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Title

GEOCHEMICAL DATA REPORT FOR WELL 31/4-6

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Abstract

Three samples from the cored interval in well 31/4-6 have been analysed by Iatroscan (TLC-FID) and the saturated hydrocarbon fractions from all three samples were analysed by GC-FID. The saturated hydrocarbon fractions from two samples were analysed by GC/MS.

NOT INCLUDED IN WELL TRADE.

BA-93-1996-1  
 17 OCT 1993  
 REGIS TRETT  
 OLJEDIREKTORATET

Key Words

31/4-6, geochemistry, GC-FID, GC/MS, Brage Field

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## **1 Objectives**

The objective of this study was to characterise the extractable hydrocarbons in three core samples from well 31/4-6 from the Brage Field, Norway.

## **2 General well information**

The well was drilled by Norsk Hydro as operator of licence 055 from 28/2-82 to 20/4-82 and reached a total depth of 2447 mRKB. The KB of the rig was 25 metres and the water depth was 130 metres.

## **3 Samples and analytical scheme**

Three samples were picked from the cored interval in the well on the 16th of September 1992 at NPD's store in Stavanger. The three samples (see table 1) were analysed by Iatroscan (TLC-FID), and the saturated hydrocarbon fraction from all three samples (2158.5, 2164.5 and 2167.5 mRKB) were analysed by GC-FID. The samples from 2158.5 and 2164.5 mRKB were analysed by GC-FID and GC/MS.

## **4 Vitrinite reflectance**

No samples were analysed.

## **5 TOC and Rock Eval**

No samples were analysed.

## **6 Iatroscan (TLC-FID)**

Three samples were analysed, and the results are tabulated in Table 1.

## **7 GC-FID**

The saturated hydrocarbon fractions from three samples 2158.5, 2164.5 and 2167.5 mRKB were analysed by GC-FID. All the samples have a uniform n-alkane distribution without any signs of biological degradation.

Since the evaporative loss has affected the relative concentration of individual compounds, no ratios were calculated.

The GC-FID chromatograms are shown in figure 1.

## **8 GC/MS**

The saturated hydrocarbon fractions from two samples were analysed by GC/MS and the mass chromatograms for m/z 191, 177, 217 and 218 are shown in figure 2.

Selected biological marker parameters are given in table 2.

## **9 Stable carbon isotopes**

No samples were analysed.

## Tab. 1

0 WELL NAME	1 NATIONALITY	2 LABORATORY	3 U.DEPTH	4 L.DEPTH	5 SAMPLE TYPE	6 LITHOLOGY	7 EOM mg/g
1 31/4-6	NOR	SAGA	2158.50	2158.54	CCP	SST	8.61
2 31/4-6	NOR	SAGA	2164.50	2164.50	CCP	SST	10.88
3 31/4-6	NOR	SAGA	2167.60	2167.60	CCP	SST	12.97

0 WELL NAME	8 SAT (mg/g)	9 ARO (mg/g)	10 POL (mg/g)	11 SAT %	12 ARO %	13 POLARS %	14 SAT ARO	15 METHODS
1 31/4-6	3.93	1.53	3.15	45.644599	17.770035	36.585366	2.568627	GC, GC/MS
2 31/4-6	5.98	3.00	1.90	54.963235	27.573529	17.463235	1.993333	GC, GC/MS
3 31/4-6	6.56	4.04	2.37	50.578258	31.148805	18.272938	1.623762	Iatroscan

## Tab. 2

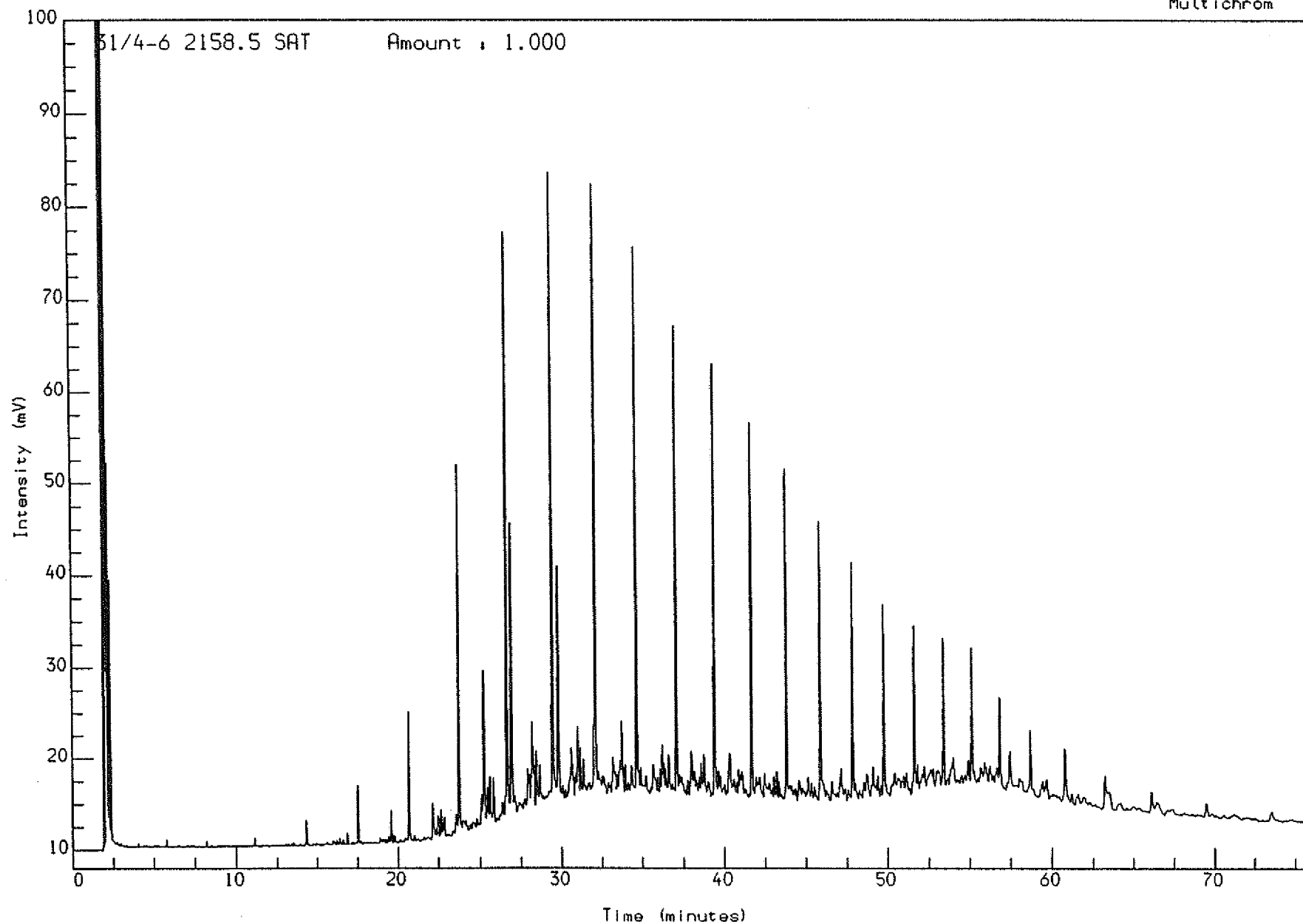
0 WELL NAME	1 CONS.	2 UPPER DEPTH	3 DEPTH	4 LITH	5 SAMPLE TYPE	6 Q/E	7 Ts/Tm	8 Z/C	9 ab/ab+ba
1 31/4-6	SAGA	2158.50	2158.50	SST	CCP	0.20	1.02	0.54	0.89
2 31/4-6	SAGA	2164.50	2164.50	SST	CCP	0.18	0.71	0.41	0.85

