

DEPT. NAT. RES. & ENV.



PE808214

HALIBUT 1 Well
Greenechem Data Folder

-VR, Whole Oil GC,
C5-C7 HCs, EOM,
Gas data.

Tetrants Reflectance

Amuro. 22 APR 1986

Depth (ft)	Mean Maximum Reflectance (%)	Standard Deviation	Range	Number of Determinations
<u>COD-1</u>				
7100-7120	0.63	0.06	0.53-0.81	41
8333-8339	0.59	0.05	0.47-0.67	34
9030-9060	0.75	0.06	0.61-0.85	32
9460-9470	0.77	0.06	0.61-0.86	41
<u>FLOUNDER-1</u>				
7430	0.44	0.05	0.36-0.56	39
8783-8795	0.64	0.04	0.56-0.77	36
9140	0.61	0.06	0.52-0.77	42
10395-10400	0.72	0.06	0.58-0.80	34
11350-11356	0.90	0.05	0.76-0.97	36
11676-11682	0.90	0.07	0.78-1.04	44
<u>HALIBUT-1</u>				
7888-7891	0.49	0.07	0.37-0.67	39
8450-8460	0.54	0.04	0.47-0.61	31
9250-9260	0.57	0.06	0.46-0.66	43
9630-9640	0.61	0.04	0.54-0.69	35
9870-9880	0.63	0.06	0.47-0.75	52
<u>MACKEREL-1</u>				
8760-8780	0.63	0.05	0.52-0.71	31
9630-9650	0.66	0.05	0.69-0.76	25
9870-9890	0.65	0.02	0.60-0.73	28



Department of
Resources and Energy

OIL ANALYSIS

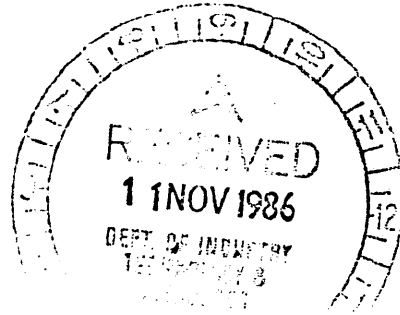
D. Powell. (80) 11/11

Bureau of Mineral Resources, Geology & Geophysics
Division of Continental Geology

Postal address: GPO Box 378
Canberra, 2601
Australia
Telephone: (062) 499111
Telex: AA62109
Facsimile: (062) 488178
Telegrams: BUROMIN

In reply please quote: 85/110.

5 November 1986



Mr B. Thompson
Manager Petroleum Resources
Department of Industry, Technology
and Resources
Petroleum Division
151 Flinders Street
MELBOURNE VIC 3001

11 NOV 1986

PETROLEUM DIVISION

Dear Mr Thompson

HALIBUT-1

... Further to your letter of the 26th August, please find enclosed the relevant information on the composition of the Gippsland oils that BMR has analysed. Most data is summarised in the Table, however, compositional percentages of individual components can be found in the separate data sheets.

If it is possible, I would appreciate a copy of the compiled data on the Gippsland oils when the work has finished.

Yours sincerely

T.G. Powell
Senior Principal Research Scientist

Original 30-1

Composition of Whole Oil

HALIBUT-1.

HBT # 1

ID= 67

RECORD= 38

FILE=ALK1.OIL1

STD WT= 10.3 SAMP WT= 11.8 VOL ADDED= 118 STD AREA= 47

 N-ALKANE % CONCENTRATION OEP AREA

N-ALKANE	% CONCENTRATION	OEP	AREA
10	1.93		88
11	1.45		66
12	1.25	1.01	57
13	1.25	1.05	57
14	1.21	1.06	55
15	1.34	1.05	61
16	1.31	1.02	60
17	1.31	1.02	60
18	1.27	1.02	58
19	1.29	1.01	59
20	1.29	1.00	59
21	1.31	1.00	60
22	1.36	1.01	62
23	1.40	1.02	64
24	1.34	1.04	61
25	1.31	1.05	60
26	1.10	1.07	50
27	.96	1.10	44
28	.61	1.11	28
29	.39	1.15	18
30	.13	1.37	6
31	.11		5
32	.07		3
PRISTANE	.88		40
PHYTANE	.12		6

