Hole Record:
36" hole : 365-454.6m MD
30" casing shoe at 449m MD
26" hole : 454.6 - 1050m MD
20" casing shoe at 1038m MD
17 ½" hole 1050 - 1964 m MD
13 3/8" shoe at 1954 m MD
12 ¼" hole 1964 - 3623m MD
9 5/8" liner at 3602m MD (liner top at 1891m MD)
8 ½" hole 3623 -3897m MD

MWD/LWD Logs Run:
Anderdrift surveys in 36" hole, 365-454.6 m MD
Run 1 : 26" hole : MWD/CDR/Pwd, 454.6-1050m MD : *RT & Memory ok*
Run 2 : 17 ½" hole : **MWD/CDR/Pwd/ISONIC, 1050-1964m MD**: (Isonic 1050-1847m only due memory full). *No RT CDR due field coil in turbine short circuit.. Memory logs ok. Bad Isonic data due formation 1395-1566m.*
Run 3: 12 ¼" hole : MWD/RAB/CDR/PWD, 1964 - 3417m MD. RAB fail realtime, 1964-2037m MD, & RAB intermittent near end (awaiting failure report) otherwise good logs. Pooh to change bit, so changed out ILS stab & CDR.
Run 4: 12 ¼" hole: MWD/RAB/CDR/PWD, 3417 - 3623m MD. All ok
3623-3626: Drill cement & 3m new formation with Anderdrift only.
Run 5: 8 ½" hole: RAB behind core No 2: 3600-3682m MD (ie over core1) Memory only, ok
Run 6: 8 ½" hole: RAB behind core No.3: 3670-3737m MD (ie over core2) Memory only, ok
Run 7: 8 ½" hole: MWD/RAB: 3730-3897m MD: over core No.3 & drill to TD.

Wireline Logs Run:
12 ¼" hole:
Run 1A: PEX/DSI/AITB/EMS/GPIT/ACTS 3621-1949m, DSI in 13 3/8" to 1450m, GR to surface.
Run 1B: MDT/GR: 21 pretests, 10 good, 11 tight.
3 x450ccMPSR & 3x1gall gas sample at 3615.5m MD 4 pretests **0.11psi/ft GAS/COND**
1x450ccMPSR sample at 2990 m MD - turned out to be mud
Run 1C: MSCT/GR: Cut 25, 20 good, 3 partial, 2 missing
8 ½" hole:
Run 2A: IPLT 3565-3890m MD
Run 2A: MDT 44 pretests, 20 good, 24 tight or supercharged. Samples obtained at 5 depths. Samples attempted at 2 other depths but tight.
on residual oil.

MDT 8.5": Samples:-				
1	3647m MD	Gas/Cond	2x250, 2x450	PVT, volumes validated at rig
2	3637m MD	Gas/Cond	2x250, 2x450 1x 2 3/4 gall	PVT, volumes validated at rig
3	3850m MD	water	1x1gall	Bulk water sample
4	3658m MD	water	1x1gall	Bulk water sample
5	3651.5m MD	water	1x1gall	Bulk water sample
6	3819m MD	water	2x450	would not fill, tight

Client:	BP AMOCO	Field:	Skarv
Job No:	NOR 005	Well:	6507/5-2
Date:	05 - 18 September 1999	Installation:	West Alpha

Sample Listing

Sample No	Sampling Date	Sampling Time	Sample Type	Sample Point	Bottle Type	Serial No
N/A						
1.1	05.09.99	11:58	Bottomhole Sample	3615.5 m	Conventional (CSB)	4632-EA
1.2	05.09.99	12:01	Bottomhole Sample	3615.5 m	Conventional (CSB)	4811-EA
1.3	05.09.99	12:04	Bottomhole Sample	3615.5 m	Conventional (CSB)	5315-EA
1.4	05.09.99	14:00	Bottomhole Sample	2990 m	Conventional (CSB)	4930-EA
1.5	05.09.99	11:18	Bottomhole Sample	3615.5 m	Conventional (CSB)	0137-EA
1.6	05.09.99	11:18	Bottomhole Sample	3615.5 m	Conventional (CSB)	5093-EA
1.7	05.09.99	11:18	Bottomhole Sample	3615.5 m	0.5 ltr Plastic Cont.	N/A
1.8	05.09.99	11:31	Bottomhole Sample	3615.5 m	0.5 ltr Plastic Cont.	N/A
1.9	05.09.99	11:45	Bottomhole Sample	3615.5 m	Conventional (CSB)	0220-AA
1.10	05.09.99	11:45	Bottomhole Sample	3615.5 m	Conventional (CSB)	4669-EA
1.11	05.09.99	11:45	Bottomhole Sample	3615.5 m	Conventional (CSB)	4720-EA
1.12	05.09.99	11:45	Bottomhole Sample	3615.5 m	0.5 ltr Plastic Cont.	N/A
1.13	05.09.99	N/A	Mudsample	N/A	1 ltr Plastic Cont.	N/A
1.14	05.09.99	N/A	Baseoil sample	N/A	1 ltr Plastic Cont.	N/A
2.1	16.09.99	17:09	Monophasic Bottomhole Sample	3647 m	Single-phase (SSB)	2313-EA
2.2	16.09.99	17:09	Bottomhole Sample	3647 m	Conventional (CSB)	5836-MA
2.3	16.09.99	19:25	Monophasic Bottomhole Sample	3637 m	Single-phase (SSB)	1561-EA
2.4	16.09.99	19:25	Monophasic Bottomhole Sample	3637 m	Single-phase (SSB)	2149-EA
2.5	16.09.99	16:52	Bottomhole Sample	3647 m	Conventional (CSB)	5837-MA
2.6	16.09.99	19:49	Bottomhole Sample	3637 m	Conventional (CSB)	5842-MA
2.7	16.09.99	19:49	Bottomhole Sample	3637 m	Conventional (CSB)	5839-MA
2.8	16.09.99	16:57	Bottomhole Sample	3647 m	Conventional (CSB)	5761-MA
2.9	16.09.99	15:07	Bottomhole Sample	3850 m	5 ltr Plastic Cont.	N/A
2.10	17.09.99	00:30	Bottomhole Sample	3658 m	5 ltr Plastic Cont.	N/A
2.11	16.09.99	22:40	Bottomhole Sample	3651.5 m	5 ltr Plastic Cont.	N/A
2.12	16.09.99	18:42	Bottomhole Sample	3637 m	1 ltr Plastic Cont.	N/A
2.13	16.09.99	N/A	Mudsample WBM	N/A	1 ltr Plastic Cont.	N/A
2.14	16.09.99	N/A	Mudfiltrate sample WBM	N/A	Glass Bottle	N/A

L-962

BAKER HUGHES INTEQ

BP AMOCO

6507/5-2

FORMATION EVALUATION

BP Amoco

Company:	BP AMOCO
Well:	6507/5-2
Field:	SKARV 2
Region:	NORWAY
Coordinates:	65 deg 42 min 59.090 sec
	07 deg 38 min 18.830 sec
API Index:	
Spud Date:	13th August 1999
RKB - SEA LEVEL:	18m
RKB - SEABED:	365m
Contractor:	Smedvik
Rig:	West Alpha
Type:	Semi Submersible
Total Measured Depth:	3897m
True Vertical Depth:	3894.5m
Completion Status:	Plug & Abandon

LOG INTERVAL

Depth:	365	to	3897
Date:	13Aug99	to	15Sep.99
Scale:	1 : 500		

Hole Size

36"	to	454m (454m TVD)
26"	to	1050m (1049.76m TVD)
17½"	to	1964m (1963.0m TVD)
12 1/4"	to	3623m (3620.9m TVD)
8 1/2"	to	3897m (3894.5m TVD)

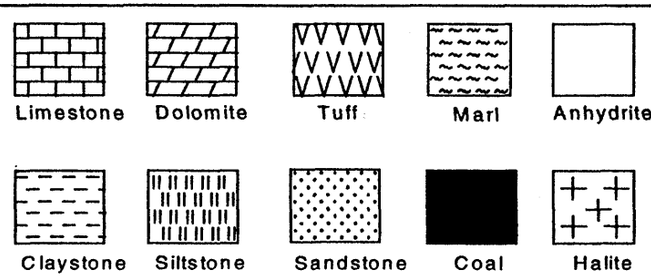
Casing Size

30"	to	449m (449m TVD)
20"	to	1038m (1037.8m TVD)
13 3/8"	to	1954m (1953.1m TVD)
9 5/8" Liner	PBR	1884.6m (1883.7m TVD)
9 5/8" Liner	to	3602m (3599.9m TVD)

Mud Types

Seawater/HIVIS	to	1050m (1049.8m TVD)
Inhibited silicate	to	1964m (1963.0m TVD)
Oilbased	to	3623m (3620.9m TVD)
KCl -polymer	to	3897m (3894.5m TVD)