0 WELL NAME	10 %22S	11 %20S	12 %bb	13 a/a+j	14 C27st	15 C28st	16 C29st
1 31/4-6	0.58	0.54	0.54	0.80	31.53	33.17	35.30
2 31/4-6	0.58	0.51	0.52	0.72	32.64	31.24	36.13

**Fig. 1**

Analysis Name : [DEFPROJECT] 3 S103,9,1.

Multichrom



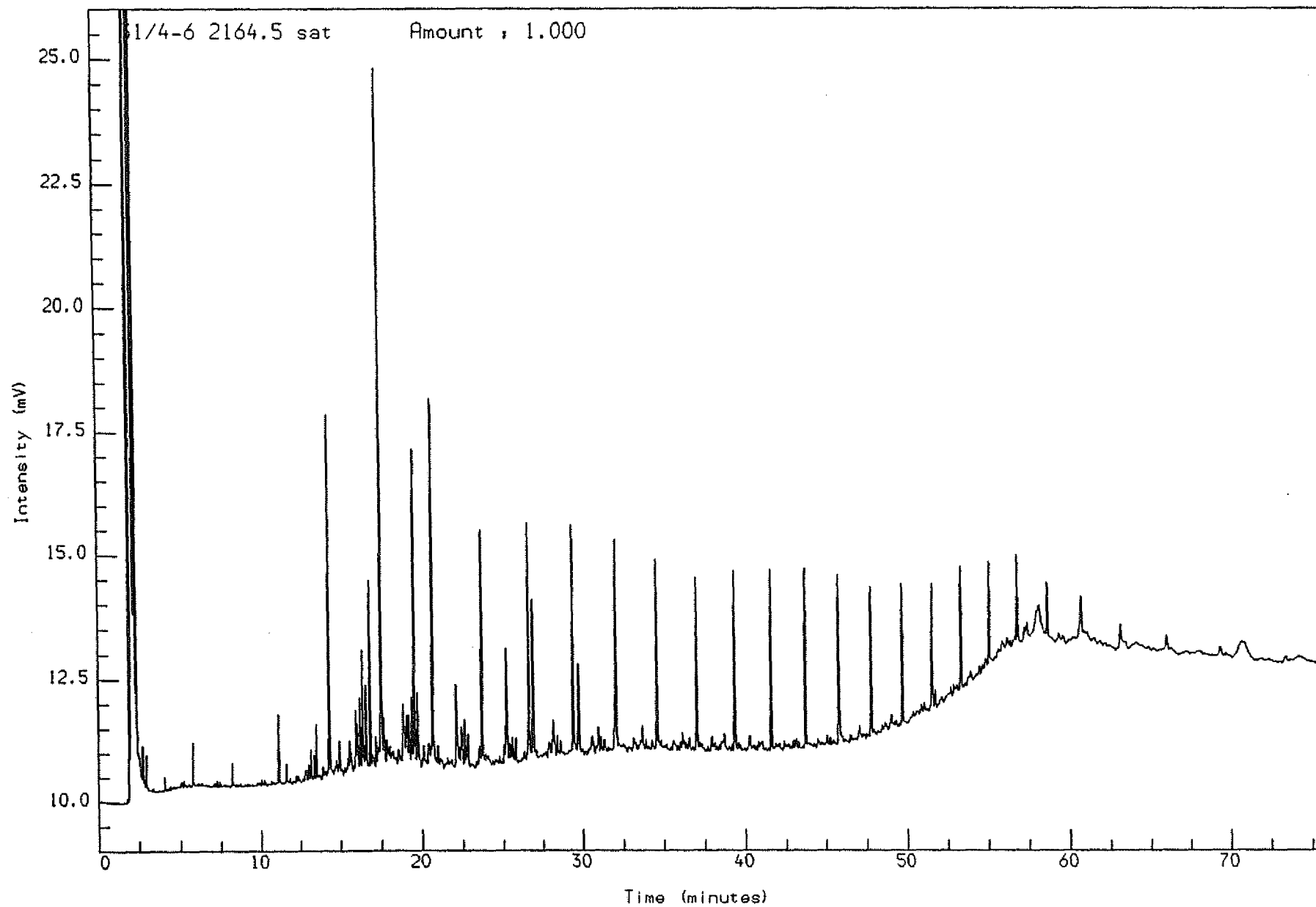
Acquired on 2-OCT-1992 at 08:08

Reported on 6-OCT-1992 at 10:01



Analysis Name : [DEFPROJECT] 3 S104,4,1.

