the existing GGU vitrinite reflectance data are obviously erroneous, indicating unrealistically high levels of thermal maturity. A careful scrutiny of all data, and combination information of all data types available, allow a maturity trend to be constructed with some confidence (Figure). The trend includes a maturity reversal near the unconformity recorded at approximately 2700 m b.rfl; this observation is supported by both Rock-Eval Tmax and biomarker data. In this context it is important to note that the Ikermiut-1 well was drilled on a flower structure, where a complex interplay of lateral and vertical tectonic movements have taken place. The top of the oil window, defined as $R_o = 0.50\%$, is found at approximately 3000 m b. rfl. The reversal of the maturity trend seems to indicate that the tectonic movements to some extent postdate thermal maturation of the drilled sediments. However, due to the coolness of the basin and the lack of data on deeper, undrilled parts of the succession, this may not necessarily be considered detrimental to the prospectivity of the area.

Kangamiut-1

Rock-Eval/TOC screening

43 prewashed cutting samples covering the range 1956–3600 m b. rfl. (M. Eocene – U. Paleocene) were subjected to Rock-Eval/TOC analysis (Table). The Middle Eocene portion of the succession (~2780 m b. rfl.) shows values of TOC in the range 0.25–1.5 %. Pyrolysis yields (S2) are invariably very low (<1 mg/g), and hydrogen indices (HI) are <75. The deeper part of the penetrated succession shows values of TOC in the range 0.5–3.5 %, with a tendency towards increasing values with depth. Pyrolysis yields (S2) are invariably low (<3 mg/g, mainly < 1 mg/g), and hydrogen indices (HI) are <100. Tmax data show some scatter due to low pyrolysis yields, but excluding obviously spurious data, values in the range 415–438°C are observed, showing a fairly well-constrained maturation trend. Based on the screening data obtained, seven samples were selected for further studies following preparation (washing) from the original cutting samples.

Vitrinite reflectance, R_o

Vitrinite reflectance data are available from three sources (Table). A dataset comprising 24 samples was produced by the former GGU. 12 Geotrack samples were remounted, re-polished, and measured by GEUS. Seven samples selected for further studies based on screening results (see above) were measured by GEUS.

Biological markers

The use of biological marker data are in the Kangamiut-1 well is hampered by contamination in several samples and overall low maturity, indicated by the presence of thermally

unstable biomarkers. Assessed from biological marker maturity parameters, the oil window is not reached in the well.

Evaluation of maturation gradient

Most of the existing GGU vitrinite reflectance data are obviously erroneous, indicating unrealistically high levels of thermal maturity. A careful scrutiny of all data, and combination information for all data types available, allow a maturity trend to be constructed with some confidence (Figure). Based on extrapolation of the trend, the top of the oil window, defined as $R_o = 0.50\%$ is found at approximately 4000 m b. rfl., well into the crystalline basement, and below TD.

Nukik-1

Rock-Eval/TOC screening

25 prewashed cutting samples covering the range 1402–2359 m b. rfl. (? M. Miocene – U. Paleocene) were subjected to Rock-Eval/TOC analysis (Table). The entire succession shows variable values of TOC, ranging from near zero to approximately 7%. Pyrolysis yields (S₂) are variable, occasionally high, covering the range 0–21 mg/g, whereas hydrogen indices (HI) are in the range 25–500. Tmax data show some scatter, probably due to contamination and occasionally low pyrolysis yields. Even when excluding obviously spurious data, a reliable maturity trend cannot be constructed, but little doubt exists that the overall level of thermal maturity is low. Based on the screening data obtained, six samples were selected for further studies following preparation (washing) from the original cutting samples. However, due to poor sample quality, only one of these samples could be analysed.

Vitrinite reflectance, R_o

Vitrinite reflectance data are available from three sources (Table). A dataset comprising seven samples was produced by the former GGU. Six Geotrack samples were remounted, repolished, and measured by GEUS. One sample selected for further studies based on screening results (see above) was measured by GEUS.

Biological markers

The single sample that lent itself to biological marker analysis showed to be contaminated, and did not yield useful data.

Evaluation of maturation gradient

A rather poorly constrained maturity trend may be constructed from the R_o data available (Figure). By extrapolation of the trend, the top of the oil window, defined as $R_o = 0.50\%$, is found approximately at 3000 m b. rfl., well into the crystalline basement and below TD.

Nukik-2

Rock-Eval/TOC screening

17 prewashed cutting samples covering the range 1999–2557 m b. rfl. were subjected to Rock-Eval/TOC analysis (Table). The entire succession shows variable values of TOC, ranging from near zero to approximately 11 %. Pyrolysis yields (S₂) are variable, occasionally high, covering the range 0.5–18 mg/g, whereas hydrogen indices (HI) are in the range 15–350. Tmax data show some scatter, probably due to contamination and occasional low pyrolysis yields. Even when excluding obviously spurious data, a reliable maturity trend cannot be constructed, but little doubt exists that the overall level of thermal maturity is low. Based on the screening data obtained, four samples were selected for further studies following preparation (washing) from the original cutting samples. However, due to poor sample quality, only three of these samples could be analysed.

Vitrinite reflectance, R_o

Vitrinite reflectance data are available from three sources (Table). A dataset comprising 12 samples was produced by the former GGU. Eight Geotrack samples were remounted, re-polished, and measured by GEUS. Three samples selected for further studies based on screening results (see above) were measured by GEUS.

Biological markers

The samples selected for biomarker analysis showed to be contaminated, and did not yield useful data.

Evaluation of maturation gradient

No meaningful maturation trend could be constructed (Figure).

Summary of gradients

Despite considerable differences in data-density and -quality among the wells studied, all data consistently indicate that the basins off West Greenland geothermally are relatively cool.

The depth to the top of the oil window, i.e. to the onset of petroleum generation, is generally near to 3000 m, or even deeper, whereas the depth to "peak oil generation" cannot be estimated in a meaningful way.

The geothermal coolness of the basins suggests that potential source rocks of Palaeogene age in general cannot be expected to have attained levels of thermal maturity sufficient for the generation of significant amounts of petroleum, except in specific settings where increased heatflow locally may have enhanced maturation or in areas where thick successions of Paleocene volcanics are present. Hence, exploration activities in the region must be directed towards plays involving Mesozoic (- or older) source rocks. In light of the seepage discoveries in the Disko – Nuussuaq – Svartenhuk Halvø region, particularly the existence of source rocks of Cenomanian – Turonian age is conceivable.

The Ikermiut-1 well represents a very unusual situation, where large-scale lateral tectonic movements along the Ungava Fracture Zone have resulted in the formation of a stratigraphic hiatus, and the superposition of sedimentary successions with different thermal histories, and hence, the emergence of a very unusual maturity profile, comprising two partially amalgamated maturation trends. The disequilibrium of the maturity profile indicates that structure formation to some extent postdates maturation, but due to the overall low levels of thermal maturity, this should not necessarily be considered detrimental to the prospectivity of the area.

Recommendations for basin modelling and future studies

The present study has clearly demonstrated that it is not easy to get reliable maturity data from the offshore wells in West Greenland. Problems with contamination and a number of inaccurate data and misinterpretations in previous studies have provided many more or less useless data!

The present study has demonstrated that a careful interpretation (and reinterpretation) of maturity data was necessary prior to any meaningful basin modelling in West Greenland. It is suggested only to use the approved data from the present report for basin modelling (see Tables and Figures).

The present study has, however, given a good background for future studies and evaluations. It still seems necessary with more studies of the Ikermiut-1 well where the maturity trend is quite remarkable. A closer sampling for maturity analysis should be combined with a detailed stratigraphic and structural correlation. Such studies are particularly important for the ongoing exploration in the Sisimiut-West license area. It is therefore recommended that GEUS – after a preliminary contact with BMP – gets into an informal contact with Phillips to discuss some of the critical data and models.

The present study has also shown how important it is to get good samples without contamination. This emphasises the necessity of a significant amount of cores or side-wall cores for future wells within the Fylla and Sisimiut-West license areas, followed by adequate analytical programmes.

Acknowledgements

Parts of the present study were initiated during an EFP-91 project "Basin modelling West Greenland" (EFP 1313/91-0014).

The analytical work and subsequent reporting were economically supported by the Bureau of Minerals and Petroleum, Nuuk (BMP) the Danish Energy Agency, Copenhagen (DEA).

John Boserup, Ditte Kiel-Dühring and Lisbeth Løvig Nielsen are thanked for sample preparation and laboratory work.

