

6.2 Mud Data

6.2.1 Mud Properties, Daily Report

Table 6.2.1 lists the daily reported mud properties (2 pages).

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
990725	9 7/8"	580.0	1.03			/		/					SPUD MUD
990726	9 7/8"	580.0	1.03			/		/					SPUD MUD
990727	36"	467.0	1.03			/		/					SPUD MUD
990728	36"	467.0	1.03			/		/					SPUD MUD
990729	17 1/2"	467.0	1.20			/		/					SPUD MUD
990730	17 1/2"	1209.0	1.20			/		/					SPUD MUD
990731	12 1/4"	1209.0	1.20			/		/					SPUD MUD
990801	12 1/4"	1209.0	1.20			/		/					SPUD MUD
990802	12 1/4"	1209.0	1.20			/		/					SPUD MUD
990803	12 1/4"	1209.0	1.20			/		/					SPUD MUD
990804	12 1/4"	1209.0	1.20			/		/					SPUD MUD
990805	12 1/4"	1209.0	1.40	30.0	25.0	7/9	7.6	/		83000		16.0	KCl MUD
990806	12 1/4"	1780.0	1.53	36.0	37.0	9/15	7.9	/		82000	1.0	22.0	KCl MUD
990807	12 1/4"	1780.0	1.53	32.0	28.0	9/15	8.5	/		80000	1.0	16.6	KCl MUD
990808	12 1/4"	1780.0	1.53	32.0	27.0	9/14	8.4	/		81000	.6	22.0	KCl MUD
990809	12 1/4"	1927.0	1.53	32.0	22.0	7/14	8.4	/		81000	.4	21.0	KCl MUD
990810	12 1/4"	1927.0	1.53	29.0	23.0	7/13	8.4	/		82000	.4	21.0	KCl MUD
990811	12 1/4"	1929.0	1.52	30.0	23.0	7/13	8.9	/		81000	.6	21.0	KCl MUD
990812	8 1/2"	2098.0	1.50	30.0	21.0	7/12	9.1	/		81000	.6	20.0	KCl MUD
990813	8 1/2"	2248.0	1.50	32.0	23.0	6/14	8.8	/		83000	.5	20.5	KCl MUD
990814	8 1/2"	2297.0	1.50	30.0	26.0	6/13	8.6	/		84000	.4	20.5	KCl MUD
990815	6"	2297.0	1.50	28.0	16.0	5/8	9.3	/		80000	.3	20.0	KCl MUD
990816	6"	2297.0	1.31	20.0	18.0	4/6	9.1	/		87000	.2	14.2	KCl MUD
990817	6"	2356.0	1.30	18.0	17.0	4/6	8.8	/		86500	.3	14.6	KCl MUD
990818	6"	2546.0	1.30	24.0	22.0	6/9	8.3	/		84400	.4	15.0	KCl MUD
990819	6"	2750.0	1.30	25.0	25.0	7/9	8.5	/		85000	.4	15.6	KCl MUD
990820	6"	2750.0	1.30	25.0	26.0	6/9	8.5	/		85000	.4	15.6	KCl MUD

Table 6.2.1 Mud Properties

Well: 6508/1-1S

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
990821	6"	2750.0	1.30	28.0	21.0	6/10	9.3	/		86000	.6	15.5	KCl MUD
990822	P&A	2750.0	1.30	27.0	18.0	6/10	8.6	/		86000	.6	15.5	KCl MUD
990823	P&A	2750.0	1.52	31.0	24.0	7/12	7.8	/		86000	.6	21.2	KCl MUD
990824	P&A	1877.0	1.52	25.0	26.0	7/10	9.0	/		86500	.6	21.0	KCl MUD
990825	P&A	1877.0	1.52	27.0	26.0	7/12	8.0	/		86000	.6	21.0	KCl MUD
990826	P&A	1877.0	1.40	22.0	22.0	5/8	8.4	/		90000	.6	17.8	KCl MUD
990827	P&A	1877.0	1.40	29.0	22.0	6/12	9.4	/		92000	.3	18.0	KCl MUD
990828	P&A	1877.0	1.40	31.0	22.0	8/12	8.5	/		88000	.2	18.0	KCl MUD
990829	P&A	1219.0	1.40	24.0	29.0	8/12	9.4	/		81000	.2	18.0	KCl MUD

Table 6.2.1 Mud Properties

6.2.2 Mud Materials Used

The mud material consumption is shown in Table 6.2.2.

Material	Unit	36"	17 1/2"	12 1/4"	8 1/2"	6"	Total
BARITE	MT	35	32	727	40	185	1019
BENTONITE	KG	40	44				84
SODA ASH	KG	275	150	50			475
RHODOPOL	M3	950	175	3825	675	1300	6925
LIME	KG	140	220				360
CMC EHV	KG		4750				4750
KCI BRINE	M3			721	75	137	933
CELPOL LV	KG			14875	1300	2650	18825
GLYDRILL MC	LT			47000	9500	6500	63000
BICARBONATE	KG			175	250	4775	5200
MICA FINE	KG			2000			2000
NUTPLUG FINE	KG			1500			1500
VENFYBER	KG			1358			1358
PBS PLUG	KG			4500			4500
PBS RETARDER	KG			375			375
PBS ACCELERATOR	KG			1250			1250
CITRIC ACID	KG			225	725	6325	7275
NO FOAM	KG			25			25
CALCIUM CHLORIDE	KG				1050		1050

Table 6.2.2 Mud materials used in well 6508/1-1S.