Multichrom

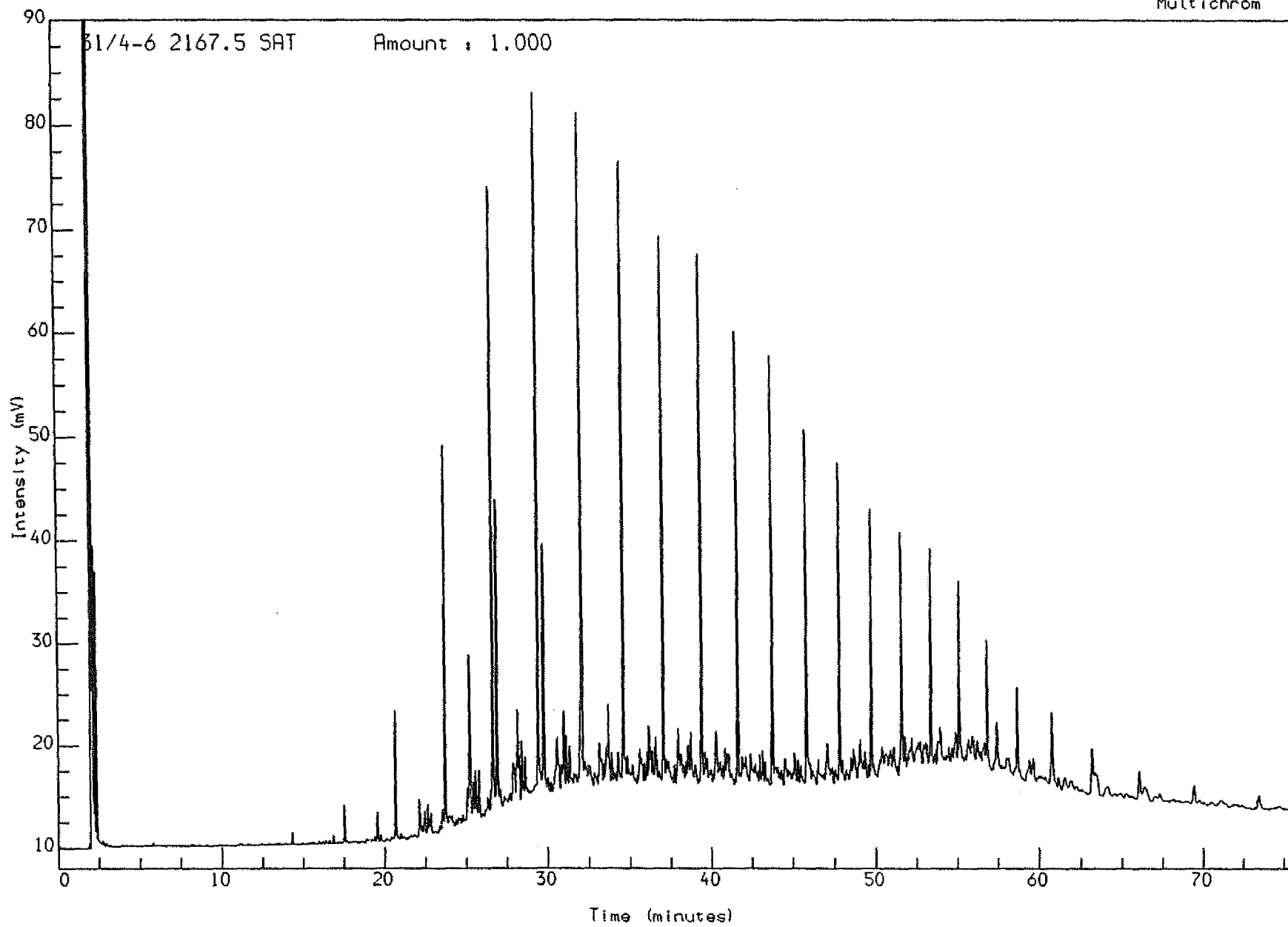


Acquired on 5-OCT-1992 at 14:03

Reported on 6-OCT-1992 at 10:05

Analysis Name : [DEFPROJECT] 3 S104,5,1.

