



TABLE 4a  
SOURCE ROCK QUALITY INDICATORS

WELL: NORMANBY 1  
LOCATION: AUSTRALIA

DEPTH (m)	DEPTH RANGE (m)	PICKED LITHOLOGY	P1 (kg/t) (mg/gC)	P1 (kg/t)	P2 (kg/t)	GOGI	HI	TOC (%)	CARB (%)
710.00	680-710	BULKED SILTSTONE	0.0	0.0	1.3		87	1.5	32.4
740.00	710-740	BULKED SILTSTONE	0.4	11.8	4.3		126	3.4	4.7
820.00	820-845	BULKED SILTSTONE	1.7	33.3	7.8		153	5.1	8.3
845.00	845-875	BULKED SILTSTONE	2.2	52.4	9.4	0.48	224	4.2	5.1
875.00	875-915	BULKED SILTSTONE	0.4	25.0	1.3		100	0.80	34.0
915.00	915-935	BULKED SILTSTONE	0.2	0.9	0.8		237	4.8	14.5
935.00	935-985	BULKED SILTSTONE	3.0	62.5	11.4	0.43			
985.00	985-1010	BULKED SILTSTONE	0.2	0.2	2.6				
1010.00	1010-1035	BULKED SILTSTONE	0.2	0.4	32.4	0.45	69	46.8	0.0
1035.00	1035-1060	BULKED SILTSTONE	0.2	6.9	4.2		145	2.9	11.4
1060.00	1060-1085	BULKED SILTSTONE	2.7	23.3	5.1	0.50			
1085.00	1085-1110	BULKED SILTSTONE	0.3	0.3	3.5		117	3.0	5.6
1110.00	1085-1135	BULKED SILTSTONE	0.2	6.3	4.0		109	3.2	3.4
1135.00	1110-1135	BULKED SILTSTONE	0.4	6.3	3.5		113	3.2	0.0
1160.00	1135-1160	BULKED SILTSTONE	0.3	10.8	3.6	0.38	124	3.7	0.0
1185.00	1160-1185	BULKED SILTSTONE	0.4	9.4	4.0		131	3.2	4.6
1210.00	1185-1210	BULKED SILTSTONE	0.3	5.0	4.2		95	2.0	14.0
1210.10		BULKED SILTSTONE	0.1	0.1	3.0		89	1.8	10.1
1210.20		BULKED SILTSTONE	0.1	0.0	1.7		71	2.1	11.2
1240.00	1210-1240	COAL							
1265.00	1240-1265	SILTSTONE							
1290.00	1265-1290	SILTSTONE							
1315.00	1290-1315	SILTSTONE							
1340.00	1315-1340	SILTSTONE							
1365.00	1340-1365	MUDSTONE							
1390.00	1365-1390	MUDSTONE							
1415.00	1390-1415	MUDSTONE							
1445.00	1415-1445	MUDSTONE							
1470.00	1445-1470	MUDSTONE							
1490.00	1470-1490	MUDSTONE							
1515.00	1490-1515	MUDSTONE							
1535.00	1515-1535	MUDSTONE							
1560.00	1535-1560	MUDSTONE							
1590.00	1560-1590	MUDSTONE							
1615.00	1590-1615	MUDSTONE							
1635.00	1615-1635	MUDSTONE							
1665.00	1635-1665	MUDSTONE							



TABLE 4b

SOURCE ROCK QUALITY INDICATORS

WELL: NORMANBY-1

LOCATION: AUSTRALIA

DEPTH (m)	DEPTH RANGE (m)	PICKED LITHOLOGY	P1 (kg/t)	P1 (mg/gc)	P2 (kg/t)	GOGI	HI	TOC (%)	CARBT (%)
1665.10	1665-1690	COAL MUDSTONE	0.9	1.9	63.0	0.54	132	47.8	0.0
1665.20			0.0	0.0	3.2		91	3.5	5.2
1690.00			0.2	2.9					
1715.10	1715-1740	COAL MUDSTONE	1.5	2.3	49.8	0.89	77	64.6	0.0
1715.20			0.0	0.0	2.9		100	2.9	7.8
1740.00			0.0	0.0	3.0				
1740.10	1740-1765	COAL SILTSTONE	0.2	0.2	35.9	0.51	103	51.8	0.0
1740.20			0.0	0.0	3.0		93	4.0	7.8
1765.10			1.1	2.1	53.4				
1765.20	1765-1790	COAL SILTSTONE	0.1	2.5	3.7		119	50.4	0.0
1790.00			0.2	0.2	61.4		121	2.8	8.8
1790.10			0.1	3.6	4.4				
1815.10	1790-1815	COAL SILTSTONE	1.5	3.0	59.8		85	2.6	5.4
1815.20			0.1	3.6	3.4		72	2.5	7.4
1840.00			0.1	4.0	1.8		90	3.0	6.0
1840.10	1815-1840	COAL SILTSTONE	1.0	6.7	2.7		82	2.8	9.8
1840.20			0.2	3.6	2.3		97	3.1	7.2
1865.00			0.1	6.5	3.0		97	3.0	8.5
1865.10	1840-1865	SILTSTONE	0.1	0.0	2.9		68	3.1	3.2
1890.00			0.1	0.2	2.1		86	2.8	8.7
1890.10			0.1	0.2	2.5		94	1.8	9.9
1915.00	1890-1915	SILTSTONE	0.2	0.0	1.4		92	2.6	7.0
1915.10			0.1	0.2	1.8				
1940.00			0.1	0.2	2.1				
1940.10	1915-1940	SILTSTONE	0.1	3.6	2.3				
1940.20			0.1	6.7	3.3				
1965.00			0.1	6.7	3.0				
1965.10	1940-1965	SILTSTONE	0.2	0.0	2.9				
1990.00			0.1	0.2	2.1				
1990.10			0.1	0.2	2.1				
2015.00	1965-1990	SILTSTONE	0.1	0.0	2.3				
2015.10			0.1	0.2	3.0				
2040.00			0.2	6.5	3.0				
2040.10	2015-2040	SILTSTONE	0.2	0.0	2.1				
2065.00			0.2	0.2	2.9				
2065.10			0.1	6.7	3.0				
2100.00	2040-2065	SILTSTONE	0.1	0.0	2.1				
2100.10			0.2	0.2	2.1				
2125.00			0.2	0.0	2.1				
2125.10	2100-2125	SILTSTONE	0.1	0.0	2.1				
2150.00			0.1	0.0	2.1				
2150.10			0.1	0.0	2.1				
2175.00	2125-2150	SILTSTONE	0.1	0.0	2.1				
2175.10			0.1	0.0	2.1				
2200.00			0.1	0.0	2.1				
2200.10	2150-2200	SILTSTONE	0.1	3.6	2.4				
2225.00			0.1	5.6	1.7				
2225.10			0.1	5.6	1.7				
2245.00	2200-2225	SILTSTONE	0.2	7.7	1.8				
2245.10			0.2	7.7	1.8				
2270.00			0.2	7.7	1.8				
2270.10	2245-2270	SILTSTONE	0.2	7.7	1.8				
2295.00			0.2	7.7	1.8				
2295.10			0.2	7.7	1.8				