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Title:

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6508/1-1S**

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SUMMARY & INTRODUCTION

Client name	Saga Petroleum A.S.A.
Well names	6508/1-1S
Location	Norway
Dates of receipt	1/9/99 & 7/9/99 (1210-2282m & 2291-2750m)
Dates of analysis	11/9/99 - 31/1/00
Sample types	Cuttings
RL job no	99021
Client ref. nos.	9 000 001 242

Wet ditch cuttings were received in geochemical cans from well 6508/1-1S. One hundred and forty-seven samples were submitted for analysis in the interval 1210 – 2750 m.

The objective of this report is to present analytical data produced from the samples documented above. Saga's personnel carried out all selection of analysis. The canned samples were analysed for headspace gas and gas fractions were taken for isotope analysis. After the cans were opened, occluded gas analysis was performed on a portion of the wet sediment. All samples were then washed, dried, described, then crushed, prior to total organic carbon analysis (TOC). After samples were analysed for TOC, one hundred and four samples were selected for Rock Eval pyrolysis, however a small selection of these samples were screened first. This showed the samples to be contaminated by drilling fluid. Consequently all samples for Rock Eval pyrolysis were solvent cleaned before analysis. Finally, forty-eight samples were solvent extracted and analysed by Iatroscan fractionation.

IFE performed the isotope analysis presented in this report, at Saga's request. The analytical program (table 2) on pages 4 to 8 of this report fully documents the analysis carried out on each sample.

EXPERIMENTAL PROCEDURES

Unless otherwise stated, analysis was carried out following 'the Norwegian Industry Guide to Organic Geochemical Analysis, November 1992'. A detailed table documenting the methodologies adopted can be found overleaf.

EXPERIMENTAL PROCEDURES (Table 1)

ANALYSIS	INSTRUMENT	METHOD	TEMPERATURE PROGRAM	COLUMNS
Headspace gas	Perkin Elmer Sigma 3	NPD method	isothermal 110C	1/8" SS, packed
Occluded gas	Perkin Elmer Sigma 3	NPD method	isothermal 110C	1/8" SS, packed
TOC	Leco CS 125	OLS 1 *		
Rock Eval Pyrolysis	Rock Eval II	OLS 5 *	Cycle 1	
Iatroscan Fractionation	Iatroscan Mk III	NPD Method		
Isotope analysis	sub contracted and run at Saga's request by IFE			

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* - TOC and Rock Eval methods are comparable with NPD method. However we do not have Black Ven Marl. Consequently, the Rock Eval was calibrated with a standard related to Delsi IFP standard. In house check standards are run at greater frequency than prescribed in the NPD guidelines. Furthermore, both these methods are UKAS accredited. Robertson Laboratories has been UKAS accredited for the majority of it's geochemical services since 1991. UKAS, an organisation established by the UK government, has reciprocal agreements with Norske Veritas. UKAS accreditation is specifically designed for laboratory testing and is broadly based on ISO 9001. Robertson Laboratories were audited by Saga (Audit no. SAGA-93-110) and it's geochemical methods were found to be satisfactory.



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ANALYTICAL PROGRAM (Table 2)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas isotope analysis	Lithology descriptions	TOC	RockEvalPyrolysis	larioscan
6508/1-1S	99021-1	1210.0	1210.0	Cuttings	X	X		X	X		
6508/1-1S	99021-2	1220.0	1220.0	Cuttings	X	X		X	X		
6508/1-1S	99021-3	1230.0	1230.0	Cuttings	X	X		X	X		
6508/1-1S	99021-4	1240.0	1240.0	Cuttings	X	X		X	X		
6508/1-1S	99021-5	1260.0	1260.0	Cuttings	X	X	X	X	X		
6508/1-1S	99021-6	1270.0	1270.0	Cuttings	X	X		X	X		
6508/1-1S	99021-7	1290.0	1290.0	Cuttings	X	X		X	X		
6508/1-1S	99021-8	1300.0	1300.0	Cuttings	X	X		X	X		
6508/1-1S	99021-9	1310.0	1310.0	Cuttings	X	X		X	X		
6508/1-1S	99021-10	1320.0	1320.0	Cuttings	X	X		X	X		
6508/1-1S	99021-10X	1320.0	1320.0	S.E.Cuttings						X	
6508/1-1S	99021-11	1330.0	1330.0	Cuttings	X	X		X	X		
6508/1-1S	99021-12	1340.0	1340.0	Cuttings	X	X		X	X		
6508/1-1S	99021-13	1350.0	1350.0	Cuttings	X	X		X	X		
6508/1-1S	99021-14	1360.0	1360.0	Cuttings	X	X		X	X		
6508/1-1S	99021-15	1370.0	1370.0	Cuttings	X	X		X	X		
6508/1-1S	99021-16	1380.0	1380.0	Cuttings	X	X		X	X		
6508/1-1S	99021-16X	1380.0	1380.0	S.E.Cuttings						X	
6508/1-1S	99021-17	1390.0	1390.0	Cuttings	X	X		X	X		
6508/1-1S	99021-17X	1390.0	1390.0	S.E.Cuttings						X	
6508/1-1S	99021-18	1410.0	1410.0	Cuttings	X	X		X	X		
6508/1-1S	99021-19	1420.0	1420.0	Cuttings	X	X		X	X		
6508/1-1S	99021-20	1430.0	1430.0	Cuttings	X	X		X	X		
6508/1-1S	99021-20X	1430.0	1430.0	S.E.Cuttings						X	
6508/1-1S	99021-21	1440.0	1440.0	Cuttings	X	X		X	X		
6508/1-1S	99021-22	1450.0	1450.0	Cuttings	X	X		X	X		
6508/1-1S	99021-23	1460.0	1460.0	Cuttings	X	X		X	X		
6508/1-1S	99021-24	1470.0	1470.0	Cuttings	X	X		X	X		
6508/1-1S	99021-24X	1470.0	1470.0	S.E.Cuttings						X	
6508/1-1S	99021-25	1480.0	1480.0	Cuttings	X	X		X	X		
6508/1-1S	99021-26	1490.0	1490.0	Cuttings	X	X		X	X		
6508/1-1S	99021-27	1500.0	1500.0	Cuttings	X	X		X	X		
6508/1-1S	99021-28	1510.0	1510.0	Cuttings	X	X	X	X	X		
6508/1-1S	99021-28X	1510.0	1510.0	S.E.Cuttings						X	
6508/1-1S	99021-29	1520.0	1520.0	Cuttings	X	X		X	X		
6508/1-1S	99021-30	1530.0	1530.0	Cuttings	X	X		X	X		
6508/1-1S	99021-31	1540.0	1540.0	Cuttings	X	X		X	X		
6508/1-1S	99021-31X	1540.0	1540.0	S.E.Cuttings						X	
6508/1-1S	99021-32	1550.0	1550.0	Cuttings	X	X		X	X		
6508/1-1S	99021-33	1560.0	1560.0	Cuttings	X	X		X	X		
6508/1-1S	99021-33X	1560.0	1560.0	S.E.Cuttings						X	
6508/1-1S	99021-34	1570.0	1570.0	Cuttings	X	X		X	X		
6508/1-1S	99021-34X	1570.0	1570.0	S.E.Cuttings						X	
6508/1-1S	99021-35	1590.0	1590.0	Cuttings	X	X		X	X		
6508/1-1S	99021-35X	1590.0	1590.0	S.E.Cuttings						X	
6508/1-1S	99021-36	1600.0	1600.0	Cuttings	X	X		X	X		
6508/1-1S	99021-36X	1600.0	1600.0	S.E.Cuttings						X	
6508/1-1S	99021-37	1610.0	1610.0	Cuttings	X	X		X	X		
6508/1-1S	99021-37X	1610.0	1610.0	S.E.Cuttings						X	
6508/1-1S	99021-38	1630.0	1630.0	Cuttings	X	X		X	X		
6508/1-1S	99021-38X	1630.0	1630.0	S.E.Cuttings						X	