Multichrom



Acquired on 5-OCT-1992 at 15:24

Reported on 6-OCT-1992 at 10:06

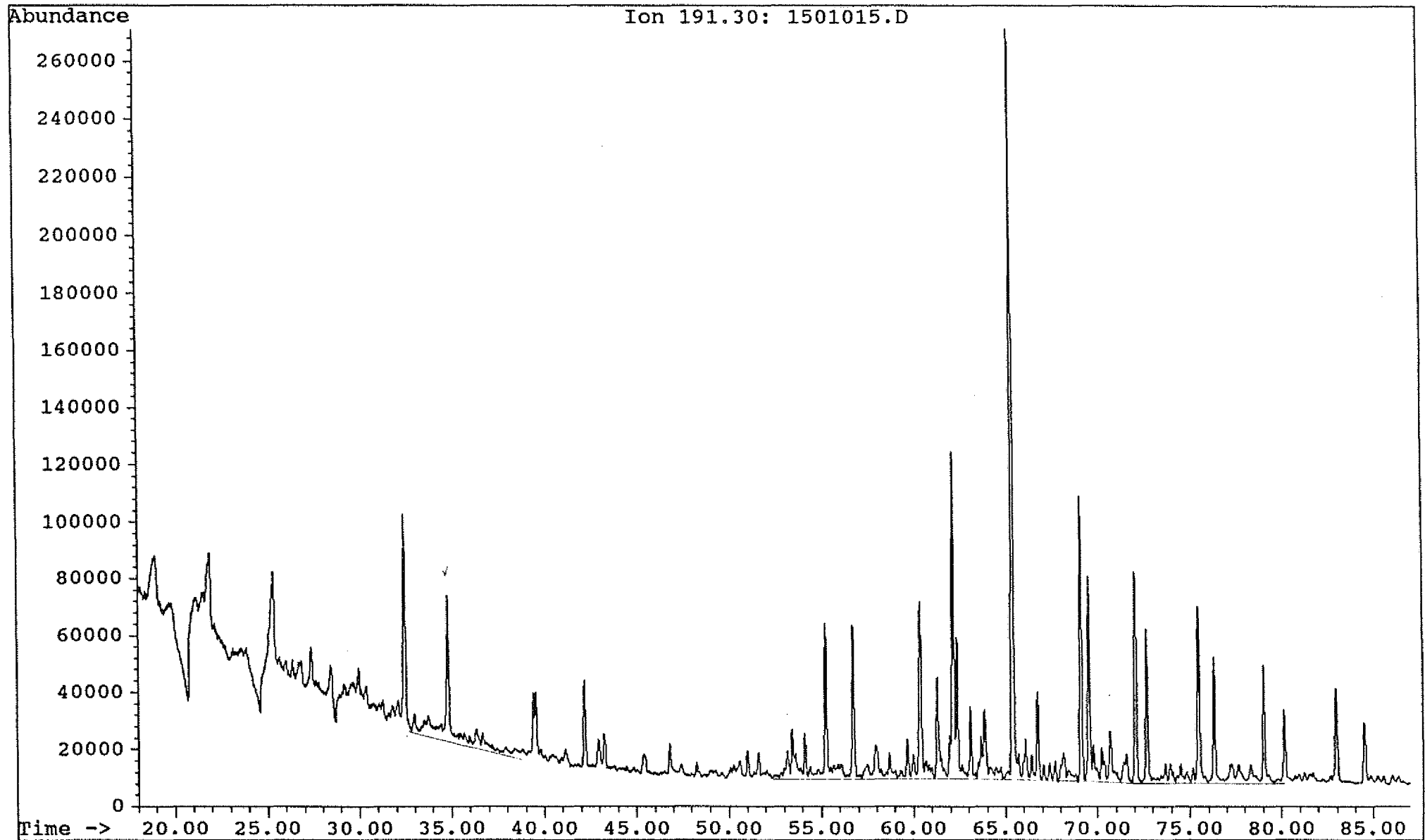
**Fig. 2**

Saga Petroleum a.s.

Date acquired: 6 Oct 92 2:06 pm

File: C:\CHEMPC\DATA\30\_31\1501015.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name: WELL 31/4-6 2158,5 sat



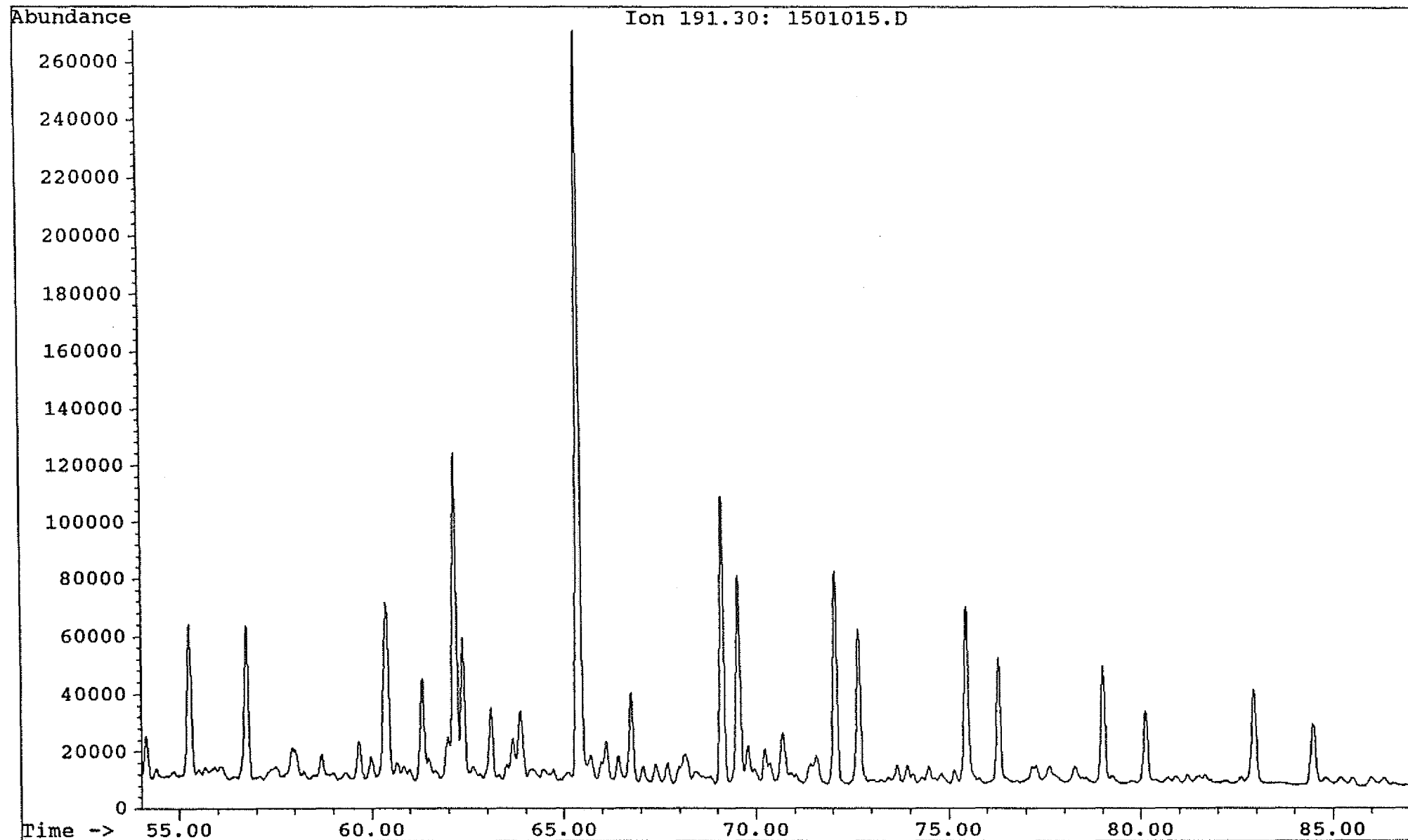
Saga Petroleum a.s.