LITHOLOGY SYMBOLS



INTEQ Plot Suite

- Formation Evaluation Log
- Gas Ratio Plot
- Pressure Evaluation Plot
- Engineering Summary

ABBREVIATIONS

NB	New Bit	SWG	Swab Gas
RRB	Rerun Bit	SVG	Survey Gas
CB	Core Bit	C	Carbide Test
WOB	Weight On Bit	MW	Mud Density
RPM	Revs Per Minute	V	Funnel Viscosity
FLC	Flow Check	F	Filtrate API (cc)
PR	Poor Returns	FC	Filter Cake (1/32"
NR	No Returns	PV	Plastic Viscosity (
LAT	Logged After Trip	YP	Yield Point (pa)
BG	Background Gas	SOL	Solids % (corr)
FG	Formation gas	SD	Sand %
TG	Trip Gas	Cl	Salinity g/L Cl
WTG	WiperTrip Gas	OWR	Oil Water Ratio
CG	Connection Gas	ES	Electric Stability

SYMBOLS

Geochemical Report for
Well 6507/5-2

Authors: Peter Barry Hall
Sunil Bharati

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Hornebergveien 5
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Norway

Date: 28/04/00

Chapter 1

INTRODUCTION

1.1 General comments on 6507/5-2

This well is the second well on the Skarv structure. This project for BPAmoco started off as a series of hot-shot analyses on a number of reservoir rocks. The section of the well from 1964 m to 3623 m was drilled with an oil based mud and below that it was drilled with a KCl water-based mud system. The side wall core samples were obtained using a rotary system.

1.2 Analytical program

Based on the instructions from BPAmoco, the following analyses were carried out

Rocks

Analysis type	*No. of samples*	*Fig.*	*Table*
Headspace Gas Analysis	23	2.1	1
Washing of cuttings	62	-	-
Solvent extraction to clean cuttings*	58	-	-
Lithology Description[1]	76	-	2
TOC	66	2.2	2,3
Rock-Eval Pyrolysis	66	2.3a-d	3
Extraction (includes 6 hot shots)	34	2.4g	4a-e
EOM GC	6	2.4i	-
Thermal Extraction GC	6	2.4j, l	
Asphaltene separation	28	-	4a-e
MPLC separation	28	-	4a-e
Saturated hydrocarbon GC	28 (2☯)	2.4a-c, h,k,m,p,r	5a-b
Aromatic hydrocarbon GC	28	2.4d-f, n,o,q	6a-b
Vitrinite Reflectance	25	2.5	7
§Treatment to remove mineral oil before GC-MS analysis	2 (2¤)	-	-
Saturated hydrocarbon GC-MS	8 (2☯)	2.6a-m	8a-f
Aromatic hydrocarbon GC-MS	8	2.7a-d	9a-e
$\delta^{13}C$ Bulk isotope composition	8 (2☯)	2.8a-c	10a-b

The analyses performed were influenced by the drilling mud program. The cuttings samples were washed clean of mud before description. Since an oil based mud was used in drilling the interval from 1964 m to 3623 m, solvent extraction* was performed on all cuttings sample shales, which were for TOC and Rock-Eval analysis, so as to minimise contamination. Furthermore, to obtain good quality GC-MS data on two samples, saturated fractions were

treated (§ see chapter 4) so as to remove as much of the mineral oil as possible before GC-MS analysis was performed. This involved testing the clean-up method¤ on two samples before the approved clean-up procedure was performed on the two samples of interest. The cleaned-up saturated hydrocarbon fractions of these two samples were then analysed by GC, GC-MS and $\delta^{13}C$ isotope composition was also determined.

1 cuttings and side-wall samples and TOC analysed core chip (ccp) samples were described
(2☯) = number of analyses performed on cleaned-up saturated hydrocarbon fractions

Oils

Analysis type	*No. of samples*	*Fig.*	*Table*
Whole oil GC	2	3.1	1a-c
Topping	2	-	2a-c
Asphaltene separation	2	-	2a-c
MPLC separation	2	-	2a-c
Saturated hydrocarbon GC	2	3.2	3a-b
Aromatic hydrocarbon GC	2	3.3	4a-b
Saturated hydrocarbon GC-MS	2	3.4	5a-f
Aromatic hydrocarbon GC-MS	2	3.5	6a-e
$\delta^{13}C$ Bulk isotope composition	2	2.8a-c	7a-b

Experimental Procedures

Headspace Gas Analysis

The analysis is performed using a Varian 3400 gas chromatograph with a 50 m Plot fused silica Al_2O_3/KCL column, loop injector and flame ionization detector.Helium is used as carrier gas and the column is run from 70°C to 200°C, at a rate of 12°C/min. Final hold time is 13 min. Two cm^3 of headspace gas are removed from each sample can for chromatographic analysis of the C_1 to C_7 range of hydrocarbons.

Total organic carbon (TOC) and total carbon analysis

This analysis is performed using a LECO CS244 Carbon Analyser. Hand-picked lithologies from cuttings samples are crushed with a mortar and pestle and approximately 200 mg (50 mg for coals) are accurately weighed into LECO crucibles. The samples are then treated three times with 10% hydrochloric acid to remove oxidized (carbonate) carbon, and washed four times with distilled water. The samples are dried on a hotplate at 60-70°C before analysis of total organic carbon.

Rock-Eval pyrolysis

This analysis is performed by using a Rock-Eval 6 Pyrolyser. Approximately 100 mg crushed whole rock is analysed. The sample is first heated at 325°C for three min in an atmosphere of helium to release the free hydrocarbons present (S_1 peak) and then pyrolysed by increasing the temperature from 300 to 600°C (temp. gradient 25°C/min; S_2 peak). Both the S_1 and S_2 yields are measured using a flame ionization detector (FID).

Thermal extraction/pyrolysis gas chromatography

The instrument used for this analysis is a Varian 3400 Gas Chromatogaph interfaced to a pyrolysis oven (the pyrolyser). Up to 15 mg of whole rock sample is loaded on the pyrolyser and heated isothermally, at 300°C, for 4 min, during which time thermal extraction of the free hydrocarbons occurs (equivalent to the S_1 peak of the Rock-Eval). The released gases pass to a 25 m OV1 column with a liquid nitrogen-cooled trap.

After 4 min the pyrolysis oven is temperature programmed up to 530°C, at a rate of 37°C/min, causing bound hydrocarbons to be released from the kerogen (equivalent to the S_2 peak of the Rock-Eval). The released gases pass to a 25 m OV1 column with a liquid nitrogen-cooled trap.

The temperature program of the gas chromatograph oven, in which the columns are housed is -10 to 290°C at a rate of 6°C/min. Both columns are linked to an FID.

Whole Oil Gas Chromatography

Whole oil chromatography is performed on a Perkin Elmer Autosystem XL gas chromatograph fitted with a split injector, 50 m OV1 capillary column and effluent splitter connected to FID and FPD detectors allowing simultaneous determination of hydrocarbons and sulphur compounds. Approximately 0.1 microlitres of whole oil are injected and the temperature program on the chromatograph runs from -10 C to 300 C at 4 C/min.

Vitrinite Reflectance Analysis

This analysis was performed at IFE (see report in Appendix)

Solvent extraction of organic matter (EOM)

The samples are extracted using a Tecator Soxtec HT-System. Carefully weighed samples are taken in a pre-extracted thimble. Some activated copper is added to the extraction cup and dichloromethane/methanol (93:7) is used as an extraction solvent. The samples are boiled for 1 h and then rinsed for 2 h. If the samples contain more than 10% TOC, the whole procedure is repeated once. The resulting solution is transferred to a flask and the solvent removed by rotary evaporation (200 mbar, 30°C). The amount of EOM is gravimetrically established.

Removal of asphaltenes

The EOM is dissolved in pentane in a flask to precipitate the asphaltenes by ultrasonic bath for 3 min. The solution is then stored in the dark and at ambient temperature for at least 8 h. The solution is then filtered (Baker 10-spe system) and the precipitated asphaltenes returned to the original flask by dissolution in dichloromethane. The solvent is removed by rotary evaporation at 200 mbar and 30°C.

Chromatographic separation of deasphaltened EOM

Chromatographic separation is performed using an MPLC system developed by the company. The EOM (minus asphaltenes) is injected into the MPLC and separated using hexane as an eluent. The saturated and aromatic hydrocarbon fractions are collected and the solvent removed using a rotary evaporator at 30°C. The fractions are then transferred to small pre-weighed vials and evaporated to dryness overnight. The vials are re-weighed to obtain the weights of both the saturated and the aromatic fractions. The weight of the NSO fraction which is retained on the column, is obtained by weight difference.