ANALYTICAL PROGRAM (Table 2)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	RockEvalPyrolysis	Introscan
6508/1-1S	99021-39	1640.0	1640.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-39X	1640.0	1640.0	S.E.Cuttings						X	
6508/1-1S	99021-40	1660.0	1660.0	Cuttings	X	X		X	X		
6508/1-1S	99021-41	1670.0	1670.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-41X	1670.0	1670.0	S.E.Cuttings						X	
6508/1-1S	99021-42	1680.0	1680.0	Cuttings	X	X		X	X		
6508/1-1S	99021-43	1690.0	1690.0	Cuttings	X	X		X	X		
6508/1-1S	99021-44	1700.0	1700.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-44X	1700.0	1700.0	S.E.Cuttings						X	
6508/1-1S	99021-45	1710.0	1710.0	Cuttings	X	X	X	X	X		
6508/1-1S	99021-46	1720.0	1720.0	Cuttings	X	X		X	X		
6508/1-1S	99021-47	1730.0	1730.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-47X	1730.0	1730.0	S.E.Cuttings						X	
6508/1-1S	99021-48	1740.0	1740.0	Cuttings	X	X		X	X		
6508/1-1S	99021-49	1750.0	1750.0	Cuttings	X	X		X	X		
6508/1-1S	99021-49X	1750.0	1750.0	S.E.Cuttings						X	
6508/1-1S	99021-50	1790.0	1790.0	Cuttings	X	X		X	X		
6508/1-1S	99021-50X	1790.0	1790.0	S.E.Cuttings						X	
6508/1-1S	99021-51	1810.0	1810.0	Cuttings	X	X		X	X		
6508/1-1S	99021-52	1820.0	1820.0	Cuttings	X	X		X	X		
6508/1-1S	99021-53	1830.0	1830.0	Cuttings	X	X		X	X		
6508/1-1S	99021-53X	1830.0	1830.0	S.E.Cuttings						X	
6508/1-1S	99021-54	1840.0	1840.0	Cuttings	X	X		X	X		
6508/1-1S	99021-55	1850.0	1850.0	Cuttings	X	X		X	X		
6508/1-1S	99021-56	1860.0	1860.0	Cuttings	X	X		X	X		
6508/1-1S	99021-57	1870.0	1870.0	Cuttings	X	X		X	X		
6508/1-1S	99021-58	1880.0	1880.0	Cuttings	X	X		X	X		
6508/1-1S	99021-58X	1880.0	1880.0	S.E.Cuttings						X	
6508/1-1S	99021-59	1900.0	1900.0	Cuttings	X	X		X	X		
6508/1-1S	99021-60	1910.0	1910.0	Cuttings	X	X		X	X		
6508/1-1S	99021-61	1920.0	1920.0	Cuttings	X	X		X	X		
6508/1-1S	99021-62	1930.0	1930.0	Cuttings	X	X		X	X		
6508/1-1S	99021-63	1940.0	1940.0	Cuttings	X	X		X	X		
6508/1-1S	99021-63X	1940.0	1940.0	S.E.Cuttings						X	
6508/1-1S	99021-64	1950.0	1950.0	Cuttings	X	X		X	X		
6508/1-1S	99021-65	1960.0	1960.0	Cuttings	X	X	X	X	X		
6508/1-1S	99021-65X	1960.0	1960.0	S.E.Cuttings						X	
6508/1-1S	99021-66	1970.0	1970.0	Cuttings	X	X		X	X		
6508/1-1S	99021-67	1980.0	1980.0	Cuttings	X	X		X	X		
6508/1-1S	99021-67X	1980.0	1980.0	S.E.Cuttings						X	
6508/1-1S	99021-68	1990.0	1990.0	Cuttings	X	X		X	X		
6508/1-1S	99021-68X	1990.0	1990.0	S.E.Cuttings						X	
6508/1-1S	99021-69	2000.0	2000.0	Cuttings	X	X		X	X		
6508/1-1S	99021-69X	2000.0	2000.0	S.E.Cuttings						X	
6508/1-1S	99021-70	2020.0	2020.0	Cuttings	X	X		X	X		
6508/1-1S	99021-70X	2020.0	2020.0	S.E.Cuttings						X	
6508/1-1S	99021-71	2040.0	2040.0	Cuttings	X	X		X	X		
6508/1-1S	99021-71X	2040.0	2040.0	S.E.Cuttings						X	
6508/1-1S	99021-72	2050.0	2050.0	Cuttings	X	X		X	X		
6508/1-1S	99021-72X	2050.0	2050.0	S.E.Cuttings						X	
6508/1-1S	99021-73	2060.0	2060.0	Cuttings	X	X		X	X		

