Boij 11.4.91

AVON-1 W.C.R

PEP 107 GIPPSLAND BASIN VICTORIA

AVON-1

WELL COMPLETION REPORT

March 1991

Mosaic Oil NL
Level 2, 22 Pitt St.
Sydney NSW 2000

W1049

FIGURES

APPENDICES

ENCLOSURES

1. SUMMARY

Avon No 1 was drilled as a wildcat exploration well in permit PEP 107, onshore Gippsland Basin Victoria. The well was located on Mr.W. Thompson's property "Clydebank", approximately 8 kilometres north east of Sale.

Drilling commenced at 1700 hours 30th October 1990 and reached a total depth of 934 metres (KB) on 6th November 1990.

Participants in the well were Mosaic Oil N.L. (operator) , TCPL Resources Ltd, Pan Pacific Petroleum N.L., North Eastern Gold Mines N.L., Australian Challenge Resources Inc. and Amity Oil N.L.

The primary objective was a prognosed Barrier Bar Sand at the top of the Latrobe Group sediments. A 40 metre porous unconsolidated sand was encountered as forecast, but was water saturated.

A Drill Stem Test was conducted over the interval 867 to 895 metres across a basal Latrobe Group sand and recovered 5 barrels of mud and 30 barrels of water.

Two wireline logging suites comprising Dual Laterolog/MLL/Sonic/Gamma Ray and Density Neutron/Gamma Ray/Caliper were run.

Avon No.1 was plugged and abandoned as a dry hole and the rig released at 1400 hours on 11th November 1990.

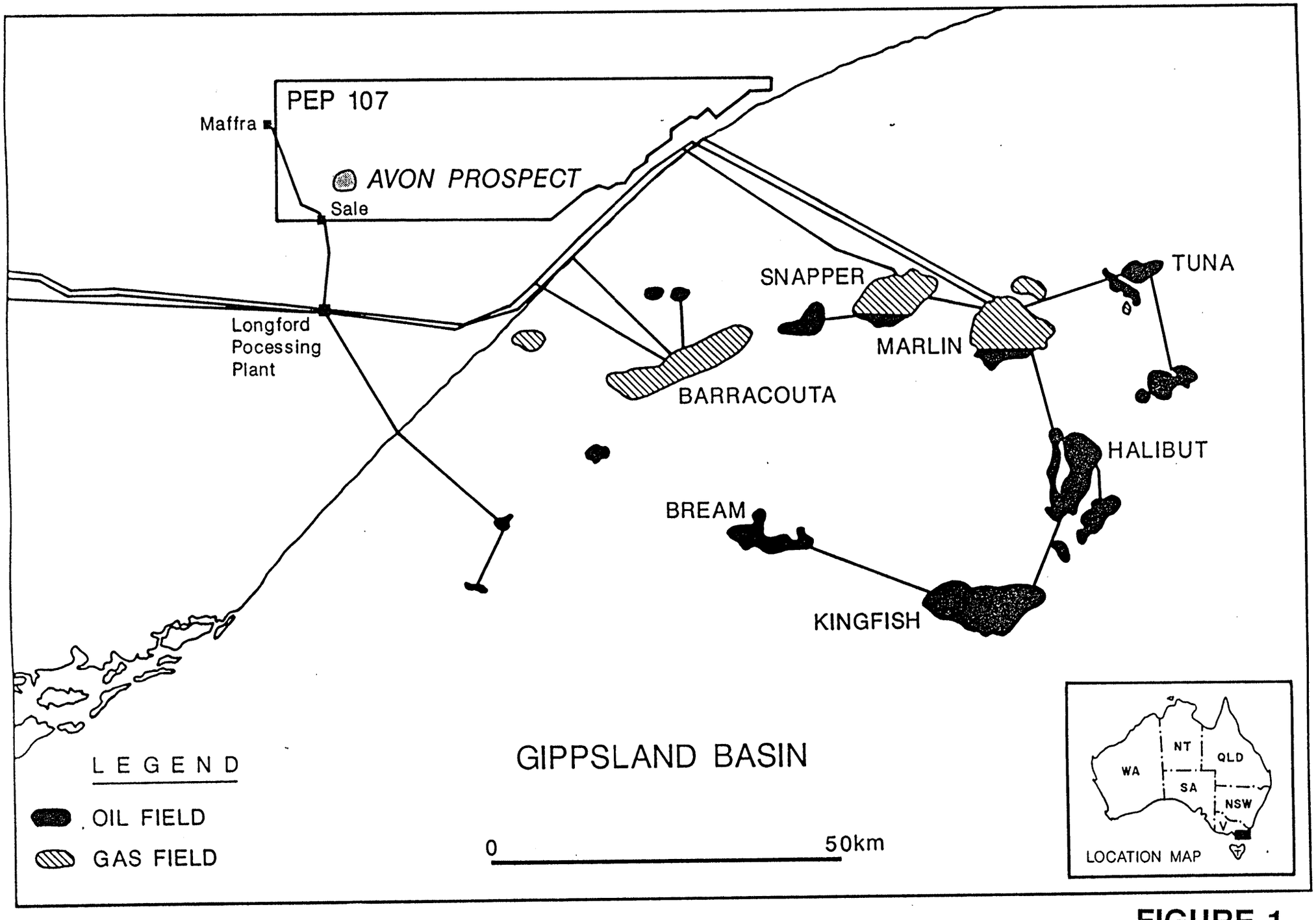
PEP 107
Maffra
AVON PROSPECT
Sale
Longford
Pocessing
Plant
SNAPPER
TUNA
MARLIN
BARRACOUTA
HALIBUT
BREAM
KINGFISH
LEGEND
OIL FIELD
GAS FIELD
GIPPSLAND BASIN
0
50km
NT
QLD
WA
SA
NSW
V
LOCATION MAP

FIGURE 1

AVON-1 WELL LOCATION

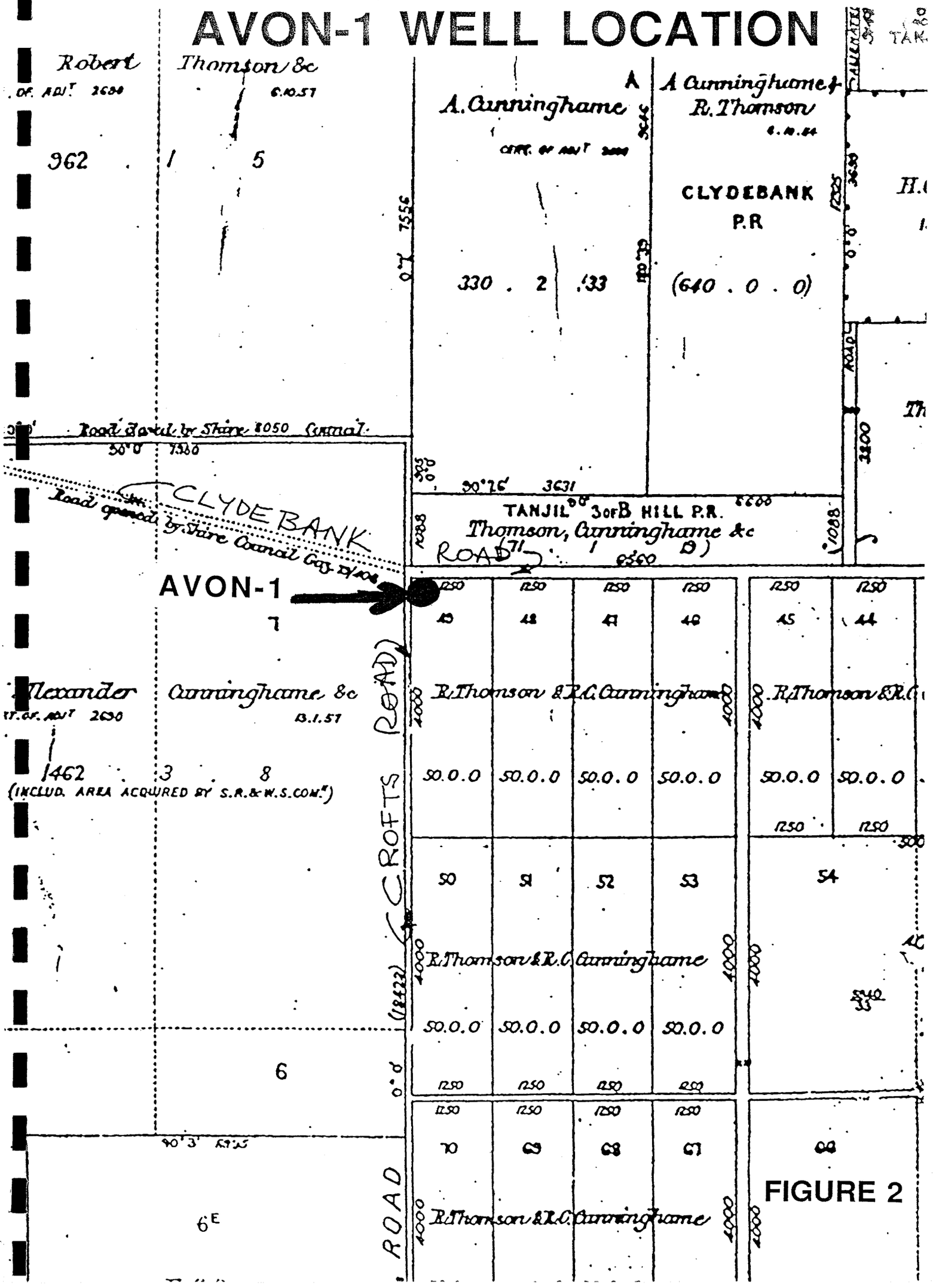

FIGURE 2

2. WELL HISTORY

2.1 LOCATION

Seismic	: Line GT 89-102 Shot Point 280
Latitude	: 38° 02' 55.0" S
Longitude	: 147° 08' 13.0" E)
Elevation	: Ground 6m (AMSL)

2.2 GENERAL DATA

(i) Well name and number: Avon No.1

(ii) Name and address of operator:
Mosaic Oil N.L.
2nd Floor, Export House
22-24 Pitt Street
SYDNEY NSW 2000

(iii) Participants:

Mosaic Oil N.L. (Operator)	30%
TCPL Resources Limited	45%
Pan Pacific Petroleum N.L.	25%
North Eastern Gold Mines N.L.	10%
Australian Challenge Resources Inc.	5%
Amity Gold N.L.	5%

(iv) Exploration Permit: PEP 107

(v) District: Onshore Gippsland Basin

(vi) Total Depth: 934 metres

(vii) Date spudded: 1700 hours 30th October 1990

(viii) Date Total Depth reached: 1430 hours 6th November 1990

(ix) Date rig released: 1400 hours 11th November 1990

(x) Drilling time (days to T.D.): 7 days

(xi) Status: Plugged and abandoned.

2.3 DRILLING DATA

2.3.1 Drilling Contractor

Drillcorp Limited
41 Buckingham Drive
Wangara WA 6005

2.3.2 Drilling Rig

Rig 24, Franks Cabot Explorer
Carrier Mounted

2.3.3 Summary of Drilling Operations

Avon #1 was spudded at 1700 Hrs on 30th October 1990 using Drillcorp rig #24 a Franks Cabot Explorer. A 444 mm Conductor hole was drilled to 11.24 metres and conductor pipe was run to 11.24 metres and cemented with Halliburton using a neat class A plus 2% $CaCl_2$ at 1.90 s.g; cement was displaced with a top plug and pressure held at surface until cement set off - no float equipment was used. Cement was displaced to surface.

A 311 mm hole was drilled from 11.24 metres to 151.5 metres with a gel /caustic mud system without any problems. 244 mm 70 Kg/m N.80 BTC casing was run to 150.5m and cemented with 287 sacks of class A cement neat at 1.90 sg. The cement was displaced with water and the plug was bumped with 3500 kpa with cement returns to surface. Conductor pipe was cut and laid out and a weld on bradenhead installed. BOP's were nippled up and blind rams, pipe rams, hydril, choke manifold and all valves including choke and kill were pressure tested to 7000 kpa.

A 216 mm drilling assembly was made up and the float collar, shoe and 2m of raw formation were drilled. The mud was circulated until even mud weight all round and a formation integrity test was conducted to an equivalent mud weight of 1.80 sg. Drilling then continued without problem, a bit trip was made at 702m and a slight amount of scrubbing was noted. After making up a new bit and running in the hole a minor mud ring was circulated out of the hole. Drilling continued to TD at 934m without incident. A wiper trip was conducted at TD and the hole was circulated clean prior to Electric Logging. Logging commenced and on the first run the tool hung up at 160m in sticky clays. A bit trip was made to 161m and the hole was circulated and reamed over the zone. Logging then was attempted again. The logging tool hung up at 702m. A bit trip was made to TD with the section around 702m being washed and reamed on the way in. Logs were again attempted and failed to pass at

152m. An overshot was run in the hole to 152m and a sample of the bridge was retrieved (comprising 50% sand 50% clay and some cement from the 244mm shoe). A bit trip was made to TD and the mud weight was increased with salt from 1.10 sg to 1.14 sg with the viscosity being increased to 66. Logging was then conducted without any further problems. A wiper trip was then made to TD in preparation for DST#1. Test tools were made up and run in the hole. DST#1 was conducted over the interval 867m to 895m.
On pulling out of the hole after the test it was found that the tools had parted at the safety joint. The fish was retrieved on the first run in the hole. Drill pipe and collars were then laid down and 2 cement plugs were run for the abandonment programme. The rig was released at 1400Hrs on 11th November 1990.

2.3.4 Casing Details

Hole Size	444m	311m
Casing Size	340mm	244mm
Weight(kg/m)	101	70
Grade	K55/BTC	N80/BTC
Float Collar	none	Insert Valve
Shoe	none	Guide
Shoe depth(m)	11.24	150.5
Cementation	Displacement	Displacement

340mm casing cemented with 35 sacks class A cement plug 2% $CaCl_2$ at 1.90 s.g. Displaced with water and pressure held at surface until cement set. No float equipment used. Displacement with top plug only. Returns to surface.

244mm casing cemented with 287 sacks class A cement neat at 1.90 s.g. 1.5 cubic metres fresh water preflush pumped ahead. Float equipment consisted of guide shoe and float collar positioned 1 joint above guide shoe. Displacement was with water using a top plug only and the plug was bumped with 3500 kpa and held for 2 minutes to check integrity of casing and float equipment. Full mud returns were recorded at surface.

2.3.5 Drilling Fluid

444mm Hole: Drilled to 11.24m using gel/caustic spud mud.

311mm Hole: Drilled to 151.5m using a gel/polymer mud system. No problems were encountered during the drilling of this section.

216mm Hole: Drilled to 934m using using a gel/polymer mud system. No problems were encountered during the drilling of this section. However at T.D. during the electric logging, logging tools hung up at 160m and at

702m. A bit trip was made and the hole and mud conditioned and the mud weight was raised from 1.10 sg to 1.14 sg with salt. Thereafter logging continued without problems.

Average mud properties were:

Hole size	444m	311mm	216mm
Weight	1.02	1.10	1.10
Viscosity	45	45	45
PV/YP	-	15/20	14/20
pH	-	9.0	9.5
W/loss	-	N/C	7.0
Solids	-	-	10
MBT	-	-	10

2.3.6 Water Supply

Pumped locally under agreement with local landowner.

2.3.7 Bit Record

Bit	Size	Type	Jets	In	Out	M	Hrs	Condition
RR1	444mm	DSJ	Open	0	12	12	8	6/6/IN
2	311mm	S13GJ	3 x 16	12	151.5	139.5	10	1/1/IN
3	216mm	S31GJ	3 x 11	151.5	702	551.5	44	2/2/IN
RR4	216mm	S31GJ	3 x 11	702	934	232	26.5	6/3/IN

Total Rotating Hours = 88.5 or 3.7 days

2.3.8 Fishing

During DST#1 while pulling out of the hole, the tool string parted at the safety joint. The fish was retrieved on the first run in the hole.

2.3.9 Plug and Abandonment

Plug#1	Class A neat @ 1.90 sg 800 - 740m
Plug#2	Class A neat @ 1.90 sg 180 - 120m

2.4 FORMATION SAMPLING AND TESTING

2.4.1 Cuttings

Cutting samples were collected at 10 metre intervals to 700 metres and at 5 metre intervals from 700 metres to T.D. (934 metres).

Sample Distribution:
Three sets of bagged, washed and air dried samples were distributed as follows: One set for the Victorian DITR Core Lab, one set for the operator, Mosaic Oil N.L., and the third set was retained by the operator as a spare set.

2.4.2 Cores

No conventional coring operations were performed.

2.4.3 Tests

One Drill Stem Test was performed over the interval 867 metres to 895 metres (a sand at the base of the Traralgon Formation). There was an initial strong blow dying after 9 minutes. Mud reached the surface and died. 4 barrels of mud and 30 barrels of water were recovered. See Appendix III for details.

2.4.4 DST Water Samples Analyses

A full pipe of fluid was recovered after DST#1. Five water samples at regular intervals were collected and later analysed by Amdel to determine concentrations of benzene, toluene and other hydrocarbons. No significant hydrocarbons beyond those associated with diesel which had contaminated the mud system and the invasion zone of the producing reservoir. See Appendix IV for details.

2.5 LOGGING AND SURVEYS

2.5.1 Mudlogging

A standard Halliburton Geodata skid-mounted unit was used to provide penetration rate, continuous mud gas monitoring, intermittent mud and cuttings gas analysis, pump rate and mud volume data. A hot wire gas detector and F.I.D. chromatograph was in operation from the surface casing shoe to TD. The mud log, including sample description, ROP, gas data and engineering data was drawn from surface to TD (see Enclosure 1).

2.5.2 Ditch Cuttings

Samples were collected at 10 m intervals to 700 metres and at 5 metre intervals from that depth to TD.
Sample log checks, using carbide gas were conducted every 100m.

2.5.3 Wireline Logging

Wireline logging was performed by BPB Wireline Services. Two suites comprising Dual Laterolog/MLL/Sonic/Gamma Ray and Density Neutron/Gamma Ray/Caliper were run.
On the first run the tool hung up at 160m in sticky clays. A bit trip was made to 161m and the hole was circulated and reamed over the zone. Logging then was attempted again. The logging test hung up at 702m. A bit trip was made to TD with the section around 702m being washed and reamed on the way in. Logs were again attempted and failed to pass at 152m. An overshot was run in the hole to 152m and a sample of the bridge was retrieved (comprising 50% sand 50% clay and some cement from the 244mm shoe). A bit trip was made to TD and the mud weight was increased with salt from 1.10 sg to 1.14 sg with the viscosity being increased to 66. Logging was then conducted without any further problems.

Copies of the logs are included in Enclosure 3.

2.5.4 Deviation Surveys

Depth	Angle
40m	$1/2^0$
90m	$1/4^0$
140m	0^0
232m	0^0
347m	0^0
490m	$1/4^0$
690m	$1/4^0$
930m	$1/2^0$

2.5.5 Velocity Survey

A velocity survey was conducted by Velocity Data Pty.Ltd., the results of which are contained in Appendix V.