TOTAL N-ALKANES=25.00

TOTAL WAX CONTENT= 8.79

% PRISTANE ANDPHYTANE= 1.00

PR/PH= 7.27

PR/NC17= 0.67

PH/NC18= 0.09

OEP for $C_n = \text{area for } (C_{n+2} + 6C_n + C_{n-2} / 4C_{n+1} + 4C_{n-1})^{n+1} (-1)$

Composition of C5-C7 hydrocarbons

HALIBUT-1 HBT #1

SAMPLE I.D. CODE NO. 67

COMPOUND	AREA	% AREA
ISO-PENTANE	1164	0.30
N-PENTANE	15684	10.64
2,2-DIMETHYLBUTANE	848	0.54
CYCLOPENTANE	1583	1.01
2,3-DIMETHYLBUTANE	3146	2.01
2-METHYLPENTANE	14909	9.51
3-METHYLPENTANE	9474	3.40
N-HEXANE	23206	14.85
METHYLCYCLOPENTANE	11553	7.37
BENZENE	126	0.08
CYCLOHEXANE	14856	9.47
2-METHYLHEXANE	4473	2.85
1,1-DIMETHYLCYCLOPENTANE	3342	2.13
3-METHYLHEXANE	4437	2.83
1,3-DIMETHYLCYCLOPENTANE	2748	1.75
1,3-DIMETHYLCYCLOPENTANE	2381	1.52
1,2-DIMETHYLCYCLOPENTANE	3347	2.45
N-HEPTANE	10365	6.63
1,2-DIMETHYLCYCLOPENTANE	360	0.23
METHYLCYCLOHEXANE	26330	16.60
2,5-DIMETHYLHEXANE	1339	0.85
2,4-DIMETHYLHEXANE	588	0.32
2,2,3-TRIMETHYLPENTANE	697	0.44
TOLUENE	359	0.23

TOTAL AREA = 156841

PARAFFIN INDEX I = 0.99
 PARAFFIN INDEX II = 14.27
 % HEPTANE IN Σ C7 COMPOUNDS = 17.92
 % BRANCHED C7 IN Σ C7 COMPOUNDS = 15.36
 % CYCLIC C7 IN Σ C7 COMPOUNDS = 56.72
 LIGHT TO HEAVY RATIO = 0.79

TABLE 1 COMPOSITION OF GIPPSLAND OIL ANALYSED BY BMR

Well	Test	Depth m	WHOLE OIL		COMPOSITION OF > 210°C Fraction												COMPOSITION OF C5-C7 HYDROCARBONS				BMR No.
			API	WAX %	%	n-alkane	Branched/ cyclic	Arom	ONS	Asph	pr/ph	pr/n-C17	ph/n-C18	Parafin Index		C7 composition-%					
														I	II	light	heavy	branched	cyclic		
Basker 1	FIT	3090	40.8	20.5	24.0	48.5	29.0	20.6	1.8	0.0	7.4	0.43	0.06	0.76	14.4	1.3	19.4	9.7	70.9	145	
Cobia 1	FIT 2	2406.5	43.1	7.4	36.0	26.7	49.2	19.7	4.4	0.0	6.8	0.63	0.10	0.91	15.0	0.9	17.7	14.3	68.0	147	
Fortescue 3	RFT 1	2440	31.0	7.6	2.0	18.1	53.7	23.6	4.5	0.0	6.3	1.18	0.21	0.80	15.1	0.3	17.2	8.6	74.2	152	
Halibut 1	PT	2346.9	42.4	8.8	35.0	29.4	49.4	14.6	6.4	0.2	7.3	0.67	0.09	0.99	14.3	1.2	17.9	15.4	66.7	67	
Kingfish B10	PT	2286	45.9	8.4	43.0	32.4	46.5	11.9	9.0	0.1	7.2	0.67	0.09	1.05	17.9	0.5	20.5	13.4	66.1	115	
Mackerel 3	FIT	2394.2	47.0	11.0	40.0	38.9	49.1	9.1	2.6	0.3	7.6	0.42	0.06	0.89	16.1	1.1	19.9	12.5	67.6	119	
Marlin EGS 4	ZONE1	1554.4	49.8	1.1	53.0	35.7	53.5	5.4	5.4	0.1	10.8	0.59	0.07	0.99	18.3	0.9	21.9	13.6	64.5	132	
Barracouta	1:1:1	7/1/1972	-	-	-	-	-	-	-	-	2.9	0.25	0.09	0.94	13.6	0.6	16.1	13.3	70.6	106	
A3, A6, A7																					

a Max% = weight% of n-alkane > C₂₂

b light/heavy = Sum of C5+C6 hydrocarbons/sum of C7 hydrocarbons.