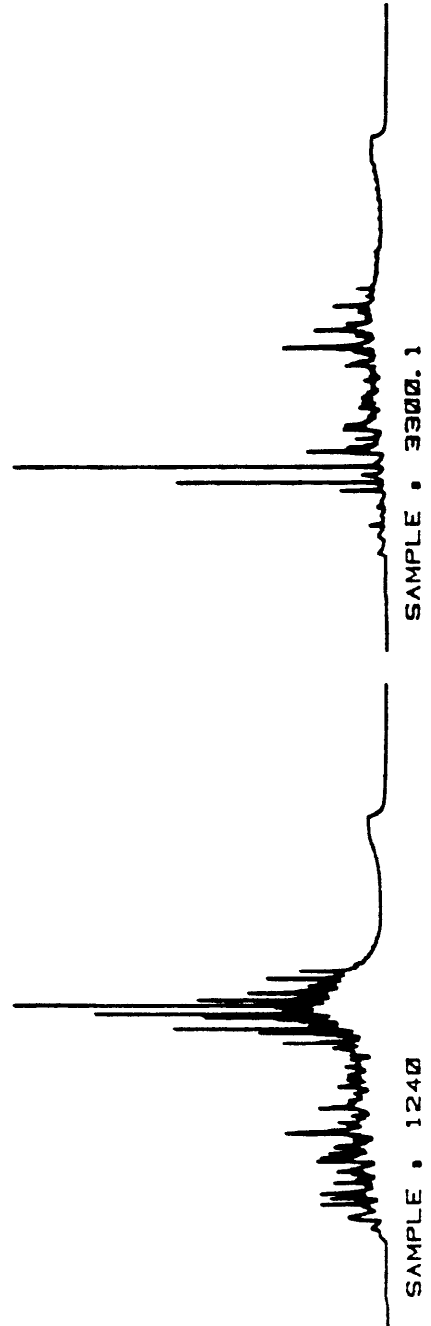
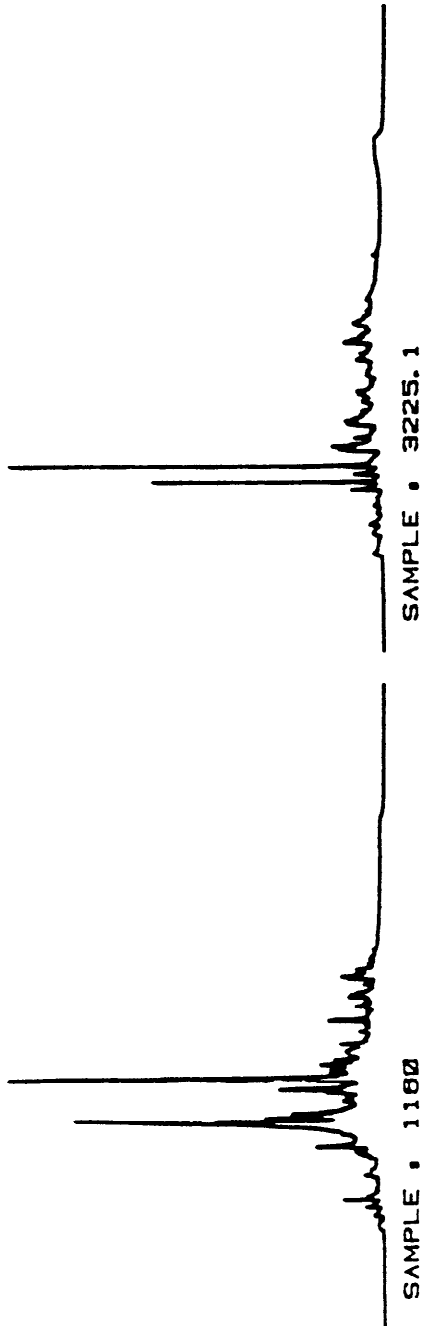
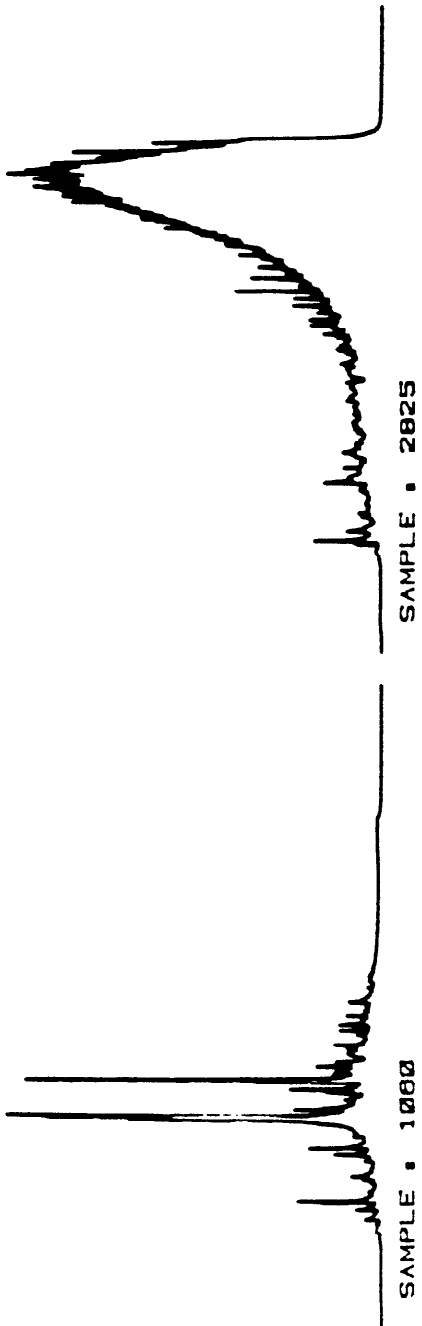