Gas chromatographic analyses

Saturated hydrocarbon fractions. The instrument used for this analysis is a DANI 8510 Gas Chromatograph equipped with an FID detector and an OV1 (25 m) column. The carrier gas is helium and the temperature program runs from 80°C to 300°C at a rate of 4°C/min. Final hold time is 20 min. The saturated hydrocarbon fraction is diluted by 1:30 and a 1 µl aliquot of this is injected into the instrument.

Aromatic hydrocarbon fractions. The instrument used is a Varian 3400 Gas Chromatograph with a 40 m SE 54 capillary column, split injector and a column splitter leading to FID and FPD detectors, which allows simultaneous analysis of co-eluting hydrocarbons and sulphur compounds. The carrier gas is helium and the temperature program runs from 40°C to 290°C at a rate of 4°C/min. Final hold time is 10 min. The aromatic hydrocarbon fraction is diluted by 1:30 and a 1 µl aliquot of this is injected into the instrument.

Combined gas chromatography-mass spectrometry (GC-MS)

The GC-MS analyses are performed on a Autospec Ultima system interfaced to a Hewlett

Packard 5890 gas chromatograph. The GC is fitted with a fused silica SE54 capillary column (40 m x 0.22 mm i.d.) directly into the ion source. Helium (12 psi) is used as carrier gas and the injections are performed in splitless mode. The GC oven is programmed from 45°C to 150°C at 35°C/min, at which point the programme rate is 2°C/min up to 310°C where the column is held isothermally for 15 min. For the aromatic hydrocarbons, the GC oven is programmed from 50°C to 310°C at 5°C/min and held isothermally at 310°C for 15 min. The mass spectrometer is operated in electron impact (EI) mode at 70 eV electron energy, a trap current of 500 µA and a source temperature of 220°C. The instrument resolution used is 1500 (10 % value).

The data system used is a VG OPUS system. The samples are analysed in multiple ion detection mode (MID) at a scan cycle time of approximately 1.1 sec. Calculation of peak ratios is performed from peak heights in the appropriate Fragmentograms.

Saturated Fractions

Terpanes. The most commonly used fragment ions for detection of terpanes are m/z 177 for detection of demethylated hopanes or moretanes, m/z 191 for detection of tricyclic, tetracyclic- and pentacyclic terpanes and m/z 205 for methylated hopanes or moretanes.

Steranes. The most commonly used fragment ions for detection of steranes are m/z 259 for detection of rearranged steranes, m/z 217 for detection of rearranged and normal steranes and m/z 218 for detection of 14β,17β(H) steranes.

The m/z 231 fragment ion is used to detect possible aromatic contamination of the saturated fraction. It is also used for detection of methyl steranes.

Aromatic Fractions

Naphthalenes. Methylnaphthalenes are normally detected by the m/z 142 fragment ion, while C_2-naphthalenes are detected by m/z 156 and C_3-naphthalenes by m/z 170.
Dibenzothiophenes. The m/z 184 fragment ion is used to detect dibenzothiophene. The m/z 198 and 212 fragment ions are used for methyl-substituted dibenzothiophenes and dimethyl-substituted dibenzothiophenes, respectively.

Phenanthrenes. Phenanthrene is detected using the m/z 178 fragment ion. Anthracene will, if present, also give a signal in the m/z 178 fragment ion. Methyl-substituted phenanthrenes give signals in the m/z 192 fragment ion.

Aromatic steranes. Monoaromatic steranes are detected using the m/z 253 fragment ion, while the triaromatic steranes are detected using the m/z 231 fragment ion.

Table 1a: C1 to C7 hydrocarbons in HEADSPACE gas
(µl gas/kg rock)

GEOLAB NOR

Project: NOCS 6507/5-2
Well: NOCS 6507/5-2
Depth unit of measure: m * Indicated values in ml gas/kg rock

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4/nC4
2610.00	3290	530	395	78	82	49	4375	1085	24.8	0.96
2660.00	339787	2601	385	45	41	235	342860	3073	0.9	1.10
2710.00	11932	232	65	8	8	6	12246	314	2.6	1.00
2760.00	7317	496	238	45	42	25	8139	821	10.1	1.07
2810.00	8013	719	285	42	46	28	9104	1092	12.0	0.92
2860.00	8900	293	82	9	11	7	9295	395	4.3	0.83
2910.00	14407	1201	302	31	36	20	15977	1570	9.8	0.84
2960.00	8053	553	120	11	13	8	8751	698	8.0	0.84
3010.00	8108	808	204	20	24	14	9165	1057	11.5	0.82
3060.00	2804	150	43	5	7	7	3008	205	6.8	0.68
3110.00	4232	401	125	10	18	14	4785	553	11.6	0.55
3160.00	96	33	28	2	6	2	166	69	41.9	0.35
3210.00	1055	49	18	2	4	7	1128	73	6.5	0.54
3260.00	25387	1184	533	55	92	59	27251	1864	6.8	0.60
3310.00	5363	246	142	14	26	11	5791	428	7.4	0.52
3360.00	1380	173	161	23	41	35	1777	397	22.4	0.56
3410.00	119	11	9	2	3	2	143	24	17.0	0.58
3460.00	8591	675	453	33	67	24	9819	1228	12.5	0.50
3510.00	10063	1407	1156	74	162	56	12862	2799	21.8	0.46
3560.00	23295	2846	1722	98	218	55	28179	4884	17.3	0.45
3760.00	14600	2265	1130	102	333	431	18429	3830	20.8	0.31
3860.00	2134	668	919	96	378	322	4195	2061	49.1	0.26
3897.00	3541	2982	6241	863	2106	1223	15732	12191	77.5	0.41

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
2724.00								0048
		2.73	100	Sh/Clst: drk gy				0048-1L
2748.00								0049
		1.54	100	Sh/Clst: drk gy				0049-1L
2772.00								0050
		1.65	100	Sh/Clst: drk gy				0050-1L
			tr	Cont : m brn, dd				0050-2L
2796.00								0051
		1.63	100	Sh/Clst: drk gy				0051-1L
			tr	Cont : m brn, dd				0051-2L
2820.00								0052
		1.67	100	Sh/Clst: drk gy				0052-1L
			tr	Cont : m brn, dd				0052-2L
2844.00								0053
		1.73	100	Sh/Clst: drk gy				0053-1L
			tr	Cont : m brn, dd				0053-2L
2856.70	swc							0040
			100	S/Sst : w to m lt gy				0040-1L
2864.00	swc							0039
			100	S/Sst : w to m lt gy				0039-1L

GEOLAB NOR

Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth Int	Depth Cvd	Type	TOC%	%	Grp	Frm	Age	Trb	Sample	Lithology description
2868.00									0054	
			1.79	95	Sh/Clst:		drk gy, dd		0054-1L	
				5	Cont	:	m brn, dd		0054-2L	
2892.00									0055	
			1.78	95	Sh/Clst:		m lt gy, dd		0055-1L	
				5	Cont	:	m brn, dd		0055-2L	
2916.00									0056	
			1.50	100	Sh/Clst:		drk gy, dd		0056-1L	
2940.00									0057	
			1.75	95	Sh/Clst:		m lt gy, dd		0057-1L	
				5	Cont	:	m drk gy, dd		0057-2L	
2964.00									0058	
			1.83	95	Sh/Clst:		m lt gy, dd		0058-1L	
				5	Cont	:	m drk gy, dd		0058-2L	
2988.00									0059	
			1.72	95	Sh/Clst:		drk gy, dd		0059-1L	
				5	Cont	:	m drk gy, dd		0059-2L	
2989.50		swc							0038	
				100	S/Sst	:	drk y brn		0038-1L	
3012.00									0060	
			1.62	95	Sh/Clst:		drk gy, dd		0060-1L	
				5	Cont	:	m drk gy, dd		0060-2L	

GEOLAB NOR

Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
3019.00		swc						0047
			100	Sh/Clst: m gn gy				0047-1L
3024.50		swc						0041
			100	S/Sst : m lt gy				0041-1L
3029.00		swc						0042
		1.59	100	S/Sst : m gy to w, argill				0042-1L
3032.20		swc						0043
		2.01	100	S/Sst : lt gy to m lt gy, argill				0043-1L
3033.00								0061
			50	Cont : m drk gy, dd				0061-2L
			45	S/Sst : w, f, l				0061-3L
			5	Sh/Clst: drk gy, dd				0061-1L
3035.50		swc						0046
		1.61	100	Sh/Clst: m gy to drk gy, slt				0046-1L
3051.00								0062
		1.49	95	Sh/Clst: drk gy, dd				0062-1L
			5	Cont : m drk gy, dd				0062-2L
3054.50		swc						0044
		0.46	100	S/Sst : lt gy, argill				0044-1L
3061.00		swc						0045
			100	Sh/Clst: m gy to drk gy				0045-1L