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Tables and Figures

Screening**Locality:** Hellefisk-1**Activity no:** 1999025**Material:** Cuttings**Client:** Flemming Getreuer**Comments:****Date:** 17. august 1999**Device:** Leco CS-200/Rock Eval 6

Lab (#)	meter	TOC (wt-%)	Tmax (°C)	S1 (mg HC / g rock)	S2	S3	HI	OI	PI	PC	
2416	1902	02-B-00-2181	0.47	416	0.01	0.08	1.25	17	260	0.11	0.01
2417	1926	02-B-00-2185	6.08	426	0.09	5.40	5.65	89	93	0.02	0.46
2418	1951	02-B-00-2192	0.80	417	0.05	0.30	1.89	38	240	0.14	0.03
2419	1975	02-B-00-2196	0.83	433	0.02	0.24	1.24	29	150	0.08	0.02
2420	1999	02-B-00-2200	0.43	432	0.01	0.12	0.58	28	140	0.08	0.01
2421	2024	02-B-00-2204	2.44	437	0.05	1.12	2.21	46	91	0.04	0.10
2422	2054	02-B-00-2209	0.53	433	0.02	0.21	0.67	40	130	0.09	0.02
2423	2079	02-B-00-2213	1.08	422	0.04	0.25	1.27	23	120	0.14	0.02
2424	2103	02-B-00-2217	0.70	425	0.02	0.19	0.79	27	110	0.10	0.02
2425	2131	02-B-00-2222	0.26	427	0.01	0.10	0.25	39	98	0.09	0.01
2426	2158	02-B-00-2225	0.26	422	0.01	0.10	0.24	38	91	0.09	0.01
2427	2182	02-B-00-2229	0.43	424	0.02	0.12	0.52	28	120	0.14	0.01
2428	2201	02-B-00-2232	0.36	422	0.02	0.13	0.42	36	120	0.13	0.01
2429	2222	02-B-00-2235	0.96	422	0.02	0.21	0.81	22	84	0.09	0.02
2430	2259	02-B-00-2239	0.11	427	0.01	0.07	0.11	66	100	0.13	0.01
2431	2280	02-B-00-2242	0.38	429	0.02	0.21	0.23	55	60	0.09	0.02
2432	2304	02-B-00-2246	0.71	426	0.02	0.31	0.78	44	110	0.06	0.03
2433	2329	02-B-00-2250	0.72	429	0.02	0.26	0.80	36	110	0.07	0.02
2434	2353	02-B-00-2258	0.58	428	0.01	0.12	0.61	21	110	0.08	0.01
2435	2374	02-B-00-2265	1.44	433	0.07	0.85	0.91	59	63	0.08	0.08
2436	2393	02-B-00-2271	1.53	431	0.07	0.75	0.78	49	51	0.09	0.07
2437	2420	02-B-00-2280	1.76	433	0.08	1.18	1.02	67	58	0.06	0.10
2438	2444	02-B-00-2287	1.29	432	0.07	0.79	0.72	61	56	0.08	0.07
2439	2472	02-B-00-2296	0.92	428	0.04	0.40	0.58	44	63	0.09	0.04
2440	2493	02-B-00-2302	0.84	427	0.02	0.27	0.75	32	89	0.07	0.02
2441	2515	02-B-00-2307	0.07	445	0.01	0.04	0.24	61	360	0.20	0.00

Screening

1

Locality: Ilkermiut-1 **Activity no:** 1999024

Material: Cuttings

Client: Flemming Getreuer

Comments:

Date: 26. august 1999

Device: Leco CS-200/Rock Eval 6

Lab (#)	meter		TOC (wt-%)	Tmax (°C)	S1 (mg HC / g rock)	S2	S3	HI	OI	PI	PC
2339	1551	04-B-00-2098	0.24	409	0.02	0.11	1.25	46	520	0.15	0.01
2340	1580	04-B-00-2103	0.47	426	0.06	0.19	1.37	41	290	0.24	0.02
2341	1601	04-B-00-2109	0.58	425	0.06	0.24	1.45	42	250	0.20	0.02
2342	1629	04-B-00-2118	0.71	431	0.04	0.23	1.56	33	220	0.15	0.02
2343	1660	04-B-00-2125	0.69	431	0.02	0.19	1.74	27	250	0.10	0.02
2344	1690	04-B-00-2131	0.68	430	0.02	0.17	1.50	25	220	0.11	0.02
2345	1710	04-B-00-2135	0.86	431	0.02	0.24	1.72	28	200	0.08	0.02
2346	1739	04-B-00-2142	0.79	437	0.02	0.21	1.54	27	200	0.09	0.02
2347	1758	04-B-00-2145	0.76	432	0.02	0.21	1.62	28	210	0.09	0.02
2348	1790	04-B-00-2151	0.71	431	0.04	0.26	1.35	37	190	0.13	0.02
2349	1820	04-B-00-2157	0.42	420	0.03	0.20	0.89	48	210	0.13	0.02
2350	1840	04-B-00-2162	0.69	425	0.03	0.23	1.07	33	150	0.12	0.02
2351	1869	04-B-00-2171	0.82	431	0.03	0.25	1.18	31	140	0.11	0.02
2352	1899	04-B-00-2180	0.75	431	0.04	0.25	1.18	33	160	0.14	0.02
2353	1920	04-B-00-2187	0.69	431	0.03	0.24	1.18	35	170	0.11	0.02
2354	1940	04-B-00-2192	0.73	427	0.07	0.29	1.12	40	150	0.19	0.03
2355	1970	04-B-00-2197	0.67	423	0.11	0.37	1.17	55	180	0.23	0.04
2356	2001	04-B-00-2206	0.86	431	0.05	0.25	1.26	29	150	0.17	0.02
2357	2020	04-B-00-2211	0.73	431	0.07	0.29	1.21	40	160	0.19	0.03
2358	2040	04-B-00-2215	0.71	425	0.04	0.27	1.18	38	170	0.13	0.03
2359	2070	04-B-00-2221	0.57	424	0.04	0.19	0.88	33	150	0.17	0.02
2360	2101	04-B-00-2230	0.55	428	0.02	0.17	0.89	31	160	0.11	0.02
2361	2131	04-B-00-2240	0.63	431	0.03	0.20	0.85	32	140	0.13	0.02
2362	2149	04-B-00-2246	0.58	426	0.03	0.17	0.88	29	150	0.15	0.02
2363	2180	04-B-00-2257	1.56	423	0.07	0.59	2.02	38	130	0.11	0.05
2364	2210	04-B-00-2263	1.63	429	0.12	0.88	2.28	54	140	0.12	0.08
2365	2240	04-B-00-2269	1.43	430	0.04	0.66	1.66	46	120	0.06	0.06
2366	2270	04-B-00-2275	1.69	433	0.06	0.91	2.20	54	130	0.06	0.08

Screening

2

Locality: Ikermiut-1

Activity no: 1999024

Material: Cuttings

Client: Flemming Getreuer

Comments:

Date: 26. august 1999

Device: Leco CS-200/Rock Eval 6

Lab (#)	meter		TOC (wt-%)	Tmax (°C)	S1 (mg HC / g rock)	S2	S3	HI	OI	PI	PC
2367	2300	04-B-00-2281	1.86	433	0.07	1.20	2.12	65	110	0.06	0.11
2368	2330	04-B-00-2287	1.56	434	0.08	1.06	1.86	68	120	0.07	0.09
2369	2350	04-B-00-2291	1.30	430	0.08	0.85	2.18	65	170	0.09	0.08
2370	2380	04-B-00-2299	0.79	435	0.05	0.46	0.90	58	110	0.10	0.04
2371	2410	04-B-00-2307	1.47	432	0.10	0.95	1.29	65	88	0.10	0.09
2372	2438	04-B-00-2315	1.85	432	0.12	1.24	1.57	67	85	0.09	0.11
2373	2465	04-B-00-2324	1.77	432	0.07	0.88	2.02	50	110	0.07	0.08
2374	2489	04-B-00-2332	1.86	430	0.07	0.91	1.97	49	110	0.07	0.08
2375	2516	04-B-00-2341	1.90	431	0.08	0.98	2.04	51	110	0.08	0.09
2376	2540	04-B-00-2349	1.89	429	0.06	0.88	1.98	47	100	0.06	0.08
2377	2570	04-B-00-2359	1.70	432	0.07	0.79	1.59	46	93	0.08	0.07
2378	2594	04-B-00-2367	1.51	430	0.11	0.89	1.83	59	120	0.11	0.08
2379	2615	04-B-00-2372	1.39	429	0.08	0.64	1.79	46	130	0.11	0.06
2380	2640	04-B-00-2377	1.22	432	0.07	0.62	0.95	51	78	0.10	0.06
2381	2667	04-B-00-2386	1.40	426	0.09	0.62	1.55	44	110	0.13	0.06
2382	2700	04-B-00-2700	1.23	433	0.10	0.74	1.14	60	93	0.12	0.07
2383	2727	04-B-00-2626	1.22	431	0.14	1.14	1.80	93	150	0.11	0.11
2384	2772	04-B-00-2641	1.45	430	0.18	1.31	1.45	91	100	0.12	0.12
2385	2799	04-B-00-2650	1.55	437	0.19	1.26	1.51	81	98	0.13	0.12
2386	2826	04-B-00-2657	1.87	430	0.36	2.62	1.29	140	69	0.12	0.25
2387	2853	04-B-00-2666	1.59	432	0.20	1.62	1.10	102	69	0.11	0.15
2388	2880	04-B-00-2675	2.17	431	0.23	1.82	1.40	84	64	0.11	0.17
2389	2907	04-B-00-2684	1.98	434	0.26	2.17	1.19	110	60	0.11	0.20
2390	2934	04-B-00-2693	2.16	436	0.43	2.00	1.31	92	61	0.18	0.20
2391	2958	04-B-00-2411	2.07	432	0.22	1.45	1.05	70	51	0.13	0.14
2392	2985	04-B-00-2420	2.00	437	0.28	1.62	0.99	81	50	0.15	0.16
2393	3015	04-B-00-2428	2.29	432	0.28	1.59	0.89	69	39	0.15	0.16
2394	3051	04-B-00-2440	2.51	432	0.32	1.92	1.08	77	43	0.14	0.19