TABLE 5

PYROLYSIS - PGC DATA

WELL: BORMABBY 1  
 LOCATION: AUSTRALIA

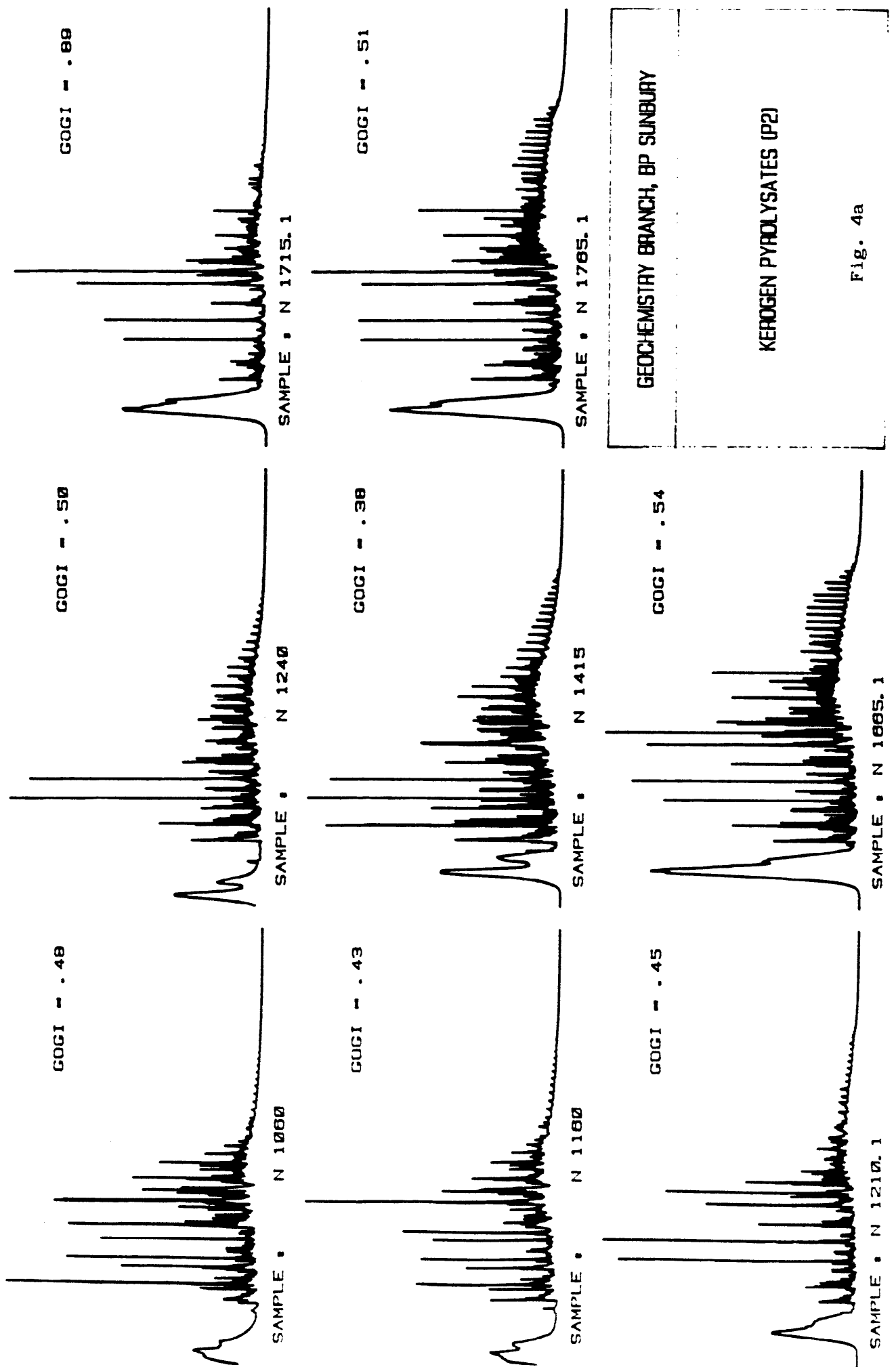
DEPTH (m)	C1-C5 (%)	C6-C9 (%)	C10-C13 (%)	C14-C22 (%)	C23-C36 (%)	GOGI	HI	TOC (%)
1060.00	32	22	28	15	3	0.48	224	4.2
1160.00	30	21	27	18	4	0.43	237	4.8
1210.10	31	16	21	23	9	0.45	69	46.8
1240.00	33	25	19	20	3	0.50		
1415.00	28	22	22	23	5	0.38	124	3.7
1665.10	35	12	18	24	1	0.54	132	47.8
1715.10	47	11	21	16	5	0.89	77	64.8
1765.10	34	11	17	25	3	0.51	103	51.8
2825.00	22	23	16	25	14	0.28	356	2.5
3225.10	32	12	11	23	23	0.47	216	61.4
3225.20	30	19	15	24	13	0.43	121	2.9
3300.10	30	10	10	23	27	0.42	247	48.5