Mobil Oil Australia Limited
(INCORPORATED IN VICTORIA)

JULY 2 1984

MR J L LE PAGE
DIRECTOR
OIL AND GAS DIVISION
DEPARTMENT OF MINERALS AND ENERGY
151 FLINDERS STREET
MELBOURNE VIC 3000

YOUR REF: J D/M H

Dear Sir

In reference to your letter of June 29 1983 giving us permission to obtain samples of ditch cuttings from the Gippsland Basin wells Halibut-1, Kingfish-1 and Tuna-1, we herewith submit the requested two copies of data obtained from the analytical tests carried out on the Halibut and Tuna samples. Samples of the Kingfish well were not analysed because of low coal content.

We apologize for the delay in submitting this information.

Yours faithfully

G J Scott

G J SCOTT
MANAGER SUPPLY OPERATIONS

ATTACH
GJS/pvw

Mr. Scott
M. J. Scott
M. Christ

2 CITY ROAD
SOUTH MELBOURNE 3205
TELEPHONE: 617 3111

PO. BOX 4507 MELBOURNE 3001
CABLE ADDRESS:
MOBIL OIL
TELEX: AA30307
AA37770

REC'D
5/7/84
CW

15 FEB 1984

UNION TEXAS AUSTRALIA INC.

GEOCHEMICAL ANALYSES OF WELLS FROM
THE GIPPSLAND BASIN, AUSTRALIA

BARRACOUTA-1, HALIBUT-1, HAPUKU-1,
KINGFISH-1, MORAY-1, PERCH-A1, PIKE-1,
PISCES-1, SNAPPER-1, TUNA-1

Project No. 9/83/105

By

S. Sengupta, S. Hindmarsh and P.J. Bigg

January, 1984

*FILED IN GEOCHEMICAL REPORTS LOG
UNDER UNION TEXAS.*

Prepared by:

Gearhart Pty. Ltd. - Geodata
Unit 2
138 Musgrave Avenue
Welland, S.A. 5007
Australia

Prepared for:

Union Texas Australia Inc.
23rd Level
459 Collins Street
Melbourne, VIC 3000
Australia

ROCK-EVAL DATA SHEET

Sample No. or Depth	% TOC	S ₁ (mg/g)	S ₂ (mg/g)	S ₃ (mg/g)	T max (°C)	Hydrogen Index	Oxygen Index	S ₂ /S ₃
<i>Halibut-1 Well</i>								
8320-8340c	67.27	1326	194.86	5.61	419	289.6	8.3	34.72
" S	3.08	0.26	1.67	9.11	432	54.2	295.7	0.18
8680-8720c	59.7	11.14	183.91	5.52	421	311.6	9.4	33.29
" S	2.84	0.28	2.35	4.19	435	82.9	147.4	0.56
9450-9460c	70.50	7.85	161.89	5.21	419	229.6	7.4	24.48
" S	10.95	1.36	24.05	2.04	427	219.6	18.7	11.77
9510-9520c	70.35	6.24	141.19	5.77	424	200.7	8.2	3.42
" S	8.56	0.48	14.41	1.93	432	168.3	22.5	7.48
9670-9670c	72.87	11.40	176.62	6.88	422	242.4	9.4	25.68
" S	7.05	0.60	10.07	2.09	434	142.8	29.6	4.82
9750-9790c	64.55	8.37	157.76	6.26	426	244.4	9.7	25.21
" S	7.40	0.79	10.26	1.97	431	138.6	26.6	5.22
<i>Tuna-1 Well</i>								
5200-5230c	62.84	4.22	85.92	14.77	428	136.7	23.5	5.82
" S								
5660-5710c	64.81	4.71	76.75	9.12	424	118.4	14.1	8.42
" S								
5800-5830c	60.09	3.67	45.10	16.78	425	75.1	27.9	2.69
" S								
6000-6040c	48.53	6.00	91.43	8.54	425	188.4	17.6	10.71
" S								
6200-6230c	62.65	3.07	65.42	19.14	424	104.4	30.6	7.22
" S								
6370-6390c	64.49	5.04	98.32	13.62	423	152.5	21.1	10.44
" S								
9150-9170c	64.22	2.70	94.44	9.86	424	147.1	15.4	9.58
" S								
9410-9430c	65.33	3.78	92.41	13.25	431	141.5	20.3	6.97
" S								