Screening

3

Locality: Ikermiut-1

Activity no: 1999024

Material: Cuttings

Client: Flemming Getreuer

Comments:

Date: 26. august 1999

Device: Leco CS-200/Rock Eval 6

Lab (#)	meter		TOC (wt-%)	Tmax (°C)	S1 (mg HC / g rock)	S2	S3	HI	OI	PI	PC
2395	3078	04-B-00-2449	2.26	436	0.24	1.35	0.89	60	39	0.15	0.13
2396	3105	04-B-00-2458	2.46	431	0.33	1.94	1.20	79	49	0.15	0.19
2397	3132	04-B-00-2467	2.30	436	0.45	2.80	0.87	122	38	0.14	0.27
2398	3159	04-B-00-2476	2.52	430	0.38	1.99	0.88	79	35	0.16	0.20
2399	3185	04-B-00-2484	2.61	435	0.25	2.48	0.85	95	33	0.09	0.23
2400	3212	04-B-00-2493	2.74	436	0.30	1.87	0.93	68	34	0.14	0.18
2401	3239	04-B-00-2502	2.63	435	0.32	2.04	0.91	78	35	0.14	0.20
2402	3266	04-B-00-2511	2.68	438	0.35	2.75	0.87	103	32	0.11	0.26
2403	3293	04-B-00-2520	2.67	438	0.35	2.56	1.05	96	39	0.12	0.24
2404	3320	04-B-00-2529	2.92	429	0.69	4.04	0.92	138	31	0.15	0.39
2405	3356	04-B-00-2540	2.66	441	0.32	2.45	1.13	92	43	0.12	0.23
2406	3383	04-B-00-2549	2.85	437	0.48	3.19	1.13	112	40	0.13	0.30
2407	3410	04-B-00-2558	2.75	441	0.38	2.48	1.01	90	37	0.13	0.24
2408	3437	04-B-00-2567	2.67	439	0.37	2.50	0.95	94	36	0.13	0.24
2409	3464	04-B-00-2576	2.61	437	0.33	2.32	0.88	89	34	0.12	0.22
2410	3491	04-B-00-2585	2.54	441	0.45	2.36	0.95	93	37	0.16	0.23
2411	3517	04-B-00-2592	2.50	439	0.31	2.21	0.88	89	35	0.12	0.21
2412	3544	04-B-00-2601	2.38	442	0.31	1.78	0.58	75	24	0.15	0.17
2413	3571	04-B-00-2610	2.41	445	0.35	2.07	0.65	86	27	0.14	0.20
2414	3598	04-B-00-2619	2.58	441	0.46	2.43	0.67	94	26	0.16	0.24
2415	3607	04-B-00-2622	2.52	443	0.39	2.19	0.63	87	25	0.15	0.21

Screening

1

Locality: Kangamiut-1

Activity no: 1999024

Material: Cuttings

Client: Flemming Getreuer

Comments:

Date: 7. oktober 1999

Device: Rock Eval 6

Lab (#)	meter	TOC (wt-%)	Tmax (°C)	S1 (mg HC / g rock)	S2	S3	HI	OI	PI	PC	
2807	1956	01-B-00-2254	0.32	416	0.03	0.14	0.98	44	306	0.18	0.01
2808	1962	01-B-00-2256	0.25	418	0.02	0.08	0.78	32	312	0.20	0.01
2809	1974	01-B-00-2260	0.68	417	0.03	0.20	1.70	29	250	0.13	0.02
2810	1986	01-B-00-2264	0.60	413	0.03	0.18	2.06	30	343	0.14	0.02
2811	2004	01-B-00-2270	0.81	405	0.05	0.27	3.01	33	372	0.16	0.03
2812	2601	01-B-00-2469	0.19	330	0.02	0.08	1.43	42	753	0.20	0.01
2813	2616	01-B-00-2474	0.36	416	0.02	0.11	1.22	31	339	0.15	0.01
2814	2625	01-B-00-2477	0.50	417	0.03	0.17	1.29	34	258	0.15	0.02
2815	2649	01-B-00-2485	1.16	421	0.12	0.82	2.11	71	182	0.13	0.08
2816	2661	01-B-00-2489	0.84	421	0.04	0.40	1.44	48	171	0.09	0.04
2817	2694	01-B-00-2500	1.39	428	0.04	1.03	1.92	74	138	0.04	0.09
2818	2724	01-B-00-2510	1.19	427	0.03	0.65	2.00	55	168	0.04	0.06
2819	2751	01-B-00-2519	1.10	426	0.03	0.71	1.65	65	150	0.04	0.06
2820	2772	01-B-00-2526	1.19	425	0.04	0.79	1.75	66	147	0.05	0.07
2821	2844	01-B-00-2550	1.37	425	0.03	0.91	2.10	66	153	0.03	0.08
2822	2901	01-B-00-2569	1.44	431	0.03	1.15	1.79	80	124	0.03	0.10
2823	2961	01-B-00-2588	1.29	428	0.06	0.79	2.39	61	185	0.07	0.07
2824	3003	01-B-00-2598	1.40	425	0.02	0.76	1.89	54	135	0.03	0.06
2825	3021	01-B-00-2602	1.18	428	0.03	0.73	0.97	62	82	0.04	0.06
2826	3051	01-B-00-2607	1.02	431	0.03	0.59	1.75	58	172	0.05	0.05
2827	3084	01-B-00-2614	0.83	420	0.09	0.53	0.65	64	78	0.15	0.05
2828	3108	01-B-00-2617	0.73	429	0.08	0.65	2.71	89	371	0.11	0.06
2829	3138	01-B-00-2621	0.57	422	0.03	0.30	0.59	53	104	0.09	0.03
2830	3147	01-B-00-2622	0.82	424	0.02	0.39	1.16	48	141	0.05	0.03
2831	3174	01-B-00-2625	0.85	426	0.03	0.42	1.25	49	147	0.07	0.04
2832	3201	01-B-00-2628	0.71	427	0.03	0.29	0.59	41	83	0.09	0.03
2833	3231	01-B-00-2632	0.71	426	0.03	0.35	0.61	49	86	0.08	0.03
2834	3249	01-B-00-2636	1.86	431	0.04	0.86	1.82	46	98	0.04	0.07

Screening

2

Locality: Kangamiut-1 **Activity no:** 1999024

Material: Cuttings

Client: Flemming Getreuer

Comments:

Date: 7. oktober 1999

Device: Rock Eval 6

Lab (#)	meter	TOC (wt-%)	Tmax (°C)	S1 (mg HC / g rock)	S2	S3	HI	OI	PI	PC
2835	3264	01-B-00-2638	3.40	430	0.13	2.03	1.83	60	54	0.06 0.18
2836	3288	01-B-00-2642	2.69	428	0.17	1.42	1.24	53	46	0.11 0.13
2837	3306	01-B-00-2644	2.97	427	0.10	1.88	1.72	63	58	0.05 0.16
2838	3324	01-B-00-2647	1.90	434	0.06	0.85	0.90	45	47	0.07 0.08
2839	3360	01-B-00-2653	1.54	428	0.03	0.66	1.18	43	77	0.04 0.06
2840	3381	01-B-00-2657	1.59	427	0.05	0.70	1.24	44	78	0.07 0.06
2841	3414	01-B-00-2665	1.54	428	0.08	0.86	0.66	56	43	0.09 0.08
2842	3447	01-B-00-2672	1.99	430	0.07	0.98	2.03	49	102	0.07 0.09
2843	3474	01-B-00-2675	1.65	424	0.09	0.67	0.88	41	53	0.12 0.06
2844	3501	01-B-00-2680	2.10	430	0.09	1.42	0.76	68	36	0.06 0.13
2845	3531	01-B-00-2685	1.96	433	0.12	1.14	0.73	58	37	0.10 0.10
2846	3549	01-B-00-2689	2.45	430	0.07	1.02	2.27	42	93	0.06 0.09
2847	3561	01-B-00-2693	2.32	428	0.11	1.49	0.95	64	41	0.07 0.13
2848	3591	01-B-00-2702	2.02	435	0.08	1.26	0.65	62	32	0.06 0.11
2849	3600	01-B-00-2705	2.55	438	0.06	1.37	1.64	54	64	0.04 0.12

Screening

1

Locality: Nukik-1

Activity no: 1999024

Material: Cuttings

Client: Flemming Getreuer

Comments:

Date: 1. oktober 1999

Device: Rock Eval 6

Lab (#)	meter	TOC (wt-%)	Tmax (°C)	S1 (mg HC / g rock)	S2	S3	HI	OI	PI	PC
2850	1402 03-B-00-2104	1.33	431	0.46	5.32	0.70	400	53	0.08	0.48
2851	1411 03-B-00-2105	3.75	413	3.39	17.60	3.27	469	87	0.16	1.74
2852	1420 03-B-00-2106	2.65	425	1.75	10.69	2.86	403	108	0.14	1.03
2853	1430 03-B-00-2107	1.09	441	0.26	2.72	3.92	250	360	0.09	0.25
2854	1439 03-B-00-2108	1.40	436	0.41	4.08	3.09	291	221	0.09	0.37
2855	1457 03-B-00-2109	0.85	425	0.05	1.36	0.84	160	99	0.04	0.12
2856	1466 03-B-00-2110	3.52	370	2.40	17.68	0.88	502	25	0.12	1.67
2857	1475 03-B-00-2111	3.99	371	2.13	20.57	1.19	516	30	0.09	1.88
2858	1484 03-B-00-2112	0.71	438	0.05	1.61	0.78	227	110	0.03	0.14
2859	1494 03-B-00-2113	1.02	431	0.08	2.49	0.84	244	82	0.03	0.21
2860	1503 03-B-00-2114	0.87	431	0.07	1.98	0.57	228	66	0.03	0.17
2861	1996 03-B-00-2167	1.89	419	0.13	3.87	1.24	205	66	0.03	0.33
2862	2015 03-B-00-2169	1.40	386	0.64	4.51	0.87	322	62	0.12	0.43
2863	2042 03-B-00-2172	2.61	406	0.50	8.85	1.41	339	54	0.05	0.78
2864	2070 03-B-00-2176	2.74	414	0.28	8.07	1.68	295	61	0.03	0.69
2865	2106 03-B-00-2179	3.69	374	1.12	10.46	3.06	283	83	0.10	0.96
2866	2134 03-B-00-2182	6.59	373	1.75	17.87	5.25	271	80	0.09	1.63
2867	2161 03-B-00-2185	0.77	417	0.01	0.19	1.38	25	179	0.05	0.02
2868	2179 03-B-00-2187	3.89	375	1.16	17.11	1.54	440	40	0.06	1.52
2869	2207 03-B-00-2190	4.20	378	0.90	16.48	1.99	392	47	0.05	1.44
2870	2243 03-B-00-2194	2.11	419	0.07	1.40	2.81	66	133	0.05	0.12
2871	2252 03-B-00-2195	1.61	415	0.05	1.38	1.92	86	119	0.03	0.12
2872	2280 03-B-00-2198	2.67	371	0.24	6.08	1.98	228	74	0.04	0.52
2873	2307 03-B-00-2201	2.53	385	0.32	7.20	1.64	285	65	0.04	0.62
2874	2344 03-B-00-2205	0.89	420	0.03	0.35	0.87	39	98	0.08	0.03
2875	2359 03-B-00-2209	0.12	422	0.01	0.10	0.29	83	242	0.09	0.01

Screening

1

Locality: Nukik-2

Activity no: 1999024

Material: Cuttings

Client: Flemming Getreuer

Comments:

Date: 1. oktober 1999

Device: Rock Eval 6

Lab (#)	meter		TOC (wt-%)	Tmax (°C)	S1 (mg HC / g rock)	S2	S3	HI	OI	PI	PC
2876	1999	05-B-00-2178	0.28	427	0.02	0.21	1.16	75	414	0.09	0.02
2877	2045	05-B-00-2183	0.97	415	0.05	0.48	2.31	49	238	0.09	0.04
2878	2091	05-B-00-2188	0.74	416	0.02	0.27	1.53	36	207	0.07	0.02
2879	2128	05-B-00-2192	1.12	416	0.24	2.24	1.68	200	150	0.10	0.21
2880	2182	05-B-00-2198	3.07	406	2.52	10.54	4.25	343	138	0.19	1.08
2881	2219	05-B-00-2202	3.20	410	1.22	6.20	3.71	194	116	0.16	0.62
2882	2274	05-B-00-2208	1.49	405	0.88	2.00	2.11	134	142	0.31	0.24
2883	2320	05-B-00-2214	1.31	415	0.09	0.99	2.48	76	189	0.08	0.09
2884	2338	05-B-00-2216	11.06	405	0.71	4.81	18.10	43	164	0.13	0.46
2885	2374	05-B-00-2220	0.57	416	0.03	0.16	1.12	28	196	0.16	0.02
2886	2402	05-B-00-2226	1.05	429	0.02	0.23	1.37	22	130	0.08	0.02
2887	2429	05-B-00-2229	1.86	429	0.02	0.57	2.01	31	108	0.03	0.05
2888	2457	05-B-00-2232	1.83	429	0.02	0.48	1.91	26	104	0.04	0.04
2889	2475	05-B-00-2234	1.56	431	0.02	0.43	1.43	28	92	0.04	0.04
2890	2502	05-B-00-2240	0.89	429	0.01	0.18	0.67	20	75	0.05	0.02
2891	2530	05-B-00-2246	0.58	429	0.01	0.10	0.42	17	72	0.09	0.01
2892	2557	05-B-00-2250	0.54	436	0.01	0.08	0.45	15	83	0.11	0.01

Gas Chromatography data

Triterpane biomarkers

Sterane biomarkers

Biomarker maturity parameters

Well	Sample	Depth (m)	Comment	Triterpane				Sterane	
				H31(S/S+R)	H32(S/S+R)	Ts/Tm+Ts	Tm/Tm+17β	29αα(S/S+R)	S29(ββ/αα+ββ)
Hellefisk-1	02-B-00-2204	2024	immature	0,11	0,14	0,00	0,33	0,10	0,46
Hellefisk-1	02-B-00-2265	2374		0,40	0,35	0,18	0,63	0,20	0,44
Hellefisk-1	02-B-00-2279	2417		0,44	0,31	0,08	0,72	0,14	0,38
Ikermiut-1	04-B-00-2136	1715	very immature, bb-hopanes, contamination	0,46	0,55	0,13	0,64	0,14	0,24
Ikermiut-1	04-B-00-2211	2020		0,35	0,47	0,27	0,59	0,09	0,37
Ikermiut-1	04-B-00-2281	2300		0,27	0,21	0,13	0,59	n.a.	n.a.
Ikermiut-1	04-B-00-2312	2429	DGU data 1993, light end contamination	0,32	0,25	0,11	0,61	0,11	0,33
Ikermiut-1	04-B-00-2316	2441		0,32	0,23	0,10	0,63	0,15	0,29
Ikermiut-1	04-B-00-2377	2640		0,36	0,32	0,12	0,66	0,22	0,30
Ikermiut-1	04-B-00-2657	2826		0,56	0,58	0,20	0,91	0,34	0,36
Ikermiut-1	04-B-00-2682	2901	DGU data 1993	0,58	0,58	0,14	0,93	0,34	0,42
Ikermiut-1	04-B-00-2684	2907		0,59	0,56	0,11	0,94	0,33	0,27
Ikermiut-1	04-B-00-2467	3132		0,60	0,59	0,21	0,94	0,39	0,45
Ikermiut-1	04-B-00-2489	3200	DGU data 1993	0,60	0,61	0,16	1,00	0,37	0,30
Ikermiut-1	04-B-00-2520	3293		0,58	0,59	0,18	1,00	0,38	0,36
Ikermiut-1	04-B-00-2529	3320		0,57	0,59	0,28	1,00	0,40	0,52
Ikermiut-1	04-B-00-2576	3464		0,57	0,62	0,26	1,00	0,40	0,42
Ikermiut-1	04-B-00-2588	3502	DGU data 1993	0,60	0,62	0,25	1,00	0,46	0,36
Ikermiut-1	04-B-00-2623	3610		0,59	0,58	0,40	1,00	0,48	0,47
Kangamiut-1	01-C-00-4944	1960	mainly diesel	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Kangamiut-1	01-B-00-2485	2649	diesel+indigenous OM	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Kangamiut-1	01-B-00-2598	3003	+ contamination??	0,20	0,26	0,19	0,46	0,17	0,41
Kangamiut-1	01-B-00-2640	3276		0,34	0,25	0,06	0,64	0,34	0,33
Kangamiut-1	01-B-00-2656	3378		0,45	0,35	0,09	0,70	0,15	0,35
Kangamiut-1	01-B-00-2681	3507		0,52	0,48	0,05	0,80	0,16	0,25
Kangamiut-1	01-B-00-2705	3600		0,51	0,48	0,07	0,80	0,21	0,26
Kangamiut-1	01-B-00-2725	3666	DGU data 1993	0,56	0,56	0,11	0,90	0,28	0,43
Nukik-1	03-B-00-2112	1484	contamination	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nukik-2	05-B-00-2213	2315	contamination	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nukik-2	05-B-00-2229	2429	contamination	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nukik-2	05-B-00-2232	2457	DGU data 1993, light end contamination	0,10	0,38	0,19	0,33	0,14	0,34
Nukik-2	05-B-00-2250	2557	contamination	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