Date acquired: 6 Oct 92 2:06 pm

File: C:\CHEMPC\DATA\30\_31\1501015.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name:

WELL 31/4-6 2158,5 sat



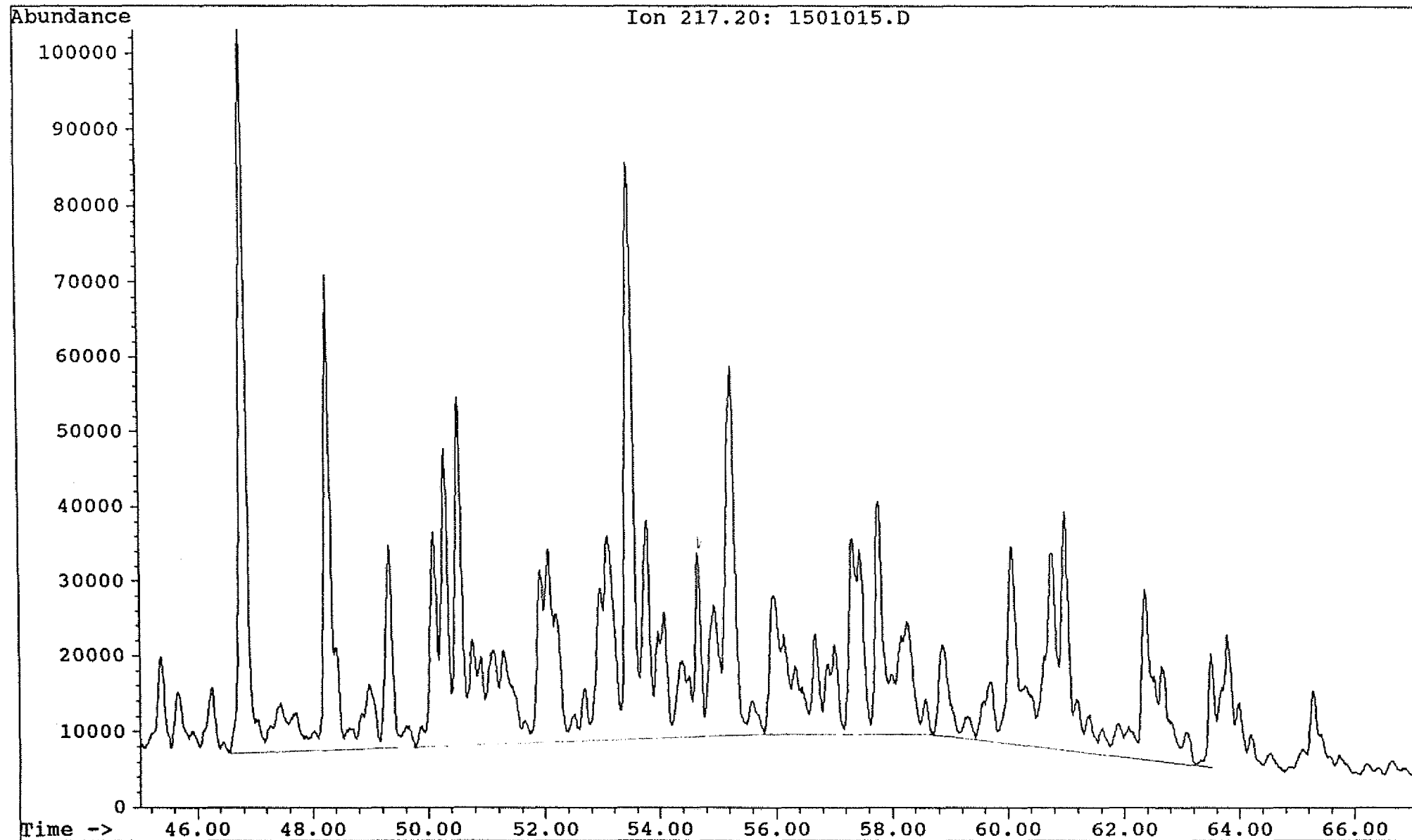
Saga Petroleum a.s.

Date acquired: 6 Oct 92 2:06 pm

File: C:\CHEMPC\DATA\30\_31\1501015.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name:

WELL 31/4-6 2158,5 sat



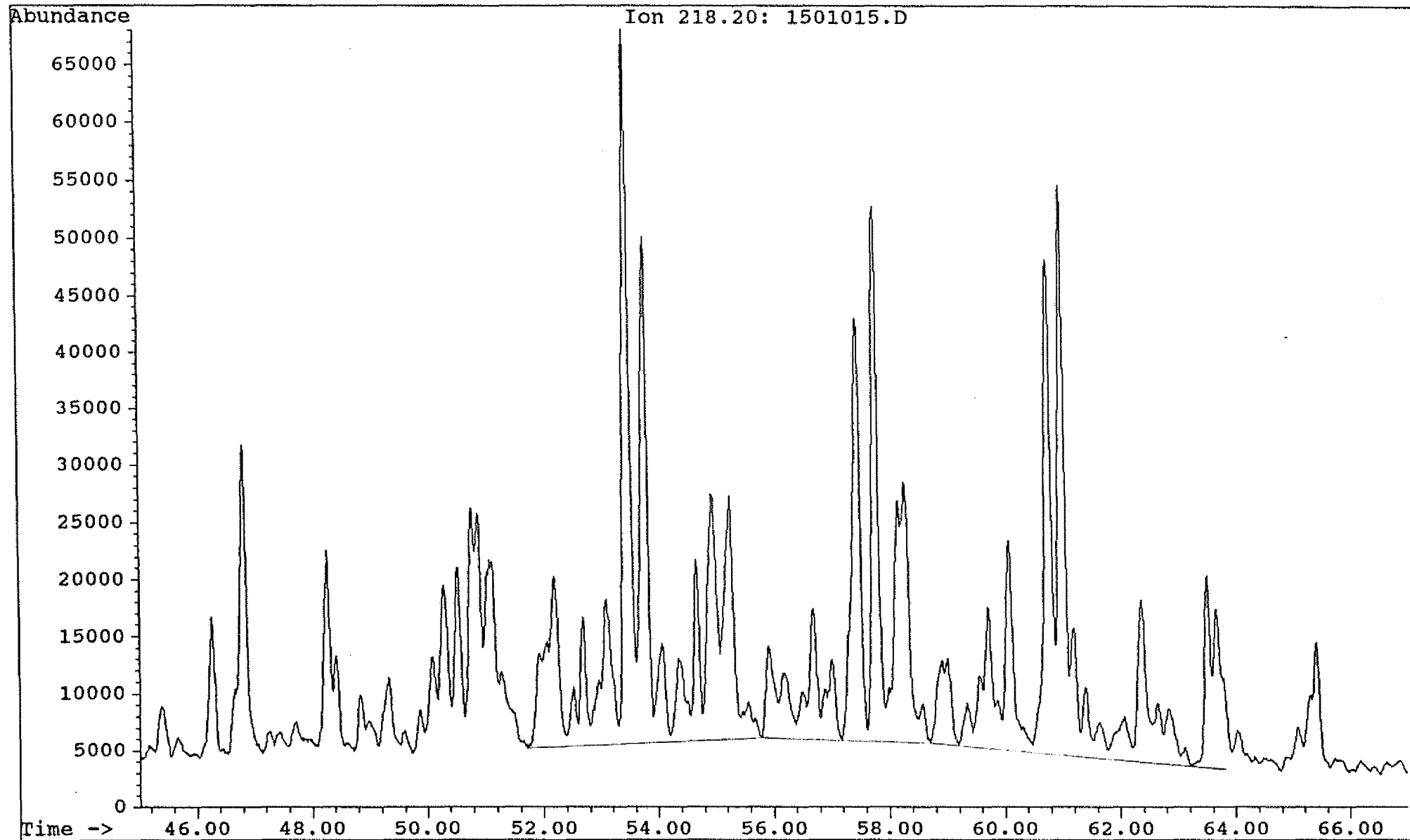
Saga Petroleum a.s.