ANALYTICAL PROGRAM (Table 2)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	RockEvalPyrolysis	lairoscan
6508/1-1S	99021-73X	2060.0	2060.0	S.E.Cuttings						X	
6508/1-1S	99021-74	2080.0	2080.0	Cuttings	X	X		X	X		
6508/1-1S	99021-74X	2080.0	2080.0	S.E.Cuttings						X	
6508/1-1S	99021-75	2090.0	2090.0	Cuttings	X	X		X	X		
6508/1-1S	99021-75X	2090.0	2090.0	S.E.Cuttings						X	
6508/1-1S	99021-76	2100.0	2100.0	Cuttings	X	X		X	X		
6508/1-1S	99021-76X	2100.0	2100.0	S.E.Cuttings						X	
6508/1-1S	99021-77	2110.0	2110.0	Cuttings	X	X		X	X		
6508/1-1S	99021-77X	2110.0	2110.0	S.E.Cuttings						X	
6508/1-1S	99021-78	2120.0	2120.0	Cuttings	X	X		X	X		
6508/1-1S	99021-78X	2120.0	2120.0	S.E.Cuttings						X	
6508/1-1S	99021-79	2130.0	2130.0	Cuttings	X	X		X	X		
6508/1-1S	99021-79X	2130.0	2130.0	S.E.Cuttings						X	
6508/1-1S	99021-80	2138.0	2138.0	Cuttings	X	X	X	X	X		
6508/1-1S	99021-80X	2138.0	2138.0	S.E.Cuttings						X	
6508/1-1S	99021-81	2147.0	2147.0	Cuttings	X	X		X	X		
6508/1-1S	99021-81X	2147.0	2147.0	S.E.Cuttings						X	
6508/1-1S	99021-82	2156.0	2156.0	Cuttings	X	X		X	X		
6508/1-1S	99021-82X	2156.0	2156.0	S.E.Cuttings						X	
6508/1-1S	99021-83	2165.0	2165.0	Cuttings	X	X		X	X		
6508/1-1S	99021-83X	2165.0	2165.0	S.E.Cuttings						X	
6508/1-1S	99021-84	2174.0	2174.0	Cuttings	X	X		X	X		
6508/1-1S	99021-84X	2174.0	2174.0	S.E.Cuttings						X	
6508/1-1S	99021-85	2183.0	2183.0	Cuttings	X	X		X	X		
6508/1-1S	99021-85X	2183.0	2183.0	S.E.Cuttings						X	
6508/1-1S	99021-86	2192.0	2192.0	Cuttings	X	X		X	X		
6508/1-1S	99021-86X	2192.0	2192.0	S.E.Cuttings						X	
6508/1-1S	99021-87	2201.0	2201.0	Cuttings	X	X		X	X		
6508/1-1S	99021-87X	2201.0	2201.0	S.E.Cuttings						X	
6508/1-1S	99021-88	2210.0	2210.0	Cuttings	X	X		X	X		
6508/1-1S	99021-88X	2210.0	2210.0	S.E.Cuttings						X	
6508/1-1S	99021-89	2219.0	2219.0	Cuttings	X	X		X	X		
6508/1-1S	99021-89X	2219.0	2219.0	S.E.Cuttings						X	
6508/1-1S	99021-90	2228.0	2228.0	Cuttings	X	X		X	X		
6508/1-1S	99021-90X	2228.0	2228.0	S.E.Cuttings						X	
6508/1-1S	99021-91	2237.0	2237.0	Cuttings	X	X		X	X		
6508/1-1S	99021-91X	2237.0	2237.0	S.E.Cuttings						X	
6508/1-1S	99021-92	2246.0	2246.0	Cuttings	X	X		X	X		
6508/1-1S	99021-92X	2246.0	2246.0	S.E.Cuttings						X	
6508/1-1S	99021-93	2255.0	2255.0	Cuttings	X	X		X	X		
6508/1-1S	99021-93X	2255.0	2255.0	S.E.Cuttings						X	
6508/1-1S	99021-94	2264.0	2264.0	Cuttings	X	X		X	X		
6508/1-1S	99021-94X	2264.0	2264.0	S.E.Cuttings						X	
6508/1-1S	99021-95	2273.0	2273.0	Cuttings	X	X		X	X		
6508/1-1S	99021-95X	2273.0	2273.0	S.E.Cuttings						X	
6508/1-1S	99021-96	2282.0	2282.0	Cuttings	X	X		X	X		
6508/1-1S	99021-96X	2282.0	2282.0	S.E.Cuttings						X	
6508/1-1S	99021-97	2291.0	2291.0	Cuttings	X	X		X	X		
6508/1-1S	99021-97X	2291.0	2291.0	S.E.Cuttings						X	
6508/1-1S	99021-98	2300.0	2300.0	Cuttings	X	X		X	X		
6508/1-1S	99021-98X	2300.0	2300.0	S.E.Cuttings						X	