GEOTRACK

Well	Sample	Depth (m)	GEUS sample & data (1999)	sample, repolished and measured by GEUS (1999)	GGU-data (old)
Gjoa G37	1999043 3061	1450		n.a.	
Gjoa G37	1999043 3062	1580		0,3	
Gjoa G37	1999043 3063	1800		0,33	
Gjoa G37	1999043 3064	1960		0,32	
Gjoa G37	1999043 3065	2160		0,34	
Gjoa G37	1999043 3066	2400		0,48	
Gjoa G37	1999043 3067	2600		0,44	
Gjoa G37	1999043 3068	3180		0,48	
Gjoa G37	1999043 3069	3420		0,58	
Gjoa G37	1999043 3070	3540		0,56	
Gjoa G37	1999043 3071	3700		0,6	
Gjoa G37	1999043 3072	3800		n.a.	
Gjoa G37	1999043 3073	3850		n.a.	
Gjoa G37	1999043 3074	3900		0,53	

Well	Sample	Depth (m)	GEUS sample & data (1999)	GEOTRACK sample, repolished and measured by GEUS (1999)	GGU-data (old)
Hellefisk-1	1999043 3090	649		n.a.	
Hellefisk-1		749			0,25
Hellefisk-1	1999043 3091	850		0,31	
Hellefisk-1	1999043 3092	1097		0,34	
Hellefisk-1	1999043 3093	1362		0,37	
Hellefisk-1	1999043 3094	1579		0,35	
Hellefisk-1	1999043 3095	1811		0,42	
Hellefisk-1		1859			0,41
Hellefisk-1	1999043 3096	1902		0,45	
Hellefisk-1		1993			0,51
Hellefisk-1	1999043 3097	1999		0,49	
Hellefisk-1	02-B-00-2204	2024	0,44		
Hellefisk-1		2048			0,49
Hellefisk-1		2103			0,53
Hellefisk-1		2140			0,55
Hellefisk-1		2182			0,55
Hellefisk-1	1999043 3098	2201		0,51	
Hellefisk-1		2222			0,7
Hellefisk-1		2298			0,63
Hellefisk-1		2347			0,61
Hellefisk-1	1999043 3099	2350		0,47	
Hellefisk-1	02-B-00-2265	2374	0,46		
Hellefisk-1		2411			0,51
Hellefisk-1	02-B-00-2279	2417	0,49		
Hellefisk-1		2440			0,49
Hellefisk-1	1999043 3100	2451		0,49	
Hellefisk-1	1999043 3101	2499		0,46	
Hellefisk-1		2505			0,47

Well	Sample	Depth (m)	GEUS sample & data (1999)	GEOTRACK sample, repolished and measured by GEUS (1999)	GGU-data (old)
Ikermiut-1	1999043 3076	1340		0,28	
Ikermiut-1		1430			0,21
Ikermiut-1	1999043 3077	1510		0,22	
Ikermiut-1	1999043 3078	1640		0,33	
Ikermiut-1		1680			0,35
Ikermiut-1	04-B-00-2136	1715	0,37		
Ikermiut-1	1999043 3079	1820		0,39	
Ikermiut-1	1999043 3080	1881		0,38	
Ikermiut-1		1922			0,32
Ikermiut-1	04-B-00-2211	2020	0,4		
Ikermiut-1		2161			0,4
Ikermiut-1	1999043 3081	2190		0,43	
Ikermiut-1		2220			0,4
Ikermiut-1	04-B-00-2281	2300	0,48		
Ikermiut-1		2310			0,51
Ikermiut-1		2340			0,41
Ikermiut-1		2370			0,41
Ikermiut-1	1999043 3082	2400		0,45	
Ikermiut-1		2429			0,46
Ikermiut-1	04-B-00-2316	2441	0,51		
Ikermiut-1		2462			0,41
Ikermiut-1		2492			0,41
Ikermiut-1		2519			0,5
Ikermiut-1		2549			0,5
Ikermiut-1		2557			0,43
Ikermiut-1		2579			0,43
Ikermiut-1	1999043 3083	2600		0,44	
Ikermiut-1		2612			0,5
Ikermiut-1	04-B-00-2377	2640	0,49		
Ikermiut-1	1999043 3084	2802		0,47	
Ikermiut-1		2815			0,54
Ikermiut-1	04-B-00-2657	2826	0,4		
Ikermiut-1	04-B-00-2684	2907	0,43		
Ikermiut-1	1999043 3085	2949		0,47	
Ikermiut-1		2975			0,54
Ikermiut-1		3073			0,67
Ikermiut-1	1999043 3086	3102		0,52	
Ikermiut-1	04-B-00-2467	3132	0,45		
Ikermiut-1		3184			0,72
Ikermiut-1		3248			0,55
Ikermiut-1	1999043 3087	3251		0,54	
Ikermiut-1		3275			0,76
Ikermiut-1	04-B-00-2520	3293	0,51		
Ikermiut-1		3302			0,65
Ikermiut-1	04-B-00-2529	3320	0,52		
Ikermiut-1		3329			0,64
Ikermiut-1		3335			0,77
Ikermiut-1		3356			0,76
Ikermiut-1		3383			0,75
Ikermiut-1	1999043 3088	3401		0,57	
Ikermiut-1		3410			0,75
Ikermiut-1		3428			0,85
Ikermiut-1		3447			0,85
Ikermiut-1	04-B-00-2576	3464	0,63		
Ikermiut-1		3487			0,89
Ikermiut-1	1999043 3089	3491		0,68	
Ikermiut-1		3520			0,85
Ikermiut-1		3544			0,9
Ikermiut-1	04-B-00-2623	3610	0,51		0,96

GEOTRACK
sample, repolished
and measured by
GGU-data
(old)
GEUS (1999)

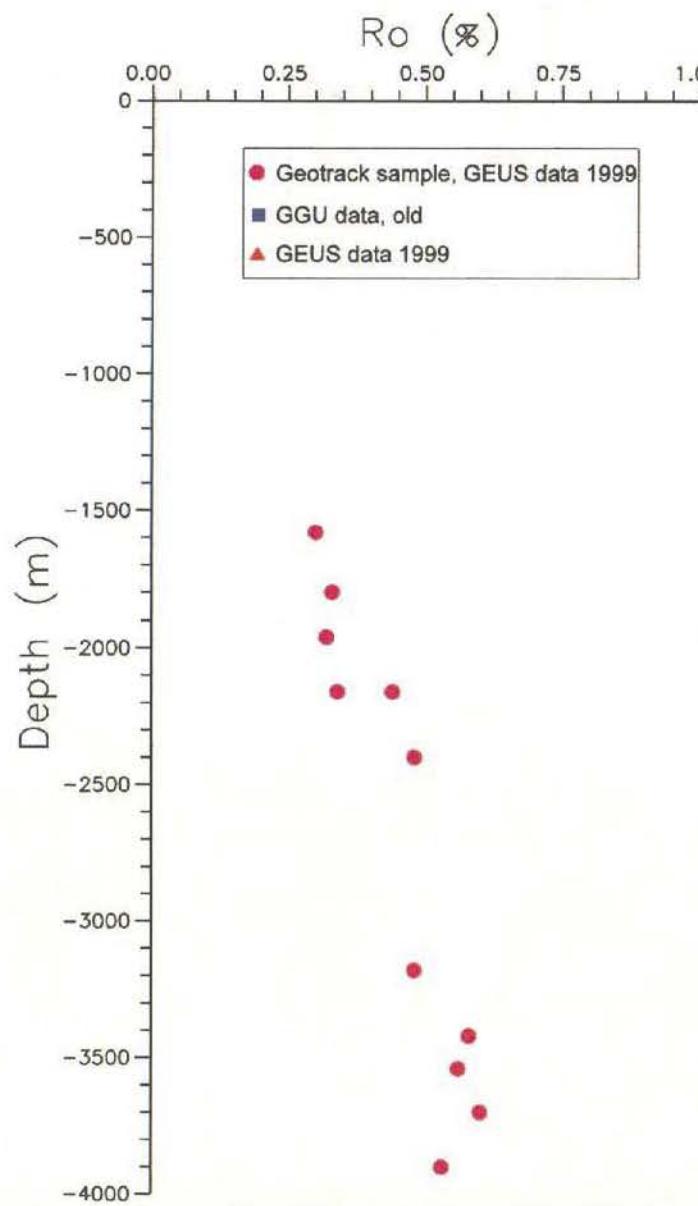
Well	Sample	Depth (m)	GEUS sample & data (1999)
Kangamiut-1	1999043 3027	850	
Kangamiut-1	1999043 3028	1010	
Kangamiut-1		1490	
Kangamiut-1	1999043 3030	1572	
Kangamiut-1	1999043 3031	1743	
Kangamiut-1	01-C-00-4944	1960	0,36
Kangamiut-1	1999043 3032	1980	
Kangamiut-1	1999043 3033	2163	
Kangamiut-1		2200	
Kangamiut-1	1999043 3034	2448	
Kangamiut-1		2500	
Kangamiut-1		2630	
Kangamiut-1	01-B-00-2485	2649	0,4
Kangamiut-1	1999043 3035	2670	
Kangamiut-1		2750	
Kangamiut-1		2830	
Kangamiut-1	1999043 3036	2919	
Kangamiut-1		2930	
Kangamiut-1		2960	
Kangamiut-1		3000	
Kangamiut-1	01-B-00-2598	3003	0,42
Kangamiut-1		3100	
Kangamiut-1	1999043 3037	3156	
Kangamiut-1		3230	
Kangamiut-1		3260	
Kangamiut-1	01-B-00-2640	3276	0,38
Kangamiut-1		3280	
Kangamiut-1	1999043 3038	3318	
Kangamiut-1		3360	
Kangamiut-1	01-B-00-2656	3378	0,4
Kangamiut-1		3380	
Kangamiut-1		3420	
Kangamiut-1		3430	
Kangamiut-1		3440	
Kangamiut-1	1999043 3039	3480	
Kangamiut-1	01-B-00-2681	3507	0,43
Kangamiut-1		3520	
Kangamiut-1		3570	
Kangamiut-1	01-B-00-2705	3600	0,46
Kangamiut-1		3650	
Kangamiut-1		3660	
Kangamiut-1		3700	