Date acquired: 6 Oct 92 2:06 pm

File: C:\CHEMPC\DATA\30\_31\1501015.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name:

WELL 31/4-6 2158,5 sat



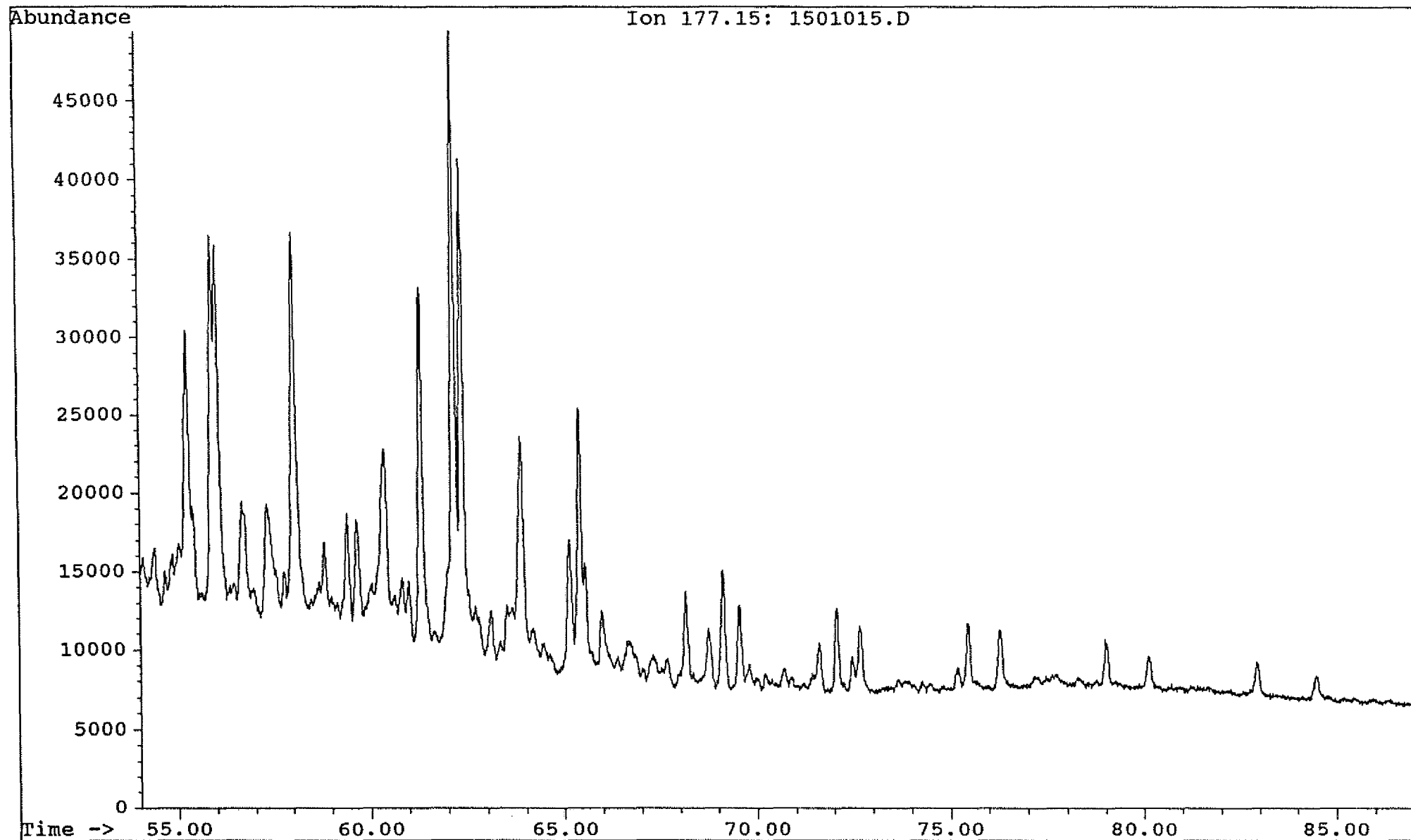
Saga Petroleum a.s.