C = COAL
S = SHALE

Confidential

HALIBUT (A.I.) FILE

LETTER to be sent to Oil Companies having Indigenous Crude Allocation
Department of Customs & Excise
Department of National Development

November 10, 1967.

Our letter of September 21st forwarded a copy of an assay on the Kingfish crude oil, as an indication of potential qualities which might be anticipated from this field and other indicated discoveries in the area. Since that date, samples of crude oil from the Halibut field have been taken and we are attaching a copy of the assay data just received.

In reviewing the potential development of the fields in the area, we would anticipate that production from Marlin will commence in the second quarter of 1969 at an approximate rate of 10,000 barrels per day. As additional wells and fields are brought into production, this rate should increase to 135,000 barrels per day by the end of 1970. This is based on 10,000 barrels per day Marlin, 75,000 barrels per day Kingfish and 50,000 barrels per day Halibut. It will be recognised that these estimates are tentative and highly dependent on the development schedule and final test and production results for specific fields, but it should provide guidance to you in your planning considerations. The above figures include both Esso and B.H.P. volumes.

As later information is developed which affects your planning, we shall make this available to you, as soon as practicable.

TMS:VA

FIELD: HALIBUT	REPORT DATE: 10-27-67
COUNTRY: Offshore, Bass Strait, Australia	DATE DISTILLED: 10-10-67
REPRESENTATIVE OF: Crude produced during initial testing of Well A-I in Halibut Field, located offshore in the Gippsland Basin portion of Bass Strait. Assay run on composite of five one-quart samples air expressed from Sydney at request of Esso Standard Eastern - Manufacturing Department.	DATE SAMPLED: 10-5-67 *
	ASSAY NO.: 1184
	FILE NO.: SL.92C-AB.67
	CARDS:
	COST CENTER: 2503-202
	REPORT BY: <i>H. M. Eberly</i> J. F. HICKERSON

DATA ON CHARGE		DATA ON PRODUCTS			
		NAPHTHAS			
GRAVITY °API	42.8	VAPOR TEMP., °F			
SULFUR, %, DIETERT	0.10	C5-175	C5-250	C5-300	C5-375
FLASH, °F, P.M.		RANGE OF CUT, LV%	3.0-10.9		
S.U. VISCOSITY AT 100°F		YIELD, LV%	7.9		
80°F		GRAVITY, °API	82.4		
60°F		RESEARCH OCTANE NO.	62.0		
40°F		+1.5 CC TEL			
S. & W., %		+3.0 CC TEL			
WATER BY DISTILLATION, %		MOTOR OCTANE NO.			
REID VAPOR PRESSURE, LB.	5.35	+1.5 CC TEL			
POUR POINT, °F	50	+3.0 CC TEL			
SALT AS NACL, PTB		REID VAPOR PRESSURE, LB.			
NEUTRALIZATION VALUE, D664		SULFUR, %, LAMP	0.0068		
HYDROCARBON ANAL., LV%:		MERCAPTAN NO., MG/100 CC.	0.19		
C2 & LIGHTER	0.1	% AT 158°F. + LOSS			
C3	0.5	212°			
iC4	0.8	257°			
NC4	1.6	284°			
iC5	1.8	302°			
NC5	2.0	F.B.P., °F			
MERCAPTAN NO., MG/100 CC.		LOSS, %			
COLOR, SAYBOLT					
COLOR, ROBINSON					