AVON—1

TIME - DEPTH CHART

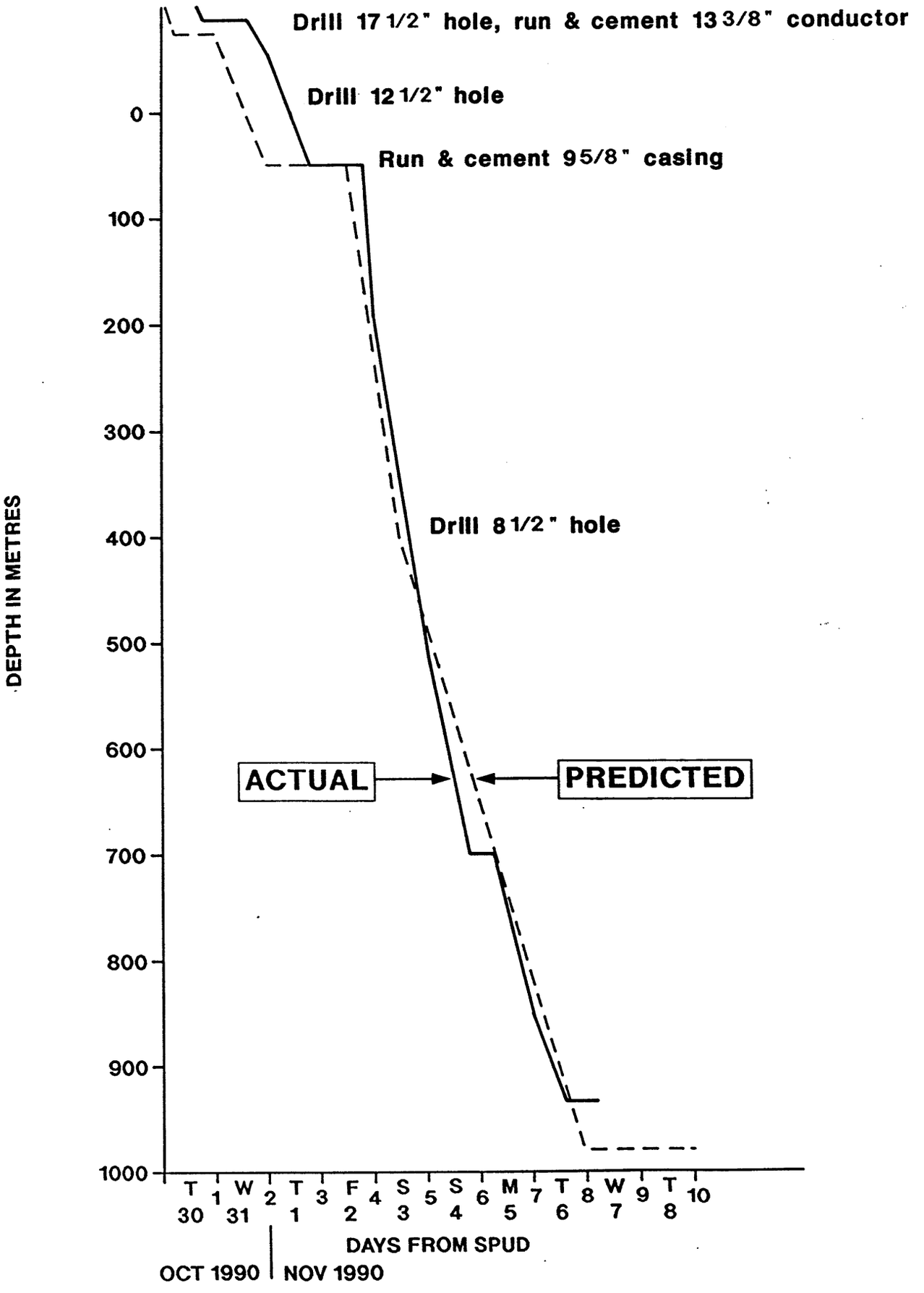

FIGURE 3

3 RESULTS OF DRILLING

3.1 STRATIGRAPHY

The following table compares predicted to actual formation tops:

Formation Top	Prognosed KB Depth(m) (KB=9m ASL)	Actual KB Depth (m)	Thickness (m)
Sale Group	0	0	224
Seaspray Group	130	224	66
Gippsland Limestone	190	290	320
Lakes Entrance Fm.	645	610	125
Shoreline Barrier Sand	785	735	40
Traralgon Formation	827	775	129
Strzelecki Formation	960	904	30+
T.D.	980	934	

3.2 LITHOLOGICAL DESCRIPTIONS

Formation Descriptions From Drill Cuttings:

Sale Group - surface to 224m

(0-12m No samples from 17-1/2" conductor hole)

SAND: clear, white, yellow, occasionally pink quartz grains, medium to coarse grained occasionally gravel, poorly sorted, angular to sub-angular occasionally rounded, with occasional lithic fragments of siltstone and fine sandstone.

CLAY: light grey to off white, very soft and occasionally dispersive, as matrix to sand.

SANDSTONE: off white, light grey, hard, very fine to fine, rounded to sub-rounded, siliceous cement, poor visible porosity.

MINOR COAL: black, occasionally dark brown, firm, occasionally argillaceous.

Seaspray group - 224m to 290m

MARL: light to medium grey, soft and sticky to firm occasionally moderately hard, abundant fossil fragments including gastropods, bivalves, foraminifera and bryozoa. Occasional quartz sand grains. Grading

into/interbedded with CALCARENITE: medium grey, very firm to hard, silt to very fine to fine, occasional quartz sand grains.

Gippsland Limestone - 290m-610m

CALCARENITE: light grey to grey, also white, brown, soft to hard often firm, silt to very fine to fine becoming generally coarser with depth, angular to sub-angular, trace of off white to light grey dispersive clay matrix, visible porosity from poor to good. Traces of PYRITE and GLAUCONITE towards base. Occasional COQUINA off white to buff, coarse fossil fragments, visible porosity excellent.

Lakes Entrance Formation - 610m to 730m

CLAYSTONE: light grey to grey, greenish grey, soft to very soft occasionally dispersive, occasionally vuggy, occasional fossil fragments, occasional fine to medium SAND and SILT, traces glauconite. Interbedded towards base with MARL: grey, very soft to soft, occasionally dispersive with suspended fine grains of quartz, glauconite, fossil fragments and pyrite. Also towards base, Sand clear, white, unconsolidated quartz grains, angular to sub-rounded, coarse to medium grained, poorly sorted, traces mica, pyrite, glauconite. Also CALCARENITE, brown, grey/green, firm, angular, fine to silt, poorly sorted, glauconitic, argillaceous matrix.

Giffard Member - 730m to 735m

GLAUCONITIC SANDSTONE: green, brown, firm to hard, fine to medium grained, angular poorly sorted, calcareous argillaceous matrix, poor visible porosity. Abundant crystalline pyrite.

Latrobe Equivalent Barrier Bar Sand - 735 to 775m

SAND: clear, translucent, white, unconsolidated, medium to coarse becoming very coarse towards base, sub-angular to sub-rounded quartz, abundant pyrite and glauconite, visible porosity at top to excellent at base. Interbedded at top with SANDSTONE: brown, green, firm to hard, fine to medium grained, angular, poorly sorted, argillaceous matrix, poor visible porosity.

Traralgon Formation - 775m to 904m

Top marked by COAL: black, brownish black, brown, soft to friable, occasionally sub-fissile, generally hackly fracture, occasionally grading into SILTSTONE: brown to dark brown, soft to firm, hackly fracture, carbonaceous non-calcareous, Trace pyrite. Often massive coals, up to 40m thick.

SAND: white, translucent, clear, unconsolidated, medium to very coarse, sub angular, occasionally sub-rounded, occasional glauconite, coarse, well-sorted, and rounded, visible porosity moderate to poor. Trace light grey, very soft clay matrix in parts.

Strzelecki Formation - 904m to 934+m

CLAYSTONE: light grey/green, very soft, occasionally dispersive, slightly calcareous, occasionally fine sand, traces coal and glauconite. Visible porosity nil to trace.

AVON—1

DIAGRAMMATIC GEOLOGICAL SUMMARY

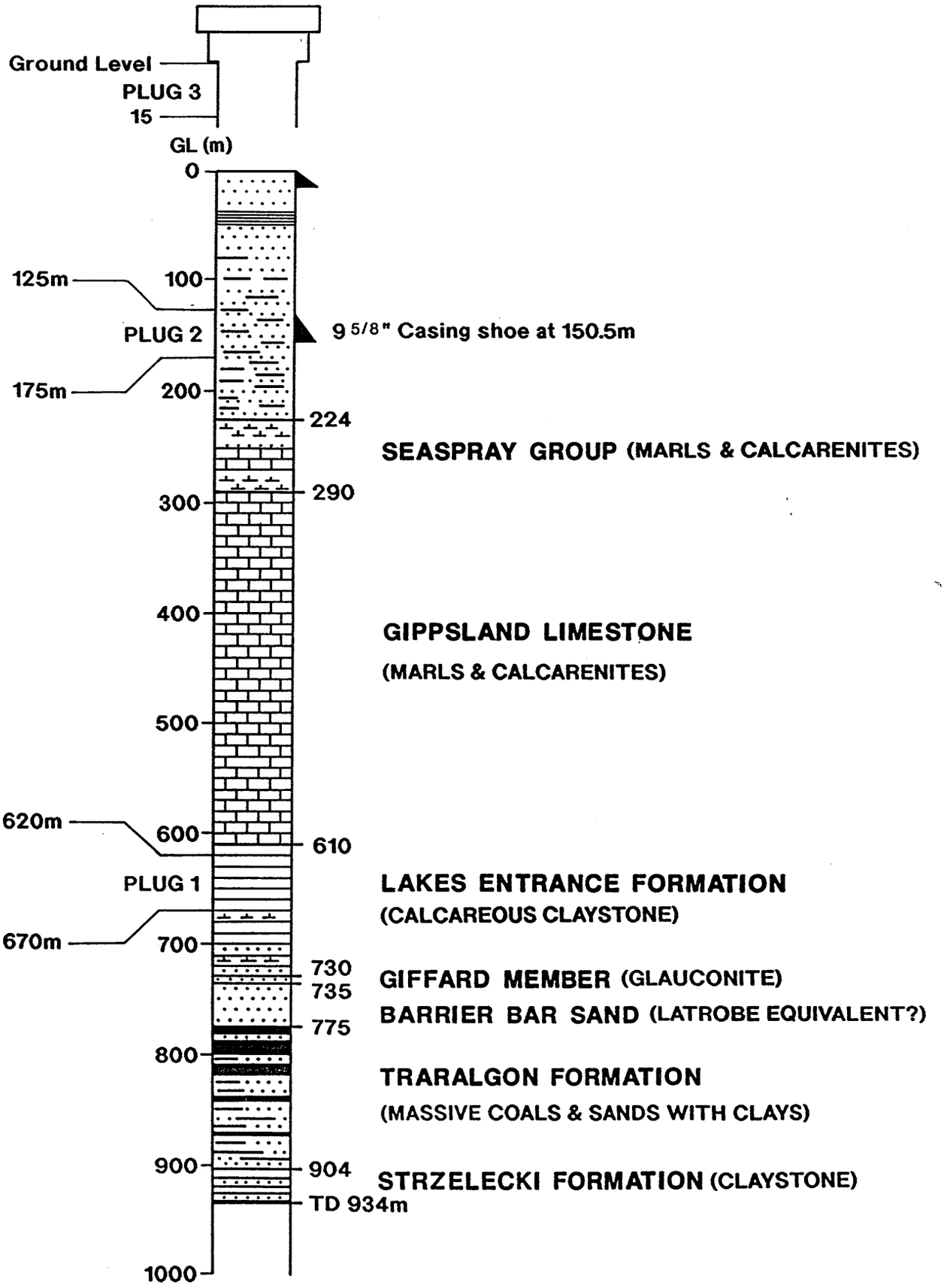

FIGURE 4

3.3 HYDROCARBONS

3.3.1 Mud Gas Readings

No significant gas was seen in the mud until top of the Latrobe Equivalent Barrier Bar sand at 735m. Background gas levels averaged 6ppm throughout this interval to 775m, with a peak at 748m of 138ppm. Chromatographic analysis of the total gas from this peak revealed that it was composed of mostly methane with traces of ethane.
Average background levels of total gas rose to 20ppm throughout the coal-rich Traralgon Formation. Two significant peaks of gas rose were seen while drilling this formation, one at 810m of 120ppm, and a second at 845m of 72ppm. Both peaks comprised methane and traces only of ethane. No heavier alkanes than ethane in trace concentrations were identified in Avon-1 suggesting that the mud gas was derived from the thick coals in the Traralgon Formation.

3.3.2 Sample Fluorescence

No fluorescence was noted in samples during drilling.

4. GEOLOGY

4.1 REGIONAL GEOLOGY AND EXPLORATION HISTORY

Introduction

PEP 107 is situated in the northeast flank of the Gippsland Basin, which is a lightly explored onshore part of the basin. The major oil and gas fields of the basin are all offshore. Exploration onshore so far has discovered the residual oil accumulation at Lakes Entrance and a few minor hydrocarbon indications in onshore wells.

Geologically, the permit occupies part of the northern onshore margin of the Gippsland Basin, and is close to the largest oil-field production infrastructure in Australia. The sedimentary sequence in PEP 107 contains sandstone reservoirs and overlying mudstone seals, equivalent to those in the offshore petroleum fields. It is unlikely that the sequence contains a substantial volume of thermally mature source rock. Potential traps are related to fault-induced reversals in the regional southerly dip and to stratigraphic wedge-out traps in depositional embayments created by north-south trending structures in the Palaeozoic basement.

The petroleum play concept for the permit area implies some migration of hydrocarbons from the established source to the east, and traps that are sheltered from the potentially adverse effects of groundwater movement.

Previous Exploration

Hydrocarbons were first discovered in the Gippsland Basin in 1924 when a water well at Lake Entrance encountered oil and gas shows. In 1942, the Commonwealth and Victorian Governments, in an effort to supplement a wartime oil shortage, sank a shaft (Lakes Entrance oil shaft) near this well and produced 8,000 barrels of 15.7 degree API gravity oil up to 1956, when the field was abandoned. A total of 64 shallow wells were drilled in the Lakes Entrance area by that time. Elsewhere in the onshore Gippsland Basin, 30 wells were drilled from 1925 to 1941. Geophysical exploration commenced with a regional gravity survey in 1949. In 1951 the Bureau of Mineral Resources (BMR) carried out an extensive gravity survey and an airborne magnetometer survey.

In 1960 BHP Ltd was granted an exploration permit covering much of the offshore area of the Gippsland Basin. Esso Australia Ltd joined BHP in 1964 and drilled the Barracouta-1 gas discovery in 1965. Since then over 100 exploration and appraisal wells have been drilled in the basin resulting in the discovery of approximately 3.5 billion barrels of

recoverable oil and 8 trillion cubic feet of recoverable gas. Exploration in the offshore areas is actively continuing today.

In PEP 107, historically all seismic exploration activities have been directed to the northeastern portion of the permit. During the 1960s, several dynamite seismic surveys were recorded in the region. In 1983 and 1984 the Bengworden Seismic Survey, also in this area, acquired some 239 kilometres of seismic data. The seismic survey area was considered prospective because of the inference of oil migration from the depocentre of the Gippsland Basin towards the basin margin from the evidence presented by the Lakes Entrance accumulation. The presence of good reservoirs in the objective Latrobe Group/Traralgon Formation enhanced the prospectivity of the area.

A Vibroseis survey of 37 kilometres was recorded in 1985. The Wrixondale-1 well was drilled in late 1985 after interpretation of the seismic delineated the prospect. The well encountered good sands within the Traralgon Formation, which proved to be water saturated at this location.

Recent Exploration

1) A geological study by the present Joint Venture in 1986 identified a potential stratigraphic trap in the central northern part of the permit.
2) A regional geochemical survey in November 1987 indicated that the area had anomalously high soil-gas concentrations. Other anomalous areas identified for further investigation were detected in the southwestern part of the permit.
3) A seismic survey of 57 kilometres was conducted in March 1988 to investigate the geochemical anomalies and has provided good correlation with seismic anomalies which are potential hydrocarbon traps.
4) A second geochemical survey in late 1988 further confirmed the presence of these geochemical anomalies.
5)A detail seismic survey of 25km was conducted in 1989 to further delineate the southwestern potential trap.
6) Also, seismic inversion was done on some existing lines to assist in more clearly defining the traps.

4.2. AVON-1 PROSPECT

Mapping of the Top Latrobe Group surface in the offshore Gippsland Basin has shown the surface to be time variant, from Late Paleocene in the east to Late Eocene in the west. The Latrobe Group offshore is overlain by the marine Cobia Group of Late Eocene-Early Oligocene age. Although the onshore Traralgon Formation is time equivalent to the Cobia Group, it is a facies equivalent to the Upper Latrobe Group, comprising braided stream and coastal plain deposits with abundant

coals, overlain by the marine Lakes Entrance Formation which resulted from a major marine transgression during the Late Oligocene.

These complexities in the stratigraphic nomenclature should not be allowed to confuse what is essentially a very straightforward 'theme' in the depositional history of the basin and that is the gradual, but persistent marine invasion of a coastal plain which was starved of sediments. As a result, barrier sand systems of Late Cretaceous to Middle Miocene age have been identified across the basin, marking the progressive transgression of the shoreline.

R. Blake identified three stacked coastal barrier complexes within the Uppermost Latrobe Group in Vic P17, south of PEP 107, and close to the present coastline. A similar complex has been mapped in southwestern PEP 107 and may, in fact, be the northern extension of the youngest and most westerly sequence mapped by Blake.

Geological Model

Reservoir: Barrier and/or shore face sands within the Uppermost Traralgon Formation.
Top seal: Lakes Entrance Shale.
Trap: Regional dip to the south.
Shaling out to the west(lower coastal plain)
Shaling out to the east(offshore marine)

Maximum thickness- 40 metres
Maximum area of closure- 24 square kilometres

Seismic Identification of Model Components:

Lower Coastal Plain - High amplitude,laterally continuous reflectors indicative of coals. Abrupt terminations reflect transition to barrier system seaward, fluvial system landward.

Barrier Complex - Little internal reflector character (bland), low frequency, mound-like geometry.

Offshore Marine Evidence of progradation (downlapping on seismic). Multiple reflectors (interbedding).

A reduction in sediment supply or a rise in sea level can induce the landward migration of a barrier system. Most present day barrier islands migrated landwards across the continental shelves during the major Holocene transgression. During landward migration the barrier island sands are reworked by shoreface erosion and produce a thin transgressive sand trailing behind the retreating barrier. In the case

published by Blake, three mature barrier systems were 'drowned' in place by rising sea level and may represent still stand development of very large barrier islands. The barrier system interpreted for PEP 107 is thinner than those in VIC P17 and is only a remnant of the original barrier island, probably extensively eroded by shore face currents and wave action. The shoreline complex was finally 'drowned' in the early Oligocene and the marine Lakes Entrance Formation was deposited over the onshore portion of the Gippsland Basin.

Post-mortem

The Barrier Bar Sand was encountered as predicted, but no hydrocarbons were encountered.. It would appear that the sand does not shale out to the north-east as forecast. This was always an accepted risk in the prospect. A significant geochemical hydrocarbon anomaly coincided with the mapped prospect. A possible explanation for this anomaly would be the thick coaly sequence (over 40m) encountered in the Traralgon Formation.

APPENDIX I

DRILLING PLANT DETAILS

DRILLCORP LTD.

RIG 24

INVENTORY

TYPE:	Franks Cabot Explorer, Carrier Mounted
CAPACITY:	5,000' - 1,600m
DERRICK:	Cabot 96' - 150' 96 x 150,000 lb capacity 4 leg telescoping
DRAWWORKS:	Cabot Split Drawworks Drilling/Tripping Drums Model 1D58/150-2 2 Detroit Diesel GM6V-71N Belt compound
SUB-STRUCTURE:	1 Piece 8' x 14'
MUD PUMPS:	1) Ideco MM450 Duplex 7-1/4" x 12" Powered by 2 6-71GM
ROTARY TABLE:	Gardner-Denver No. RT-18, 18" opening
SWIVEL:	Brewster Model 40S
BLOCKS:	McKissick Model 83A
HOOK:	Web Wilson Hydra Hook
CROWN:	Cabot 152,000 lb capacity with 5 x 25" Sheeves
B.O.P.:	Shaffer Type 'E' Double Gate, 10" x 3,000 psi 1) Annular Shaffer 10" x 3,000 psi 2) Annular Regan 9" x 3,000 psi
B.O.P. CONTROL:	Koomey 80 Gallon, 8 Bottles, with 2 air Pumps
CHOKE MANIFOLD:	Demco 2 x 2" x 3,000 psi, 1/fixed, 1/adjustable
DRILLING LINE:	2,500' x 7/8" OD 6 x 19 E.I.P.S. APISQA

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DrillCorp Rig 24 Inventory (cont):

MUD CONTROL EQUIPMENT:	2-FMC 5 x 4 Shakers 1-Warman 2 x 10" Desander Unit 1-Warman 4 x 6" Desilter Unit
KELLY:	ONCOR 4-1/4" Hex 40"
MUD TANKS:	Shaker tank = 250 BBLS Suction tank= 150 BBLS
WATER TANK: & DOG HOUSE	200 BBLS
FUEL TANKS:	400 gallons, 300 gallons
SUCTION TANK:	150 barrels (optional)
GENERATORS:	1 Rolls Royce with 130 KVA Unit 50 HZ
POWER TONGS:	Farr Hydraulic Tubing Tongs, complete with inserts for 2.3/8inch, 2.7/8inch, 3.1/2inch, 4.1/2inch, 5.1/2inch tubing and drillpipe.
LUBRICATOR:	Guiberson Hydraulic Wireline Stripper with 2.3/8inch, 2.7/8inch, 3.1/2inch JV rubbers.
DEGASSER:	13ft x 1ft6inch Baffled Poor Boy Degasser.
HANDLING TOOLS:	Slips and elevator for 2.3/8inch, 2.7/8inch, 3.1/2inch tubing. Air Slips Cavin model 'C' for 2.3/8inch, 2.7/8inch 3.1/2inch tubing.
MISCELLANEOUS:	2.7/8inch stabbing valves with 2.3/8inch X/O. 2 sets pipe racks. Swabbing equipment includes Mandrel and sinker bars.
TUBULARS AVAILABLE:	4,000ft x 4.1/2inch pipe grade 'E' 16.60 lb/ft
DRILL COLLARS AVAILABLE:	22 x 6.1/4inch 2.3/4inch x 30ft 4.1/2inch XH conn.