ANALYTICAL PROGRAM (Table 2)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	RockEval/Pyrolysis	Isoscanner
6508/1-1S	99021-99	2309.0	2309.0	Cuttings	X	X		X	X		
6508/1-1S	99021-99X	2309.0	2309.0	S.E.Cuttings						X	
6508/1-1S	99021-100	2318.0	2318.0	Cuttings	X	X		X	X		
6508/1-1S	99021-100X	2318.0	2318.0	S.E.Cuttings						X	
6508/1-1S	99021-101	2327.0	2327.0	Cuttings	X	X	X	X	X		
6508/1-1S	99021-101X	2327.0	2327.0	S.E.Cuttings						X	
6508/1-1S	99021-102	2336.0	2336.0	Cuttings	X	X		X	X		
6508/1-1S	99021-102X	2336.0	2336.0	S.E.Cuttings						X	
6508/1-1S	99021-103	2345.0	2345.0	Cuttings	X	X		X	X		
6508/1-1S	99021-103X	2345.0	2345.0	S.E.Cuttings						X	
6508/1-1S	99021-104	2354.0	2354.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-104X	2354.0	2354.0	S.E.Cuttings						X	
6508/1-1S	99021-105	2363.0	2363.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-105X	2363.0	2363.0	S.E.Cuttings						X	
6508/1-1S	99021-106	2372.0	2372.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-106X	2372.0	2372.0	S.E.Cuttings						X	
6508/1-1S	99021-107	2381.0	2381.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-107X	2381.0	2381.0	S.E.Cuttings						X	
6508/1-1S	99021-108	2390.0	2390.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-108X	2390.0	2390.0	S.E.Cuttings						X	
6508/1-1S	99021-109	2399.0	2399.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-109X	2399.0	2399.0	S.E.Cuttings						X	
6508/1-1S	99021-110	2408.0	2408.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-110X	2408.0	2408.0	S.E.Cuttings						X	
6508/1-1S	99021-111	2417.0	2417.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-111X	2417.0	2417.0	S.E.Cuttings						X	
6508/1-1S	99021-112	2426.0	2426.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-112X	2426.0	2426.0	S.E.Cuttings						X	
6508/1-1S	99021-113	2435.0	2435.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-113X	2435.0	2435.0	S.E.Cuttings						X	
6508/1-1S	99021-114	2444.0	2444.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-114X	2444.0	2444.0	S.E.Cuttings						X	
6508/1-1S	99021-115	2462.0	2462.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-115X	2462.0	2462.0	S.E.Cuttings						X	
6508/1-1S	99021-116	2471.0	2471.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-116X	2471.0	2471.0	S.E.Cuttings						X	
6508/1-1S	99021-117	2480.0	2480.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-117X	2480.0	2480.0	S.E.Cuttings						X	
6508/1-1S	99021-118	2489.0	2489.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-118X	2489.0	2489.0	S.E.Cuttings						X	
6508/1-1S	99021-119	2498.0	2498.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-119X	2498.0	2498.0	S.E.Cuttings						X	
6508/1-1S	99021-120	2507.0	2507.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-120X	2507.0	2507.0	S.E.Cuttings						X	
6508/1-1S	99021-121	2516.0	2516.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-121X	2516.0	2516.0	S.E.Cuttings						X	
6508/1-1S	99021-122	2525.0	2525.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-122X	2525.0	2525.0	S.E.Cuttings						X	
6508/1-1S	99021-123	2534.0	2534.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-123X	2534.0	2534.0	S.E.Cuttings						X	
6508/1-1S	99021-124	2543.0	2543.0	Cuttings	X	X		X	X		X