* Date received

VAPOR TEMPERATURE, °F	HEAVY NAPHTHAS			KEROSENE & TURBO FUELS		
	250-375	175-300	350-375	375-530	300-500	575-430
RANGE OF CUT, LV%		10.9-26.0			26.0-50.0	
YIELD, LV%		15.1			24.0	
MIDPOINT OF CUT, °F		241				
GRAVITY, °API		57.2			43.0	
RESEARCH OCTANE NO., CALC.						
SULFUR, %, LAMP		0.0041			0.049	
ANILINE POINT, °F		126			135	
MERCAPTAN NO., MG/100 CC.		0.26			0.35	
VISCOSITY, SAY. THERMO						
VISCOSITY, KINEMATIC, @-40°F., CS						
FREEZING POINT, °F						
RING NUMBER						
I.P.T. SMOKE POINT, MM.						
COLOR, SAYBOLT						
AROMATICS, LV%, M.S.		6.6				
NAPHTHENES, LV%, M.S.		54.0				
PARAFFINS, LV%, M.S.		39.4				
AROMATICS, LV%, F.I.A.						
LUMINOMETER NO.						
REFRACTIVE INDEX, ND 20°C						
VISCOSITY, KINEMATIC @ 100°F., CS.						

:1hn:mk

VAPOR TEMPERATURE, °F	MIDDLE DISTILLATES			GAS OILS		
		430-530	500-650	650-850	850-1050	1050-
RANGE OF CUT, LV%			50.0-69.5			
YIELD, LV%			19.5			
GRAVITY, °API			34.3			
REFRACTIVE INDEX, ND ₅₇ °C.			1.4585			
SULFUR, %, DIETERT			0.11			
ANILINE POINT, °F			165			
DIESEL INDEX						
POUR POINT, °F			30			
CONRADSON CARBON, %		—				
NITROGEN, WT. %		—				
AROMATIC RINGS, CALC.			10.3			
NAPHTHENE RINGS, CALC.			27.4			
WET ASH, PPM NI	—	—	—	—	—	—
V	—	—	—	—	—	—
FE	—	—	—	—	—	—
S.U. VISCOSITY AT 100°F.	—	—	40.3	—	—	—
130°	—	—	—	—	—	—
150°	—	—	—	—	—	—
175°	—	—	—	—	—	—
210°	—	—	—	—	—	—
NEUTRALIZATION VALUE D974	—	—	—	—	—	—
Mercaptan No., Mg/100 cc			0.57			

VAPOR TEMPERATURE, °F	WAXY LUBE OIL	DEWAXED LUBE	BOTTOMS		CORRELATED DATA	
	790-1000		BEYOND 1050	BEYOND 650		
RANGE OF CUT, LV%				69.5-100.0	PHENOL TREATING CHARACTERISTICS ON NARROW LUBE CUT DEWAXED	
YIELD, LV%		—		30.5		
GRAVITY, °API		—		29.5		
SULFUR, %, DIETERT		—		0.37		
ANILINE POINT, °F		—	—	—	% TREAT	V.I.
DIESEL INDEX		—	—	—	0	
S.U. VISCOSITY AT 100°F	—	—	—	—	100	
130°F	—	—	—	—	200	
150°F	—	—	—	—	300	
175°F	—	—	—	68.0		
210°	—	—	—	—		V.G.C.
S.F. VISCOSITY AT 122°F	—	—	—	44.7		
210°	—	—	—	—		
275°	—	—	—	—		
300°	—	—	—	—		
FLASH, °F, C.O.C.		—	—	—		
POUR POINT, °F		—	—	110		
VISCOSITY INDEX		—	—	—		
NEUTRALIZATION VALUE D664		—	—	—		
WAX, S.B.A., %		—	—	—		
CONRADSON CARBON, %	—	—	—	—		
MOD. INSOL. IN 36° NAPH.	—	—	—	—		
NITROGEN, WT. %	—	—	—	—		
WET ASH, PPM NI	—	—	—	0.56		
V	—	—	—	0.58		
FE	—	—	—	5.05		
OLIENSIS	—	—	—	—		
SOFTENING POINT, °F	—	—	—	—		
PENETRATION AT 77°F	—	—	—	—		
PENETRATION AT 35.2 °F	—	—	—	—		
DUCTILITY AT 77°F	—	—	—	—		
SOLUBLE IN CCl ₄	—	—	—	—		