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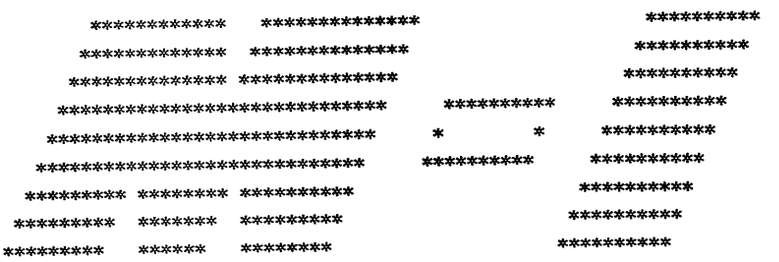
DrillCorp Rig 24 Inventory (cont):

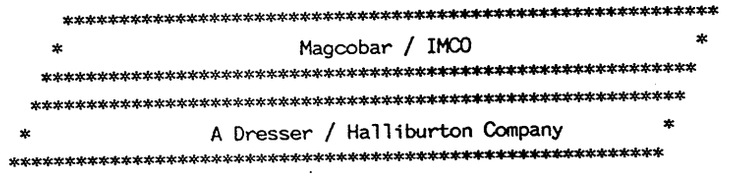
ITEMS AVAILABLE ON REQUEST

DRILL COLLARS	15 x 4.3/4inch x 30ft with 3.1/2inch IF conn.
FISHING EQUIPMENT	Wide range available.
TUBULARS	1. 6014ft (194 JTS 2.7/8inch OD x 10.4lb/ft range 2 grade 'E' drillpipe with 4.1/8inch OF tool having 2.7/8inch IF pin x box connections. 2. 12 JTS 4.1/8inch OD range 2 slick drillcollars with 2.7/8inch IF pin x box connections. 3. 12 JTS 3.1/2inch OD range 2 slick drillcollars with 2.3/8inch IF pin x box connections.
TUBULARS	DP 4,200FT X 3.1/2inch GR 'E' premium 13.3lb/ft 3.1/2inch IF connection DC 22 x 6.1/4inch zip with 4inch IF connection.
MUD TANKS	Shaker tank - 250BBLS
WATER TANK	200BBLS
FUEL TANK	1,000 gallons
GENERATORS	1 Rolls Royce with 130 KVA unit 50HZ.

APPENDIX II

MUD
AND
DRILL
RECAP





M-I Drilling Fluids Company

FIELD DATA COMMUNICATIONS COMPUTERIZED WELL RECAP

Operator :	MOSAIC OIL	Spud Date :	10/31/90
Well Name :	AVON-1	TD Date :	11/10/90
Field/Area :	PCP-107	Loc Code :	
Description :	WILDCAT	DistEngr :	BURKE P
Location :	GIPPSLAND	SalesEngr :	JONES B
Warehouse :	WELSHPOOL	SalesEngr :	
Contractor :	DRILCORP	Well ID :	Y0002

Comments: WILDCAT EXPLORATION IN THE GIPPSLAND BASIN.

Type	Size in	Depth m	TVD m	Hole in	MaxMW #/ft³3	Mud 1	Mud 2	Drilling Problem	Days	Cost $
FullSt	13.375	12	12	17.500						
FullSt	9.625	150	150	12.250	9.10	FW SPUD MUD		NO PROBLEMS	2	1978
OpHole	8.500	934	934	8.500	9.50	FW-GEL MUD		NO PROBLEMS	5	4887

Total Depth: 934 m TVD: 934 m Water Depth: ft Drilling Days: 11 Total Mud Cost: $ 6865

M-I Drilling Fluids Company - FDC CASING INTERVAL ASSISTANCE Y0002

Type	Size	CsgTD	CsgTVD	Hole	Bit	MudWt	Mud	Daily Cost	Calc Cost	Diff	Day	Date	TD	TVD
F	13.375	12	12		12.250	8.90	202	1246	1246	0	1	10/31/90	40	40
F	9.625	150	150		8.500	9.10	202	731	732	0	2	11/01/90	152	152
F	9.625	150	150		8.500	9.00	202	807	807	0	3	11/02/90	179	179
F	9.625	150	150		8.500	9.20	202	790	790	0	4	11/03/90	509	509
F	9.625	150	150		8.500	9.10	202	1164	1164	0	5	11/04/90	702	702
F	9.625	150	150		8.500	9.00	202	1150	1150	0	6	11/05/90	855	855
F	9.625	150	150		8.500	9.20	202	419	419	0	7	11/06/90	934	934
F	9.625	150	150		8.500	9.20	202	558	558	0	8	11/07/90	934	934
F	9.625	150	150		8.500	9.40	233		0	0	9	11/08/90	934	934
F	9.625	150	150		8.500	9.40	233		0	0	10	11/09/90	934	934
F	9.625	150	150		8.500		233		0	0	11	11/10/90	934	934

Operator : MOSAIC OIL | Contractor : DRILCORP | Legal Description : WILDCAT
Well Name : AVON-1 | Field/Block : PCP-107 | County, State : GIPPSLAND

Date: 10/31/90 Depth: 40 Day: 1

Ran the 13.375" conductor to 12m and cemented with 30 sacks of cement,CaCl2 was used in the cement mix water.
Drilled the mousehole and rathole while waiting on cement.
Picked up a 12.25" bit and bottom hole assembly, ran into the hole and drilled out the cement and 13.375" shoe.
Drilled 12.25" hole from 12m-40m,drilling ahead.

Date: 11/01/90 Depth: 152 Day: 2

Continued drilling to 152m, circulated 20min prior to pulling out of the hole to the 13.375" shoe.
Ran back into the hole, no fill, circulated a further 30min, pulled out of the hole.
Picked up and ran 9.625" casing, landing the shoe at 150m, circulated 1.5 time the casing volume and then cemented the casing displacing the cement with 37bbl of mud.

Date: 11/02/90 Depth: 179 Day: 3

Finished nippling up and testing the B.O.P.
Made up an 8.5" drilling assembly and ran into the hole, tagged cement at 137m
Drilled out the cement and 9.625" shoe track, drilled new hole from 152m-155m, leak off test to 160psi,mud weight equivalent of 15.0ppg.
Drilling ahead at 179m.

Date: 11/03/90 Depth: 509 Day: 4

Drilling continued from 179m-509m. Dilution rate was about 10 bbls per hour which maintained the Mud weight at 9.2ppg.
Drilling continued.

Date: 11/04/90 Depth: 702 Day: 5

Drilled 8.5" hole from 509m-702m, circulated bottoms up and pulled out of the hole.
The mud weight was lowered to 9.0ppg as per company instructions.

Date: 11/05/90 Depth: 855 Day: 6

Contiued to pull out of the hole, ran back into the hole with the same bit, drilled from 702m-755m,circulate out a drilling break.
Drilled 8.5" hole from 750m-855m, drilling ahead.

Date: 11/06/90 Depth: 934 Day: 7

Continued drilling to 934m, T.D., circulated bottoms up and then made a 13 stand wiper trip.
Ran back to bottom and circulated the hole clean, pulled out of the hole for logging run.

Operator : MOSAIC OIL | Contractor : DRILCORP | Legal Description : WILDCAT
Well Name : AVON-1 | Field/Block : PCP-107 | County, State : GIPPSLAND

Date: 11/07/90 Depth: 934 Day: 8

The logging tool was run into the hole but got hung up at 160m. It was laid down and a bit was run to 160m to work through the tight spot. The logging tool then hung up at 702m so the bit was run to bottom and the hole was conditioned.
The logging tool was then unable to pass 154m so an 8.5" overshot was run to 154m and rotated around whilst circulating. A lot of sand was seen at the shakers. The bit was then run to bottom and the mud conditioned.

Date: 11/08/90 Depth: 934 Day: 9

Finish conditioning the mud to 9.5ppg, rig up and run B.P.B.
logs.
Ran DLL/ATS/MRS/GR,CNR/GR and velocity survey, rigged down logging tools.
Picked up 8.5" bit and bottom hole assembly and ran into the hole, lowered viscosity by dilution in preparation for a drill stem test.

Date: 11/09/90 Depth: 934 Day: 10

The D.S.T. tool was made up and ran into the hole.

Set packer from 867m-895m, open tool for 5min, close tool for 30min, open tool for 90min, close tool for 90min, maximum surface pressure 19psi, water flow.
Pull out of the hole, lost 3 drill collars and part of the D.S.T.tool.

Date: 11/10/90 Depth: 934 Day: 11

Run back into the hole, screw into fish, pull out of the hole.
Plug and abandon Avon-1.

Engineer released November 10-90.

PRODUCT SUMMARY

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT | Well : Y0002
Well Name : AVON-1 | Field/Block : PCP-107 | Location : GIPPSLAND

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 10/31/90 - 11/01/90, 40 - 152 m

WATER-BASE PROD	SIZE	AMOUNT	UNIT COST	PROD COST
Calcium Chloride	25KG SK	7	$ 19.49	$ 136.43
Caustic Soda	25KG SK	3	$ 24.75	$ 74.25
IMCO Sapp	25KG SK	2	$ 59.44	$ 118.88
M-I GEL	100# SK	65	$ 19.30	$ 1254.50
PAC	50# SK	4	$ 98.50	$ 394.00

*** INTERVAL WATER-BASE MUD COST TOTAL = $ 1,978.06

*** TOTAL MUD COST FOR INTERVAL = $ 1,978.06

PRODUCT SUMMARY

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT | Well : Y0002

Well Name : AVON-1 | Field/Block : PCP-107 | Location : GIPPSLAND

BREAKDOWN OF COST BY PRODUCT GROUP 10/31/90 - 11/01/90, 40 - 152

WATER BASE MUD PRODUCTS

		Cost	% Total
GEL	.....$	1,254.50	63.4
POLYMERS	.....$	394.00	19.9
MISCELLANEOUS	.....$	329.56	16.7
WATER BASE MUD TOTAL COST	.....$	1,978.06	100.0

PRODUCT SUMMARY

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT | Well : Y0002
Well Name : AVON-1 | Field/Block : PCP-107 | Location : GIPPSLAND

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 11/02/90 - 11/10/90, 179 m - 934 m

WATER-BASE PROD	SIZE	AMOUNT	UNIT COST	PROD COST
Caustic Soda	25KG SK	21	$ 24.75	$ 519.75
Common Salt	50KG SK	40	$ 10.50	$ 420.00
IMCO Sapp	25KG SK	8	$ 59.44	$ 475.52
PAC	50# SK	16	$ 98.50	$ 1576.00
POLY SAL	25KG SK	44	$ 43.09	$ 1895.96

*** INTERVAL WATER-BASE MUD COST TOTAL = $ 4,887.23

*** TOTAL MUD COST FOR INTERVAL = $ 4,887.23

PRODUCT SUMMARY

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT | Well : Y0002
Well Name : AVON-1 | Field/Block : PCP-107 | Location : GIPPSLAND

BREAKDOWN OF COST BY PRODUCT GROUP 11/02/90 - 11/10/90, 179 m - 934 m:

WATER BASE MUD PRODUCTS

		Cost	% Total
POLYMERS	.....$	3,471.96	71.0
MISCELLANEOUS	.....$	1,415.27	29.0
WATER BASE MUD TOTAL COST	.....$	4,887.23	100.0

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT | Well : Y0002
Well Name : AVON-1 | Field/Block : PCP-107 | Location : GIPPSLAND

SUMMARY OF PRODUCT USAGE FOR INTERVAL FROM 10/31/90 - 11/10/90, 40 m - 934 m

WATER-BASE PROD	SIZE	AMOUNT	UNIT COST	PROD COST
Calcium Chloride	25KG SK	7	$ 19.49	$ 136.43
Caustic Soda	25KG SK	24	$ 24.75	$ 594.00
Common Salt	50KG SK	40	$ 10.50	$ 420.00
IMCO Sapp	25KG SK	10	$ 59.44	$ 594.40
M-I GEL	100# SK	65	$ 19.30	$ 1254.50
PAC	50# SK	20	$ 98.50	$ 1970.00
POLY SAL	25KG SK	44	$ 43.09	$ 1895.96

*** INTERVAL WATER-BASE MUD COST TOTAL = $ 6,865.29

*** TOTAL MUD COST FOR INTERVAL = $ 6,865.29

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT | Well : Y0002
Well Name : AVON-1 | Field/Block : PCP-107 | Location : GIPPSLAND

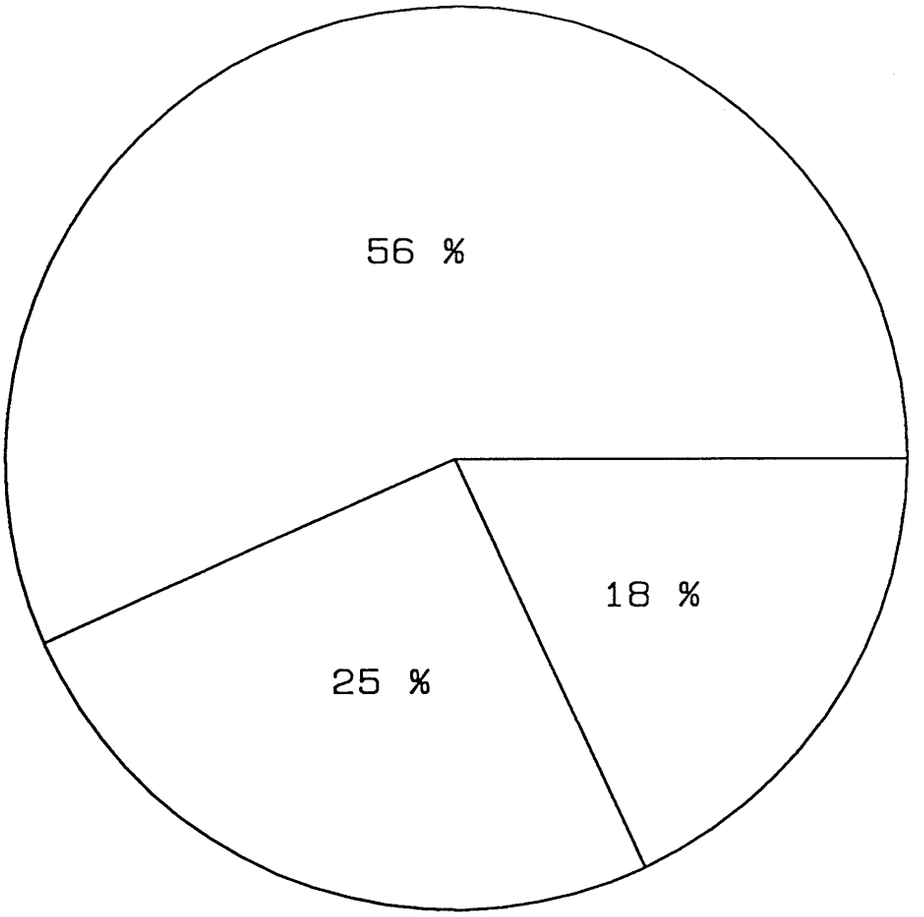
BREAKDOWN OF COST BY PRODUCT GROUP 10/31/90 - 11/10/90, 40 m - 934 m

WATER BASE MUD PRODUCTS

		Cost	% Total
GEL	.....$	1,254.50	18.3
POLYMERS	.....$	3,865.96	56.3
MISCELLANEOUS	.....$	1,744.83	25.4
WATER BASE MUD TOTAL COST	.....$	6,865.29	100.0

Magcobar/IMCO	Operator : MOSAIC OIL Well Name : AVON-1 Legal : WILDCAT Field/Block : PCP-107 Location : GIPPSLAND	COST ANALYSIS

BREAKDOWN OF COST BY PRODUCT GROUP 10/31/90 - 11/10/90 40m - 934m



WATER BASE MUD PRODUCTS

POLYMERS	56 %
MISCELLANEOUS	25 %
GEL	18 %

PRODUCT SUMMARY

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT | Well : Y0002

Well Name : AVON-1 | Field/Block : PCP-107 | Location : GIPPSLAND

BREAKDOWN OF PRODUCT USAGE BY GROUP 10/31/90 - 11/10/90, 40 m - 934 m

WATER BASE MUD

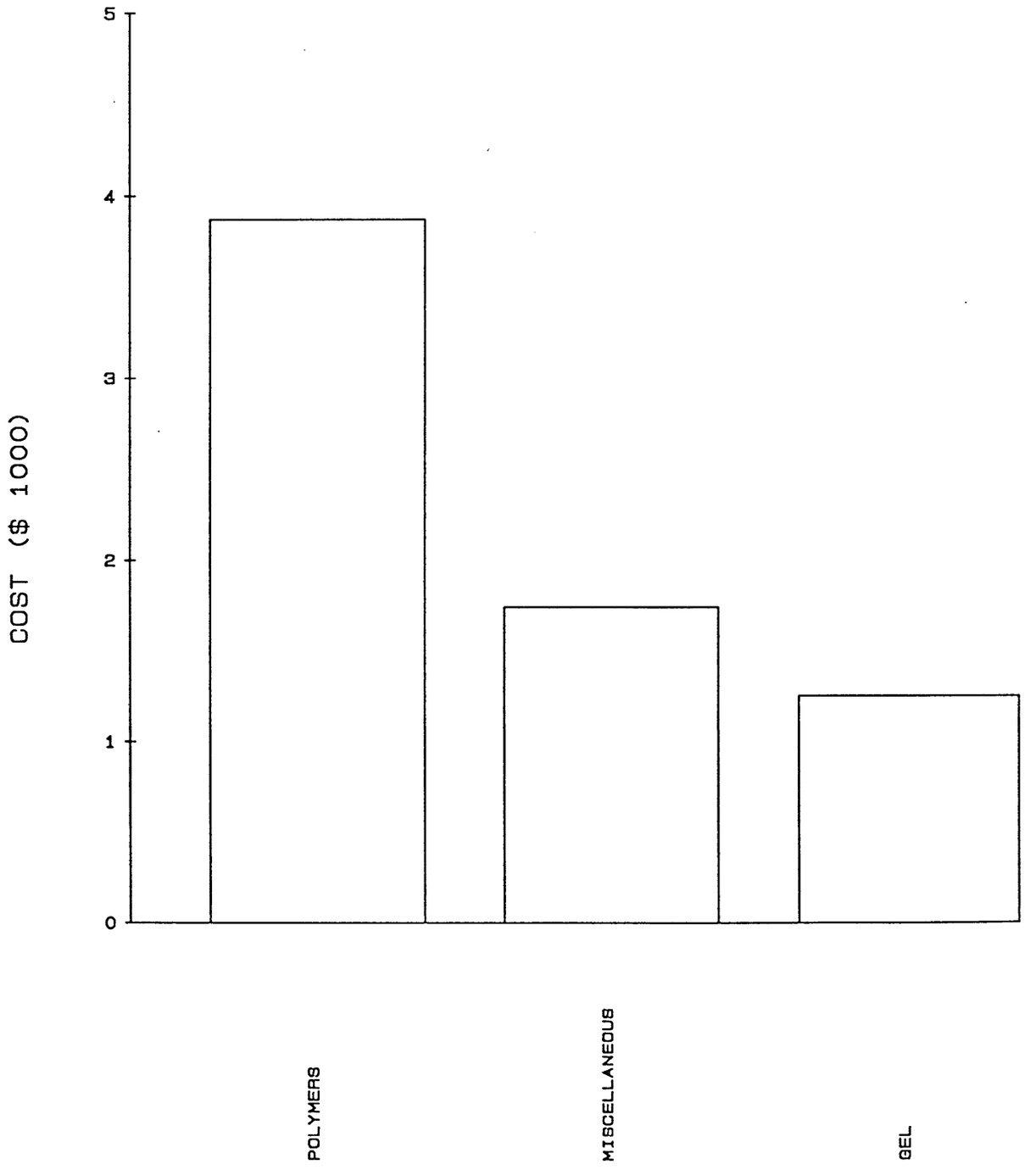
PRODUCT CATEGORY	PRODUCTS USED			
GEL				
	M-I GEL			
POLYMERS				
	PAC	POLY SAL		
MISCELLANEOUS				
	Calcium Chloride	Caustic Soda	Common Salt	IMCO Sapp

Operator : MOSAIC OIL
Well Name : AVON-1
Legal : WILDCAT
Field/Block : PCP-107
Location : GIPPSLAND