Well	Sample	Depth (m)	GEUS sample & data (1999)	GEOTRACK sample, repolished and measured by GEUS (1999)	GGU-data (old)
Nukik-1	1999043 3042	1289		n.a.	
Nukik-1		1308			0,24
Nukik-1		1347			0,22
Nukik-1	1999043 3043	1402		0,29	
Nukik-1		1475			0,27
Nukik-1	03-B-00-2112	1484	0,36		
Nukik-1	1999043 3044	1502		0,32	
Nukik-1		1932			0,25
Nukik-1	1999043 3047	1951		0,38	0,32
Nukik-1	1999043 3048	2088		0,34	
Nukik-1	1999043 3049	2188		0,35	
Nukik-1		2207			0,37
Nukik-1		2325			0,39

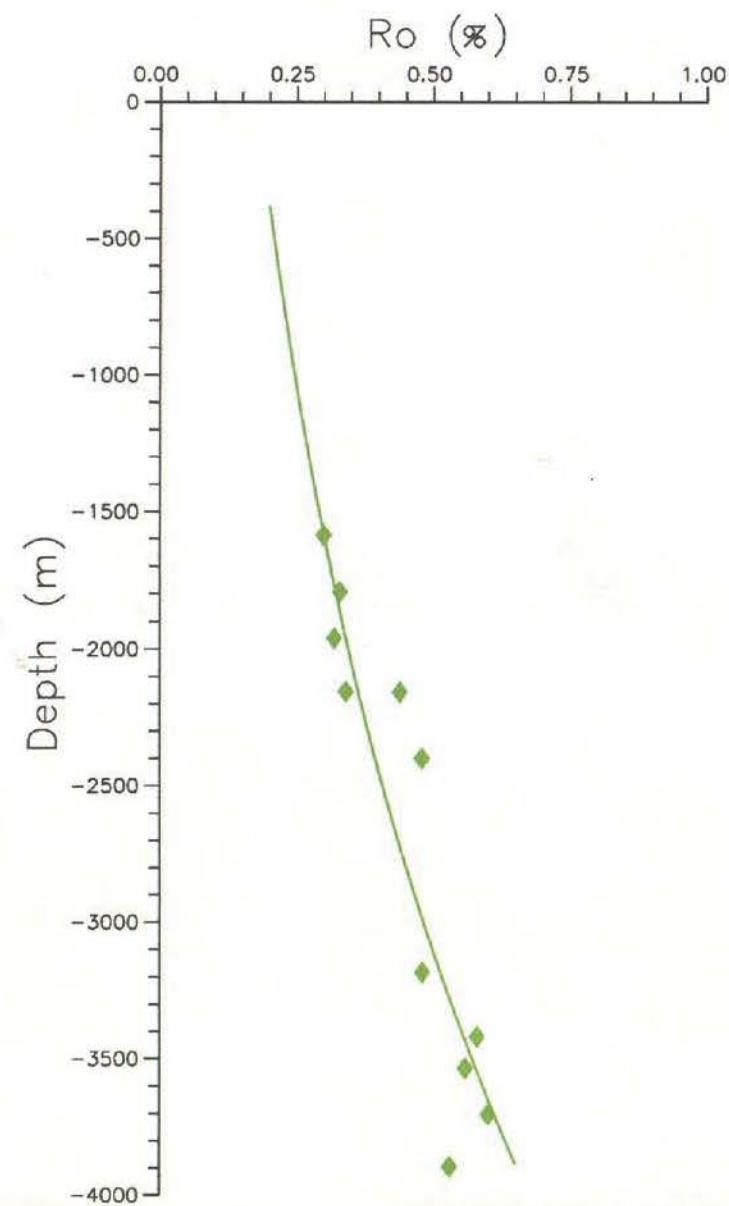
Well	Sample	Depth (m)	GEUS sample & data (1999)	GEOTRACK sample, repolished and measured by GEUS (1999)	GGU-data (old)
Nukik-2		1012			0,33
Nukik-2		1122			0,32
Nukik-2	1999043 3052	1158		n.a.	
Nukik-2		1195			0,37
Nukik-2	1999043 3053	1305		n.a.	
Nukik-2		1341			0,41
Nukik-2	1999043 3054	1423		0,31	
Nukik-2	1999043 3056	1844		0,44	
Nukik-2	1999043 3057	2063		0,29	
Nukik-2	1999043 3058	2301		0,3	
Nukik-2		2310			0,31
Nukik-2	05-B-00-2213	2315	0,36		
Nukik-2	1999043 3059	2402		0,39	0,42
Nukik-2	05-B-00-2229	2429	0,39		
Nukik-2		2438			0,57
Nukik-2	1999043 3060	2448		0,39	
Nukik-2		2475			0,51
Nukik-2		2521			0,53
Nukik-2		2539			0,56
Nukik-2	05-B-00-2250	2557	0,46		0,54
Nukik-2		2578			0,62