•D974

CRUDE: Halibut, AUSTRALIA

ASSAY NO.: 1184

FILE NO.: SL.92C-AB.67

Vapor Temperature, °F. Beyond 650

Range of Cut, LV % 69.5-100.0

Yield of Cut, LV % 30.5

DISTILLATION TYPE, D-1160 - 10MM

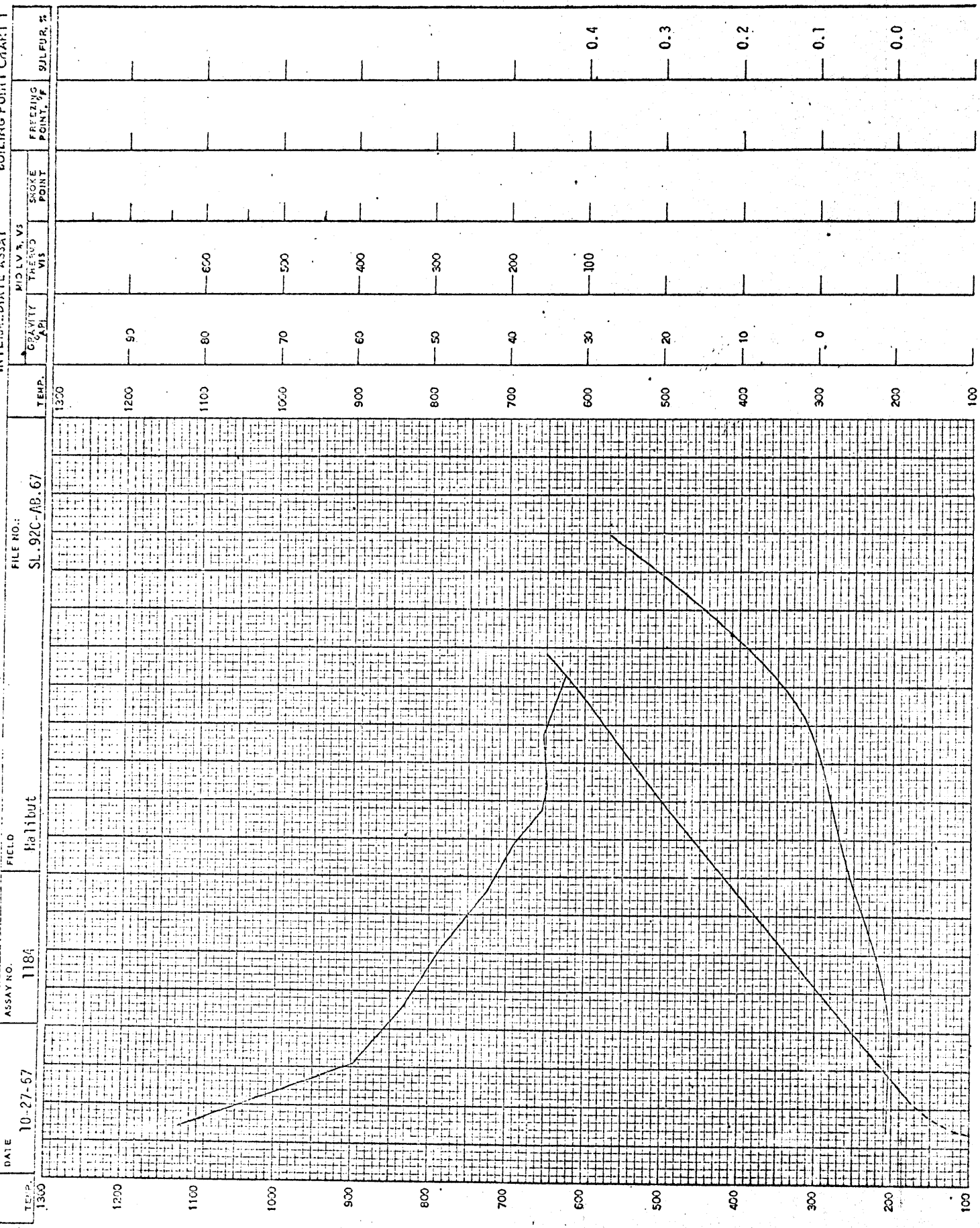
I.B.P., °F.

F.B.P., °F.

Loss, %

92.0% @ 700°F.

5%	438	(715)
10	445	(723)
20	457	(735)
30	470	(750)
40	484	(767)
50	504	(792)
60	528	(817)
70	553	(846)
80	596	(895)
90	680	(988)
92	700	(1009)



FILE NO.: SL. 92C-AB. 67

FIELD: Halibut

ASSAY NO.: 1184

DATE: 10-27-67