

ORIGINAL

Norske Shell

Tananger 23/8-84

Report : Shell-8

Water analysis and  
compositional analysis  
of suspended solids.

Well 6407/a-1

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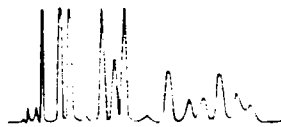
LABORATORY REPORT.

Sample description :

Sample no. 5 : Shell-08 no. 2  
1 gal seregrated watersample, 6407/9-1.  
Sample date 6/8-84, depth 1703 m.  
RFT-run no. 3.

Sample no. 6 : Shell-09 no. 1  
Mud sample taken before logging,  
3 Aug.'84. 6047/9-1.  
Depth 2500 m.





6079-

**ANALYSIS OF SUSPENDED SOLIDS.**

Report : Shell-08

Sample no.: 2.

Element                      Weight% of ash. Most probable chem form, weight%

<u>Inorganics.</u>			
Sulphur, S.	3,97	SO <sub>4</sub> (Excess)	2,05
Zinc, Zn.	0,16	ZnO	0,20
Barium, Ba.	13,50	BaSO <sub>4</sub>	23,00
Silicon, Si.	12,40	SiO <sub>2</sub>	26,40
Iron, Fe.	8,05	Fe <sub>2</sub> O <sub>3</sub>	11,50
Magnesium, Mg.	0,88	MgCO <sub>3</sub>	3,05
Aluminium, Al.	7,53	Al <sub>2</sub> O <sub>3</sub>	14,20
Calcium, Ca.	1,28	CaCO <sub>3</sub>	3,20
Sodium, Na.	0,95	NaCl	2,41
Strontium, Sr.	0,35	SrSO <sub>4</sub>	0,71
Potassium, K.	2,40	KCl	4,58
Phosphorus, P.	0,13	P <sub>2</sub> O <sub>5</sub>	0,30
Manganese, Mn.	0,04	MnO	0,07
Lead, Pb.	< 0,01	PbO	
Copper, Cu.	0,07	CuO	0,09
Tin, Sn.	< 0,01	SnO	
Titanium, Ti.	0,45	TiO <sub>2</sub>	0,74
Chromium, Cr.	< 0,01	CrO <sub>3</sub>	
<u>Organics:</u>	Weight % of		
% loss on ignition at 550°C	tot. sample.		
-----	14,6		
% ash residue at 550°C	-----		
	85,4		

Remarks:

The sample was ignited, ashed at 550°C and acid extracted. The acid insoluble residues was fused in alkali medium, analysed by plasma emission spectrometry.

100% sample = Ash + Organics.

Ash = element oxides.

LABORATORY REPORT.

Results :

Sample no.	5	6
pH, 20°C	7,40	***
Specific gravity 60/60 F	1,044	1,074
Resistivity, 20°C (ohm-meters)	0,113	0,074
Sulfide as H <sub>2</sub> S mg/l	-	-
Suspended solids mg/l	797,2	2367,9
	mg/l	mg/l
Sodium Na	7.199 **	4.603 *
Calcium Ca	781	388
Magnesium Mg	244	47
Barium Ba	9	8,4
Iron Fe	0,7	13
Strontium Sr	18	14
Potassium K	23.778	66.151
Chloride Cl	34.435	33.015
Sulfate SO <sub>4</sub>	275	220
Carbonate CO <sub>3</sub>	0	***
Bicarbonate HCO <sub>3</sub>	272	***
Hydroxide OH	0	***
Bromid Br <sup>-</sup>	328	

\* : Measured (meas)

\*\* : Calculated (calc)

\*\*\* : Sample is not pH-stabile and results from  
alkalinity-titration is not reproduceable.  
pH measured in the range : 4-6.

**ANALYSIS OF SUSPENDED SOLIDS**

Report : Shell-09

Sample no.: 1.

Element                      Weight% of ash. Most probable chem form, weight%

Inorganics. Sulphur, S.	8,63	SO <sub>4</sub> (Excess)	2,98
Zinc, Zn.	0,03	ZnO	0,02
Barium, Ba.	31,70	BaSO <sub>4</sub>	53,80
Silicon, Si.	7,97	SiO <sub>2</sub>	17,00
Iron, Fe.	2,19	Fe <sub>2</sub> O <sub>3</sub>	3,12
Magnesium, Mg.	0,37	MgCO <sub>3</sub>	1,28
Aluminium, Al.	3,19	Al <sub>2</sub> O <sub>3</sub>	6,03
Calcium, Ca.	0,94	CaCO <sub>3</sub>	2,36
Sodium, Na.	0,37	NaCl	0,94
Strontium, Sr.	0,77	SrSO <sub>4</sub>	1,58
Potassium, K.	2,72	KCl	5,19
Phosphorus, P.	0,17	P <sub>2</sub> O <sub>5</sub>	0,39
Manganese, Mn.	0,03	MnO <sub>2</sub>	0,04
Lead, Pb.	0,02	PbO	0,02
Copper, Cu.	0,03	CuO	0,04
Titanium, Ti.	0,18	TiO <sub>2</sub>	0,31
Chromium, Cr.	< 0,01	CrO <sub>3</sub>	
Cadmium, Cd.	< 0,01	CdO	
<u>Organics:</u>	Weight % of	<u>Notes :</u>  The sample is not radio- active.  The sample appears to be drilling mud (barite + clay).	
% loss on drying 100°C	tot. sample.		
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% loss on ignition at 100 - 550°C	-----		
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% ash residue 500°C	94,1		

Remarks:

The deposit was removed from the filter, crushed, dried at 100°C and ashed at 550°C. The ashed material was acid extracted, the insoluble residues fused in an alkali medium and all solutions analysed by plasma emission spectrometry.