ANALYTICAL PROGRAM (Table 2)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	RockEval/Pyrolysis	lairoscan
6508/1-1S	99021-124X	2543.0	2543.0	S.E.Cuttings						X	
6508/1-1S	99021-125	2552.0	2552.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-125X	2552.0	2552.0	S.E.Cuttings						X	
6508/1-1S	99021-126	2561.0	2561.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-126X	2561.0	2561.0	S.E.Cuttings						X	
6508/1-1S	99021-127	2570.0	2570.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-127X	2570.0	2570.0	S.E.Cuttings						X	
6508/1-1S	99021-128	2579.0	2579.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-128X	2579.0	2579.0	S.E.Cuttings						X	
6508/1-1S	99021-129	2588.0	2588.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-129X	2588.0	2588.0	S.E.Cuttings						X	
6508/1-1S	99021-130	2597.0	2597.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-130X	2597.0	2597.0	S.E.Cuttings						X	
6508/1-1S	99021-131	2606.0	2606.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-131X	2606.0	2606.0	S.E.Cuttings						X	
6508/1-1S	99021-132	2615.0	2615.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-132X	2615.0	2615.0	S.E.Cuttings						X	
6508/1-1S	99021-133	2624.0	2624.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-133X	2624.0	2624.0	S.E.Cuttings						X	
6508/1-1S	99021-134	2633.0	2633.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-134X	2633.0	2633.0	S.E.Cuttings						X	
6508/1-1S	99021-135	2642.0	2642.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-135X	2642.0	2642.0	S.E.Cuttings						X	
6508/1-1S	99021-136	2651.0	2651.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-136X	2651.0	2651.0	S.E.Cuttings						X	
6508/1-1S	99021-137	2660.0	2660.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-137X	2660.0	2660.0	S.E.Cuttings						X	
6508/1-1S	99021-138	2669.0	2669.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-138X	2669.0	2669.0	S.E.Cuttings						X	
6508/1-1S	99021-139	2678.0	2678.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-139X	2678.0	2678.0	S.E.Cuttings						X	
6508/1-1S	99021-140	2687.0	2687.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-140X	2687.0	2687.0	S.E.Cuttings						X	
6508/1-1S	99021-141	2696.0	2696.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-141X	2696.0	2696.0	S.E.Cuttings						X	
6508/1-1S	99021-142	2705.0	2705.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-142X	2705.0	2705.0	S.E.Cuttings						X	
6508/1-1S	99021-143	2714.0	2714.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-143X	2714.0	2714.0	S.E.Cuttings						X	
6508/1-1S	99021-144	2723.0	2723.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-144X	2723.0	2723.0	S.E.Cuttings						X	
6508/1-1S	99021-145	2732.0	2732.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-145X	2732.0	2732.0	S.E.Cuttings						X	
6508/1-1S	99021-146	2741.0	2741.0	Cuttings	X	X		X	X		X
6508/1-1S	99021-146X	2741.0	2741.0	S.E.Cuttings						X	
6508/1-1S	99021-147	2750.0	2750.0	Cuttings	X	X	X	X	X		X
6508/1-1S	99021-147X	2750.0	2750.0	S.E.Cuttings						X	

147 147 7 147 147 104 48

HEADSPACE GAS ANALYSIS (Table 3)

Well Name	Location	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4 nC4
6508/1-1S	NOR	99021-1	1210.0	1210.0	Cuttings	352.70	30.95	69.54	1.07	46.75	288.57	501.01	148.31	29.60	0.02
6508/1-1S	NOR	99021-2	1220.0	1220.0	Cuttings	4128.16	33.01	51.67	0.63	22.97	120.19	4236.44	108.28	2.56	0.03
6508/1-1S	NOR	99021-3	1230.0	1230.0	Cuttings	970.25	14.74	28.74	0.47	12.27	109.06	1026.48	56.23	5.48	0.04
6508/1-1S	NOR	99021-4	1240.0	1240.0	Cuttings	10339.65	49.59	94.10	3.03	47.47	384.31	10533.83	194.18	1.84	0.06
6508/1-1S	NOR	99021-5	1260.0	1260.0	Cuttings	13584.26	50.70	100.85	3.18	50.88	521.20	13789.88	205.62	1.49	0.06
6508/1-1S	NOR	99021-6	1270.0	1270.0	Cuttings	4239.31	63.69	134.87	0.82	74.78	623.02	4513.46	274.16	6.07	0.01