Gjoa G-37

All data

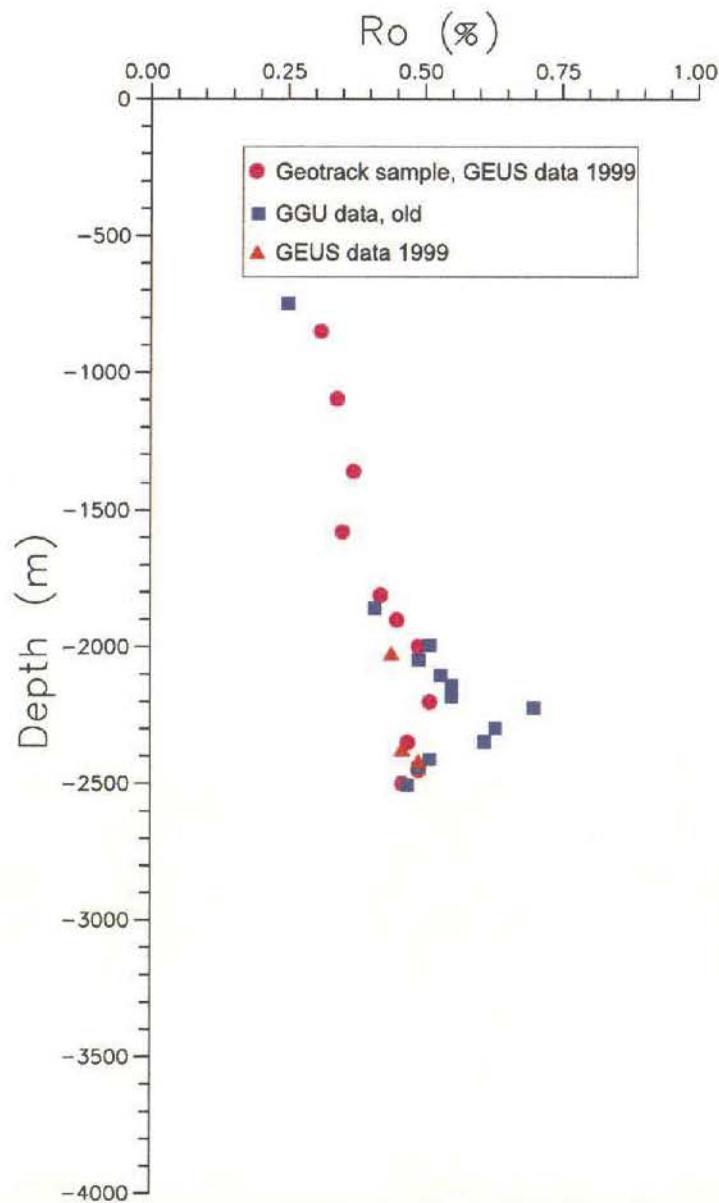


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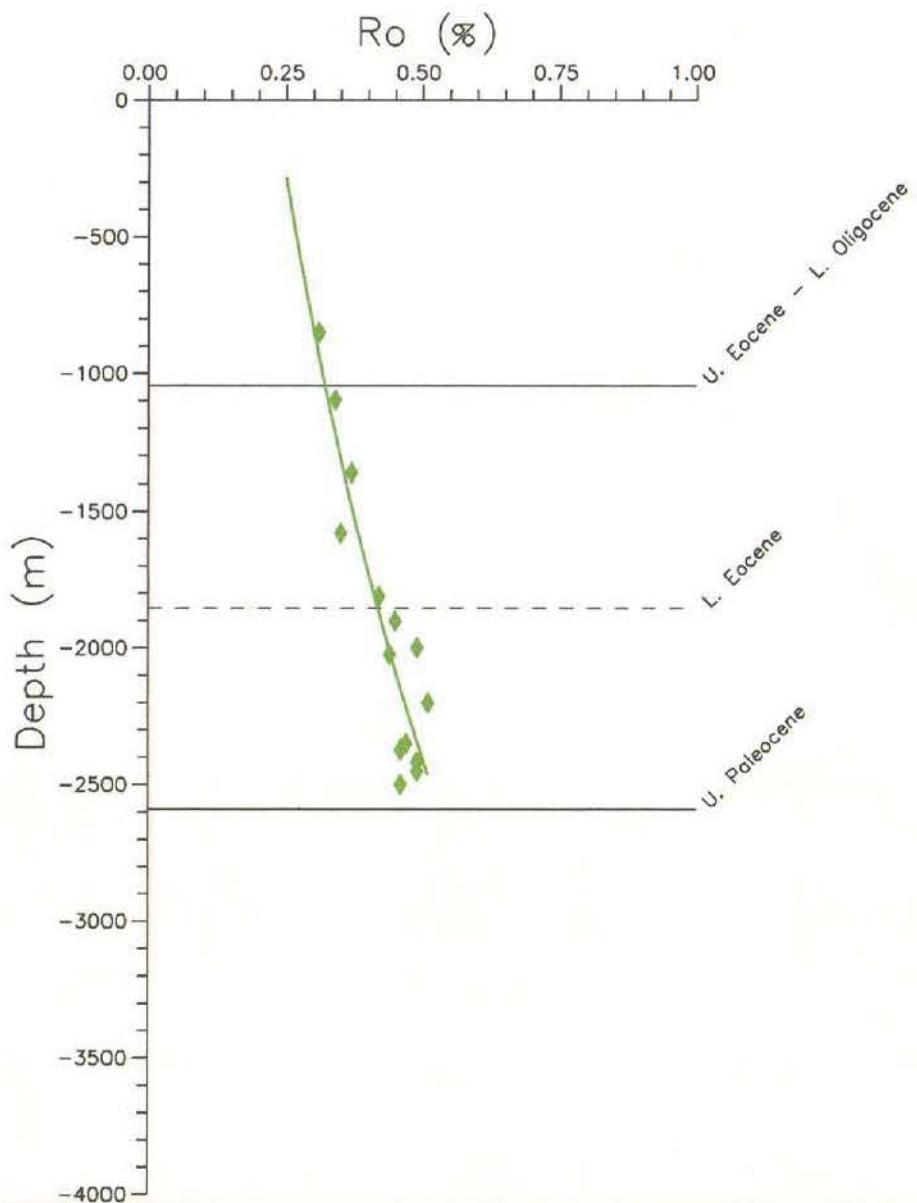


Hellefisk-1

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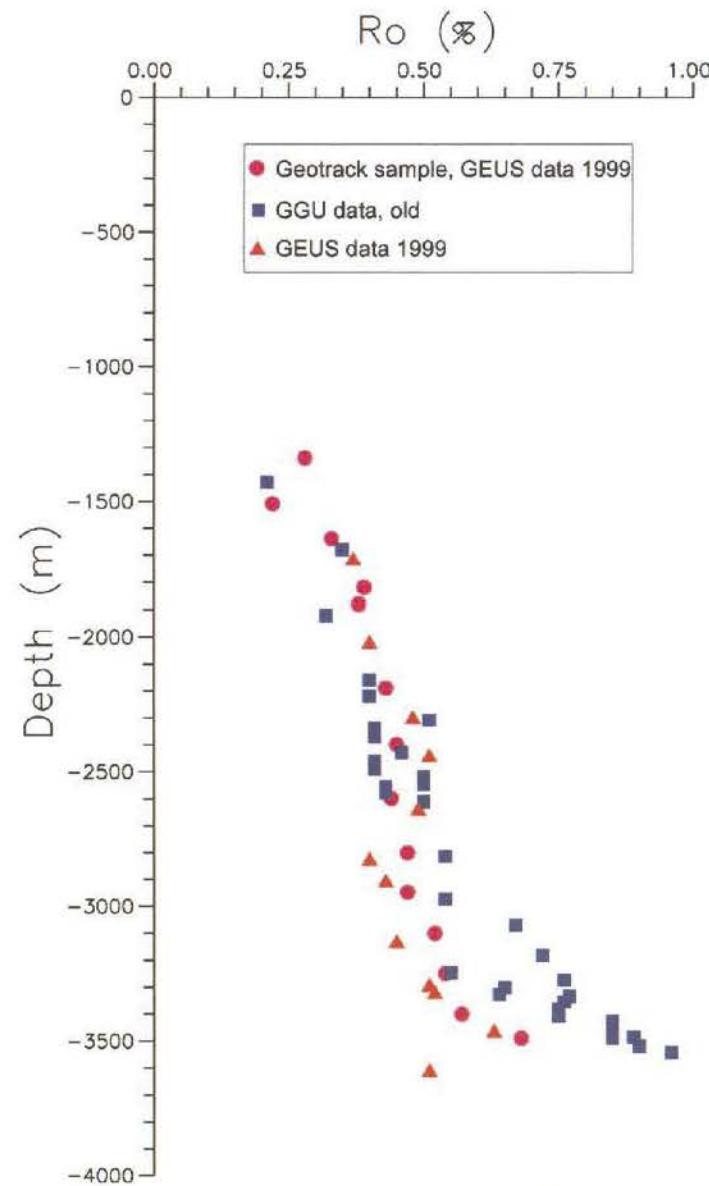


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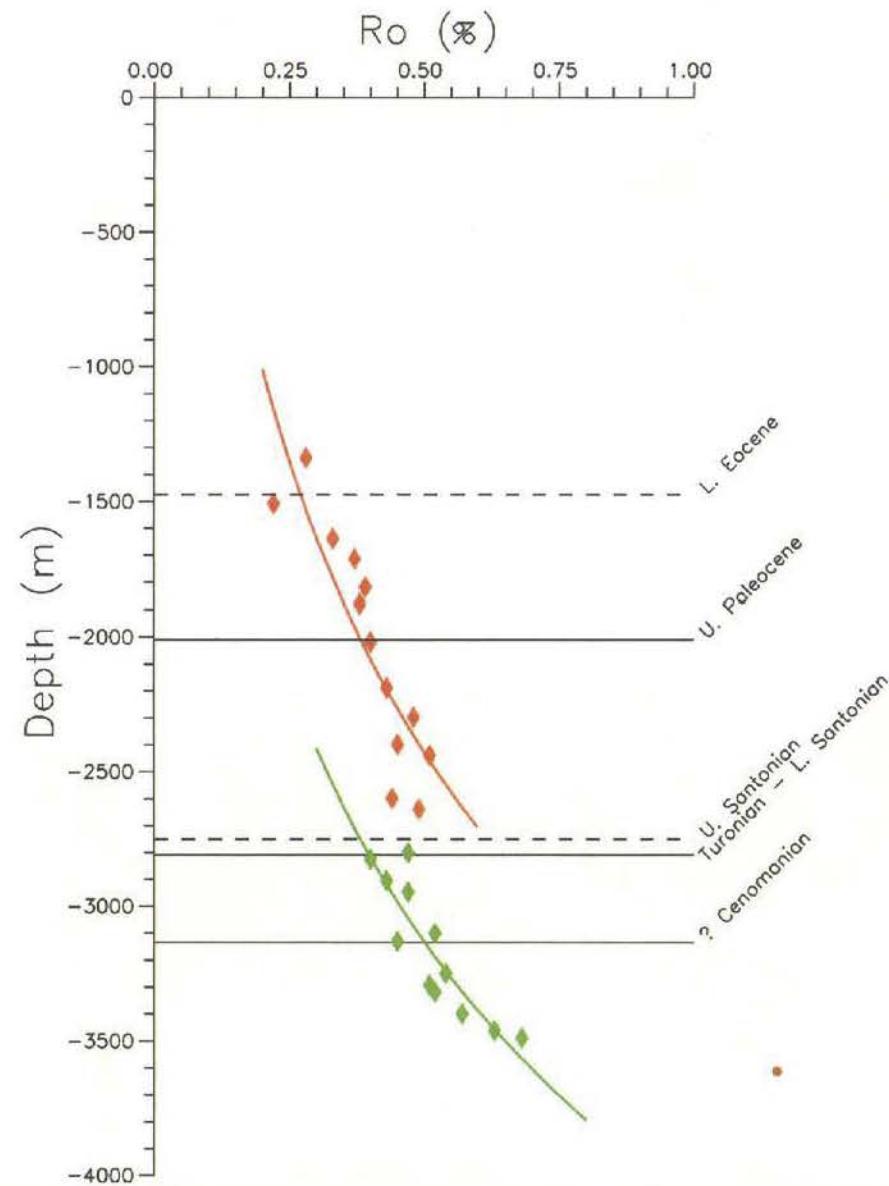