COST ANALYSIS

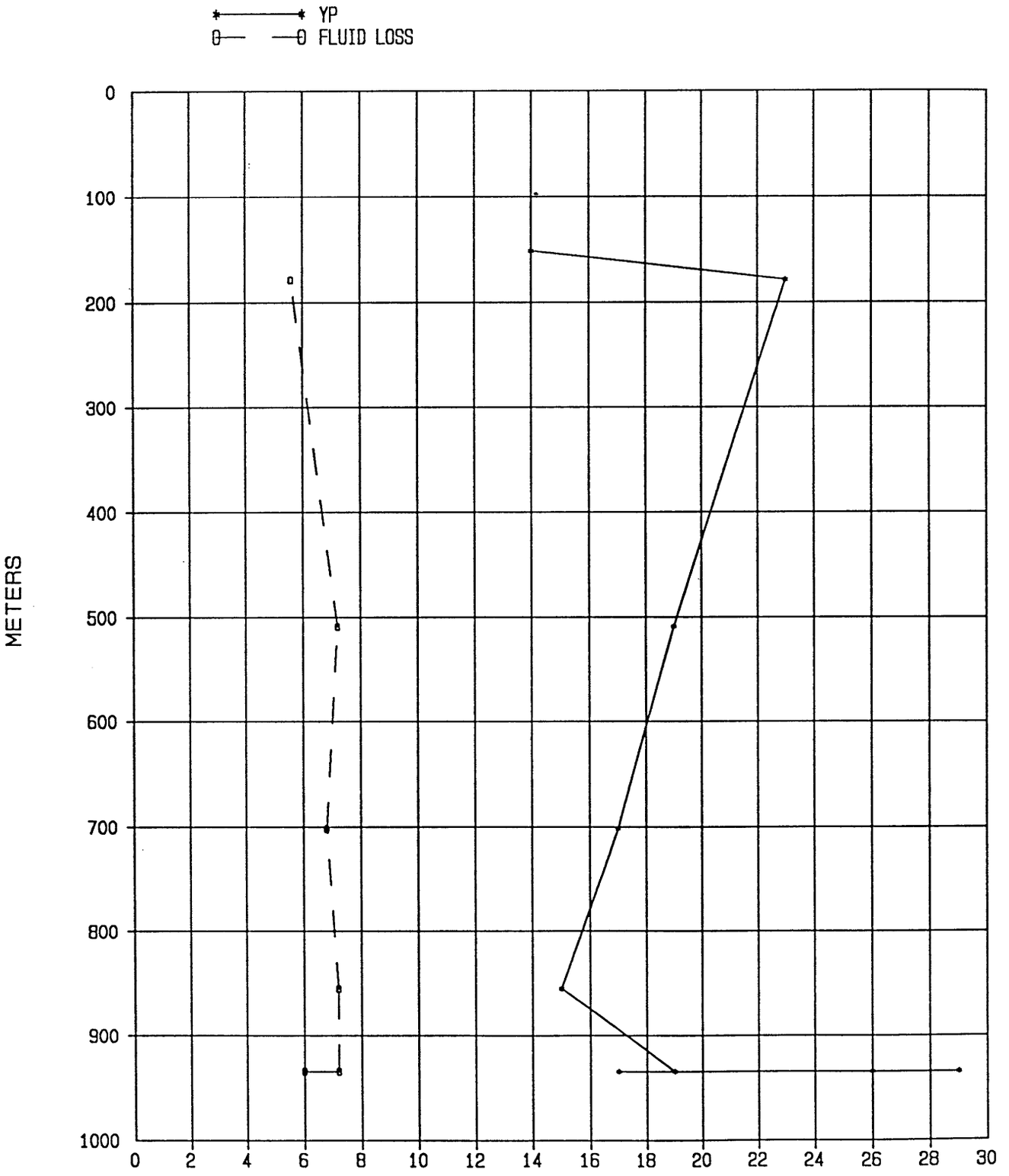
BREAKDOWN OF COST BY PRODUCT GROUP 10/31/90 - 11/10/90 40 m - 934 m

WATER BASE MUD PRODUCTS



Operator : MOSAIC OIL
Well Name : AVON-1
Legal : WILDCAT
Field/Block : PCP-107
County/State : GIPPSLAND

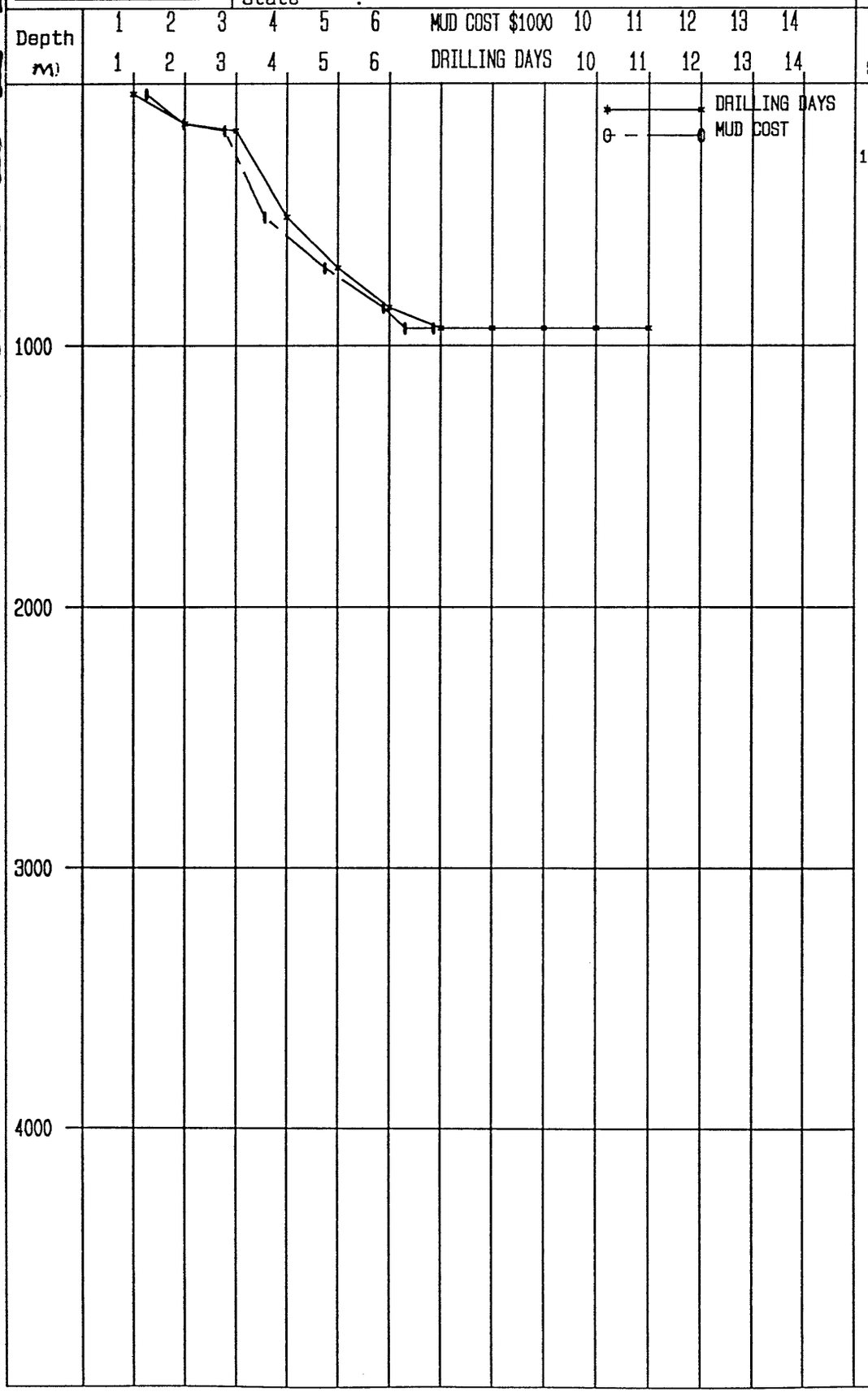
DRILLING FLUID PARAMETERS



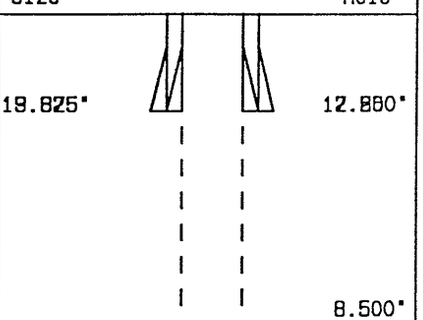
Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT
Well Name : AVON-1 | Field/Area : PCP-107 | Location : GIPPSLAND

*Date	10/31/90	11/01/90	11/02/90	11/03/90	11/04/90	11/05/90	11/06/90	11/07/90	11/08/90
*Depth M	40	152	179	509	702	855	934	934	934
*Days Since Spud	1	2	3	4	5	6	7	8	9
*RHEOLOGICAL PROPERTIES									
Mud Weight -#/ft^3	8.90	9.10	9.00	9.20	9.10	9.00	9.20	9.20	9.40
Plastic Visc -cps	0	12	14	13	8	10	13	18	10
Yield Point -lb/100ft2	0	14	23	19	17	15	19	17	29
Zero Gel -lb/100ft2	0	0	0	2	2	2	2	2	2
n-factor	***	0.5475	0.4630	0.5194	0.4306	0.5208	0.5194	0.6280	0.3451
K -lb-sec^n/100ft2	***	0.8554	2.0621	1.1762	1.5683	0.8936	1.1762	0.6570	4.2999
*FLOW DATA									
Flow Rate -gpm	238	238	185	222	222	275	238	238	238
Min Flow Rate -gpm	***	***	***	***	***	***	***	***	***
Max Flow Rate -gpm	***	***	1780	1616	1341	1388	1616	1806	1675
Pump Pressure -psi	400	400	700	1400	1450	1150	1150	1150	1150
Pump -hhp	56	56	76	181	188	185	160	160	160
*PRESSURE LOSSES									
Drill String -psi	***	***	12	18	17	23	27	28	35
Bit -psi	20	20	50	70	70	110	80	80	90
Annulus -psi	***	***	3	10	11	12	15	14	24
Total System -psi	***	***	65	98	98	145	122	122	149
*BIT HYDRAULICS									
Nozzles -1/32 inch	16/16/16	16/16/16	11/11/11	11/11/11	11/11/11	11/11/11	11/11/11	11/11/11	11/11/11
Nozzles -1/32 inch	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Bit Pressure %	4	5	7	5	5	9	7	7	7
Bit -hhp	2	3	5	9	9	17	12	12	12
Bit HSI (Index)	0.00	0.00	0.10	0.20	0.20	0.30	0.20	0.20	0.20
Jet Velocity -fps	130	130	213	256	256	317	274	274	274
Impact Force -lbs	19	20	25	36	36	54	42	42	43
*DRILL COLLARS ANNULUS									
Velocity -fpm	***	***	137	164	164	203	176	176	176
Critical Vel -fpm	***	***	1315	1193	990	1025	1193	1334	1237
*DRILL PIPE ANNULUS									
Velocity -fpm	***	***	63	75	75	93	81	81	81
Critical Vel -fpm	***	***	1026	914	809	790	914	939	1053
*HOLE CLEANING									
Slip Velocity -fpm	***	***	107	116	132	151	116	126	54
Rising Velocity -fpm	***	***	-44	-41	-56	-58	-36	-46	27
Lifting Capacity -%	***	***	***	***	***	***	***	***	33
Cuttings Conc -%	***	***	***	***	***	***	***	***	***
Penetration Rate -fph	10.0	10.0	9.0	30.0	30.0	30.0	8.0	***	***
*CASING SHOE PRESSURES									
ECD -#/ft^3	***	***	11.24	10.33	10.22	10.01	10.36	10.20	11.40
ECD+Cuttings -#/ft^3	***	***	***	***	***	***	***	***	***
*TOTAL DEPTH PRESSURES									
ECD -#/ft^3	***	***	11.74	11.87	11.33	11.05	11.55	11.37	13.07
ECD+Cuttings -#/ft^3	***	***	***	***	***	***	***	***	***
*MUD VOLUMES									
Drill String -bbl	***	***	1	6	9	11	12	12	12
Annulus -bbl	***	***	9	26	36	44	48	48	48
Total Hole -bbl	***	***	10	32	45	55	60	60	60

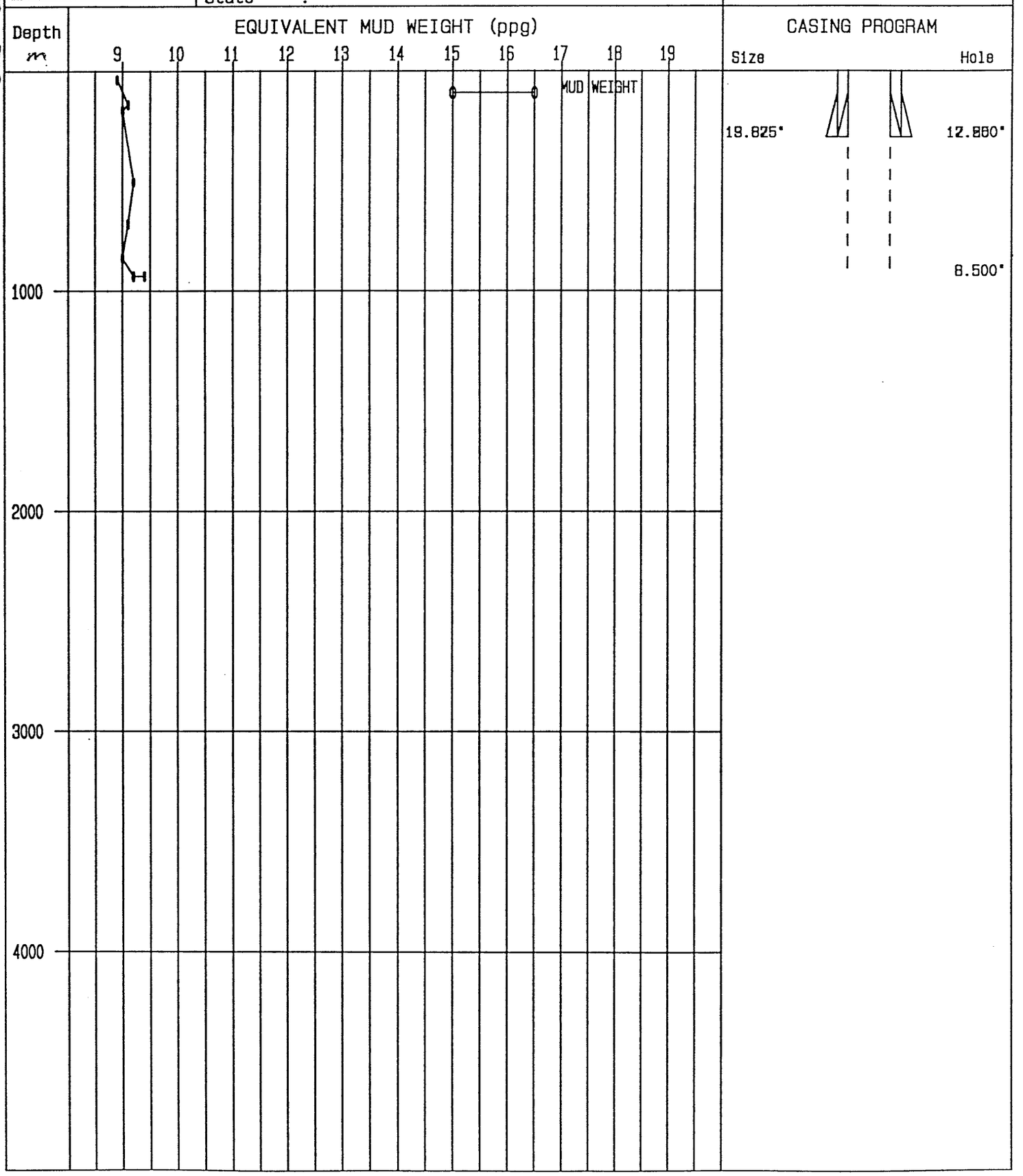
Operator : MOSAIC OIL		Depth: 934	WELL DATA
Well Name : AVON-1		TVD : 934	
Field : PCP-107		Date : 01/01/80	
Location : WILDCAT		By :	
County :		File : Y0002	
State :			



CASING PROGRAM



Operator : MOSAIC OIL		Depth: 934	PRESSURE PROFILE
Well Name : AVON-1		TVD : 934	
Field : PCP-107		Date : 01/01/80	
Location : WILDCAT		By :	
County :		File : Y0002	
State :			



M-I DRILLING FLUIDS RECAP

Operator : MOSAIC OIL
Well Name : AVON-1
Contractor: DRILCORP
Descript : WILDCAT
Location : GIPPSLAND
Spud Date : 10/31/90
Sales Engr: JONES B

Csg MD (ft)	O.D.(in)
12	13.375
150	9.625
934	8.500

Page : 1 - 1
Report Date: 01/01/80
API Well No: 24- -
Warehouse : WELSHPOOL
Dist Engr : BURKE P
Well No : Y0002

Mud Type : Water Base

Date (1990)	Depth m	Wt #/ft³	FV s/qt	PV	YP lb/100ft2	Gels 10s/10m		API F	HTHP	Sol %	Water %	Oil %	Sand %	MBT ppb	pH	Pm	Pf	Mf	Chlor mg/L	Ca mg/L	Cost ($) Daily	Cost ($) Cumul
10/31	40	8.90	40	-	-	-	-	-	-	-	-	-	-	-	9.0	-	-	-	-	-	1246	1246
TVD:	40		DRILLING	: Prehydrate gel in fresh water.																		
11/01	152	9.10	45	12	14	3	5	-	-	-	-	-	-	-	9.0	-	-	-	-	-	731	1977
TVD:	152		RUN CASING	: Mix Polypac to maintain viscosity S.A.P.P. used to reduce Calcium.																		
11/02	179	9.00	55	14	23	5	9	5.6	-	6	94	0	.25	10.0	11	8.0	8.0	1.0	700	80	807	2784
TVD:	179		DRILLING	: Commencing to add NaCl to the system to help inhbit the forthcoming clay interval.																		
11/03	509	9.20	46	13	19	10	15	7.2	-	10	90	0	.25	15.0	10.5	2.8	2.8	.76	600	40	790	3575
TVD:	509		DRILLING	: Added NaCl to inhibit the clay formation.																		
11/04	702	9.10	45	8	17	2	8	6.8	-	10	90	0	.25	12.5	9.5	1.3	1.3	.5	300	120	1164	4739
TVD:	702		TRIP	: Lowering mud weight from 9.2-9.0ppg as per company instructions.																		
11/05	855	9.00	43	10	15	1	3	7.2	-	10	90	0	0	12.5	10.0	1.4	1.4	.70	300	40	1150	5888
TVD:	855		DRILLING	: Dumped 20bbls, lost 40bbls while changing out shaker sreen.																		
11/06	934	9.20	45	13	19	2	7	7.2	-	10	90	0	0	10.0	9.5	1.2	1.2	.7	300	80	419	6307
TVD:	934		TRIP	: Drilled 8.5" hole to 934m T.D.																		
11/07	934	9.20	65	18	17	2	9	6.0	-	10	90	0	0	10.0	9.0	1.0	1.0	.68	300	80	558	6865
TVD:	934		CONDITION	: Conditioning mud weight to 9.5ppg.																		
11/08	934	9.40	48	10	29	8	18	7.2	-	12	88	0	-	10.0	10	2.8	2.8	1.1	20000	80		6865
TVD:	934		CONDITIONIG	: Condition mud for D.S.T.																		
11/09	934	9.40	54	14	26	10	22	7.2	-	12	88	0	-	10.0	10	2.8	2.8	1.1	20000	80		6865
TVD:	934		TESTING	: Flow test with D.S.T.																		

M-I DRILLING FLUIDS RECAP

Operator : MOSAIC OIL
Well Name : AVON-1

Report Date: 01/01/80

Daily Mud Additions

Date (1990)	Depth	Calcium Chlorde 25KG SK	Caustic Soda 25KG SK	M-I GEL 100# SK	Common Salt 50KG SK	PAC 50# SK	POLY SAL 25KG SK	IMCO Sapp 25KG SK
10/31	40	2	2	60	...	...	...	...
11/01	152	5	1	5	...	4	...	2
11/02	179	...	3	...	...	3	6	3
11/03	509	...	2	...	10	...	12	2
11/04	702	...	5	...	...	4	15	...
11/05	855	...	5	...	...	5	11	1
11/06	934	...	1	...	...	4	...	...
11/07	934	...	5	...	30	...	...	2
11/08	934	...	...	...	...	...	...	...
11/09	934	...	...	...	...	...	...	...