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description			
3072.00						0063
	1.30	95	Sh/Clst:	m gy to m lt gy, dd		0063-1L
		5	Cont :	m drk gy, dd		0063-2L
3093.00						0064
	1.13	90	Sh/Clst:	drk gy, dd		0064-1L
		5	Cont :	m drk gy, dd		0064-2L
		5	Sh/Clst:	red		0064-3L
3114.00						0065
	1.21	95	Sh/Clst:	drk gy, dd		0065-1L
		5	Cont :	m drk gy, dd		0065-2L
3135.00						0066
	1.79	100	Sh/Clst:	drk gy, dd		0066-1L
3160.00						0067
	1.36	100	Sh/Clst:	drk gy, dd		0067-1L
3162.00						0091
	1.45	100	Sh/Clst:	m gy to drk gy		0091-1L
		tr	Ca :	lt brn gy		0091-2L
		tr	Sh/Clst:	m brn		0091-3L
3195.00						0092
		65	Sh/Clst:	m brn		0092-3L
	1.88	30	Sh/Clst:	m gy to drk gy		0092-1L
		5	Sh/Clst:	blk, carb		0092-4L
		tr	Ca :	lt brn gy		0092-2L
3210.00						0068
	1.79	70	Sh/Clst:	drk gy, dd		0068-1L
		30	Sh/Clst:	m brn, dd		0068-2L

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth Int	Cvd	Type TOC%	%	Grp Frm Age Lithology description	Trb	Sample
3222.00						0093
		5.21	60	Sh/Clst: drk gy to blk		0093-1L
			25	Ca : lt brn gy		0093-2L
			15	Sh/Clst: m brn		0093-3L
3225.00						0094
			50	Ca : lt brn gy		0094-2L
		5.29	45	Sh/Clst: drk gy to blk		0094-1L
			5	Sh/Clst: m brn		0094-3L
3231.00						0095
		6.99	95	Sh/Clst: drk gy to blk		0095-1L
			5	Ca : lt brn gy		0095-2L
			tr	Sh/Clst: m brn		0095-3L
3237.00						0096
		7.63	100	Sh/Clst: drk gy to blk		0096-1L
3243.00						0097
		8.22	100	Sh/Clst: drk gy to blk		0097-1L
3249.00						0098
		8.02	100	Sh/Clst: drk gy to blk		0098-1L
3255.00						0099
		8.68	100	Sh/Clst: drk gy to blk		0099-1L
3260.00						0069
		8.09	100	Sh/Clst: drk gy, dd		0069-1L

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth Int	Cvd	Type TOC%	%	Grp	Frm	Age	Trb	Sample	Lithology description
3261.00								0100	
		8.51	100					0100-1L	Sh/Clst: drk gy to blk
3267.00								0101	
		7.20	100					0101-1L	Sh/Clst: drk gy to blk
3273.00								0102	
		7.48	100					0102-1L	Sh/Clst: drk gy to blk
3279.00								0103	
		8.50	100					0103-1L	Sh/Clst: drk gy to blk
3285.00								0104	
			100					0104-1L	Sh/Clst: drk gy to blk
3291.00								0105	
		6.89	100					0105-1L	Sh/Clst: m drk gy to blk
3297.00								0106	
		1.81	90					0106-1L	Sh/Clst: m drk gy to blk
			10					0106-2L	Ca : lt brn gy
3303.00								0107	
		6.16	90					0107-1L	Sh/Clst: m drk gy to blk
			10					0107-2L	Ca : lt brn gy
3309.00								0108	
			40					0108-2L	Ca : lt brn gy
		14.50	30					0108-1L	Sh/Clst: blk, carb, slt
		14.50	30					0108-3L	Sh/Clst: lt brn gy to m gy

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Grp	Frm	Age	Trb	Sample	Lithology description
3310.00								0070	
		7.24	100					0070-1L	Sh/Clst: drk gy, dd
3315.00								0109	
			50					0109-2L	Ca : lt brn gy
			40					0109-3L	Sh/Clst: lt brn gy to m gy
		4.86	10					0109-1L	Sh/Clst: drk gy to blk
3330.00								0071	
		2.52	100					0071-1L	Sh/Clst: drk gy to m lt gy, dd
3351.00								0072	
		2.99	100					0072-1L	Sh/Clst: drk gy to m lt gy, dd
3372.00								0073	
		2.18	100					0073-1L	Sh/Clst: drk gy to m lt gy, dd
3393.00								0074	
		1.73	100					0074-1L	Sh/Clst: drk gy to m lt gy, dd
3414.00								0075	
		3.13	100					0075-1L	Sh/Clst: drk gy, dd
3435.00								0076	
		1.86	100					0076-1L	Sh/Clst: drk gy to m lt gy, dd
3456.00								0077	
		2.53	100					0077-1L	Sh/Clst: drk gy to m lt gy, dd

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Type		Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description				
3477.00							0078
	3.22	100	Sh/Clst: drk gy, dd				0078-1L
3498.00							0079
	3.25	100	Sh/Clst: drk gy, dd				0079-1L
3519.00							0080
	2.51	100	Sh/Clst: drk gy, dd				0080-1L
3540.00							0081
	4.00	100	Sh/Clst: drk gy, dd				0081-1L
3561.00							0082
	3.35	100	Sh/Clst: drk gy, dd				0082-1L
3582.00							0083
	2.94	100	Sh/Clst: drk gy, dd				0083-1L
3603.00							0084
	1.64	100	Sh/Clst: drk gy, dd				0084-1L
3612.00							0085
	1.86	100	Sh/Clst: m lt gy, dd				0085-1L
3628.50 ccp							0017
		100	S/Sst : lt brn to w				0017-1L

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth Int	Cvd	Type TOC%	%	Grp	Frm	Age / Lithology description	Trb	Sample
3633.89		ccp						0018
			100	S/Sst		: lt brn to w		0018-1L
3643.75		ccp						0019
			100	S/Sst		: m brn to w		0019-1L
3653.10		ccp						0020
			100	S/Sst		: lt brn to w		0020-1L
3654.40		ccp						0021
			100	S/Sst		: lt brn to w		0021-1L
3667.10		ccp						0022
			100	S/Sst		: m lt brn to w		0022-1L
3670.10		ccp						0023
			100	S/Sst		: m brn to m gy to w, pyr		0023-1L
3672.10		ccp						0024
			100	S/Sst		: lt gy, mic, argill, f		0024-1L
3679.90		ccp						0025
			100	S/Sst		: lt gy to lt brn, argill, f		0025-1L
3693.05		ccp						0026
	1.75		100	Sh/Clst		: drk gy		0026-1L

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Grp	Frm	Age / Lithology description	Trb	Sample
3700.20		ccp						0027
			100	Sltst		: m lt gy to w, argill		0027-1L
3710.20		ccp						0028
			100	Sltst		: m lt gy to w, argill		0028-1L
3718.70		ccp						0029
			100	S/Sst		: m brn to w		0029-1L
3730.10		ccp						0030
			100	Sh/Clst		: m gy to lt gy to w, slt		0030-1L
3740.10		ccp						0031
		1.22	100	Sh/Clst		: drk gy		0031-1L
3755.10		ccp						0032
		0.77	100	Sh/Clst		: drk gy, slt		0032-1L
3765.10		ccp						0033
		0.57	100	Sh/Clst		: drk gy to m gy, slt		0033-1L
3777.50		ccp						0034
			100	Sltst		: lt gy to w		0034-1L
3778.30		ccp						0035
			100	S/Sst		: lt gy to w		0035-1L

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Table 2 : Lithology description for well NOCS 6507/5-2

Depth unit of measure: m

Depth Int	Cvd	Type TOC%	%	Grp Frm Age Lithology description	Trb	Sample
3785.10	ccp					0036
			100	S/Sst : lt gy to w to m gy, argill		0036-1L
3790.10	ccp					0037
			100	S/Sst : lt gy to w to m gy, argill		0037-1L
3855.00						0086
			70	S/Sst : lt gy to w, dd		0086-1L
			30	Cont : lt gy, dd		0086-2L
3867.00						0087
			70	S/Sst : lt gy to w, dd		0087-1L
			25	Cont : lt gy, dd		0087-2L
			5	Sh/Clst: m lt gy		0087-3L
3879.00						0088
		2.72	70	Sh/Clst: m lt gy, dd		0088-1L
			25	S/Sst : lt gy to w, dd		0088-2L
			5	Cont : lt gy, dd		0088-3L
3888.00						0089
			75	S/Sst : lt gy to w, dd		0089-2L
		2.05	20	Sh/Clst: m lt gy, dd		0089-1L
			5	Cont : lt gy, dd		0089-3L
3897.00						0090
			75	S/Sst : lt gy to w, dd		0090-2L
		2.04	20	Sh/Clst: m lt gy, dd		0090-1L
			5	Cont : lt gy, dd		0090-3L