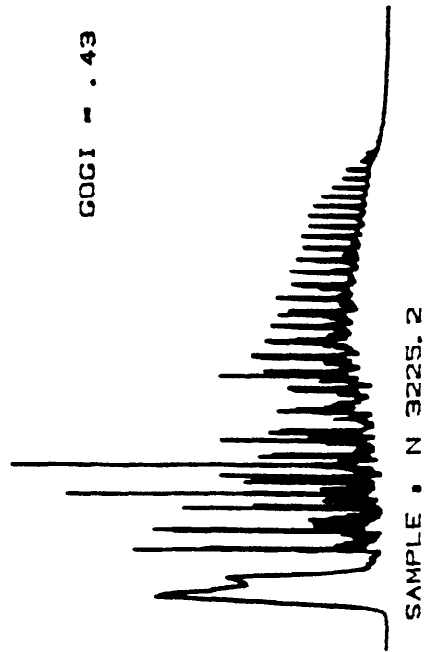
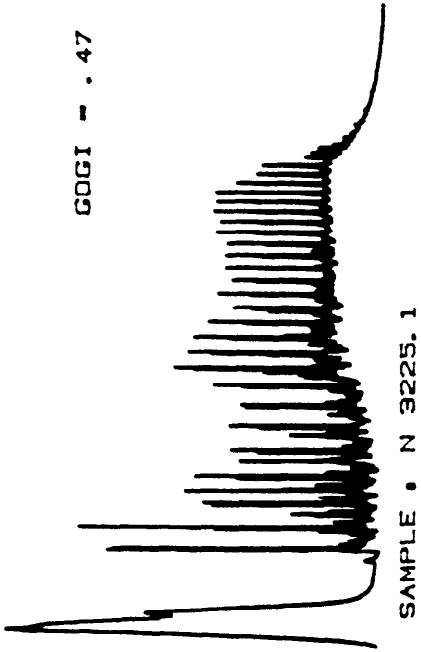
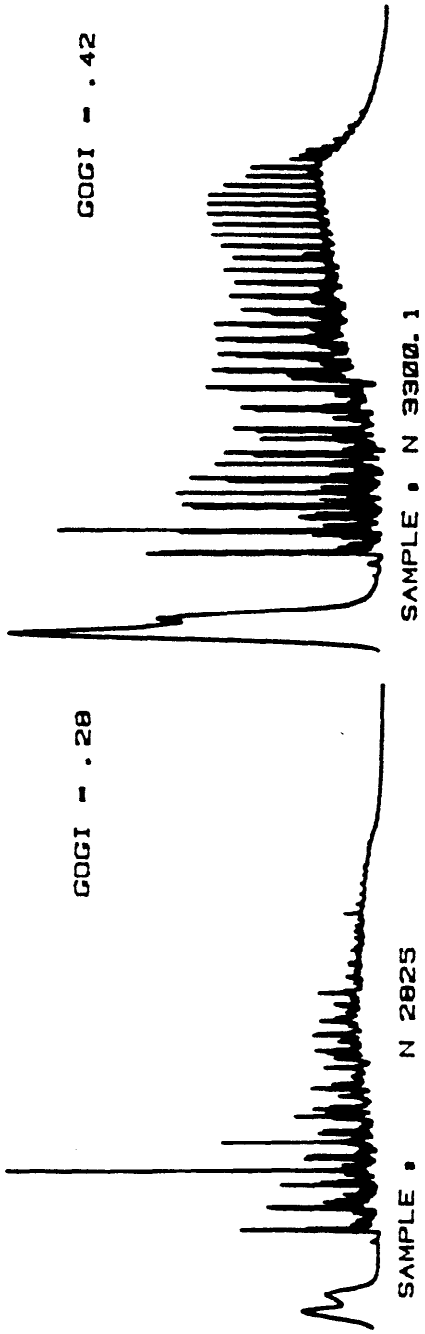
GEOCHEMISTRY BRANCH, BP SUNBURRY

THERMAL VOLATILES (P1)

Fig. 3







GEOCHEMISTRY BRANCH, BP SUNBURY

KERDGEN PYROLYSATES (P2)

Fig. 4b

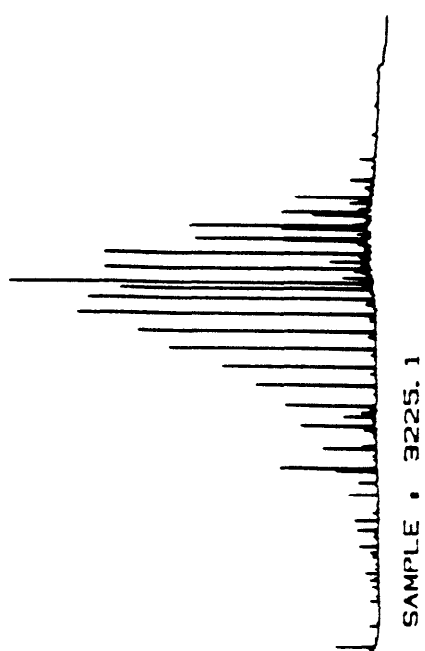
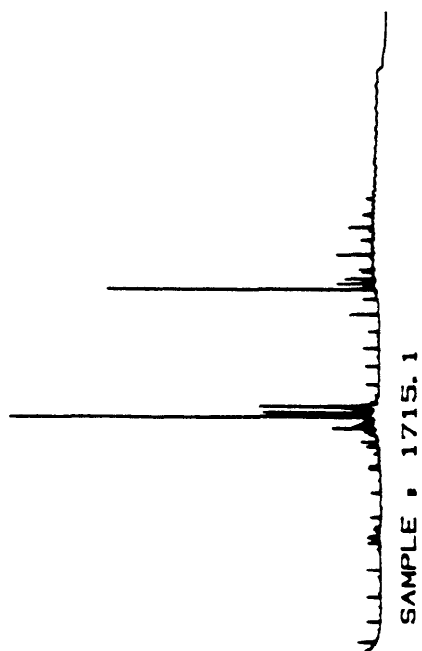
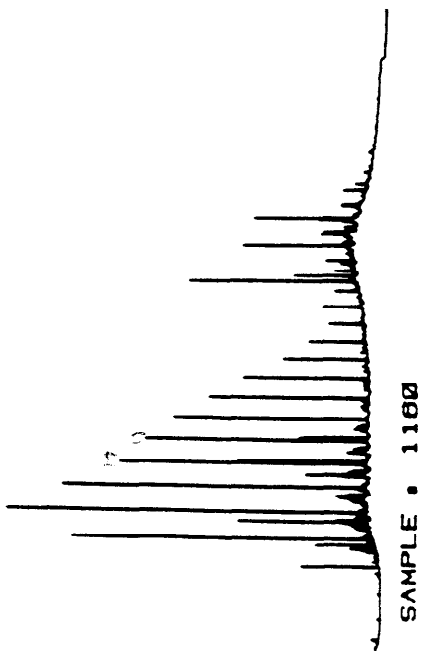
TABLE 6