Ikermiut-1

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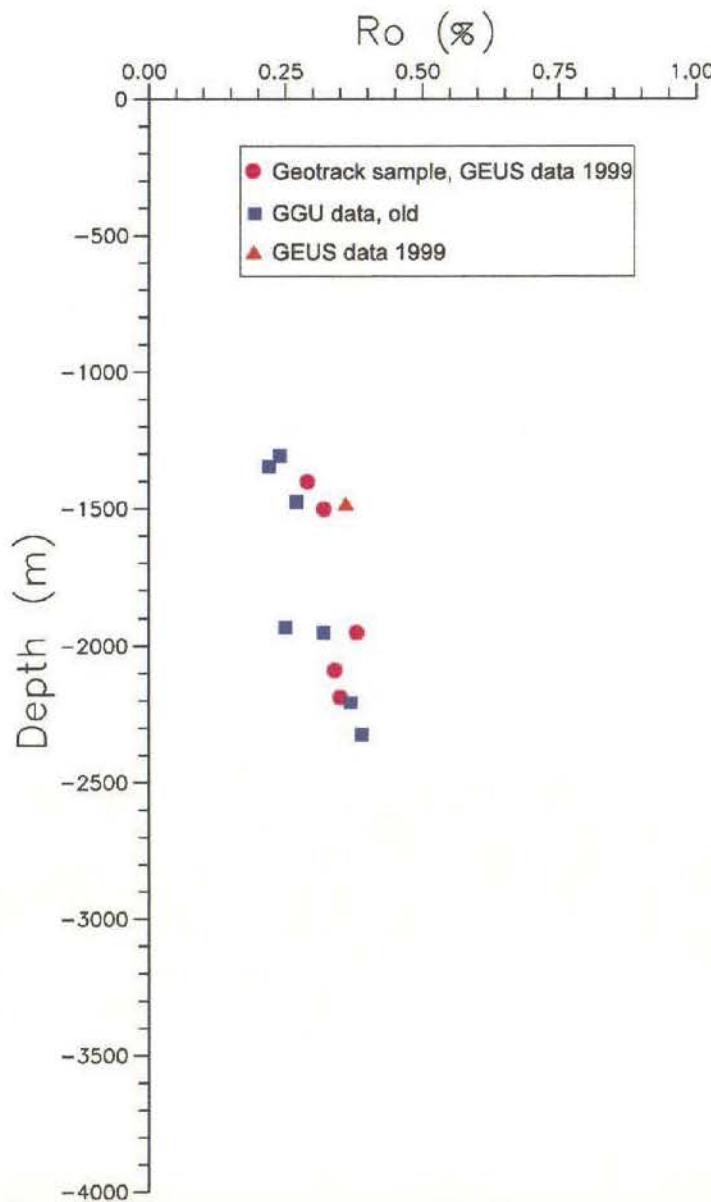


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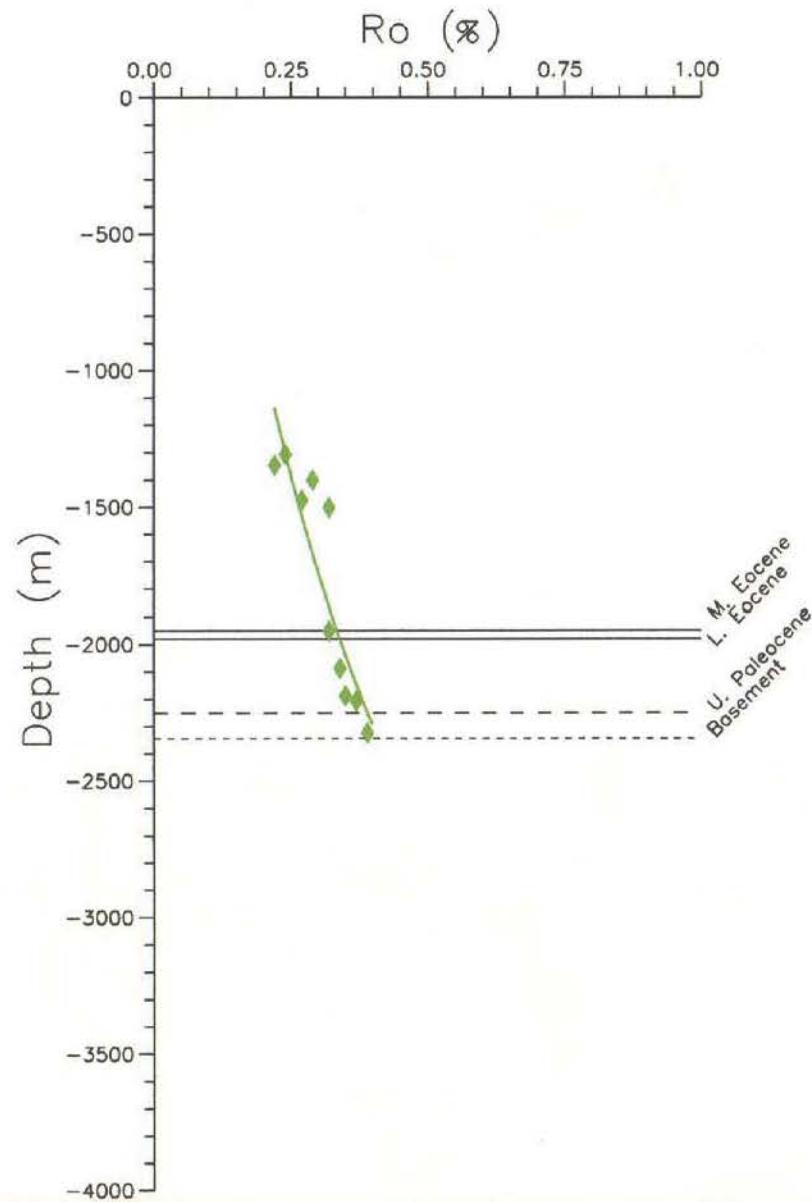


Nukik-1

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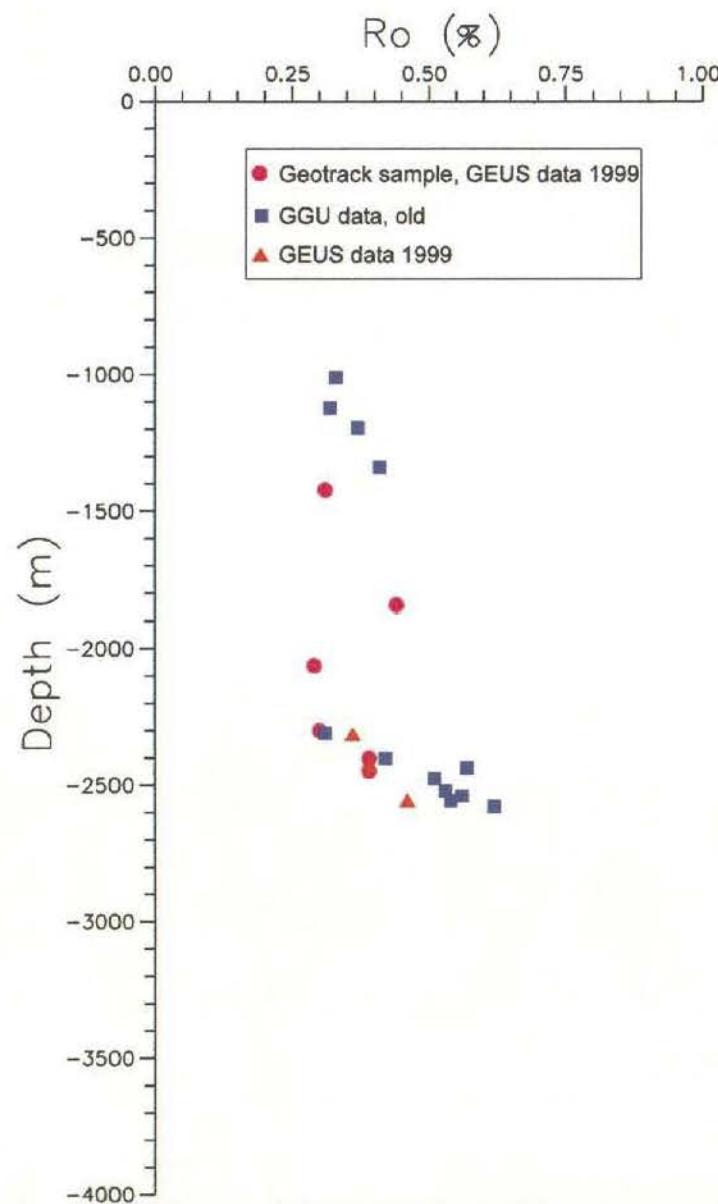


Selected data



Nukik-2

All data



Selected data