Date acquired: 6 Oct 92 2:06 pm

File: C:\CHEMPC\DATA\30\_31\1501015.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name:

WELL 31/4-6 2158,5 sat



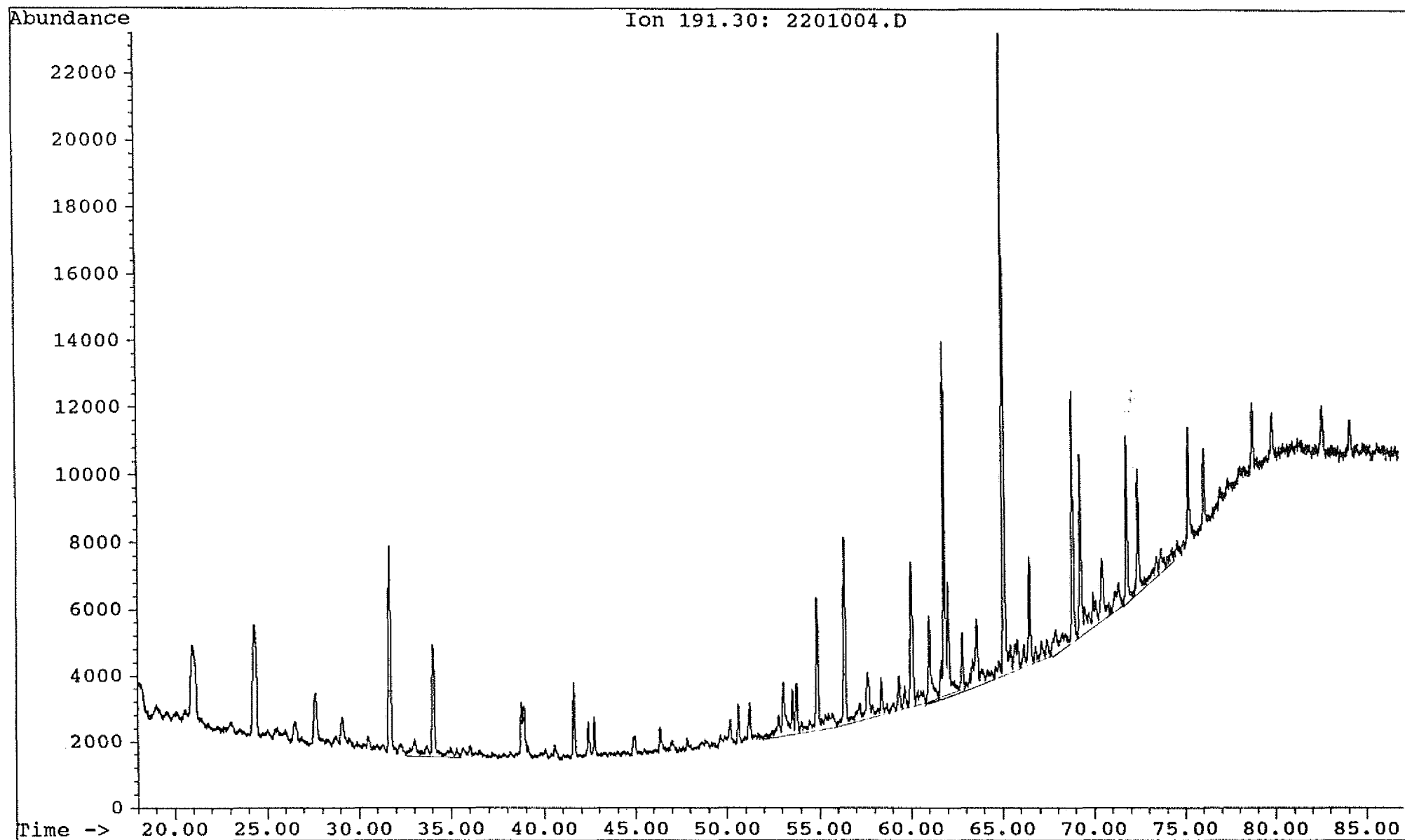


Saga Petroleum a.s.

Date acquired: 7 Oct 92 6:29 pm

File: C:\CHEMPC\DATA\30\_31\2201004.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name: WELL 31/4-6 2164,5 sat