S O L U B L E E X T R A C T D A T A

WELL: NORMANBY-1

LOCATION: AUSTRALIA

DEPTH (m)	TOC (%)	ISE (%)	ISE (mg/gC)	SAC (mg/gC)	SAC (%)	AROM (%)	RES (%)	ASPH (%)	CPI	PR/PH	PR/C17	PH/C18
1160.00	4.8	0.036	7	4	47.8	29.8	22.4		1.60	1.90	0.60	0.40
1715.10	64.6	0.984	15	1	7.9	32.7	59.4		1.20	9.30	3.10	0.30
3225.10	61.4	0.705	11	4	37.9	15.3	46.8					



GEOCHEMISTRY BRANCH, BP SUNBURY
<p style="text-align: center;">SAC FRACTION GAS CHROMATOGRAMS</p> <p style="text-align: center;">Fig. 5</p>

TABLE 7

C A R B O N I S O T O P E R A T I O S

WELL: NORMANBY-1

LOCATION: AUSTRALIA

DEPTH (m)	PICKED LITHOLOGY	SAMPLE	ISOTOPE RATIO (per mil)
1160.00	SILTSTONE	KEROGEN	-26.2
1715.10	COAL	KEROGEN	-23.8
3225.10	COAL	KEROGEN	-25.4

C-12/C-13 ISOTOPIIC RATIOS ARE RELATIVE TO  
PDB STANDARD: NBS-22 AT -29.8 per mil

TABLE 8a

M O L E C U L A R   S O U R C E   R O C K   I N D I C A T O R S

WELL: NORMANBY-1  
 LOCATION: AUSTRALIA

DEPTH (m)	111	112	113	114	115	116	117	118	119	51	52	53	54	55
1160.00	0.48	0.23	0.85											
1715.10	0.50	0.13	0.78		100:186:52:35:18:19	0.41	0.52	0.63	0.62	0.35	0.60	37:18:45	24:26:50	23.70
3225.10		0.60	0.85		100:94:45:21:8:3	0.12	0.52	0.52	0.48	0.12	0.47	9:18:73	7:23:70	24.20
						0.10				0.51		18:21:61		16.30

TABLE 8b

MOLECULAR SOURCE ROCK INDICATORS

WELL: NORMANBY 1

LOCATION: AUSTRALIA

DEPTH (m)	A1	A2	A3	A4	A5	A6	M1	M2	M3	M4	M5
1160.00											
1715.10								0.46		65.70	
3225.10									0.37	69.60	83.60