Table 3: Rock-Eval table for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2724.00	cut		Sh/Clst: drk gy	1.69	11.43	1.80	6.35	2.73	419	66	13.1	0.13	421	0048-1L
2748.00	cut		Sh/Clst: drk gy	1.16	5.63	1.41	3.99	1.54	366	92	6.8	0.17	423	0049-1L
2772.00	cut		Sh/Clst: drk gy	1.34	7.37	3.12	2.36	1.65	447	189	8.7	0.15	353	0050-1L
2796.00	cut		Sh/Clst: drk gy	1.45	7.31	2.21	3.31	1.63	448	136	8.8	0.17	354	0051-1L
2820.00	cut		Sh/Clst: drk gy	1.17	6.45	1.04	6.20	1.67	386	62	7.6	0.15	355	0052-1L
2844.00	cut		Sh/Clst: drk gy	1.06	6.42	0.88	7.30	1.73	371	51	7.5	0.14	357	0053-1L
2868.00	cut		Sh/Clst: drk gy	1.06	6.83	1.42	4.81	1.79	382	79	7.9	0.13	430	0054-1L
2892.00	cut		Sh/Clst: m lt gy	1.27	8.04	1.20	6.70	1.78	452	67	9.3	0.14	359	0055-1L
2916.00	cut		Sh/Clst: drk gy	1.05	5.94	2.31	2.57	1.50	396	154	7.0	0.15	428	0056-1L
2940.00	cut		Sh/Clst: m lt gy	1.42	8.15	0.86	9.48	1.75	466	49	9.6	0.15	353	0057-1L
2964.00	cut		Sh/Clst: m lt gy	1.34	8.17	0.93	8.78	1.83	446	51	9.5	0.14	355	0058-1L
2988.00	cut		Sh/Clst: drk gy	1.26	7.68	2.37	3.24	1.72	447	138	8.9	0.14	356	0059-1L
3012.00	cut		Sh/Clst: drk gy	1.33	6.46	1.02	6.33	1.62	399	63	7.8	0.17	345	0060-1L
3029.00	swc		S/Sst : m gy to w	11.47	1.88	0.44	4.27	1.59	118	28	13.4	0.86	431	0042-1L
3032.20	swc		S/Sst : lt gy to m lt gy	22.51	1.17	0.17	6.88	2.01	58	8	23.7	0.95	429	0043-1L
3035.50	swc		Sh/Clst: m gy to drk gy	7.12	1.79	0.35	5.11	1.61	111	22	8.9	0.80	436	0046-1L

Table 3: Rock-Eval table for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3051.00	cut		Sh/Clst: drk gy	1.59	8.06	2.44	3.30	1.49	541	164	9.7	0.16	356	0062-1L
3054.50	swc		S/Sst : lt gy	7.46	0.47	0.55	0.85	0.46	103	120	7.9	0.94	405	0044-1L
3072.00	cut		Sh/Clst: m gy to m lt gy	1.42	4.94	1.14	4.33	1.30	380	88	6.4	0.22	351	0063-1L
3093.00	cut		Sh/Clst: drk gy	1.20	5.91	1.27	4.65	1.13	523	112	7.1	0.17	355	0064-1L
3114.00	cut		Sh/Clst: drk gy	1.15	5.15	1.35	3.81	1.21	426	112	6.3	0.18	357	0065-1L
3135.00	cut		Sh/Clst: drk gy	1.37	5.65	0.84	6.73	1.79	316	47	7.0	0.20	349	0066-1L
3160.00	cut		Sh/Clst: drk gy	0.38	4.51	0.81	5.57	1.36	332	60	4.9	0.08	404	0067-1L
3162.00	cut		Sh/Clst: m gy to drk gy	3.14	25.20	0.96	26.25	1.45	1738	66	28.3	0.11	419	0091-1L
3195.00	cut		Sh/Clst: m gy to drk gy	1.92	13.22	1.14	11.60	1.88	703	61	15.1	0.13	432	0092-1L
3210.00	cut		Sh/Clst: drk gy	0.81	5.40	0.63	8.57	1.79	302	35	6.2	0.13	424	0068-1L
3222.00	cut	SPEK	Sh/Clst: drk gy to blk	6.41	12.21	1.13	10.81	5.21	234	22	18.6	0.34	432	0093-1L
3225.00	cut		Sh/Clst: drk gy to blk	3.23	6.01	0.65	9.25	5.29	114	12	9.2	0.35	344	0094-1L
3231.00	cut		Sh/Clst: drk gy to blk	1.85	4.37	0.76	5.75	6.99	63	11	6.2	0.30	340	0095-1L
3237.00	cut		Sh/Clst: drk gy to blk	2.36	24.88	0.66	37.70	7.63	326	9	27.2	0.09	421	0096-1L
3243.00	cut		Sh/Clst: drk gy to blk	2.86	28.31	0.60	47.18	8.22	344	7	31.2	0.09	422	0097-1L
3249.00	cut		Sh/Clst: drk gy to blk	4.05	28.46	0.47	60.55	8.02	355	6	32.5	0.12	422	0098-1L

Table 3: Rock-Eval table for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3255.00	cut		Sh/Clst: drk gy to blk	2.57	30.61	0.51	60.02	8.68	353	6	33.2	0.08	424	0099-1L
3260.00	cut	SPEK	Sh/Clst: drk gy	0.92	31.86	0.67	47.55	8.09	394	8	32.8	0.03	423	0069-1L
3261.00	cut		Sh/Clst: drk gy to blk	2.25	30.85	0.74	41.69	8.51	363	9	33.1	0.07	423	0100-1L
3267.00	cut		Sh/Clst: drk gy to blk	1.92	23.10	0.74	31.22	7.20	321	10	25.0	0.08	429	0101-1L
3273.00	cut		Sh/Clst: drk gy to blk	2.57	20.82	0.55	37.85	7.48	278	7	23.4	0.11	429	0102-1L
3279.00	cut		Sh/Clst: drk gy to blk	2.93	29.52	0.44	67.09	8.50	347	5	32.5	0.09	422	0103-1L
3291.00	cut		Sh/Clst: m drk gy to blk	1.59	14.16	1.67	8.48	6.89	206	24	15.8	0.10	430	0105-1L
3297.00	cut		Sh/Clst: m drk gy to blk	1.79	6.51	0.94	6.93	1.81	360	52	8.3	0.22	351	0106-1L
3303.00	cut		Sh/Clst: m drk gy to blk	1.89	13.42	2.83	4.74	6.16	218	46	15.3	0.12	429	0107-1L
3309.00	cut		Sh/Clst: lt brn gy to m gy	3.14	15.85	1.45	10.93	14.50	109	10	19.0	0.17	438	0108-3L
3310.00	cut	MELK	Sh/Clst: drk gy	0.70	19.73	1.04	18.97	7.24	273	14	20.4	0.03	430	0070-1L
3315.00	cut		Sh/Clst: drk gy to blk	2.38	12.24	1.00	12.24	4.86	252	21	14.6	0.16	433	0109-1L
3330.00	cut	MELK	Sh/Clst: drk gy to m lt gy	1.31	10.08	1.93	5.22	2.52	400	77	11.4	0.12	434	0071-1L
3351.00	cut	MELK	Sh/Clst: drk gy to m lt gy	1.45	11.32	0.79	14.33	2.99	379	26	12.8	0.11	436	0072-1L
3372.00	cut	MELK	Sh/Clst: drk gy to m lt gy	1.24	9.38	1.22	7.69	2.18	430	56	10.6	0.12	432	0073-1L
3393.00	cut	MELK	Sh/Clst: drk gy to m lt gy	1.44	7.86	2.76	2.85	1.73	454	160	9.3	0.15	428	0074-1L