6508/1-1S	NOR	99021-7	1290.0	1290.0	Cuttings	10753.90	66.89	149.85	2.07	85.81	807.38	11058.51	304.62	2.75	0.02
6508/1-1S	NOR	99021-8	1300.0	1300.0	Cuttings	556.73	33.82	78.63	0.67	28.28	397.36	698.12	141.39	20.25	0.02
6508/1-1S	NOR	99021-9	1310.0	1310.0	Cuttings	8894.88	89.57	168.73	0.00	63.63	1154.23	9216.81	321.93	3.49	0.00
6508/1-1S	NOR	99021-10	1320.0	1320.0	Cuttings	9169.70	65.55	142.94	0.47	59.02	1289.04	9437.68	267.98	2.84	0.01
6508/1-1S	NOR	99021-11	1330.0	1330.0	Cuttings	8777.26	63.38	146.55	0.32	51.94	581.59	9039.46	262.20	2.90	0.01
6508/1-1S	NOR	99021-12	1340.0	1340.0	Cuttings	14554.48	149.47	257.31	2.60	121.89	1361.07	15085.75	531.27	3.52	0.02
6508/1-1S	NOR	99021-13	1350.0	1350.0	Cuttings	2041629.63	4087.47	3087.01	16.76	1692.67	9070.57	2050513.55	8883.92	0.43	0.01
6508/1-1S	NOR	99021-14	1360.0	1360.0	Cuttings	2064005.35	3833.60	2028.77	8.59	968.22	10007.08	2070844.53	6839.18	0.33	0.01
6508/1-1S	NOR	99021-15	1370.0	1370.0	Cuttings	1440903.66	3164.02	2196.78	63.54	1008.70	3951.48	1447336.70	6433.04	0.44	0.06
6508/1-1S	NOR	99021-16	1380.0	1380.0	Cuttings	33791.25	200.18	249.28	18.81	38.84	104.86	34298.37	507.12	1.48	0.48
6508/1-1S	NOR	99021-17	1390.0	1390.0	Cuttings	24973.14	144.67	155.44	12.53	24.99	51.63	25310.77	337.64	1.33	0.50
6508/1-1S	NOR	99021-18	1410.0	1410.0	Cuttings	10470.59	83.30	104.36	9.88	23.01	61.00	10691.13	220.54	2.06	0.43
6508/1-1S	NOR	99021-19	1420.0	1420.0	Cuttings	27218.83	184.11	241.17	21.86	30.92	124.38	27696.89	478.06	1.73	0.71
6508/1-1S	NOR	99021-20	1430.0	1430.0	Cuttings	46057.16	320.32	477.83	34.42	56.78	181.32	46946.50	889.34	1.89	0.61
6508/1-1S	NOR	99021-21	1440.0	1440.0	Cuttings	30667.58	201.76	323.47	24.06	44.57	121.21	31261.44	593.85	1.90	0.54
6508/1-1S	NOR	99021-22	1450.0	1450.0	Cuttings	32742.29	243.37	369.29	29.25	46.17	86.38	33430.38	688.09	2.06	0.63
6508/1-1S	NOR	99021-23	1460.0	1460.0	Cuttings	39066.59	294.76	498.42	41.02	50.90	118.54	39951.68	885.09	2.22	0.81
6508/1-1S	NOR	99021-24	1470.0	1470.0	Cuttings	25506.20	177.19	322.84	23.71	44.04	102.42	26073.98	567.78	2.18	0.54
6508/1-1S	NOR	99021-25	1480.0	1480.0	Cuttings	30970.80	248.28	450.31	42.96	44.69	116.10	31757.04	786.24	2.48	0.96
6508/1-1S	NOR	99021-26	1490.0	1490.0	Cuttings	48619.71	423.36	713.00	92.19	66.01	158.94	49914.26	1294.55	2.59	1.40
6508/1-1S	NOR	99021-27	1500.0	1500.0	Cuttings	27517.37	221.38	388.79	69.01	37.37	121.78	28233.91	716.55	2.54	1.85
6508/1-1S	NOR	99021-28	1510.0	1510.0	Cuttings	44038.56	390.14	592.66	111.20	55.69	174.59	45188.25	1149.69	2.54	2.00
6508/1-1S	NOR	99021-29	1520.0	1520.0	Cuttings	39626.20	330.48	522.62	108.69	55.78	196.87	40643.78	1017.57	2.50	1.95
6508/1-1S	NOR	99021-30	1530.0	1530.0	Cuttings	31046.12	245.13	321.98	64.65	36.50	104.30	31714.38	668.26	2.11	1.77
6508/1-1S	NOR	99021-31	1540.0	1540.0	Cuttings	42027.95	342.13	461.31	73.52	45.60	165.89	42950.51	922.56	2.15	1.61
6508/1-1S	NOR	99021-32	1550.0	1550.0	Cuttings	30165.80	251.83	334.52	42.89	39.67	114.72	30834.71	668.90	2.17	1.08
6508/1-1S	NOR	99021-33	1560.0	1560.0	Cuttings	1249.83	56.41	206.52	8.00	61.53	318.98	1582.29	332.47	21.01	0.13
6508/1-1S	NOR	99021-34	1570.0	1570.0	Cuttings	20458.90	222.82	599.43	50.65	67.10	382.55	21398.90	940.00	4.39	0.75
6508/1-1S	NOR	99021-35	1590.0	1590.0	Cuttings	36629.65	353.20	718.91	91.63	62.55	402.41	37855.95	1226.30	3.24	1.46
6508/1-1S	NOR	99021-36	1600.0	1600.0	Cuttings	670.96	29.19	122.31	13.15	42.43	158.47	878.04	207.08	23.58	0.31
6508/1-1S	NOR	99021-37	1610.0	1610.0	Cuttings	4009.33	75.26	236.94	42.84	82.23	307.84	4446.60	437.26	9.83	0.52
6508/1-1S	NOR	99021-38	1630.0	1630.0	Cuttings	1024.82	36.24	130.44	17.75	55.13	288.90	1264.38	239.56	18.95	0.32
6508/1-1S	NOR	99021-39	1640.0	1640.0	Cuttings	684.18	23.45	87.09	8.33	74.34	241.50	877.40	193.21	22.02	0.11