M-I DRILLING FLUIDS RECAP

Operator : MOSAIC OIL
Well Name : AVON-1
Contractor: DRILCORP
Descript : WILDCAT

Page : 2 - 1
Report Date: 01/01/80
API Well No: 24- -
Warehouse : WELSHPOOL

Mud Type : Water Base

Date (1990)	Depth M	Wt #/ft³	FV s/qt	PV F	YP lb/100ft2	Gels 10s/10m	API	HTHP	Sol %	Water %	Oil %	Sand %	MBT ppb	pH	Pm	Pf	Mf	Chlor mg/L	Ca mg/L	Cost ($) Daily	Cumul
11/10	934	-	-	-	-	- - -	-	-	-	-	-	-	-	-	-	-	-	-	-		
TVD:	934					: Fishing, plug and abandon.															

Daily Mud Additions

11/10 934

WATER BASE MUD REPORT — Day : 1

M-I Drilling Fluids Company — 24- - — Date : 10/31/90 — Depth : 40 m
FIELD DATA COMMUNICATIONS SYSTEM — Well No. : Y0002 — Spud : 10/31/90 — Activity : DRILLING

Operator : MOSAIC OIL — Contractor : DRILCORP — Description : WILDCAT
Well Name : AVON-1 — Field/Area : PCP-107 — Location : GIPPSLAND

Bit : 12.250 "
Jets:16/16/16/ / / 32nd"
Drill Pipe 1 OD : " 9 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 31 ft

CASING
Casing OD : 13.375" Liner OD : "
Casing ID : 12.615" Liner ID : "
Casing TD : 12 ft Liner TD : ft
Casing TVD : 12 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume :
Pits Volume :
Circulating Volume : 160
Mud : FW-GEL MUD

MUD PROPERTIES :		CIRCULATION DATA		SOLIDS ANALYSIS
Sample From	: FL 10:00	Flow Rate (gpm) :	238	
Flow Line Temp	: °F	DP Annular Vel (fpm) :		
Depth/TVD (ft)	: 40 /40	DC Annular Vel (fpm) :		
Mud Weight (#/ft³3)	: 8.90	DP Critical Vel (fpm) :		
Funnel Vis (s/qt)	: 40	DC Critical Vel (fpm) :		
Plastic Vis (cps)	:	Circ. Pressure (psi) :	400	
YP/Os Gel (lb/100ft2)	: /	Bottoms Up (min) :		
10s/10m Gel (lb/100ft2)	: /	Total Circ Time (min) :		
API F Loss (cc/30 min)	:			
HTHP F Loss (cc/30 min)	: @ °F	PRODUCTS USED LAST 24 HOURS		SOLIDS EQUIPMENT Size Hours
Cake API/HTHP (32nd")	:	Caustic Soda 25KG SK	2	Shaker #1: B100 10
Solids (%vol)	:	M-I GEL 100# SK	60	Shaker #2: S80 10
Oil/Water (%vol)	: /	Calcium Chloride 25KG SK	2	Shaker #3:
Sand (%vol)	:			Shaker #4:
MBT (ppb)	:			Mud Cleaner:
pH	: 9.0 @ °F			Centrifuge:
Alkal. Mud (Pm)	:			Desander: 10
Alkal. Filtrate (Pf/Mf)	: /			Desilter:
Chlorides (mg/l)	:			Degasser:
Hardness Ca	:			MUD VOLUME ACCT (bbl)
	:			Oil Added:
	:			Water Added:
	:			Mud Built: 250
n-Factor	:			Mud Received:
k-Factor (lb-sec/100ft2)	:			Mud Disposed: 90

REMARKS :
Prehydrate gel in fresh water.
Ran the 13.375" conductor to 12m and cemented with 30 sacks of cement,CaCl2 was used in the cement mix water.
Drilled the mousehole and rathole while waiting on cement.
Picked up a 12.25" bit and bottom hole assembly, ran into the hole and drilled out the cement and 13.375" shoe.
Drilled 12.25" hole from 12m-40m,drilling ahead.

M-I Sales Engineer : BURKE.P — Warehouse: WELSHPOOL — Daily Cost $: 1246 — Cumul Cost $: 1246

WATER BASE MUD REPORT

Day : 2

M-I Drilling Fluids Company — 24- - — Date : 11/01/90 — Depth : 152 ft
FIELD DATA COMMUNICATIONS SYSTEM — Well No. : Y0002 — Spud : 10/31/90 — Activity : RUN CASING

Operator : MOSAIC OIL — Contractor : DRILCORP — Description : WILDCAT
Well Name : AVON-1 — Field/Area : PCP-107 — Location : GIPPSLAND

Bit : 8.500 "
Jets:16/16/16/ / / 32nd"
Drill Pipe 1 OD : " 0 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 152 ft

CASING
Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume :
Pits Volume :
Circulating Volume : 163
Mud : FW-GEL MUD

MUD PROPERTIES :

Sample From	FL 12:00
Flow Line Temp	°F
Depth/TVD (ft)	152 /152
Mud Weight (#/ft^3)	9.10
Funnel Vis (s/qt)	45
Plastic Vis (cps)	12
YP/0s Gel (lb/100ft2)	14 /
10s/10m Gel (lb/100ft2)	3 / 5
API F Loss (cc/30 min)	
HTHP F Loss (cc/30 min)	@ °F
Cake API/HTHP (32nd")	
Solids (%vol)	
Oil/Water (%vol)	/
Sand (%vol)	
MBT (ppb)	
pH	9.0 @ °F
Alkal. Mud (Pm)	
Alkal. Filtrate (Pf/Mf)	/
Chlorides (mg/l)	
Hardness Ca	
n-Factor	0.547
k-Factor (lb-sec/100ft2)	0.85545

CIRCULATION DATA

Flow Rate (gpm)	238
DP Annular Vel (fpm)	
DC Annular Vel (fpm)	
DP Critical Vel (fpm)	
DC Critical Vel (fpm)	
Circ. Pressure (psi)	400
Bottoms Up (min)	
Total Circ Time (min)	

PRODUCTS USED LAST 24 HOURS

Caustic Soda	25KG	SK	1
M-I GEL	100#	SK	5
Calcium Chloride	25KG	SK	5
PAC	50#	SK	4
IMCO Sapp	25KG	SK	2

SOLIDS ANALYSIS

SOLIDS EQUIPMENT

	Size	Hours
Shaker #1:	B100	10
Shaker #2:	S80	10
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		10
Desilter:		
Degasser:		

MUD VOLUME ACCT (bbl)

Oil Added:	
Water Added:	
Mud Built:	100
Mud Received:	160
Mud Disposed:	97

REMARKS :
Mix Polypac to maintain viscosity S.A.P.P. used to reduce Calcium.
Continued drilling to 152m, circulated 20min prior to pulling out of the hole to the 13.375" shoe.
Ran back into the hole, no fill, circulated a further 30min, pulled out of the hole.
Picked up and ran 9.625" casing, landing the shoe at 150m, circulated 1.5 time the casing volume and then cemented the casing displacing the cement with 37bbl of mud.

M-I Sales Engineer : BURKE.P — Warehouse: WELSHPOOL — Daily Cost $: 731 — Cumul Cost $: 1977

WATER BASE MUD REPORT — Day : 3

M-I Drilling Fluids Company — 24- - — Date : 11/02/90 — Depth : 179

FIELD DATA COMMUNICATIONS SYSTEM — Well No. : Y0002 — Spud : 10/31/90 — Activity : DRILLING

Operator : MOSAIC OIL — Contractor : DRILCORP — Description : WILDCAT

Well Name : AVON-1 — Field/Area : PCP-107 — Location : GIPPSLAND

Bit : 8.500 "
Jets:11/11/11/ / / 32nd"
Drill Pipe 1 OD : 4.500 " 11 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 168 ft

CASING

Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)

Hole Volume : 10
Pits Volume : 155
Circulating Volume : 165
Mud : FW-GEL MUD

MUD PROPERTIES :

Sample From	: FL 23:30
Flow Line Temp	: °F
Depth/TVD (ft)	: 179 /179
Mud Weight (#/ft^3)	: 9.00
Funnel Vis (s/qt)	: 55
Plastic Vis (cps)	: 14
YP/Os Gel (lb/100ft2)	: 23 /
10s/10m Gel (lb/100ft2)	: 5 / 9
API F Loss (cc/30 min)	: 5.6
HTHP F Loss (cc/30 min)	: @ °F
Cake API/HTHP (32nd")	: 1
Solids (%vol)	: 6
Oil/Water (%vol)	: 0 /94
Sand (%vol)	: .25
MBT (ppb)	: 10.0
pH	: 11 @ °F
Alkal. Mud (Pm)	: 8.0
Alkal. Filtrate (Pf/Mf)	: 4.5 / 1.0
Chlorides (mg/l)	: 700
Hardness Ca	: 80
	:
	:
	:
	:
n-Factor	: 0.463
k-Factor (lb-sec/100ft2)	: 2.06214

CIRCULATION DATA

Flow Rate (gpm)	: 185
DP Annular Vel (fpm)	: 63
DC Annular Vel (fpm)	: 137
DP Critical Vel (fpm)	: 1026
DC Critical Vel (fpm)	: 1315
Circ. Pressure (psi)	: 700
Bottoms Up (min)	: 2.0
Total Circ Time (min)	: 37.5

PRODUCTS USED LAST 24 HOURS

Caustic Soda	25KG SK	3
POLY SAL	25KG SK	6
PAC	50# SK	3
IMCO Sapp	25KG SK	3

SOLIDS ANALYSIS

SOLIDS EQUIPMENT

	Size	Hours
Shaker #1:	B100	10
Shaker #2:	S80	10
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		10
Desilter:		
Degasser:		

MUD VOLUME ACCT (bbl)

Oil Added:	
Water Added:	
Mud Built:	2
Mud Received:	163
Mud Disposed:	

REMARKS :

Commencing to add NaCl to the system to help inhbit the forthcoming clay interval.
Finished nippling up and testing the B.O.P.
Made up an 8.5" drilling assembly and ran into the hole, tagged cement at 137m
Drilled out the cement and 9.625" shoe track, drilled new hole from 152m-155m,
leak off test to 160psi,mud weight equivalent of 15.0ppg.
Drilling ahead at 179m.

M-I Sales Engineer : JONES.B — Warehouse: WELSHPOOL — Daily Cost $: 807 — Cumul Cost $: 2784

WATER BASE MUD REPORT — Day : 4

M-I Drilling Fluids Company | 24- - | Date : 11/03/90 | Depth : 509
FIELD DATA COMMUNICATIONS SYSTEM | Well No. : Y0002 | Spud : 10/31/90 | Activity : DRILLING

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT
Well Name : AVON-1 | Field/Area : PCP-107 | Location : GIPPSLAND

Bit : 8.500 "
Jets:11/11/11/ / / 32nd"
Drill Pipe 1 OD : 4.500 " 341 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 168 ft

CASING
Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume : 32
Pits Volume : 127
Circulating Volume : 159
Mud : FW-GEL MUD

MUD PROPERTIES :

Sample From	: FL 23:30
Flow Line Temp	: 85 °F
Depth/TVD (ft)	: 509 /509
Mud Weight (#/ft^3)	: 9.20
Funnel Vis (s/qt)	: 46 @ 70 °F
Plastic Vis (cps)	: 13 @ 70 °F
YP/Os Gel (lb/100ft2)	: 19 / 2
10s/10m Gel (lb/100ft2)	: 10 / 15
API F Loss (cc/30 min)	: 7.2
HTHP F Loss (cc/30 min)	: @ °F
Cake API/HTHP (32nd")	: 2
Solids (%vol)	: 10
Oil/Water (%vol)	: 0 /90
Sand (%vol)	: .25
MBT (ppb)	: 15.0
pH	: 10.5@ °F
Alkal. Mud (Pm)	: 2.8
Alkal. Filtrate (Pf/Mf)	: .65 / .76
Chlorides (mg/l)	: 600
Hardness Ca	: 40
	:
	:
	:
	:
n-Factor	: 0.519
k-Factor (lb-sec/100ft2)	: 1.17620

CIRCULATION DATA

Flow Rate (gpm)	: 222
DP Annular Vel (fpm)	: 105
DC Annular Vel (fpm)	: 164
DP Critical Vel (fpm)	: 989
DC Critical Vel (fpm)	: 1193
Circ. Pressure (psi)	: 1400
Bottoms Up (min)	: 4.9
Total Circ Time (min)	: 30.1

PRODUCTS USED LAST 24 HOURS

Caustic Soda	25KG SK	2
POLY SAL	25KG SK	12
IMCO Sapp	25KG SK	2
Common Salt	50KG SK	10

SOLIDS ANALYSIS

SOLIDS EQUIPMENT

	Size	Hours
Shaker #1:	B100	24
Shaker #2:	S80	24
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		24
Desilter:		24
Degasser:		

MUD VOLUME ACCT (bbl)

Oil Added:	
Water Added:	
Mud Built:	240
Mud Received:	165
Mud Disposed:	240

REMARKS :
Added NaCl to inhibit the clay formation.
Drilling continued from 179m-509m. Dilution rate was about 10 bbls per hour
which maintained the Mud weight at 9.2ppg.
Drilling continued.

M-I Sales Engineer : JONES B | Warehouse: WELSHPOOL | Daily Cost $: 790 | Cumul Cost $: 3575

WATER BASE MUD REPORT

Day : 5

M-I Drilling Fluids Company — 24- - — Date : 11/04/90 — Depth : 702 ft
FIELD DATA COMMUNICATIONS SYSTEM — Well No. : Y0002 — Spud : 10/31/90 — Activity : TRIP

Operator : MOSAIC OIL — Contractor : DRILCORP — Description : WILDCAT
Well Name : AVON-1 — Field/Area : PCP-107 — Location : GIPPSLAND

Bit : 8.500 "
Jets:11/11/11/ / / 32nd"
Drill Pipe 1 OD : 4.500 " 534 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 168 ft

CASING
Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume : 45
Pits Volume : 166
Circulating Volume : 211
Mud : FW-GEL MUD

MUD PROPERTIES :

Sample From	FL 20:30
Flow Line Temp	75 °F
Depth/TVD (ft)	702 /702
Mud Weight (#/ft³)	9.10
Funnel Vis (s/qt)	45 @ 70 °F
Plastic Vis (cps)	8 @ 70 °F
YP/Os Gel (lb/100ft2)	17 / 2
10s/10m Gel (lb/100ft2)	2 / 8
API F Loss (cc/30 min)	6.8
HTHP F Loss (cc/30 min)	@ °F
Cake API/HTHP (32nd")	1
Solids (%vol)	10
Oil/Water (%vol)	0 /90
Sand (%vol)	.25
MBT (ppb)	12.5
pH	9.5 @ °F
Alkal. Mud (Pm)	1.3
Alkal. Filtrate (Pf/Mf)	.3 / .5
Chlorides (mg/l)	300
Hardness Ca	120
n-Factor	0.431
k-Factor (lb-sec/100ft2)	1.56829

CIRCULATION DATA

Flow Rate (gpm)	222
DP Annular Vel (fpm)	105
DC Annular Vel (fpm)	164
DP Critical Vel (fpm)	859
DC Critical Vel (fpm)	990
Circ. Pressure (psi)	1450
Bottoms Up (min)	6.8
Total Circ Time (min)	39.9

PRODUCTS USED LAST 24 HOURS

Caustic Soda	25KG	SK	5
POLY SAL	25KG	SK	15
PAC	50#	SK	4

SOLIDS ANALYSIS

SOLIDS EQUIPMENT

	Size	Hours
Shaker #1:	B100	22
Shaker #2:	S80	22
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		22
Desilter:		22
Degasser:		

MUD VOLUME ACCT (bbl)

Oil Added:	
Water Added:	
Mud Built:	92
Mud Received:	159
Mud Disposed:	40

REMARKS :
Lowering mud weight from 9.2-9.0ppg as per company instructions.
Drilled 8.5" hole from 509m-702m, circulated bottoms up and pulled out of the hole.
The mud weight was lowered to 9.0ppg as per company instructions.

M-I Sales Engineer : JONES B — Warehouse: WELSHPOOL — Daily Cost $: 1164 — Cumul Cost $: 4739

WATER BASE MUD REPORT

Day : 6

M-I Drilling Fluids Company — 24- - — Date : 11/05/90 — Depth : 855 ft
FIELD DATA COMMUNICATIONS SYSTEM — Well No. : Y0002 — Spud : 10/31/90 — Activity : DRILLING

Operator : MOSAIC OIL — Contractor : DRILCORP — Description : WILDCAT
Well Name : AVON-1 — Field/Area : PCP-107 — Location : GIPPSLAND

Bit : 8.500 "
Jets:11/11/11/ / / 32nd"
Drill Pipe 1 OD : 4.500 " 687 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 168 ft

CASING
Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume : 55
Pits Volume : 171
Circulating Volume : 226
Mud : FW-GEL MUD

MUD PROPERTIES :

Sample From	FL 23:30
Flow Line Temp	80 °F
Depth/TVD (ft)	855 /855
Mud Weight (#/ft^3)	9.00
Funnel Vis (s/qt)	43 @ 80 °F
Plastic Vis (cps)	10 @ 80 °F
YP/Os Gel (lb/100ft2)	15 / 2
10s/10m Gel (lb/100ft2)	1 / 3
API F Loss (cc/30 min)	7.2
HTHP F Loss (cc/30 min)	@ °F
Cake API/HTHP (32nd")	1
Solids (%vol)	10
Oil/Water (%vol)	0 /90
Sand (%vol)	0
MBT (ppb)	12.5
pH	10.0@ °F
Alkal. Mud (Pm)	1.4
Alkal. Filtrate (Pf/Mf)	.45 / .70
Chlorides (mg/l)	300
Hardness Ca	40
n-Factor	0.521
k-Factor (lb-sec/100ft2)	0.89359

CIRCULATION DATA

Flow Rate (gpm)	275
DP Annular Vel (fpm)	130
DC Annular Vel (fpm)	203
DP Critical Vel (fpm)	853
DC Critical Vel (fpm)	1025
Circ. Pressure (psi)	1150
Bottoms Up (min)	6.7
Total Circ Time (min)	34.5

PRODUCTS USED LAST 24 HOURS

Caustic Soda	25KG SK	5
POLY SAL	25KG SK	11
PAC	50# SK	5
IMCO Sapp	25KG SK	1

SOLIDS ANALYSIS

SOLIDS EQUIPMENT

	Size	Hours
Shaker #1:	B100	18
Shaker #2:	S80	18
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		18
Desilter:		18
Degasser:		

MUD VOLUME ACCT (bbl)

Oil Added:	
Water Added:	
Mud Built:	75
Mud Received:	211
Mud Disposed:	60

REMARKS :
Dumped 20bbls, lost 40bbls while changing out shaker sreen.
Contiued to pull out of the hole, ran back into the hole with the same bit,
drilled from 702m-755m,circulate out a drilling break.
Drilled 8.5" hole from 750m-855m, drilling ahead.

M-I Sales Engineer : JONES B — Warehouse: WELSHPOOL — Daily Cost $: 1150 — Cumul Cost $: 5888

WATER BASE MUD REPORT — Day : 7

M-I Drilling Fluids Company — 24- - — Date : 11/06/90 — Depth : 934

FIELD DATA COMMUNICATIONS SYSTEM — Well No. : Y0002 — Spud : 10/31/90 — Activity : TRIP

Operator : MOSAIC OIL — Contractor : DRILCORP — Description : WILDCAT

Well Name : AVON-1 — Field/Area : PCP-107 — Location : GIPPSLAND

Bit : 8.500 "

Jets:11/11/11/ / / 32nd"

Drill Pipe 1 OD : 4.500 " 766 ft

Drill Pipe 2 OD : " ft

Drill Collar OD : 6.250 " 168 ft

CASING

Casing OD : 9.625" Liner OD : "

Casing ID : 9.625 " Liner ID : "

Casing TD : 150 ft Liner TD : ft

Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)

Hole Volume : 60

Pits Volume : 187

Circulating Volume : 247

Mud : FW-GEL MUD

MUD PROPERTIES :

Sample From	FL 17:00
Flow Line Temp	70 °F
Depth/TVD (ft)	934 /934
Mud Weight (#/ft³3)	9.20
Funnel Vis (s/qt)	45 @ 70 °F
Plastic Vis (cps)	13 @ 70 °F
YP/Os Gel (lb/100ft2)	19 / 2
10s/10m Gel (lb/100ft2)	2 / 7
API F Loss (cc/30 min)	7.2
HTHP F Loss (cc/30 min)	@ °F
Cake API/HTHP (32nd")	1
Solids (%vol)	10
Oil/Water (%vol)	0 /90
Sand (%vol)	0
MBT (ppb)	10.0
pH	9.5 @ °F
Alkal. Mud (Pm)	1.2
Alkal. Filtrate (Pf/Mf)	.25 / .7
Chlorides (mg/l)	300
Hardness Ca	80
n-Factor	0.519
k-Factor (lb-sec/100ft2)	1.17620

CIRCULATION DATA

Flow Rate (gpm)	238
DP Annular Vel (fpm)	112
DC Annular Vel (fpm)	176
DP Critical Vel (fpm)	989
DC Critical Vel (fpm)	1193
Circ. Pressure (psi)	1150
Bottoms Up (min)	8.5
Total Circ Time (min)	43.6

PRODUCTS USED LAST 24 HOURS

Caustic Soda	25KG SK	1
PAC	50# SK	4

SOLIDS ANALYSIS

SOLIDS EQUIPMENT

	Size	Hours
Shaker #1:	B100	17
Shaker #2:	S80	17
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		17
Desilter:		14
Degasser:		

MUD VOLUME ACCT (bbl)

Oil Added:	
Water Added:	
Mud Built:	21
Mud Received:	226
Mud Disposed:	

REMARKS :

Drilled 8.5" hole to 934m T.D.