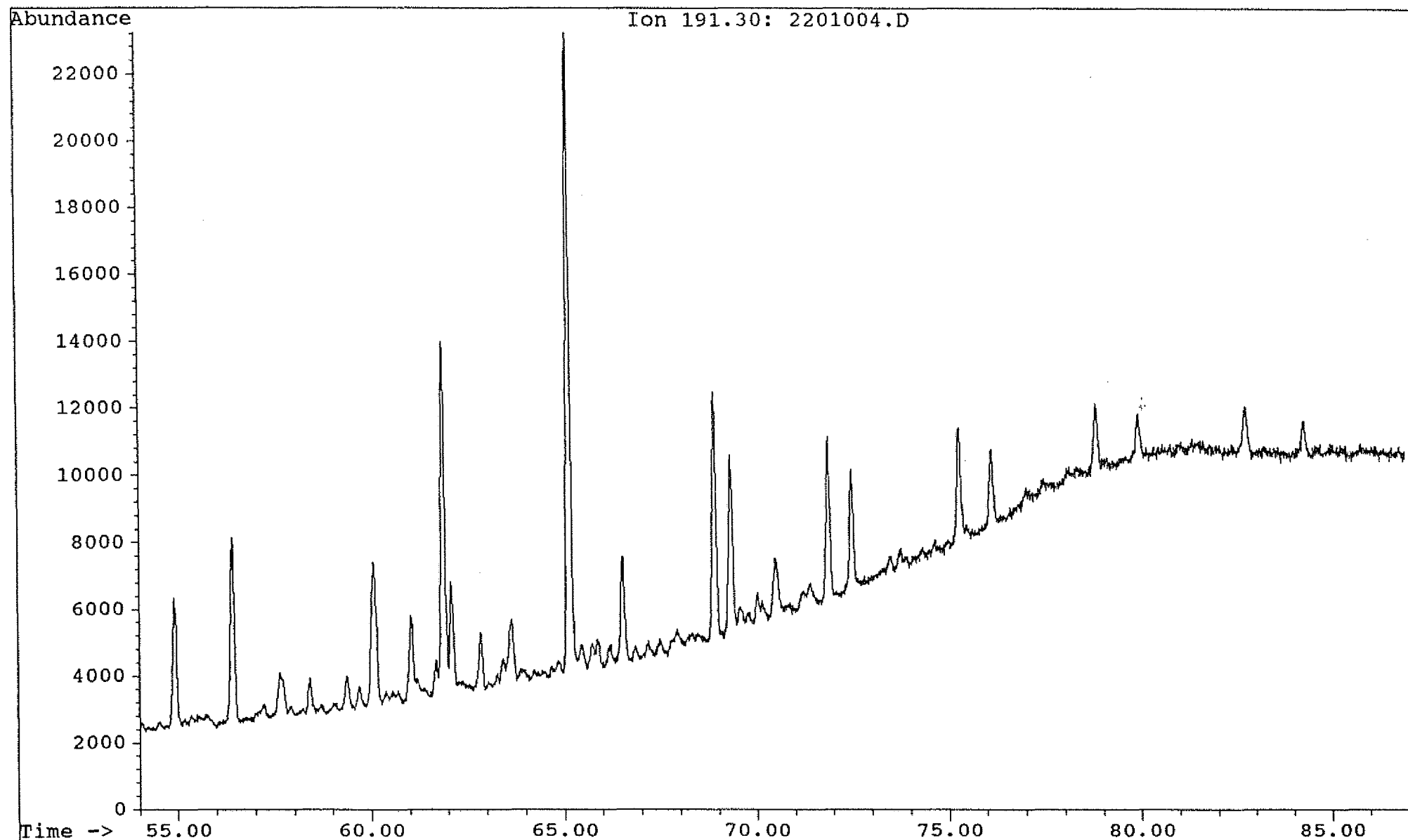


Saga Petroleum a.s.

ate acquired: 7 Oct 92 6:29 pm

File: C:\CHEMPC\DATA\30\_31\2201004.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name: WELL 31/4-6 2164,5 sat



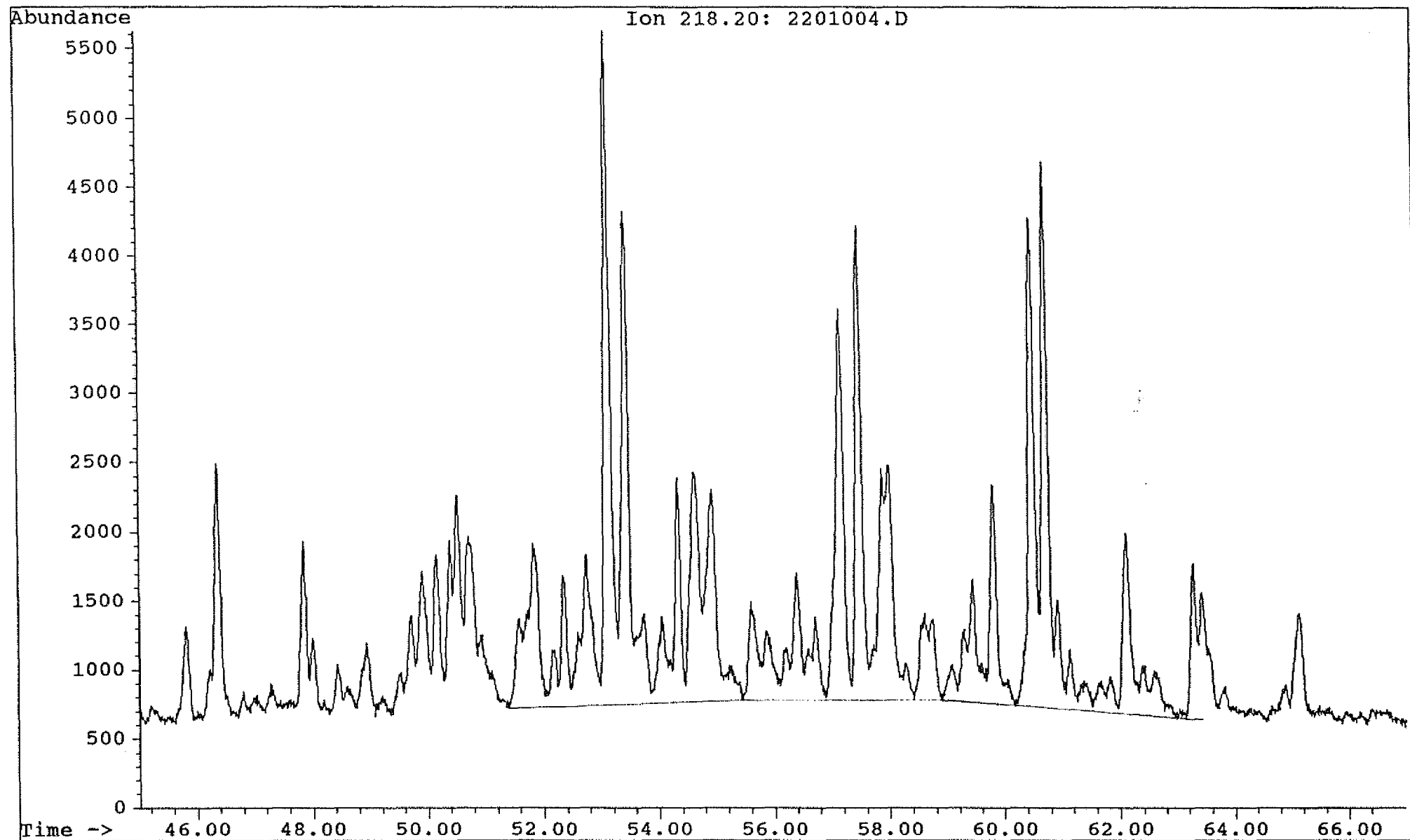
Saga Petroleum a.s.

ate acquired: 7 Oct 92 6:29 pm

File: C:\CHEMPC\DATA\30\_31\2201004.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name:

WELL 31/4-6 2164,5 sat



Saga Petroleum a.s.

ate acquired: 7 Oct 92 6:29 pm

File: C:\CHEMPC\DATA\30\_31\2201004.D Inst: HP5971A Inj: Split Meth: BMS.M

Sample name: WELL 31/4-6 2164,5 sat