ANALYSIS NAME • DM00 • [ 300 • 301 ] V427 • MIS • 2

V04.0 WINDOW •

TITLE • SATS EX NORMANBY-1 1160M

OPERATOR •

DATE • 23-SEP-86

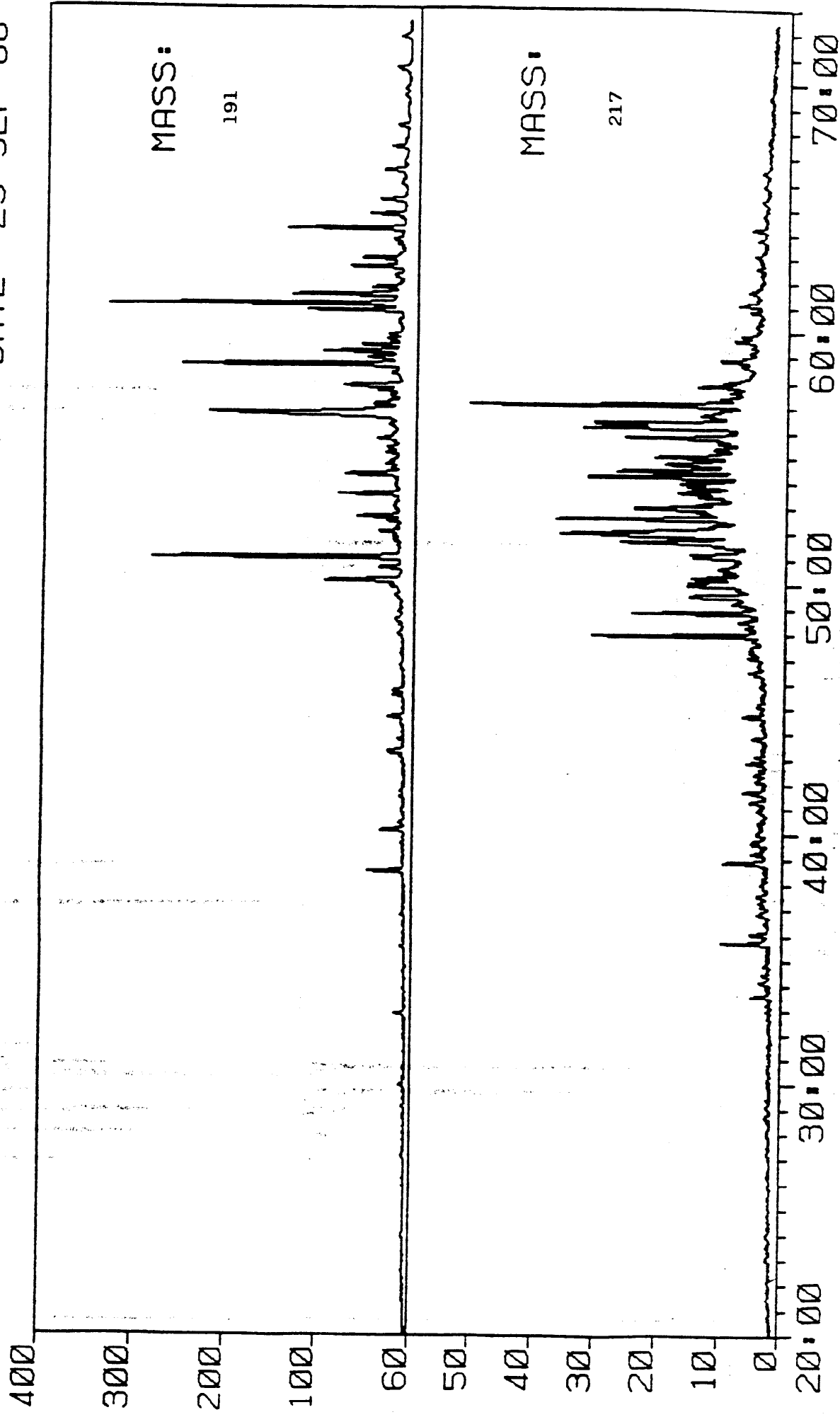


Fig. 6

ANALYSIS NAME • DM00 • [ 300 • 301 ] V428 • MIS • 1  
TITLE • SATS EX NORMANBY - 1 1715M

V04.0 WINDOW •

OPERATOR •

DATE • 23-SEP-86