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HEADSPACE GAS ANALYSIS (Table 3)

Well Name	Location	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4 nC4
6508/1-1S	NOR	99021-40	1660.0	1660.0	Cuttings	60.56	2.26	7.88	0.00	4.74	48.64	75.44	14.88	19.73	0.00
6508/1-1S	NOR	99021-41	1670.0	1670.0	Cuttings	571.25	16.05	36.99	3.04	19.69	69.79	647.02	75.77	11.71	0.15
6508/1-1S	NOR	99021-42	1680.0	1680.0	Cuttings	170.75	12.86	24.80	0.95	17.84	60.24	227.20	56.45	24.85	0.05
6508/1-1S	NOR	99021-43	1690.0	1690.0	Cuttings	487.63	23.33	40.61	1.87	30.77	79.13	584.20	96.57	16.53	0.06
6508/1-1S	NOR	99021-44	1700.0	1700.0	Cuttings	12082.74	67.10	46.16	4.36	11.42	33.20	12211.77	129.03	1.06	0.38
6508/1-1S	NOR	99021-45	1710.0	1710.0	Cuttings	12571.93	293.27	84.86	12.55	31.68	51.31	12994.30	422.37	3.25	0.40
6508/1-1S	NOR	99021-46	1720.0	1720.0	Cuttings	10450.88	173.94	32.92	3.43	7.07	20.58	10668.24	217.36	2.04	0.49
6508/1-1S	NOR	99021-47	1730.0	1730.0	Cuttings	12213.27	126.66	35.36	1.44	9.05	36.87	12385.78	172.51	1.39	0.16
6508/1-1S	NOR	99021-48	1740.0	1740.0	Cuttings	10869.78	125.84	39.57	1.47	7.86	29.01	11044.53	174.75	1.58	0.19
6508/1-1S	NOR	99021-49	1750.0	1750.0	Cuttings	10753.88	135.03	57.72	2.55	9.26	36.00	10958.43	204.56	1.87	0.28
6508/1-1S	NOR	99021-50	1790.0	1790.0	Cuttings	3429.90	119.90	72.36	1.09	24.85	78.59	3648.10	218.20	5.98	0.04
6508/1-1S	NOR	99021-51	1810.0	1810.0	Cuttings	17590.31	233.28	91.69	4.27	11.60	99.53	17931.15	340.84	1.90	0.37
6508/1-1S	NOR	99021-52	1820.0	1820.0	Cuttings	866.71	106.74	71.46	6.65	5.47	84.56	1057.02	190.31	18.00	1.22
6508/1-1S	NOR	99021-53	1830.0	1830.0	Cuttings	11521.46	674.53	142.51	39.71	16.34	56.95	12394.54	873.08	7.04	2.43
6508/1-1S	NOR	99021-54	1840.0	1840.0	Cuttings	1400.85					125.23	1400.85			
6508/1-1S	NOR	99021-55	1850.0	1850.0	Cuttings	141.81	83.36	40.39	1.79	10.08	86.08	277.44	135.63	48.89	0.18
6508/1-1S	NOR	99021-56	1860.0	1860.0	Cuttings	55.45	12.17	26.94	0.49	11.43	133.67	106.48	51.03	47.93	0.04
6508/1-1S	NOR	99021-57	1870.0	1870.0	Cuttings	1433.44	63.49	58.48	11.06	13.81	274.75	1580.28	146.84	9.29	0.80
6508/1-1S	NOR	99021-58	1880.0	1880.0	Cuttings	3206.29	221.24	116.08	94.71	43.51	1566.29	3681.83	475.54	12.92	2.18
6508/1-1S	NOR	99021-59	1900.0	1900.0	Cuttings	835.54	99.22	97.94	61.78	46.22	887.78	1140.70	305.16	26.75	1.34
6508/1-1S	NOR	99021-60	1910.0	1910.0	Cuttings	26.77	6.83	24.68	4.26	11.53	309.67	74.07	47.29	63.85	0.37
6508/1-1S	NOR	99021-61	1920.0	1920.0	Cuttings	45.79	12.17	29.71	14.99	23.93	427.82	126.58	80.80	63.83	0.63
6508/1-1S	NOR	99021-62	1930.0	1930.0	Cuttings	22.48	0.90	0.97	0.43	0.92	247.26	25.70	3.23	12.56	0.46
6508/1-1S	NOR	99021-63	1940.0	1940.0	Cuttings	6455.12	1006.27	909.60	935.78	1079.05	6745.24	10385.83	3930.71	37.85	0.87
6508/1-1S	NOR	99021-64	1950.0	1950.0	Cuttings	70.37	23.79	64.88	100.18	147.14	3604.37	406.36	335.99	82.68	0.68
6508/1-1S	NOR	99021-65	1960.0	1960.0	Cuttings	10262.23	1611.85	1456.01	1022.02	1425.08	5958.70	15777.18	5514.95	34.96	0.72
6508/1-1S	NOR	99021-66	1970.0	1970.0	Cuttings	8053.76	1297.07	1244.88	683.53	1083.66	4048.00	12362.90	4309.14	34.86	0.63
6508/1-1S	NOR	99021-67	1980.0	1980.0	Cuttings	6701.82	1019.43	1005.75	640.82	901.52	3433.97	10269.34	3567.52	34.74	0.71
6508/1-1S	NOR	99021-68	1990.0	1990.0	Cuttings	9384.43	1543.83	1510.67	716.94	1247.22	5312.42	14403.09	5018.66	34.84	0.57
6508/1-1S	NOR	99021-69	2000.0	2000.0	Cuttings	9816.97	1607.50	1768.19	880.31	1509.45	5386.03	15582.42	5765.45	37.00	0.58
6508/1-1S	NOR	99021-70	2020.0	2020.0	Cuttings	10943.47	2417.11	2989.64	1511.55	2579.60	8447.42	20441.37	9497.90	46.46	0.59
6508/1-1S	NOR	99021-71	2040.0	2040.0	Cuttings	7743.53	1824.70	2575.96	1274.62	2211.82	7199.41	15630.64	7887.10	50.46	0.58
6508/1-1S	NOR	99021-72	2050.0	2050.0	Cuttings	8952.75	1937.10	2320.64	945.13	1662.95	5058.71	15818.57	6865.82	43.40	0.57
6508/1-1S	NOR	99021-73	2060.0	2060.0	Cuttings	8787.57	1851.57	2344.57	948.58	1707.16	5069.36	15639.44	6851.88	43.81	0.56
6508/1-1S	NOR	99021-74	2080.0	2080.0	Cuttings	14162.75	2896.38	3091.33	1067.83	2051.45	6306.30	23269.74	9106.99	39.14	0.52
6508/1-1S	NOR	99021-75	2090.0	2090.0	Cuttings	12980.14	3702.26	4440.89	1543.81	2887.12	7780.00	25554.22	12574.08	49.21	0.53
6508/1-1S	NOR	99021-76	2100.0	2100.0	Cuttings	17520.42	6201.56	8018.93	2652.60	4651.33	10690.04	39044.84	21524.42	55.13	0.57
6508/1-1S	NOR	99021-77	2110.0	2110.0	Cuttings	17130.42	6424.82	7470.12	2319.95	3951.80	8709.67	37297.12	20166.69	54.07	0.59
6508/1-1S	NOR	99021-78	2120.0	2120.0	Cuttings	50353.36	15172.26	14030.22	3856.33	7043.55	19065.52	90455.73	40102.37	44.33	0.55

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