Continued drilling to 934m, T.D., circulated bottoms up and then made a 13 stand wiper trip.

Ran back to bottom and circulated the hole clean, pulled out of the hole for logging run.

M-I Sales Engineer : JONES B — Warehouse: WELSHPOOL — Daily Cost $: 419 — Cumul Cost $: 6307

WATER BASE MUD REPORT — Day : 8

M-I Drilling Fluids Company — 24- - — Date : 11/07/90 — Depth : 934 ftn
FIELD DATA COMMUNICATIONS SYSTEM — Well No. : Y0002 — Spud : 10/31/90 — Activity : CONDITION

Operator : MOSAIC OIL — Contractor : DRILCORP — Description : WILDCAT
Well Name : AVON-1 — Field/Area : PCP-107 — Location : GIPPSLAND

Bit : 8.500 "
Jets:11/11/11/ / / 32nd"
Drill Pipe 1 OD : 4.500 " 766 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 168 ft

CASING
Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume : 60
Pits Volume : 179
Circulating Volume : 239
Mud : FW-GEL MUD

MUD PROPERTIES :

Sample From	FL , 23:30
Flow Line Temp	75 °F
Depth/TVD (ft)	934 /934
Mud Weight (#/ft^3)	9.20
Funnel Vis (s/qt)	65 @ 75 °F
Plastic Vis (cps)	18 @ 75 °F
YP/Os Gel (lb/100ft2)	17 / 2
10s/10m Gel (lb/100ft2)	2 / 9
API F Loss (cc/30 min)	6.0
HTHP F Loss (cc/30 min)	@ °F
Cake API/HTHP (32nd")	1
Solids (%vol)	10
Oil/Water (%vol)	0 /90
Sand (%vol)	0
MBT (ppb)	10.0
pH	9.0 @ 70 °F
Alkal. Mud (Pm)	1.0
Alkal. Filtrate (Pf/Mf)	.16 / .68
Chlorides (mg/l)	300
Hardness Ca	80
n-Factor	0.628
k-Factor (lb-sec/100ft2)	0.65704

CIRCULATION DATA

Flow Rate (gpm)	238
DP Annular Vel (fpm)	112
DC Annular Vel (fpm)	176
DP Critical Vel (fpm)	1041
DC Critical Vel (fpm)	1334
Circ. Pressure (psi)	1150
Bottoms Up (min)	8.5
Total Circ Time (min)	42.2

PRODUCTS USED LAST 24 HOURS

Caustic Soda	25KG SK	5
IMCO Sapp	25KG SK	2
Common Salt	50KG SK	30

SOLIDS ANALYSIS

SOLIDS EQUIPMENT

	Size	Hours
Shaker #1:	B100	5
Shaker #2:	S80	5
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		5
Desilter:		
Degasser:		

MUD VOLUME ACCT (bbl)

Oil Added:	
Water Added:	
Mud Built:	
Mud Received:	247
Mud Disposed:	8

REMARKS :
Conditioning mud weight to 9.5ppg.
The logging tool was run into the hole but got hung up at 160m. It was laid down and a bit was run to 160m to work through the tight spot. The logging tool then hung up at 702m so the bit was run to bottom and the hole was conditioned.
The logging tool was then unable to pass 154m so an 8.5" overshot was run to 154m and rotated around whilst circulating. A lot of sand was seen at the shakers. The bit was then run to bottom and the mud conditioned.

M-I Sales Engineer : JONES B — Warehouse: WELSHPOOL — Daily Cost $: 558 — Cumul Cost $: 6865

WATER BASE MUD REPORT — Day : 9

M-I Drilling Fluids Company | 24- - | Date : 11/08/90 | Depth : 934 (M)
FIELD DATA COMMUNICATIONS SYSTEM | Well No. : Y0002 | Spud : 10/31/90 | Activity : CONDITIONIG

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT
Well Name : AVON-1 | Field/Area : PCP-107 | Location : GIPPSLAND

Bit : 8.500 "
Jets:11/11/11/ / / 32nd"
Drill Pipe 1 OD : 4.500 " 766 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 168 ft

CASING
Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume : 60
Pits Volume : 179
Circulating Volume : 239
Mud : SW BIOPOLYMER MUD

MUD PROPERTIES :

Sample From	FL 23:59
Flow Line Temp	90 °F
Depth/TVD (ft)	934 /934
Mud Weight (#/ft³)	9.40
Funnel Vis (s/qt)	48 @ 80 °F
Plastic Vis (cps)	10 @ 80 °F
YP/0s Gel (lb/100ft2)	29 / 2
10s/10m Gel (lb/100ft2)	8 / 18
API F Loss (cc/30 min)	7.2
HTHP F Loss (cc/30 min)	@ °F
Cake API/HTHP (32nd")	1
Solids (%vol)	12
Oil/Water (%vol)	0 /88
Sand (%vol)	
MBT (ppb)	10.0
pH	10 @ °F
Alkal. Mud (Pm)	2.8
Alkal. Filtrate (Pf/Mf)	.3 / 1.1
Chlorides (mg/l)	20000
Hardness Ca	80
n-Factor	0.345
k-Factor (lb-sec/100ft2)	4.29991

CIRCULATION DATA

Flow Rate (gpm)	238
DP Annular Vel (fpm)	112
DC Annular Vel (fpm)	176
DP Critical Vel (fpm)	1105
DC Critical Vel (fpm)	1237
Circ. Pressure (psi)	1150
Bottoms Up (min)	8.5
Total Circ Time (min)	42.2

PRODUCTS USED LAST 24 HOURS

SOLIDS ANALYSIS

SOLIDS EQUIPMENT	Size	Hours
Shaker #1:	B100	5
Shaker #2:	S80	5
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		5
Desilter:		
Degasser:		

MUD VOLUME ACCT (bbl)	
Oil Added:	
Water Added:	
Mud Built:	
Mud Received:	
Mud Disposed:	

REMARKS :
Condition mud for D.S.T.
Finish conditioning the mud to 9.5ppg, rig up and run B.P.B.
logs.
Ran DLL/ATS/MRS/GR,CNR/GR and velocity survey, rigged down logging tools.
Picked up 8.5" bit and bottom hole assembly and ran into the hole, lowered
viscosity by dilution in preparation for a drill stem test.

M-I Sales Engineer : JONES B | Warehouse: WELSHPOOL | Daily Cost $: 0 | Cumul Cost $: 6865

WATER BASE MUD REPORT

Day : 10

M-I Drilling Fluids Company — 24- - — Date : 11/09/90 — Depth : 934 m
FIELD DATA COMMUNICATIONS SYSTEM — Well No. : Y0002 — Spud : 10/31/90 — Activity : TESTING

Operator : MOSAIC OIL — Contractor : DRILCORP — Description : WILDCAT
Well Name : AVON-1 — Field/Area : PCP-107 — Location : GIPPSLAND

Bit : 8.500 "
Jets: / / / / / 32nd"
Drill Pipe 1 OD : 4.500 " 766 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 168 ft

CASING
Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume : 60
Pits Volume : 179
Circulating Volume : 239
Mud : SW BIOPOLYMER MUD

MUD PROPERTIES :

Sample From	PIT 23:30
Flow Line Temp	75 °F
Depth/TVD (ft)	934 /934
Mud Weight (#/ft^3)	9.40
Funnel Vis (s/qt)	54 @ 70 °F
Plastic Vis (cps)	14 @ 70 °F
YP/Os Gel (lb/100ft2)	26 /
10s/10m Gel (lb/100ft2)	10 / 22
API F Loss (cc/30 min)	7.2
HTHP F Loss (cc/30 min)	@ °F
Cake API/HTHP (32nd")	1
Solids (%vol)	12
Oil/Water (%vol)	0 /88
Sand (%vol)	
MBT (ppb)	10.0
pH	10 @ °F
Alkal. Mud (Pm)	2.8
Alkal. Filtrate (Pf/Mf)	.3 / 1.1
Chlorides (mg/l)	20000
Hardness Ca	80
n-Factor	0.433
k-Factor (lb-sec/100ft2)	2.68819

CIRCULATION DATA

Flow Rate	(gpm) :	
DP Annular Vel	(fpm) :	
DC Annular Vel	(fpm) :	
DP Critical Vel	(fpm) :	1129
DC Critical Vel	(fpm) :	1323
Circ. Pressure	(psi) :	
Bottoms Up	(min) :	
Total Circ Time	(min) :	

PRODUCTS USED LAST 24 HOURS

SOLIDS ANALYSIS

SOLIDS EQUIPMENT	Size	Hours
Shaker #1:	B100	2
Shaker #2:	S80	2
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		2
Desilter:		
Degasser:		

MUD VOLUME ACCT	(bbl)
Oil Added:	
Water Added:	
Mud Built:	
Mud Received:	
Mud Disposed:	

REMARKS :
Flow test with D.S.T.
The D.S.T. tool was made up and ran into the hole.
Set packer from 867m-895m, open tool for 5min, close tool for 30min, open tool for 90min, close tool for 90min, maximum surface pressure 19psi, water flow.
Pull out of the hole, lost 3 drill collars and part of the D.S.T.tool.

M-I Sales Engineer : JONES B — Warehouse: WELSHPOOL — Daily Cost $: 0 — Cumul Cost $: 6865

WATER BASE MUD REPORT — Day : 11

M-I Drilling Fluids Company | 24- - | Date : 11/10/90 | Depth : 934 m
FIELD DATA COMMUNICATIONS SYSTEM | Well No. : Y0002 | Spud : 10/31/90 | Activity :

Operator : MOSAIC OIL | Contractor : DRILCORP | Description : WILDCAT
Well Name : AVON-1 | Field/Area : PCP-107 | Location : GIPPSLAND

Bit : 8.500 "
Jets: / / / / / 32nd"
Drill Pipe 1 OD : 4.500 " 766 ft
Drill Pipe 2 OD : " ft
Drill Collar OD : 6.250 " 168 ft

CASING
Casing OD : 9.625" Liner OD : "
Casing ID : 9.625 " Liner ID : "
Casing TD : 150 ft Liner TD : ft
Casing TVD : 150 ft Liner TVD : ft

MUD VOLUME (bbl)
Hole Volume : 60
Pits Volume : -60
Circulating Volume :
Mud : SW BIOPOLYMER MUD

MUD PROPERTIES :

Sample From	:	:
Flow Line Temp	:	°F
Depth/TVD (ft)	:	934 /934
Mud Weight (#/ft^3)	:	
Funnel Vis (s/qt)	:	
Plastic Vis (cps)	:	
YP/Os Gel (lb/100ft2)	:	/
10s/10m Gel (lb/100ft2)	:	/
API F Loss (cc/30 min)	:	
HTHP F Loss (cc/30 min)	:	@ °F
Cake API/HTHP (32nd")	:	
Solids (%vol)	:	
Oil/Water (%vol)	:	/
Sand (%vol)	:	
MBT (ppb)	:	
pH	:	
Alkal. Mud (Pm)	:	
Alkal. Filtrate (Pf/Mf)	:	/
Chlorides (mg/l)	:	
Hardness Ca	:	
	:	
	:	
	:	
	:	
n-Factor	:	
k-Factor (lb-sec/100ft2)	:	

CIRCULATION DATA

Flow Rate	(gpm)	:
DP Annular Vel	(fpm)	:
DC Annular Vel	(fpm)	:
DP Critical Vel	(fpm)	:
DC Critical Vel	(fpm)	:
Circ. Pressure	(psi)	:
Bottoms Up	(min)	:
Total Circ Time	(min)	:

PRODUCTS USED LAST 24 HOURS

SOLIDS ANALYSIS

SOLIDS EQUIPMENT	Size	Hours
Shaker #1:	B100	0
Shaker #2:	S80	0
Shaker #3:		
Shaker #4:		
Mud Cleaner:		
Centrifuge:		
Desander:		0
Desilter:		
Degasser:		

MUD VOLUME ACCT	(bbl)
Oil Added:	
Water Added:	
Mud Built:	
Mud Received:	
Mud Disposed:	

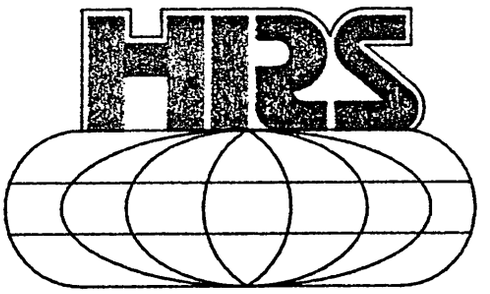
REMARKS :
Fishing, plug and abandon.
Run back into the hole, screw into fish, pull out of the hole.
Plug and abandon Avon-1.
Engineer released November 10-90.

M-I Sales Engineer : JONES B | Warehouse: WELSHPOOL | Daily Cost $: 0 | Cumul Cost $: 0

APPENDIX III

DRILL STEM TEST REPORT

FORMATION TEST REPORT



HALLIBURTON
RESERVOIR SERVICES

A Halliburton Company

Customer: MOSAIC OIL
Well Description: AVON #1
Field Name: GIPPSLAND BASIN

TEST NO: DST #1
TEST DATE: 09-11-90
TICKET NO: 000380

HALLIBURTON
SERVICES

REPORT TICKET NO: 000380
BT-GAUGE TICKET NO: 000380
DATE: 9-11-90
HALLIBURTON CAMP: ADELAIDE
TESTER: T.Burke
WITNESS:

DRILLING CONTRACTOR: DRILLCORP
LEGAL LOCATION: 38 2' 55.0"S
147 8' 13.0"E

OPERATOR: MOSAIC OIL
LEASE NAME: AVON
WELL NO: 1
TEST NO: 1
TESTED INTERVAL: 2846.00 - 2936.00 ft

FIELD AREA: GIPPSLAND BASIN
COUNTY/LSD:
STATE/PROVINCE: VICTORIA
COUNTRY: AUSTRALIA

TABLE OF CONTENTS

Date: 9-11-90 Ticket No: 000380 Page No: 1.1

SUMMARY OF TEST

Lease Owner: MOSAIC OIL

Lease Name: AVON

Well No.: 1

Test No.: 1

County/LSD:

State/Province: VICTORIA

Country: AUSTRALIA

Formation Tested: TARALGON

Hole Temp: 128.00 F

Total Depth: 3058.00 ft

Net Pay: 66.00 ft

Gross Tested Interval: 2846.00 - 2936.00 ft

Perforated Interval (ft):

RECOVERY:

4bbl. DRILLING MUD
30bbl. FORMATION WATER

REMARKS:

ALL DOWNHOLE PRESSURES ARE IN ABSOLUTE PSIA.

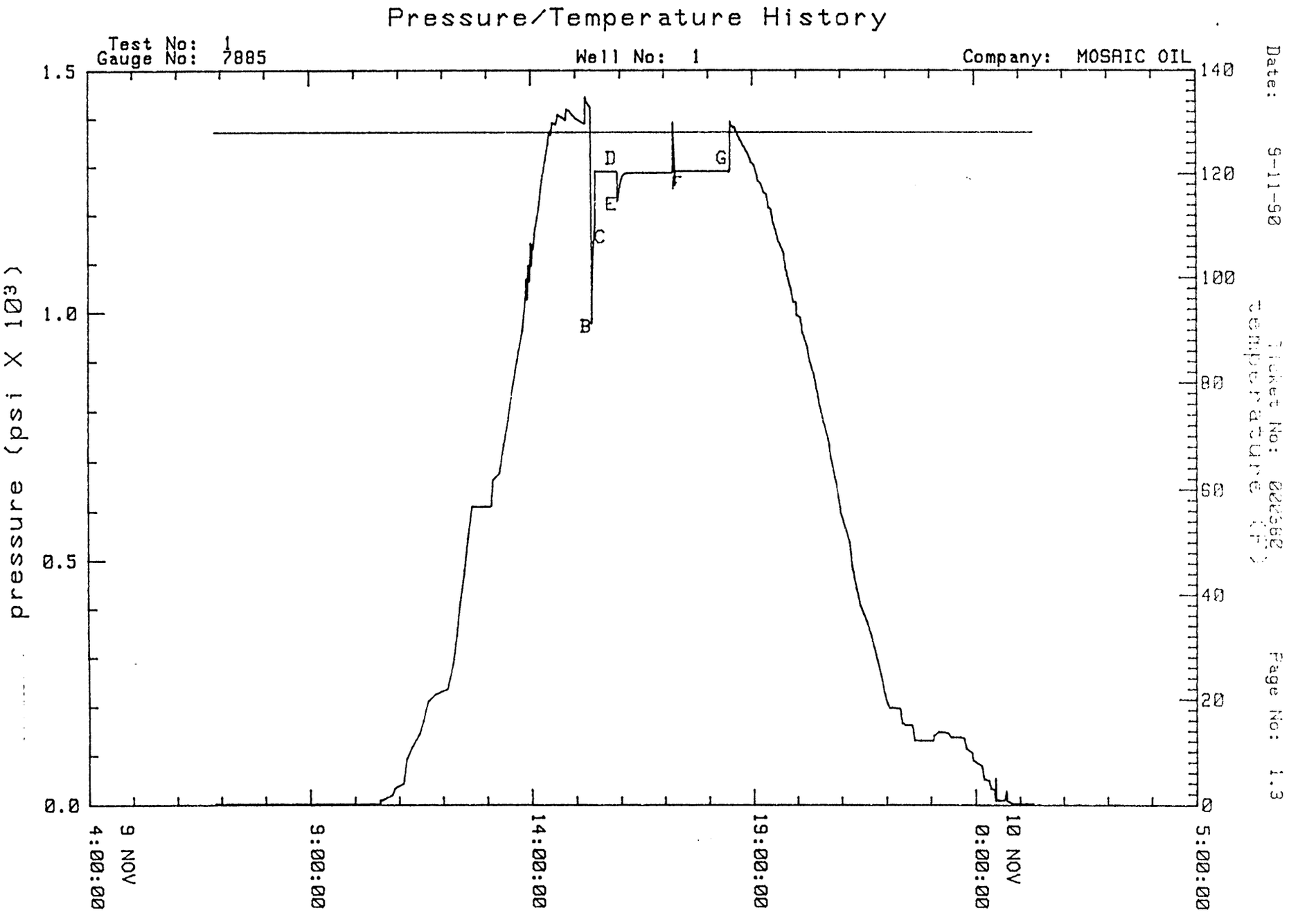
CLOCK FAILURE ON GAUGE BT#8008 - BOTTOM BLANKED OFF.

TEST PERIOD SUMMARY

Gauge No.: 7885 Depth: 2834.00 ft Blanked off : No
Hour of clock: 24

ID	PERIOD	DESCRIPTION	PRESSURE (psi)	DURATION (min)
A		Initial Hydrostatic	1388.10	
B	1	Start Draw-down	975.42	
C		End Draw-down	1175.38	4.75
C	2	Start Build-up	1175.38	
D		End Build-up	1289.12	30.02
E	3	Start Draw-down	1227.01	
F		End Draw-down	1286.88	75.06
F	4	Start Build-up	1286.88	
G		End Build-up	1289.99	74.91
H		Final Hydrostatic	1381.20	

NOTE: for Pressure vs. Time Plot, see next page.