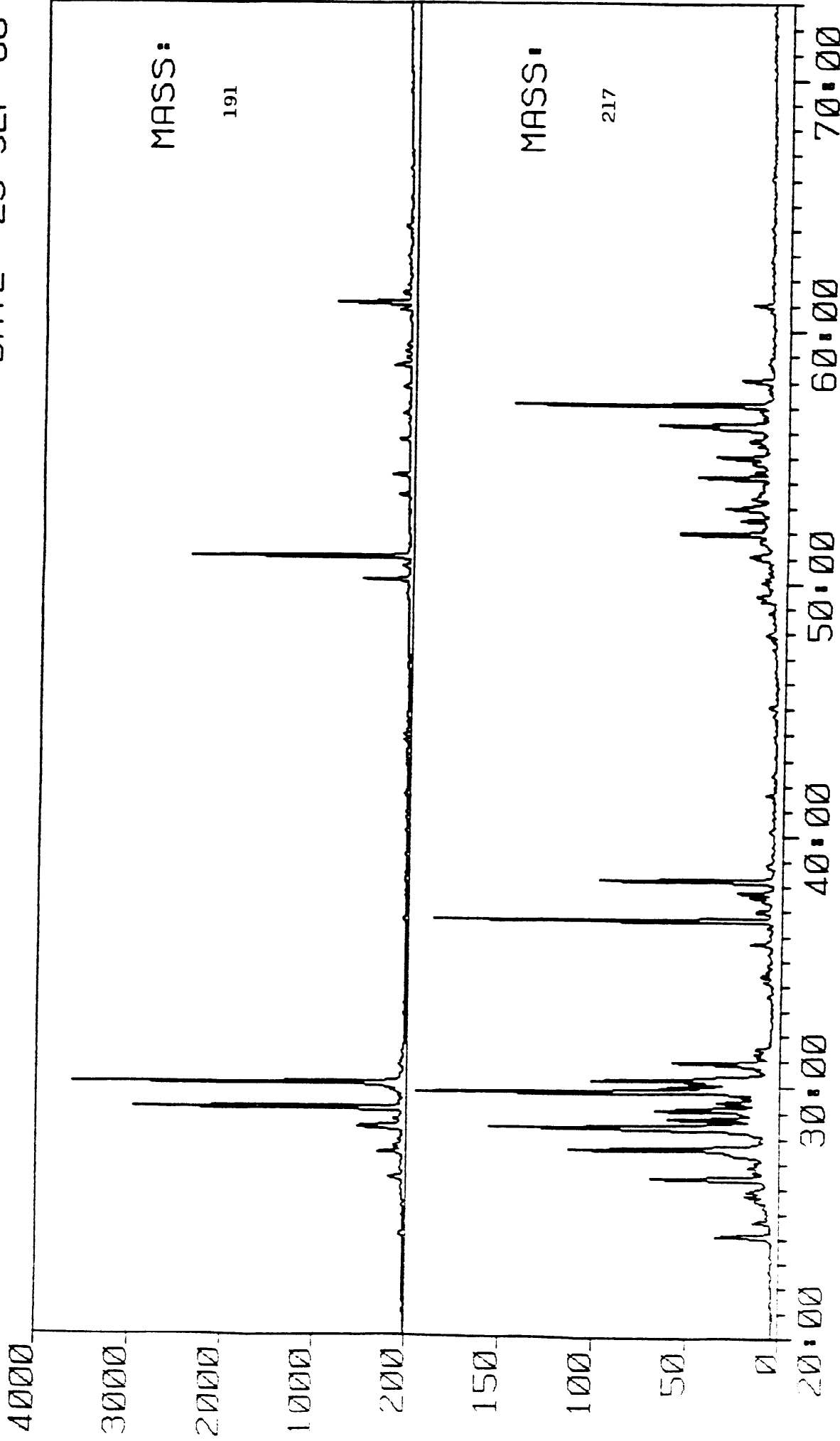


Fig. 7



ANALYSIS NAME • DM00 • [300,301]V429.MIS;2

V04.0 WINDOW •

TITLE • SATS EX NORMANBY-1 3225M

OPERATOR •

DATE • 23-SEP-86

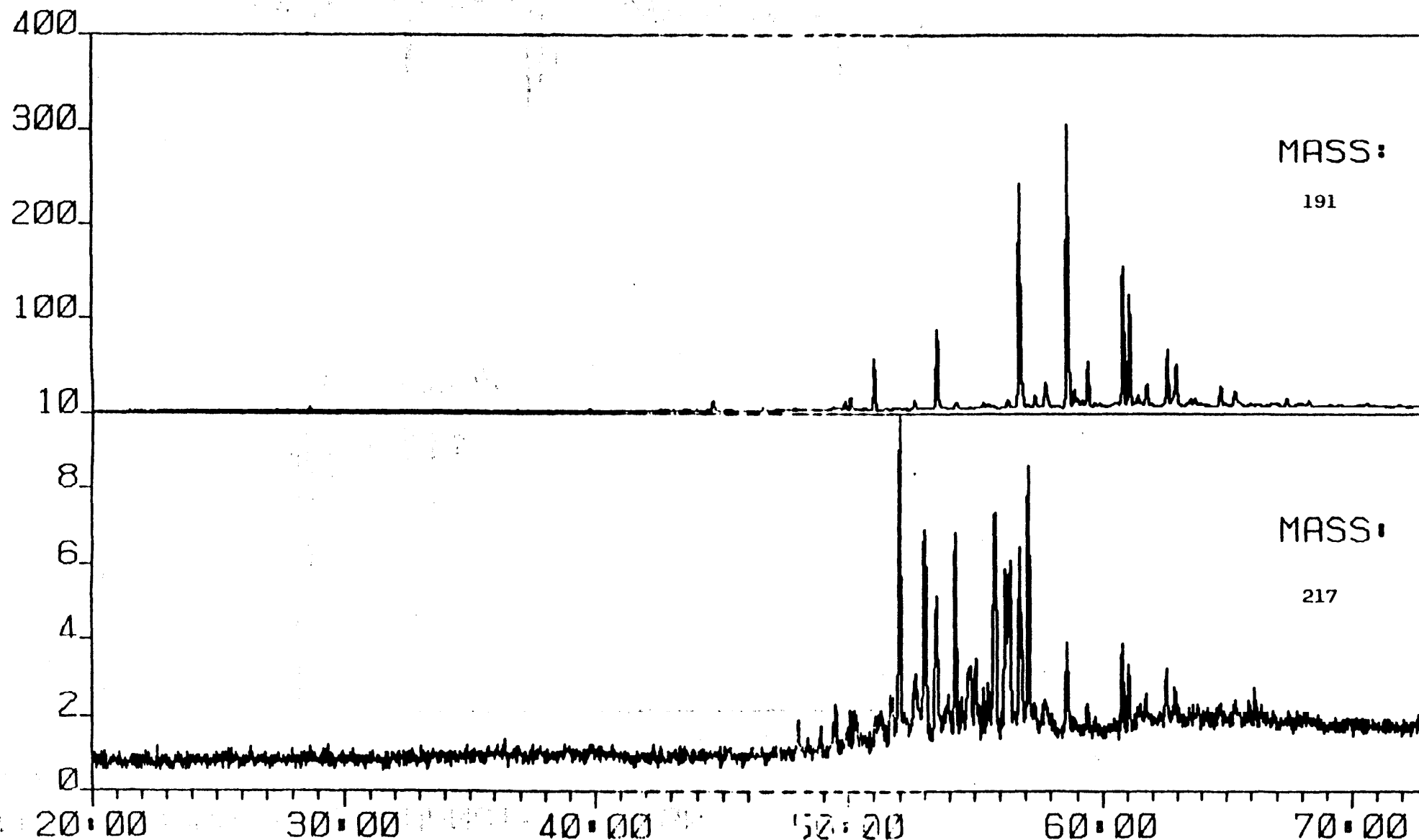


Fig. 8

INLET 515 NAME: DM00-L300-301JV430.MIS,1

V04.0 WINDOW:

TITLE: AROMS EX NORMANBY-1 3225M

OPERATOR:

DATE: 23-SEP-86

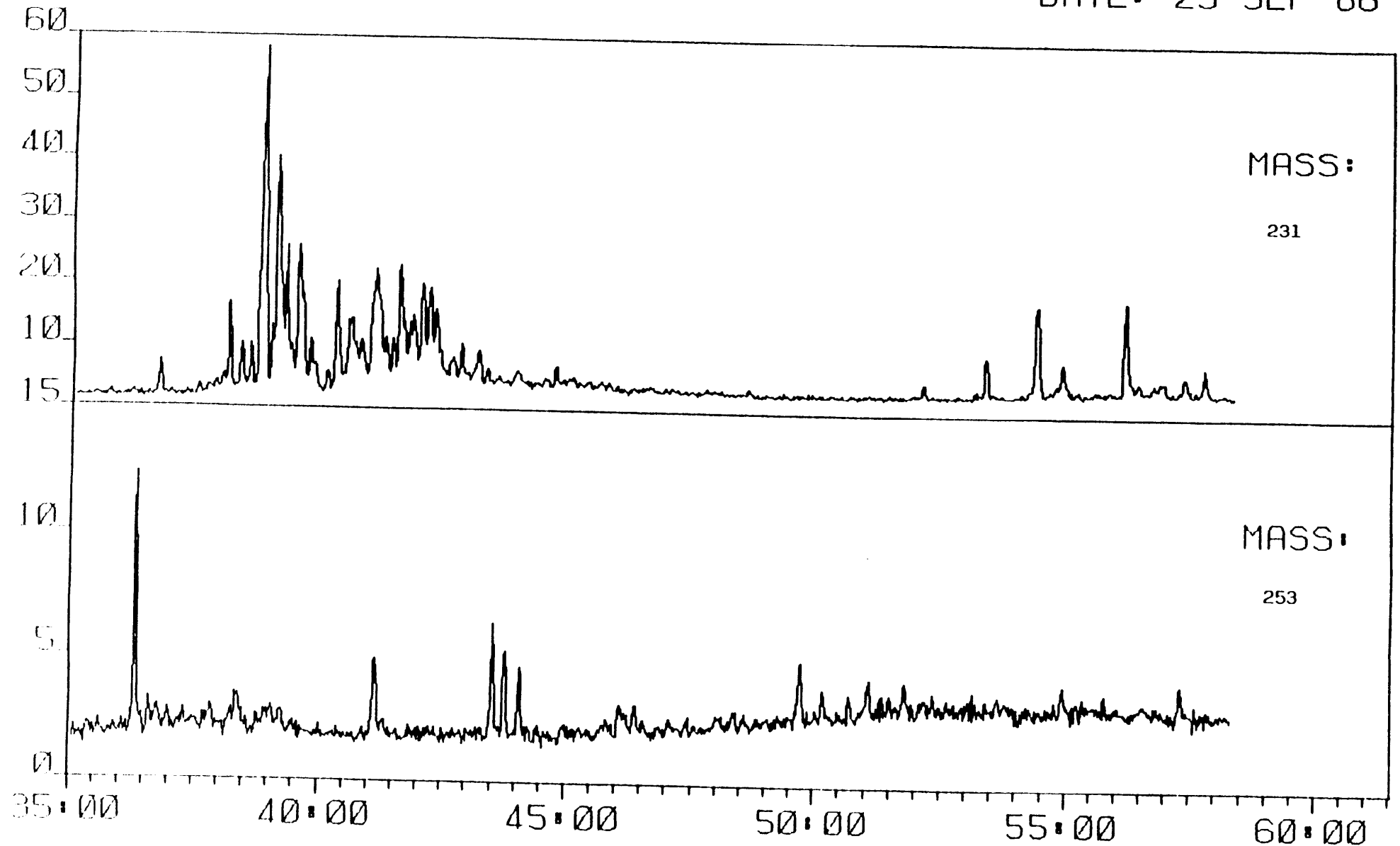


Fig. 9

ANALYSIS NAME. DM00.[300.301]V430.MIS.1  
TITLE. AROMS EX NORMANEY-1 3225M  
OPERATOR.  
V04.0 WINDOW.  
DATE. 23-SEP-86

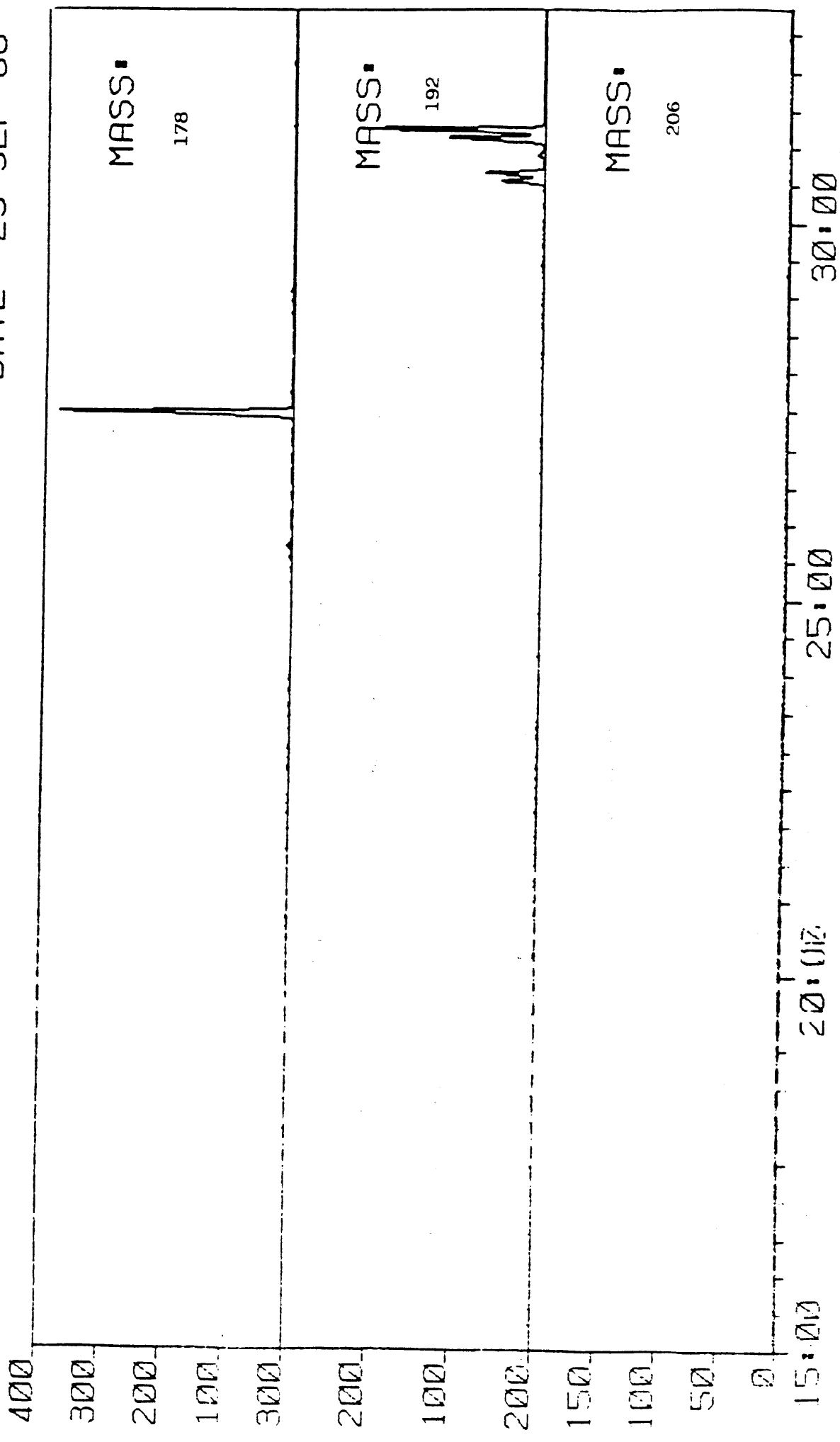


Fig. 10

TABLE 9a

G E O C H E M I C A L    D A T A

WELL : BORMANBY -1  
 LOCATION: AUSTRALIA

DEPTH (m)	QCNALK	QCNC20	QCC29ST	QCC30HD	QCC32HD	QCMONAR	QCTRIAR	QCMEPH
1160.00	501	31	2	2	1	0	4	104
3225.10	356	11	1	10	6			

\* Units of measurement are microg/g Carbon 1e ppm

TABLE 9b

G E O C H E M I C A L     D A T A

WELL: NORMANBY-1  
 LOCATION: AUSTRALIA

DEPTH (m)	QSNALK	QSN20	QSC29ST	QSC30HO	QSC32HO	QAMONAR	QATRIAR	QAMEPH
1160.00	141335	8665	431	426	282			
1715.10			331	184	124			
3225.10	81999	2452	319	2311	1311	87	2182	59722

\* Units of measurement are ppm