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3414.00	cut	MELK	Sh/Clst: drk gy	1.14	8.25	1.33	6.20	3.13	264	42	9.4	0.12	432	0075-1L
3435.00	cut	MELK	Sh/Clst: drk gy to m lt gy	0.70	5.80	1.87	3.10	1.86	312	101	6.5	0.11	434	0076-1L
3456.00	cut	MELK	Sh/Clst: drk gy to m lt gy	0.88	6.93	2.29	3.03	2.53	274	91	7.8	0.11	432	0077-1L
3477.00	cut	MELK	Sh/Clst: drk gy	0.92	7.71	2.34	3.29	3.22	239	73	8.6	0.11	437	0078-1L
3498.00	cut	MELK	Sh/Clst: drk gy	1.23	8.75	1.85	4.73	3.25	269	57	10.0	0.12	433	0079-1L
3519.00	cut	MELK	Sh/Clst: drk gy	1.01	6.84	0.99	6.91	2.51	273	39	7.9	0.13	436	0080-1L
3540.00	cut	MELK	Sh/Clst: drk gy	1.13	9.01	1.34	6.72	4.00	225	34	10.1	0.11	433	0081-1L
3561.00	cut	MELK	Sh/Clst: drk gy	0.98	7.59	1.00	7.59	3.35	227	30	8.6	0.11	431	0082-1L
3582.00	cut	MELK	Sh/Clst: drk gy	0.92	6.53	2.29	2.85	2.94	222	78	7.5	0.12	430	0083-1L
3603.00	cut	MELK	Sh/Clst: drk gy	0.89	4.57	4.30	1.06	1.64	279	262	5.5	0.16	353	0084-1L
3612.00	cut	MELK	Sh/Clst: m lt gy	1.13	5.72	1.65	3.47	1.86	308	89	6.8	0.16	352	0085-1L
3693.05	ccp		Sh/Clst: drk gy	0.32	2.22	0.18	12.33	1.75	127	10	2.5	0.13	447	0026-1L
3740.10	ccp		Sh/Clst: drk gy	0.26	3.23	0.11	29.36	1.22	265	9	3.5	0.07	443	0031-1L
3755.10	ccp		Sh/Clst: drk gy	0.18	1.64	0.18	9.11	0.77	213	23	1.8	0.10	444	0032-1L
3765.10	ccp		Sh/Clst: drk gy to m gy	0.14	1.06	0.35	3.03	0.57	186	61	1.2	0.12	445	0033-1L
3879.00	cut	ÅRE	Sh/Clst: m lt gy	0.30	5.11	1.20	4.26	2.72	188	44	5.4	0.06	440	0088-1L

Table 3: Rock-Eval table for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3888.00	cut	ÅRE	Sh/Clst: m lt gy	0.39	3.53	1.39	2.54	2.05	172	68	3.9	0.10	442	0089-1L
3897.00	cut	ÅRE	Sh/Clst: m lt gy	0.54	3.67	1.25	2.94	2.04	180	61	4.2	0.13	442	0090-1L

Table 4a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	Rock Extracted (g)	EOM (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	TOC(e) (%)	Sample
2856.70	swc	S/Sst : w to m lt gy	9.4	364.7	353.0	0.8	0.2	10.7	353.8	10.9	2.36	0040-1L
2864.00	swc	S/Sst : w to m lt gy	2.3	91.0	85.8	0.2	3.7	1.3	86.0	5.0	0.30	0039-1L
2989.50	swc	S/Sst : drk y brn	5.0	194.4	190.2	0.4	2.2	1.6	190.6	3.8	0.26	0038-1L
3019.00	swc	Sh/Clst: m gn gy	8.9	89.8	78.0	2.0	3.2	6.6	80.0	9.8	0.95	0047-1L
3024.50	swc	S/Sst : m lt gy	10.1	59.2	55.7	1.6	0.1	1.8	57.3	1.9	0.28	0041-1L
3029.00	swc	S/Sst : m gy to w	10.7	121.1	113.0	1.8	1.9	4.4	114.8	6.3	1.59	0042-1L
3032.20	swc	S/Sst : lt gy to m lt gy	8.7	274.5	270.1	0.5	0.9	3.1	270.6	3.9	2.01	0043-1L
3035.50	swc	Sh/Clst: m gy to drk gy	10.6	35.2	29.9	0.5	2.0	2.8	30.4	4.8	1.61	0046-1L
3054.50	swc	S/Sst : lt gy	10.1	93.3	88.5	0.5	0.6	3.7	89.0	4.3	0.46	0044-1L
3061.00	swc	Sh/Clst: m gy to drk gy	9.5	79.0	73.0	0.6	2.7	2.7	73.6	5.4	3.43	0045-1L
3628.50	ccp	S/Sst : lt brn to w	9.6	5.2	3.0	0.3	0.9	1.0	3.3	1.9	0.16	0017-1L
3633.89	ccp	S/Sst : lt brn to w	9.9	13.1	6.9	2.8	1.2	2.2	9.7	3.4	0.21	0018-1L
3637.00	oil	bulk	147.6	67.9	51.0	15.4	0.3	1.2	66.4	1.5	-	0135-0B
3637.15	ccp	bulk	8.0	40.8	-	-	-	-	-	-	-	0002-0B
3643.75	ccp	S/Sst : m brn to w	10.9	13.1	7.6	3.3	1.0	1.3	10.9	2.2	0.14	0019-1L
3647.00	oil	bulk	130.0	64.7	48.8	14.4	0.3	1.2	63.2	1.5	-	0136-0B

Table 4a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	Rock Extracted (g)	EOM (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	TOC(e) (%)	Sample
3649.15	ccp	bulk	8.8	22.2	-	-	-	-	-	-	-	0004-0B
3653.10	ccp	S/Sst : lt brn to w	9.7	2.9	0.4	0.4	0.7	1.3	0.9	2.0	0.06	0020-1L
3654.40	ccp	S/Sst : lt brn to w	11.7	2.5	-	-	0.2	-	-	0.2	0.09	0021-1L
3657.15	ccp	bulk	8.1	34.9	-	-	-	-	-	-	-	0006-0B
3661.15	ccp	bulk	9.1	26.0	-	-	-	-	-	-	-	0007-0B
3667.10	ccp	S/Sst : m lt brn to w	10.7	34.7	18.8	10.2	1.4	4.3	29.0	5.7	0.25	0022-1L
3670.10	ccp	S/Sst : m brn to m gy to w	9.8	60.0	31.7	19.1	2.6	6.6	50.7	9.3	0.55	0023-1L
3672.10	ccp	S/Sst : lt gy	9.6	8.6	0.8	2.4	3.5	1.9	3.2	5.4	0.88	0024-1L
3679.90	ccp	S/Sst : lt gy to lt brn	9.9	64.4	33.6	21.0	2.7	7.2	54.6	9.8	0.51	0025-1L
3683.15	ccp	bulk	10.2	28.6	-	-	-	-	-	-	-	0009-0B
3693.05	ccp	Sh/Clst: drk gy	9.8	7.8	0.4	1.3	4.3	1.7	1.7	6.1	1.99	0026-1L
3700.20	ccp	Sltst : m lt gy to w	9.8	2.1	0.2	0.2	1.3	0.4	0.4	1.7	0.41	0027-1L
3704.00	ccp	bulk	8.3	7.8	-	-	-	-	-	-	-	0012-0B
3710.20	ccp	Sltst : m lt gy to w	10.0	1.9	0.3	0.3	0.9	0.3	0.7	1.2	0.19	0028-1L
3718.70	ccp	S/Sst : m brn to w	10.3	1.6	0.2	0.3	1.0	0.2	0.5	1.1	0.24	0029-1L
3730.10	ccp	Sh/Clst: m gy to lt gy to w	10.6	6.5	1.4	1.1	1.7	2.3	2.5	4.0	0.69	0030-1L

Table 4a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	Rock Extracted (g)	EOM (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	TOC(e) (%)	Sample
3740.10	ccp	Sh/Clst: drk gy	9.9	10.8	2.1	2.1	4.4	2.1	4.3	6.5	1.19	0031-1L
3755.10	ccp	Sh/Clst: drk gy	10.5	8.8	1.2	2.9	2.4	2.3	4.1	4.7	0.75	0032-1L
3765.10	ccp	Sh/Clst: drk gy to m gy	9.3	7.5	1.0	1.5	2.0	3.0	2.5	5.0	0.59	0033-1L
3777.50	ccp	Sltst : lt gy to w	10.4	3.6	0.6	0.6	0.7	1.7	1.2	2.4	0.11	0034-1L
3778.30	ccp	S/Sst : lt gy to w	10.3	1.5	-	-	0.6	-	-	0.6	0.46	0035-1L
3785.10	ccp	S/Sst : lt gy to w to m gy	10.0	3.1	-	-	0.7	-	-	0.7	0.11	0036-1L
3790.10	ccp	S/Sst : lt gy to w to m gy	8.3	6.4	1.4	0.7	2.2	2.1	2.1	4.3	0.23	0037-1L