Pressure/Temperature History
Test No: 1
Gauge No: 7885
Well No: 1
Company: MOSAIC OIL
pressure (psi X 10³)
1.5
1.0
0.5
0.0
140
120
100
80
60
40
20
0
A
B
C
D
E
F
G
9 NOV
4:00:00
8:00:00
14:00:00
19:00:00
10 NOV
0:00:00
5:00:00
Date: 9-11-90
Page No: 1.3

TEST AND FORMATION DATA

Formation Tested: TARALGON
All Depths Measured From: KELLY BUSHINGS
Elevation: 19.68 ft
Total Depth: 3058.00 ft
Net Pay: 66.00 ft
Hole or Casing Size: 8.500 in
Gross Tested Interval: 2846.00 - 2936.00 ft
Perforated Interval (ft):

HOLE FLUID

Type: DRILLING FLUID
Weight: 9.40 lb/gal
Viscosity: 48 seconds

HOLE TEMPERATURE

Depth: 3055.00 ft
Estimated: 0.00 F
Actual: 128.00 F

HYDROCARBON PROPERTIES

Oil Gravity (API): 0.0 @ 60 F
Gas/Oil ratio (ScF/STB): 0.0
Gas Gravity (SG): 0.75

CUSHION DATA

TYPE	AMOUNT	WEIGHT
NIL		

FLUID PROPERTIES FOR RECOVERED MUD AND WATER

SOURCE	RESISTIVITY	CHLORIDES	SG	PH
	@ F	PPM		
	@ F	PPM		
	@ F	PPM		
	@ F	PPM		
	@ F	PPM		
	@ F	PPM		

SAMPLER DATA

Surface Pressure: 0 psi
Volume of Gas: 0 ft3
Volume of Oil: 0 cc
Volume of Water: 0 cc
Volume of Mud: 0 cc
Total Liquids: 0 cc

REMARKS:

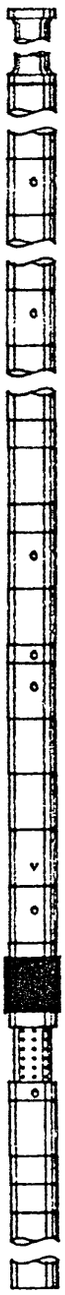
ALL DOWNHOLE PRESSURES ARE IN ABSOLUTE PSIA.

CLOCK FAILURE ON GAUGE BT#8008 - BOTTOM BLANKED OFF.

RATE HISTORY TABLE

Period No	Test Type	j	Prod Rate q(j) (bbl/d)	Duration (hrs)	Cum. Time t(j) (hrs)
		0	0.0	0.00	0.00
1	DD	1		0.09	0.09
2	BU	2	0.0	0.50	0.59
3	DD	3		1.25	1.84
4	BU	4	0.0	1.25	3.09

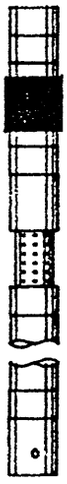
TEST STRING CONFIGURATION



	O.D. (in)	I.D. (in)	LENGTH (ft)	DEPTH (ft)
DRILL PIPE.....	4.500	3.860	2419.400	
DRILL COLLARS.....	6.000	2.620	269.730	
PUMP OUT REVERSING SUB.....	6.000	3.000	1.000	2690.00
DRILL COLLARS.....	6.000	2.620	89.250	
IMPACT REVERSING SUB.....	6.000	3.000	1.000	2781.00
DRILL COLLARS.....	6.000	2.620	30.210	
BAR CATCHER SUB.....	5.750	1.120	1.000	
AP RUNNING CASE.....	5.000	2.250	4.140	2813.00
CROSSOVER.....	5.000	2.500	1.000	
DUAL CIP VALVE.....	5.000	0.870	4.870	
SAMPLE CHAMBER.....	5.000	2.500	4.870	
DRAIN VALVE.....	5.000	2.200	0.860	
HYDROSPRING TESTER.....	5.000	0.750	5.310	2833.00
AP RUNNING CASE.....	5.000	2.250	4.140	2834.00
JAR.....	5.000	1.750	5.000	
VR SAFETY JOINT.....	5.000	1.000	2.780	
PORTED PRESSURE EQUALIZING SUB..	4.820	3.000	1.000	
OPEN HOLE PACKER.....	6.000	1.530	5.850	2846.00
PERFORATED TAIL PIPE.....	5.000	2.370	20.000	
PRESSURE EQUALIZING CROSSOVER...	4.620	2.750	1.000	
AP RUNNING CASE.....	5.000	2.250	4.140	2869.00
CROSSOVER.....	4.620	2.400	1.000	
CROSSOVER.....	5.750	2.250	1.000	
DRILL COLLARS.....	6.000	2.620	59.270	

CONTINUED

TEST STRING CONFIGURATION



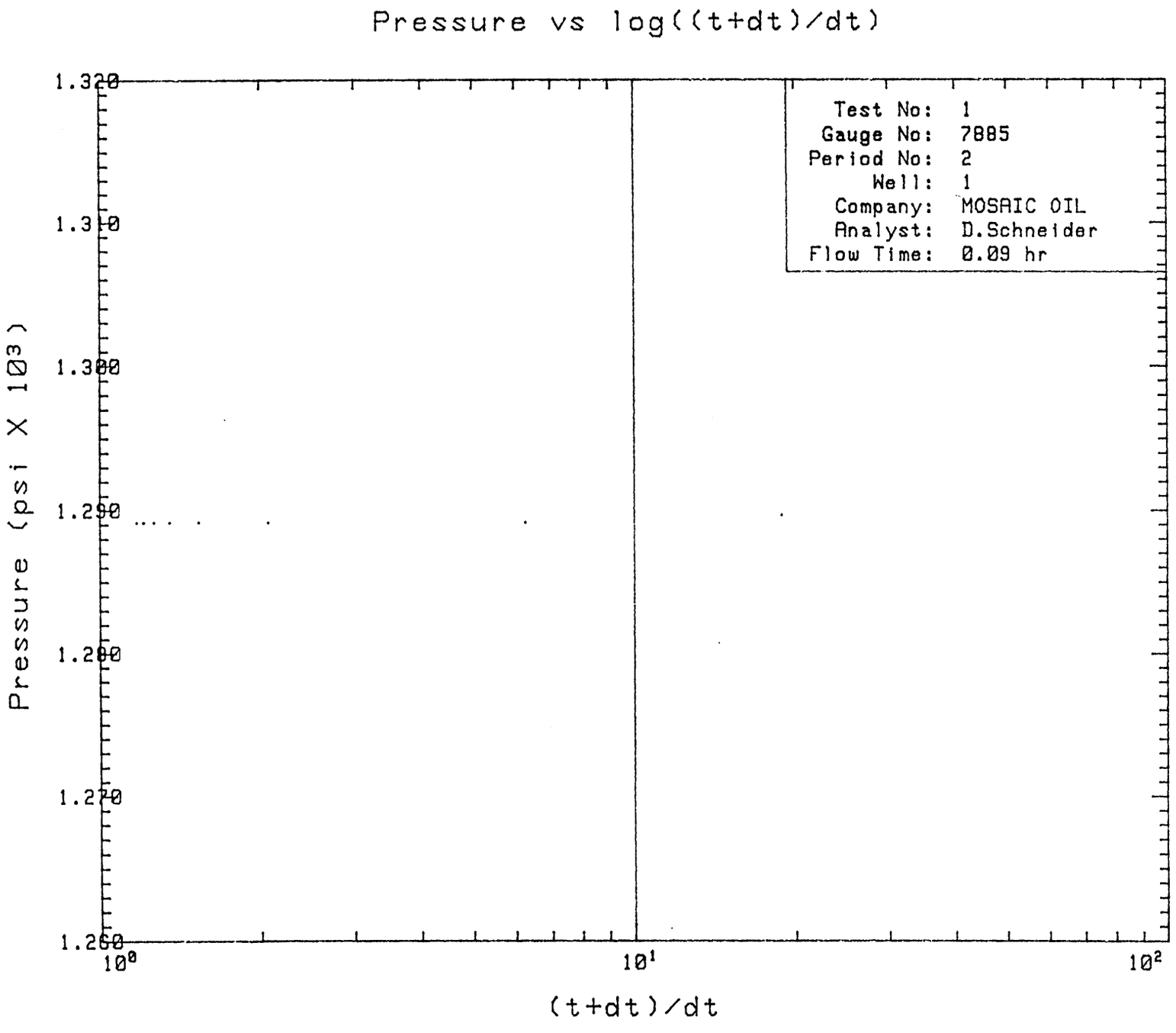
	O.D. (in)	I.D. (in)	LENGTH (ft)	DEPTH (ft)
CROSSOVER.....	5.750	2.250	1.000	
CROSSOVER.....	4.620	2.400	1.000	
OPEN HOLE PACKER.....	6.000	1.530	5.850	2936.00
CROSSOVER.....	4.620	2.400	1.000	
ANCHOR PIPE SAFETY JOINT.....	5.000	1.500	4.300	
PERFORATED TAIL PIPE.....	5.000	2.370	15.000	
CROSSOVER.....	5.750	2.000	1.000	
DRILL COLLARS.....	6.000	2.620	91.460	
CROSSOVER.....	5.750	2.250	1.000	
BLANKED-OFF RUNNING CASE.....	5.000	2.440	4.060	3055.00
TOTAL DEPTH				3058.00

Date: 9-11-90 Ticket No: 000380 Page No: 1.7.1
Test No: 1

OPERATOR JOB LOG

Type of Flow Measuring Device: .5"FIXED CHOKE

TIME HH:MM:SS	CHOKE SIZE (in)	SURFACE PRESSURE (psi)	GAS RATE (MCF/D)	LIQUID RATE (bbl/d)	REMARKS
9-NOV-90					
07:00:00					SURFACE PRESSURE = PSIG
07:00:00					MAKE UP TOOLS
08:15:00					FISH COLLARS IN DERRICK
09:00:00					CONTINUE TO MAKE UP TOOLS
10:15:00					RUN IN HOLE
14:30:00					RIG UP SURFACE EQUIPMENT
14:50:00					PRESSURE TEST SURFACE EQUIP.
15:15:00					SET PACKERS WITH 25,000lb.
15:22:00	32/64		0.00		TOOL OPEN, WEAK BLOW
15:23:00	32/64		0.00		INCREASING TO MODERATE BLOW
15:24:00	32/64		1.00		STRONG BLOW
15:27:00					TOOL CLOSED, 1st CIP
15:57:00	32/64		0.00		TOOL OPEN, 2nd FLOW, WEAK BLOW
15:59:00	32/64		0.00		INCREASE TO MODERATE BLOW
16:00:00	32/64		0.00		BLOW DECREASING TO WEAK
16:01:00			0.00		CLOSE MANIFOLD TO FLARE
16:02:00			0.00		BLOW DECREASING
16:07:00	32/64		0.00		OPEN MANIFOLD TO FLARE
16:08:00	32/64		0.00		NO BLOW
16:09:00			0.00		CLOSE MANIFOLD TO FLARE
16:13:00			0.00		NO BLOW
16:15:00	32/64		0.00		OPEN MANIFOLD TO FLARE, NO BLOW
16:15:00					
17:13:00					TOOL CLOSED, 2nd CIP
18:28:00					OPEN BYPASS, PULL OUT OF HOLE
10-NOV-90					
01:00:00					TOOL AT TABLE
01:00:00					ANCHOR PIPE & SAFETY JOINT
01:00:00					BACKED OFF
03:00:00					MANDREL AT TABLE
04:00:00					RUN IN HOLE WITH MANDREL
08:00:00					ENGAGED FISH
08:30:00					PULL FISH OUT OF HOLE
14:20:00					FISH AT TABLE

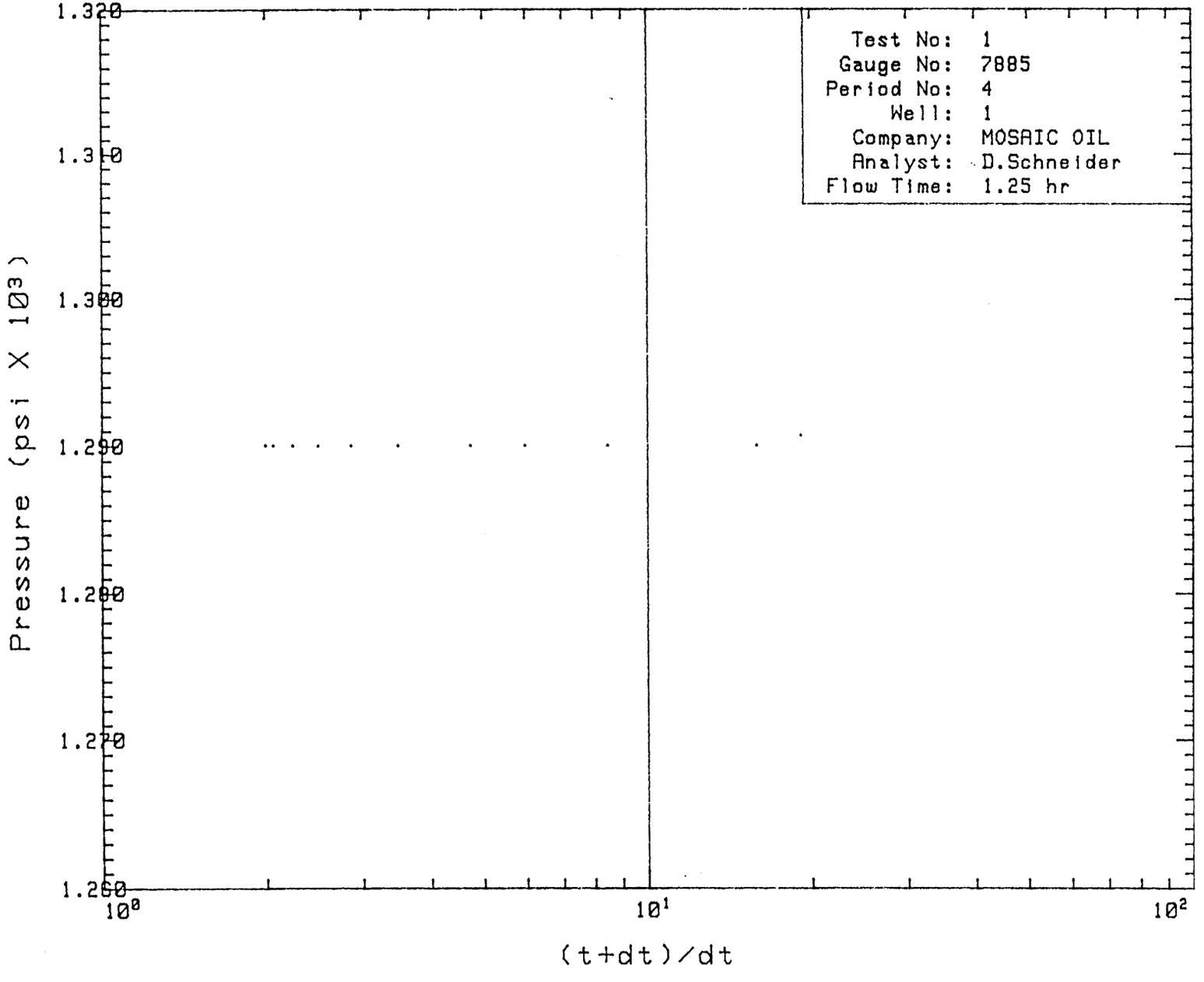


Date: 5-11-92

Ticket No: 600360

Page No: 2.2.1

Pressure vs log((t+dt)/dt)



Date: 5-11-93

Ticket No: 000382

Page No: 2.2.2

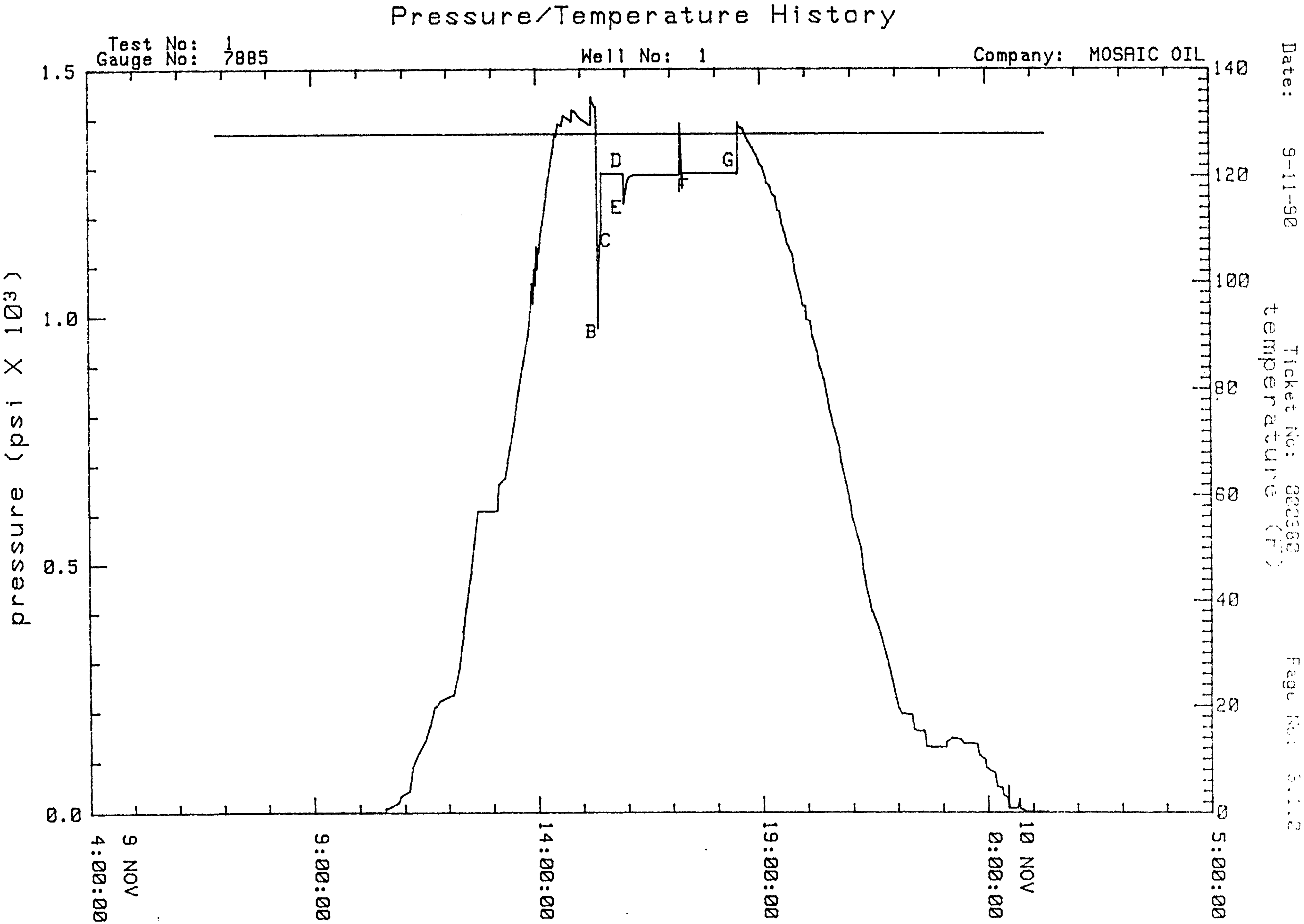
Date: 9-11-90 Ticket No: 000380 Page No: 3.1

TEST PERIOD SUMMARY

Gauge No.: 7885 Depth: 2834.00 ft Blanked off : No
Hour of clock: 24

ID	PERIOD	DESCRIPTION	PRESSURE (psi)	DURATION (min)
A		Initial Hydrostatic	1388.10	
B	1	Start Draw-down	975.42	
C		End Draw-down	1175.38	4.75
C	2	Start Build-up	1175.38	
D		End Build-up	1289.12	30.02
E	3	Start Draw-down	1227.01	
F		End Draw-down	1286.88	75.06
F	4	Start Build-up	1286.88	
G		End Build-up	1289.99	74.91
H		Final Hydrostatic	1381.20	

NOTE: for Pressure vs. Time Plot, see next page.