Table 4b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2856.70	swc	S/Sst : w to m lt gy	38674	37436	81	22	1134	37517	1156	0040-1L
2864.00	swc	S/Sst : w to m lt gy	39393	37129	94	1601	568	37223	2170	0039-1L
2989.50	swc	S/Sst : drk y brn	39114	38260	82	442	329	38342	771	0038-1L
3019.00	swc	Sh/Clst: m gn gy	10055	8734	226	356	737	8961	1094	0047-1L
3024.50	swc	S/Sst : m lt gy	5873	5521	158	11	181	5680	192	0041-1L
3029.00	swc	S/Sst : m gy to w	11317	10562	166	173	415	10728	589	0042-1L
3032.20	swc	S/Sst : lt gy to m lt gy	31515	31004	58	99	352	31063	451	0043-1L
3035.50	swc	Sh/Clst: m gy to drk gy	3308	2812	47	185	262	2860	447	0046-1L
3054.50	swc	S/Sst : lt gy	9219	8742	52	60	364	8794	424	0044-1L
3061.00	swc	Sh/Clst: m gy to drk gy	8333	7699	62	288	282	7762	571	0045-1L
3628.50	ccp	S/Sst : lt brn to w	540	315	26	93	105	341	198	0017-1L
3633.89	ccp	S/Sst : lt brn to w	1323	700	280	118	224	980	342	0018-1L
3637.00	oil	bulk	459	345	103	2	8	449	10	0135-0B
3637.15	ccp	bulk	5093	-	-	-	-	-	-	0002-0B
3643.75	ccp	S/Sst : m brn to w	1207	698	302	90	116	1000	206	0019-1L

Table 4b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3647.00	oil	bulk	497	375	110	2	9	485	11	0136-0B
3649.15	ccp	bulk	2514	-	-	-	-	-	-	0004-0B
3653.10	ccp	S/Sst : lt brn to w	298	45	45	72	135	90	207	0020-1L
3654.40	ccp	S/Sst : lt brn to w	214	-	-	17	-	-	17	0021-1L
3657.15	ccp	bulk	4335	-	-	-	-	-	-	0006-0B
3661.15	ccp	bulk	2857	-	-	-	-	-	-	0007-0B
3667.10	ccp	S/Sst : m lt brn to w	3242	1756	955	130	400	2712	530	0022-1L
3670.10	ccp	S/Sst : m brn to m gy to w	6141	3241	1952	266	680	5194	947	0023-1L
3672.10	ccp	S/Sst : lt gy	893	82	248	363	198	330	562	0024-1L
3679.90	ccp	S/Sst : lt gy to lt brn	6472	3373	2111	266	721	5484	987	0025-1L
3683.15	ccp	bulk	2809	-	-	-	-	-	-	0009-0B
3693.05	ccp	Sh/Clst: drk gy	793	44	133	437	178	178	615	0026-1L
3700.20	ccp	Sltst : m lt gy to w	213	20	20	132	40	40	172	0027-1L
3704.00	ccp	bulk	935	-	-	-	-	-	-	0012-0B
3710.20	ccp	Sltst : m lt gy to w	189	33	33	89	33	66	123	0028-1L

Table 4b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3718.70	ccp	S/Sst : m brn to w	156	14	29	97	14	43	112	0029-1L
3730.10	ccp	Sh/Clst: m gy to lt gy to w	612	129	107	160	215	236	375	0030-1L
3740.10	ccp	Sh/Clst: drk gy	1094	216	216	444	216	433	661	0031-1L
3755.10	ccp	Sh/Clst: drk gy	839	111	277	229	222	388	451	0032-1L
3765.10	ccp	Sh/Clst: drk gy to m gy	805	107	161	214	322	268	537	0033-1L
3777.50	ccp	Sltst : lt gy to w	346	55	55	67	167	111	235	0034-1L
3778.30	ccp	S/Sst : lt gy to w	145	-	-	58	-	-	58	0035-1L
3785.10	ccp	S/Sst : lt gy to w to m gy	310	-	-	70	-	-	70	0036-1L
3790.10	ccp	S/Sst : lt gy to w to m gy	768	168	84	264	252	252	516	0037-1L

Table 4c: MPLC Bulk Composition: Concentration of EOM and Fraction (mg/g TOC(e)) for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2856.70	swc	S/Sst : w to m lt gy	1638.75	1586.29	3.43	0.95	48.07	1589.73	49.02	0040-1L
2864.00	swc	S/Sst : w to m lt gy	13131.31	12376.39	31.57	533.91	189.43	12407.97	723.35	0039-1L
2989.50	swc	S/Sst : drk y brn	15044.11	14715.63	31.65	170.25	126.59	14747.27	296.84	0038-1L
3019.00	swc	Sh/Clst: m gn gy	1058.53	919.47	23.88	37.56	77.62	943.35	115.17	0047-1L
3024.50	swc	S/Sst : m lt gy	2097.51	1972.12	56.58	4.15	64.66	2028.69	68.81	0041-1L
3029.00	swc	S/Sst : m gy to w	711.81	664.29	10.46	10.90	26.15	674.75	37.05	0042-1L
3032.20	swc	S/Sst : lt gy to m lt gy	1567.94	1542.54	2.92	4.95	17.53	1545.46	22.48	0043-1L
3035.50	swc	Sh/Clst: m gy to drk gy	205.48	174.71	2.96	11.53	16.29	177.67	27.81	0046-1L
3054.50	swc	S/Sst : lt gy	2004.21	1900.57	11.31	13.13	79.19	1911.89	92.32	0044-1L
3061.00	swc	Sh/Clst: m gy to drk gy	242.95	224.47	1.83	8.41	8.25	226.30	16.65	0045-1L
3628.50	ccp	S/Sst : lt brn to w	337.84	197.20	16.43	58.47	65.73	213.63	124.21	0017-1L
3633.89	ccp	S/Sst : lt brn to w	630.11	333.58	133.43	56.35	106.75	467.01	163.10	0018-1L
3637.00	oil	bulk	-	-	-	-	-	-	-	0135-0B
3637.15	ccp	bulk	-	-	-	-	-	-	-	0002-0B
3643.75	ccp	S/Sst : m brn to w	862.41	498.58	216.05	64.68	83.10	714.63	147.78	0019-1L

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3647.00	oil	bulk	-	-	-	-	-	-	-	0136-0B
3649.15	ccp	bulk	-	-	-	-	-	-	-	0004-0B
3653.10	ccp	S/Sst : lt brn to w	497.26	75.45	75.45	120.03	226.34	150.89	346.36	0020-1L
3654.40	ccp	S/Sst : lt brn to w	238.23	-	-	19.06	-	-	19.06	0021-1L
3657.15	ccp	bulk	-	-	-	-	-	-	-	0006-0B
3661.15	ccp	bulk	-	-	-	-	-	-	-	0007-0B
3667.10	ccp	S/Sst : m lt brn to w	1297.20	702.46	382.35	52.34	160.05	1084.81	212.39	0022-1L
3670.10	ccp	S/Sst : m brn to m gy to w	1116.59	589.43	354.96	48.46	123.75	944.38	172.21	0023-1L
3672.10	ccp	S/Sst : lt gy	101.48	9.40	28.21	41.30	22.57	37.61	63.87	0024-1L
3679.90	ccp	S/Sst : lt gy to lt brn	1269.09	661.43	414.02	52.27	141.37	1075.45	193.64	0025-1L
3683.15	ccp	bulk	-	-	-	-	-	-	-	0009-0B
3693.05	ccp	Sh/Clst: drk gy	39.87	2.24	6.71	21.98	8.95	8.95	30.93	0026-1L
3700.20	ccp	Sltst : m lt gy to w	52.11	4.96	4.96	32.26	9.92	9.92	42.18	0027-1L
3704.00	ccp	bulk	-	-	-	-	-	-	-	0012-0B
3710.20	ccp	Sltst : m lt gy to w	99.80	17.51	17.51	47.27	17.51	35.02	64.78	0028-1L

Table 4c: MPLC Bulk Composition: Concentration of EOM and Fraction (mg/g TOC(e)) for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3718.70	ccp	S/Sst : m brn to w	65.04	6.10	12.20	40.65	6.10	18.29	46.75	0029-1L
3730.10	ccp	Sh/Clst: m gy to lt gy to w	88.79	18.73	15.61	23.22	31.22	34.34	54.44	0030-1L
3740.10	ccp	Sh/Clst: drk gy	91.95	18.20	18.20	37.36	18.20	36.40	55.55	0031-1L
3755.10	ccp	Sh/Clst: drk gy	111.96	14.80	37.01	30.53	29.61	51.82	60.14	0032-1L
3765.10	ccp	Sh/Clst: drk gy to m gy	136.54	18.21	27.31	36.41	54.62	45.51	91.03	0033-1L
3777.50	ccp	Sltst : lt gy to w	315.29	50.80	50.80	61.31	152.39	101.59	213.70	0034-1L
3778.30	ccp	S/Sst : lt gy to w	31.66	-	-	12.66	-	-	12.66	0035-1L
3785.10	ccp	S/Sst : lt gy to w to m gy	281.82	-	-	63.64	-	-	63.64	0036-1L
3790.10	ccp	S/Sst : lt gy to w to m gy	334.05	73.07	36.54	114.83	109.61	109.61	224.44	0037-1L

Table 4d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	Total	HC	Non-HC	Recov. MPLC	Recov. Asph	Sample
2856.70	swc	S/Sst : w to m lt gy	96.80	0.21	0.06	2.93	100.00	97.01	2.99	-	0.97	0040-1L
2864.00	swc	S/Sst : w to m lt gy	94.25	0.24	4.07	1.44	100.00	94.49	5.51	-	0.89	0039-1L
2989.50	swc	S/Sst : drk y brn	97.82	0.21	1.13	0.84	100.00	98.03	1.97	-	0.95	0038-1L
3019.00	swc	Sh/Clst: m gn gy	86.86	2.26	3.55	7.33	100.00	89.12	10.88	-	0.95	0047-1L
3024.50	swc	S/Sst : m lt gy	94.02	2.70	0.20	3.08	100.00	96.72	3.28	-	0.92	0041-1L
3029.00	swc	S/Sst : m gy to w	93.32	1.47	1.53	3.67	100.00	94.79	5.21	-	0.96	0042-1L
3032.20	swc	S/Sst : lt gy to m lt gy	98.38	0.19	0.32	1.12	100.00	98.57	1.43	-	0.98	0043-1L
3035.50	swc	Sh/Clst: m gy to drk gy	85.02	1.44	5.61	7.93	100.00	86.46	13.54	-	0.92	0046-1L
3054.50	swc	S/Sst : lt gy	94.83	0.56	0.66	3.95	100.00	95.39	4.61	-	0.90	0044-1L
3061.00	swc	Sh/Clst: m gy to drk gy	92.39	0.75	3.46	3.39	100.00	93.15	6.85	-	0.89	0045-1L
3628.50	ccp	S/Sst : lt brn to w	58.37	4.86	17.31	19.46	100.00	63.24	36.76	-	0.90	0017-1L
3633.89	ccp	S/Sst : lt brn to w	52.94	21.18	8.94	16.94	100.00	74.12	25.88	-	0.92	0018-1L
3637.00	oil	bulk	75.18	22.61	0.44	1.76	100.00	97.80	2.20	-	0.98	0135-0B
3637.15	ccp	bulk	-	-	-	-	-	-	-	-	-	0002-0B
3643.75	ccp	S/Sst : m brn to w	57.81	25.05	7.50	9.64	100.00	82.86	17.14	-	0.86	0019-1L
3647.00	oil	bulk	75.36	22.29	0.46	1.88	100.00	97.65	2.35	-	0.97	0136-0B

Table 4d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	Total	HC	Non-HC	Recov. MPLC	Recov. Asph	Sample
3649.15	ccp	bulk	-	-	-	-	-	-	-	-	-	0004-0B
3653.10	ccp	S/Sst : lt brn to w	15.17	15.17	24.14	45.52	100.00	30.34	69.66	-	0.86	0020-1L
3654.40	ccp	S/Sst : lt brn to w	-	-	8.00	-	8.00	-	8.00	-	0.72	0021-1L
3657.15	ccp	bulk	-	-	-	-	-	-	-	-	-	0006-0B
3661.15	ccp	bulk	-	-	-	-	-	-	-	-	-	0007-0B
3667.10	ccp	S/Sst : m lt brn to w	54.15	29.48	4.03	12.34	100.00	83.63	16.37	-	0.76	0022-1L
3670.10	ccp	S/Sst : m brn to m gy to w	52.79	31.79	4.34	11.08	100.00	84.58	15.42	-	1.00	0023-1L
3672.10	ccp	S/Sst : lt gy	9.27	27.80	40.70	22.24	100.00	37.06	62.94	-	1.13	0024-1L
3679.90	ccp	S/Sst : lt gy to lt brn	52.12	32.62	4.12	11.14	100.00	84.74	15.26	-	0.74	0025-1L
3683.15	ccp	bulk	-	-	-	-	-	-	-	-	-	0009-0B
3693.05	ccp	Sh/Clst: drk gy	5.61	16.83	55.13	22.44	100.00	22.44	77.56	-	0.91	0026-1L
3700.20	ccp	Sltst : m lt gy to w	9.52	9.52	61.90	19.05	100.00	19.05	80.95	-	0.95	0027-1L
3704.00	ccp	bulk	-	-	-	-	-	-	-	-	-	0012-0B
3710.20	ccp	Sltst : m lt gy to w	17.54	17.54	47.37	17.54	100.00	35.09	64.91	-	1.21	0028-1L
3718.70	ccp	S/Sst : m brn to w	9.37	18.75	62.50	9.37	100.00	28.12	71.88	-	1.00	0029-1L
3730.10	ccp	Sh/Clst: m gy to lt gy to w	21.10	17.58	26.15	35.16	100.00	38.68	61.32	-	0.77	0030-1L

Table 4d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	Total	HC	Non-HC	Recov. MPLC	Recov. Asph	Sample
3740.10	ccp	Sh/Clst: drk gy	19.79	19.79	40.62	19.79	100.00	39.58	60.42	-	0.96	0031-1L
3755.10	ccp	Sh/Clst: drk gy	13.22	33.06	27.27	26.45	100.00	46.28	53.72	-	0.90	0032-1L
3765.10	ccp	Sh/Clst: drk gy to m gy	13.33	20.00	26.67	40.00	100.00	33.33	66.67	-	0.91	0033-1L
3777.50	ccp	Sltst : lt gy to w	16.11	16.11	19.44	48.33	100.00	32.22	67.78	-	0.64	0034-1L
3778.30	ccp	S/Sst : lt gy to w	-	-	40.00	-	40.00	-	40.00	-	0.53	0035-1L
3785.10	ccp	S/Sst : lt gy to w to m gy	-	-	22.58	-	22.58	-	22.58	-	0.61	0036-1L
3790.10	ccp	S/Sst : lt gy to w to m gy	21.87	10.94	34.37	32.81	100.00	32.81	67.19	-	0.66	0037-1L

Table 4e: MPLC Bulk Composition: Ratios for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	Sat / Aro	HC / Non-HC	Asp / NSO	Sample
2856.70	swc	S/Sst : w to m lt gy	462.00	32.43	0.02	0040-1L
2864.00	swc	S/Sst : w to m lt gy	392.00	17.15	2.82	0039-1L
2989.50	swc	S/Sst : drk y brn	465.00	49.68	1.34	0038-1L
3019.00	swc	Sh/Clst: m gn gy	38.50	8.19	0.48	0047-1L
3024.50	swc	S/Sst : m lt gy	34.86	29.48	0.06	0041-1L
3029.00	swc	S/Sst : m gy to w	63.50	18.21	0.42	0042-1L
3032.20	swc	S/Sst : lt gy to m lt gy	528.00	68.75	0.28	0043-1L
3035.50	swc	Sh/Clst: m gy to drk gy	59.00	6.39	0.71	0046-1L
3054.50	swc	S/Sst : lt gy	168.00	20.71	0.17	0044-1L
3061.00	swc	Sh/Clst: m gy to drk gy	122.50	13.59	1.02	0045-1L
3628.50	ccp	S/Sst : lt brn to w	12.00	1.72	0.89	0017-1L
3633.89	ccp	S/Sst : lt brn to w	2.50	2.86	0.53	0018-1L
3637.00	oil	bulk	3.32	44.37	0.25	0135-0B
3637.15	ccp	bulk	-	-	-	0002-0B
3643.75	ccp	S/Sst : m brn to w	2.31	4.84	0.78	0019-1L

Table 4e: MPLC Bulk Composition: Ratios for well NOCS 6507/5-2

Depth unit of measure: m

Depth	Typ	Lithology	Sat / Aro	HC / Non-HC	Asp / NSO	Sample
3647.00	oil	bulk	3.38	41.60	0.25	0136-0B
3649.15	ccp	bulk	-	-	-	0004-0B
3653.10	ccp	S/Sst : lt brn to w	1.00	0.44	0.53	0020-1L
3654.40	ccp	S/Sst : lt brn to w	-	-	-	0021-1L
3657.15	ccp	bulk	-	-	-	0006-0B
3661.15	ccp	bulk	-	-	-	0007-0B
3667.10	ccp	S/Sst : m lt brn to w	1.84	5.11	0.33	0022-1L
3670.10	ccp	S/Sst : m brn to m gy to w	1.66	5.48	0.39	0023-1L
3672.10	ccp	S/Sst : lt gy	0.33	0.59	1.83	0024-1L
3679.90	ccp	S/Sst : lt gy to lt brn	1.60	5.55	0.37	0025-1L
3683.15	ccp	bulk	-	-	-	0009-0B
3693.05	ccp	Sh/Clst: drk gy	0.33	0.29	2.46	0026-1L
3700.20	ccp	Sltst : m lt gy to w	1.00	0.24	3.25	0027-1L
3704.00	ccp	bulk	-	-	-	0012-0B
3710.20	ccp	Sltst : m lt gy to w	1.00	0.54	2.70	0028-1L