Pressure/Temperature History
Test No: 1
Gauge No: 7885
Well No: 1
Company: MOSAIC OIL
Date: 9-11-90
Ticket No: 802308
pressure (psi X 10³)
temperature (F)
1.5
1.0
0.5
0.0
140
120
100
80
60
40
20
0
B
C
D
E
F
G
9 NOV
4:00:00
9:00:00
14:00:00
19:00:00
10 NOV
0:00:00
5:00:00

Date: 9-11-90 Ticket No: 000380 Page No: 3.1.1

PRESSURE VS TIME

MECHANICAL gauge no.: 7885 Gauge Depth: 2834.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
06:51:55		0.044	128.0	
07:00:00				SURFACE PRESSURE = PSIG
07:00:00				MAKE UP TOOLS
07:06:55		0.044	128.0	
07:21:54		0.044	128.0	
07:36:54		0.044	128.0	
07:51:54		0.044	128.0	
08:06:55		0.044	128.0	
08:15:00				FISH COLLARS IN DERRICK
08:21:55		0.044	128.0	
08:36:54		0.044	128.0	
08:51:54		0.044	128.0	
09:00:00				CONTINUE TO MAKE UP TOOLS
09:06:54		0.044	128.0	
09:21:55		0.044	128.0	
09:36:55		0.044	128.0	
09:51:54		0.044	128.0	
10:06:54		0.044	128.0	
10:15:00				RUN IN HOLE
10:21:55		0.044	128.0	
10:33:47		0.044	128.0	
10:34:02		8.417	128.0	
10:36:55		8.417	128.0	
10:50:49		19.282	128.0	
10:54:29		32.637	128.0	
11:05:42		42.249	128.0	
11:10:32		92.232	128.0	
11:18:14		117.112	128.0	
11:26:56		140.912	128.0	
11:33:04		169.843	128.0	
11:40:15		210.100	128.0	
11:50:06		224.101	128.0	
12:06:25		234.908	128.0	
12:13:47		284.481	128.0	
12:19:15		343.889	128.0	
12:24:07		412.034	128.0	
12:30:10		478.307	128.0	
12:35:05		542.366	128.0	
12:40:28		608.260	128.0	
12:57:14		608.611	128.0	
13:06:20		610.191	128.0	
13:08:37		662.655	128.0	
13:17:02		674.403	128.0	
13:22:55		730.116	128.0	
13:28:33		779.987	128.0	
13:35:13		847.790	128.0	

PRESSURE VS TIME

MECHANICAL gauge no.: 7885 Gauge Depth: 2834.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
13:41:10		899.794	128.0	
13:48:26		961.144	128.0	
13:52:42		1026.235	128.0	
13:53:32		1067.434	128.0	
13:55:28		1025.191	128.0	
13:56:38		1095.573	128.0	
13:58:23		1061.525	128.0	
14:00:05		1140.699	128.0	
14:01:00		1093.316	128.0	
14:02:39		1137.402	128.0	
14:03:44		1128.901	128.0	
14:05:59		1167.579	128.0	
14:08:36		1192.191	128.0	
14:12:01		1225.622	128.0	
14:15:36		1270.446	128.0	
14:19:39		1307.968	128.0	
14:23:34		1344.770	128.0	
14:25:25		1369.978	128.0	
14:27:21		1364.627	128.0	
14:29:45		1390.169	128.0	
14:30:00				RIG UP SURFACE EQUIPMENT
14:34:44		1386.028	128.0	
14:37:12		1406.730	128.0	
14:42:29		1401.556	128.0	
14:47:29		1395.518	128.0	
14:49:17		1417.940	128.0	
14:50:00				PRESSURE TEST SURFACE EQUIP.
14:52:06		1415.871	128.0	
14:56:33		1407.075	128.0	
15:02:03		1398.451	128.0	
15:07:33		1392.585	128.0	
15:10:24		1389.479	128.0	
15:12:56		1388.099	128.0	
15:13:39		1388.099	128.0	
15:14:13		1443.971	128.0	
15:14:51		1435.353	128.0	
15:15:00				SET PACKERS WITH 25,000lb.
15:16:57		1430.871	128.0	
15:18:56		1425.527	128.0	
15:20:41		1423.630	128.0	
15:22:00				TOOL OPEN, WEAK BLOW
		*** Start of Period 1 ***		
15:22:00	0.00	975.423	128.0	
15:23:00				INCREASING TO MODERATE BLOW
15:23:01	1.02	1090.363	128.0	
15:24:00				STRONG BLOW

PRESSURE VS TIME

MECHANICAL gauge no.: 7885 Gauge Depth: 2834.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
15:24:01	2.01	1118.836	128.0	
15:25:00	3.00	1141.046	128.0	
15:26:00	4.00	1161.337	128.0	
15:26:45	4.75	1175.380	128.0	
15:27:00				TOOL CLOSED, 1st CIP
		*** End of Period 1 ***		
		*** Start of Period 2 ***		
15:27:03	0.30	1289.643	128.0	
15:27:46	1.02	1289.125	128.0	
15:31:46	5.02	1289.125	128.0	
15:36:45	10.01	1289.125	128.0	
15:41:46	15.02	1289.125	128.0	
15:46:46	20.01	1289.125	128.0	
15:51:45	25.00	1289.125	128.0	
15:56:46	30.02	1289.125	128.0	
15:57:00				TOOL OPEN, 2nd FLOW, WEAK BLOW
		*** End of Period 2 ***		
		*** Start of Period 3 ***		
15:57:18	0.00	1227.007	128.0	
15:58:20	1.02	1234.452	128.0	
15:59:00				INCREASE TO MODERATE BLOW
15:59:19	2.01	1246.914	128.0	
16:00:00				BLOW DECREASING TO WEAK
16:00:19	3.00	1258.682	128.0	
16:01:00				CLOSE MANIFOLD TO FLARE
16:01:18	4.00	1265.602	128.0	
16:02:00				BLOW DECREASING
16:02:19	5.02	1271.830	128.0	
16:03:19	6.01	1276.846	128.0	
16:04:18	7.00	1280.305	128.0	
16:05:20	8.02	1282.035	128.0	
16:06:19	9.01	1283.418	128.0	
16:07:00				OPEN MANIFOLD TO FLARE
16:07:19	10.01	1284.283	128.0	
16:08:00				NO BLOW
16:09:00				CLOSE MANIFOLD TO FLARE
16:09:19	12.02	1285.493	128.0	
16:11:18	14.00	1285.839	128.0	
16:13:00				NO BLOW
16:13:19	16.02	1286.185	128.0	
16:15:00				OPEN MANIFOLD TO FLARE,
16:15:00				NO BLOW
16:15:18	18.00	1286.531	128.0	
16:17:19	20.01	1286.704	128.0	
16:22:18	25.00	1286.877	128.0	
16:27:19	30.02	1286.877	128.0	

PRESSURE VS TIME

MECHANICAL gauge no.: 7885 Gauge Depth: 2834.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
16:32:19	35.00	1286.877	128.0	
16:37:20	40.02	1286.877	128.0	
16:42:19	45.01	1286.877	128.0	
16:47:18	50.00	1286.877	128.0	
16:52:19	55.02	1286.877	128.0	
16:57:19	60.00	1286.877	128.0	
17:02:20	65.02	1286.877	128.0	
17:07:19	70.01	1286.877	128.0	
17:12:18	75.00	1286.877	128.0	
17:12:22	75.06	1286.877	128.0	
		*** End of Period 3 ***		
		*** Start of Period 4 ***		
17:12:54	0.54	1390.687	128.0	
17:13:00				TOOL CLOSED, 2nd CIP
17:16:09	3.79	1259.374	128.0	
17:16:29	4.12	1290.681	128.0	
17:17:23	5.02	1289.989	128.0	
17:22:22	10.01	1289.989	128.0	
17:27:23	15.02	1289.989	128.0	
17:32:22	20.01	1289.989	128.0	
17:42:23	30.02	1289.989	128.0	
17:52:23	40.02	1289.989	128.0	
18:02:22	50.00	1289.989	128.0	
18:12:22	60.00	1289.989	128.0	
18:22:22	70.01	1289.989	128.0	
18:27:16	74.91	1289.989	128.0	
		*** End of Period 4 ***		
18:27:27		1288.779	128.0	
18:27:52		1290.681	128.0	
18:28:00				OPEN BYPASS, PULL OUT OF HOLE
18:28:21		1287.914	128.0	
18:29:06		1292.410	128.0	
18:29:48		1289.643	128.0	
18:30:18		1392.585	128.0	
18:30:36		1386.201	128.0	
18:31:11		1383.613	128.0	
18:31:43		1385.338	128.0	
18:33:19		1383.440	128.0	
18:34:52		1379.989	128.0	
18:36:06		1381.197	128.0	
18:36:31		1379.816	128.0	
18:36:37		1381.369	128.0	
18:37:58		1374.466	128.0	
18:41:04		1364.109	128.0	
18:43:37		1355.649	128.0	
18:48:43		1341.661	128.0	

Date: 9-11-90 Ticket No: 000380 Page No: 3.1.5

PRESSURE VS TIME

MECHANICAL gauge no.: 7885 Gauge Depth: 2834.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
18:53:07		1330.260	128.0	
18:57:10		1317.301	128.0	
18:58:46		1308.314	128.0	
19:02:15		1303.820	128.0	
19:06:00		1284.975	128.0	
19:08:13		1269.235	128.0	
19:11:53		1264.391	128.0	
19:16:13		1244.664	128.0	
19:19:13		1242.761	128.0	
19:22:26		1213.499	128.0	
19:25:16		1211.075	128.0	
19:28:43		1183.007	128.0	
19:31:29		1170.526	128.0	
19:35:57		1143.994	128.0	
19:42:02		1124.910	128.0	
19:45:43		1085.327	128.0	
19:51:12		1053.010	128.0	
19:55:37		1019.973	128.0	
19:59:06		1019.973	128.0	
20:00:00		992.657	128.0	
20:05:08		989.176	128.0	
20:08:08		958.357	128.0	
20:13:35		932.222	128.0	
20:17:43		898.050	128.0	
20:22:34		875.894	128.0	
20:26:37		842.900	128.0	
20:30:42		810.581	128.0	
20:36:03		777.364	128.0	
20:41:58		744.821	128.0	
20:45:44		704.896	128.0	
20:51:30		666.513	128.0	
20:56:34		627.394	128.0	
20:59:44		594.035	128.0	
21:05:37		564.517	128.0	
21:11:45		534.979	128.0	
21:15:34		480.772	128.0	
21:20:21		441.834	128.0	
21:25:31		405.859	128.0	
21:30:01		388.743	128.0	
21:33:46		374.444	128.0	
21:38:46		349.012	128.0	
21:43:34		320.737	128.0	
21:47:54		295.626	128.0	
21:52:33		265.721	128.0	
21:57:52		227.467	128.0	
22:01:14		207.264	128.0	

Date: 9-11-90 Ticket No: 000380 Page No: 3.1.6

PRESSURE VS TIME

MECHANICAL gauge no.: 7885 Gauge Depth: 2834.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
22:05:03		196.449	128.0	
22:18:42		194.144	128.0	
22:21:51		164.875	128.0	
22:25:29		161.680	128.0	
22:35:19		161.325	128.0	
22:38:03		130.257	128.0	
22:44:54		128.836	128.0	
22:54:58		128.836	128.0	
23:03:48		128.836	128.0	
23:05:00		139.846	128.0	
23:11:42		148.013	128.0	
23:23:39		144.818	128.0	
23:27:34		136.828	128.0	
23:39:11		137.183	128.0	
23:45:35		134.342	128.0	
23:48:27		112.848	128.0	
23:55:50		105.030	128.0	
23:57:35		88.499	128.0	
10-NOV-90				
00:08:45		78.009	128.0	
00:11:55		50.436	128.0	
00:18:11		48.122	128.0	
00:20:50		32.103	128.0	
00:25:51		29.254	128.0	
00:27:14		9.308	128.0	
00:27:29		52.037	128.0	
00:27:50		7.349	128.0	
00:38:59		7.883	128.0	
00:41:54		26.049	128.0	
00:42:44		6.458	128.0	
00:44:45		5.211	128.0	
00:46:51		4.142	128.0	
00:51:33		0.401	128.0	
00:57:51		0.579	128.0	
01:00:00				TOOL AT TABLE
01:00:00				ANCHOR PIPE & SAFETY JOINT
01:00:00				BACKED OFF
01:06:07		0.222	128.0	
01:14:37		0.044	128.0	
01:18:46		0.044	128.0	
03:00:00				MANDREL AT TABLE
04:00:00				RUN IN HOLE WITH MANDREL
08:00:00				ENGAGED FISH
08:30:00				PULL FISH OUT OF HOLE
14:20:00				FISH AT TABLE

Date: 9-11-90 Ticket No: 000380 Page No: 3.2

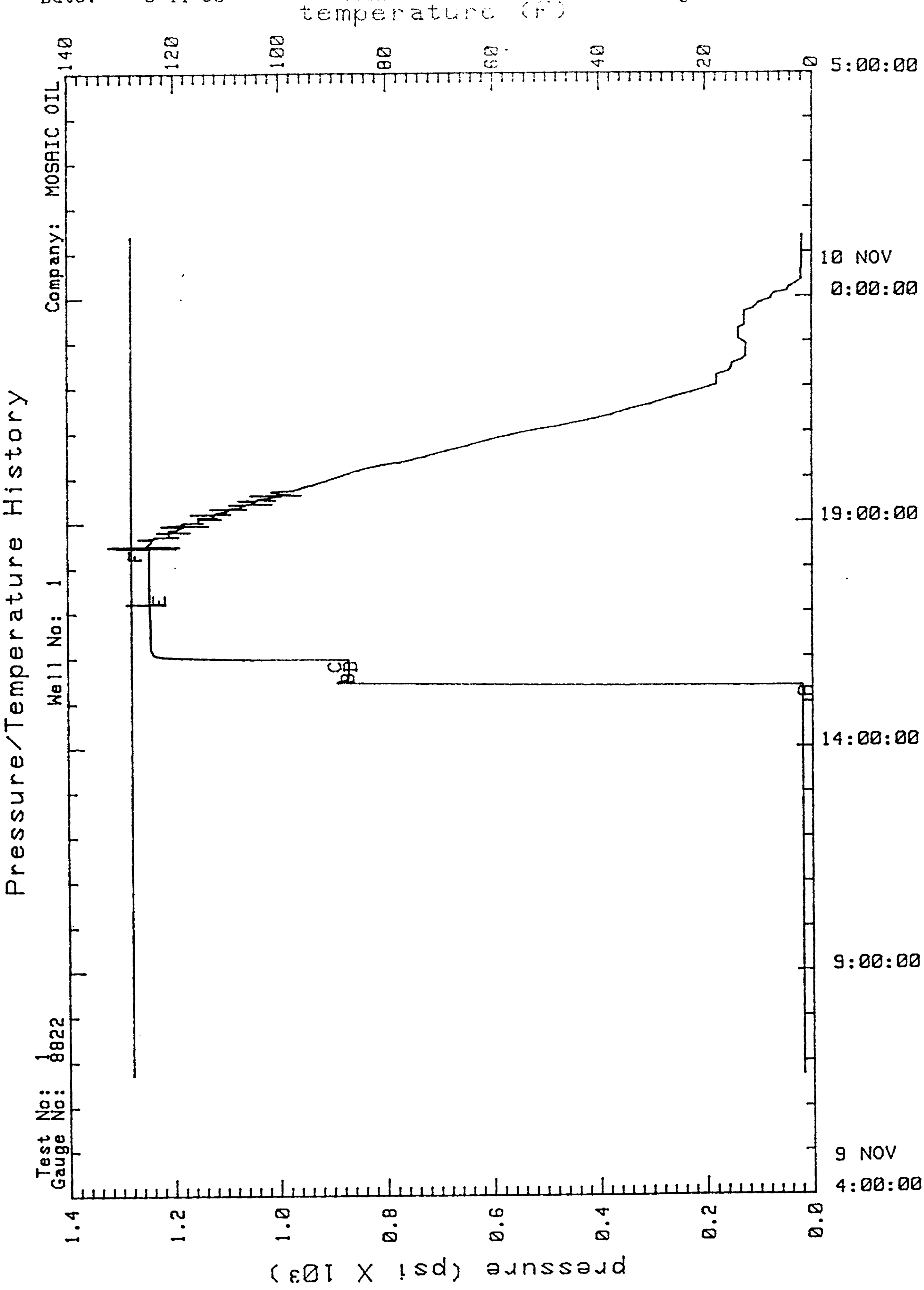
TEST PERIOD SUMMARY

Gauge No.: 8822 Depth: 2813.00 ft Blanked off : No
Hour of clock: 24

ID	PERIOD	DESCRIPTION	PRESSURE (psi)	DURATION (min)
A	1	Start Draw-down	17.24	
B		End Draw-down	890.23	5.39
B	2	Start Build-up	890.23	
C		End Build-up	869.15	30.29
D	3	Start Draw-down	869.84	
E		End Draw-down	1246.38	74.87
E	4	Start Build-up	1246.38	
F		End Build-up	1246.38	74.78
G		Final Hydrostatic	1250.82	

NOTE: for Pressure vs. Time Plot, see next page.

Date: 9-11-92 Ticket No: [illegible] Page No: 3.2.8



PRESSURE VS TIME

MECHANICAL gauge no.: 8822 Gauge Depth: 2813.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
06:43:07		17.235	128.0	
07:00:00				SURFACE PRESSURE = PSIG
07:00:00				MAKE UP TOOLS
07:13:07		17.235	128.0	
07:43:07		17.235	128.0	
08:13:06		17.235	128.0	
08:15:00				FISH COLLARS IN DERRICK
08:43:06		17.235	128.0	
09:00:00				CONTINUE TO MAKE UP TOOLS
09:13:07		17.235	128.0	
09:43:07		17.235	128.0	
10:13:07		17.235	128.0	
10:15:00				RUN IN HOLE
10:43:06		17.235	128.0	
11:13:06		17.235	128.0	
11:43:07		17.235	128.0	
12:13:07		17.235	128.0	
12:43:07		17.235	128.0	
13:13:06		17.235	128.0	
13:43:06		17.235	128.0	
14:13:07		17.235	128.0	
14:30:00				RIG UP SURFACE EQUIPMENT
14:43:07		17.235	128.0	
14:50:00				PRESSURE TEST SURFACE EQUIP.
15:13:07		17.235	128.0	
15:15:00				SET PACKERS WITH 25,000lb.
15:22:00				TOOL OPEN, WEAK BLOW
		*** Start of Period 1 ***		
15:22:00	0.00	17.235	128.0	
15:23:00				INCREASING TO MODERATE BLOW
15:23:01	1.02	378.783	128.0	
15:24:00				STRONG BLOW
15:24:00	2.01	502.700	128.0	
15:25:01	3.02	616.273	128.0	
15:26:01	4.01	731.053	128.0	
15:27:00				TOOL CLOSED, 1st CIP
15:27:00	5.00	841.379	128.0	
15:27:23	5.39	890.230	128.0	
		*** End of Period 1 ***		
		*** Start of Period 2 ***		
15:28:24	1.02	891.601	128.0	
15:29:24	2.01	888.517	128.0	
15:30:25	3.02	881.148	128.0	
15:31:24	4.01	875.493	128.0	
15:32:23	5.00	872.065	128.0	
15:33:24	6.02	870.351	128.0	

PRESSURE VS TIME

MECHANICAL gauge no.: 8822 Gauge Depth: 2813.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
15:34:24	7.00	869.837	128.0	
15:35:25	8.02	869.665	128.0	
15:36:24	9.01	869.494	128.0	
15:37:23	10.00	869.322	128.0	
15:42:23	15.00	869.151	128.0	
15:47:23	20.00	869.151	128.0	
15:52:23	25.00	869.151	128.0	
15:57:00				TOOL OPEN, 2nd FLOW, WEAK BLOW
15:57:25	30.02	869.151	128.0	
15:57:41	30.29	869.151	128.0	
		*** End of Period 2 ***		
		*** Start of Period 3 ***		
15:58:13	0.00	869.837	128.0	
15:59:00				INCREASE TO MODERATE BLOW
15:59:14	1.02	1048.750	128.0	
16:00:00				BLOW DECREASING TO WEAK
16:00:14	2.01	1112.686	128.0	
16:01:00				CLOSE MANIFOLD TO FLARE
16:01:15	3.02	1167.181	128.0	
16:02:00				BLOW DECREASING
16:02:14	4.01	1198.255	128.0	
16:03:13	5.00	1221.127	128.0	
16:04:14	6.02	1230.684	128.0	
16:05:13	7.00	1235.291	128.0	
16:06:15	8.02	1238.362	128.0	
16:07:00				OPEN MANIFOLD TO FLARE
16:07:14	9.01	1239.727	128.0	
16:08:00				NO BLOW
16:08:13	10.00	1240.239	128.0	
16:09:00				CLOSE MANIFOLD TO FLARE
16:10:13	12.00	1241.263	128.0	
16:12:14	14.01	1243.140	128.0	
16:13:00				NO BLOW
16:14:14	16.01	1244.163	128.0	
16:15:00				OPEN MANIFOLD TO FLARE,
16:15:00				NO BLOW
16:16:14	18.02	1244.334	128.0	
16:18:13	20.00	1244.675	128.0	
16:23:13	25.00	1244.846	128.0	
16:28:15	30.02	1245.016	128.0	
16:33:15	35.02	1245.016	128.0	
16:38:15	40.02	1245.016	128.0	
16:43:14	45.02	1245.187	128.0	
16:48:14	50.02	1245.358	128.0	
16:53:14	55.02	1245.699	128.0	
16:58:14	60.02	1245.870	128.0	

PRESSURE VS TIME

MECHANICAL gauge no.: 8822 Gauge Depth: 2813.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
17:03:14	65.02	1246.040	128.0	
17:08:14	70.02	1246.211	128.0	
17:13:00				TOOL CLOSED, 2nd CIP
17:13:05	74.87	1246.381	128.0	
		*** End of Period 3 ***		
		*** Start of Period 4 ***		
17:13:07	0.03	1289.535	128.0	
17:13:09	0.06	1214.471	128.0	
17:14:06	1.02	1246.893	128.0	
17:15:05	2.01	1246.552	128.0	
17:16:07	3.02	1246.381	128.0	
17:18:05	5.00	1246.381	128.0	
17:23:05	10.00	1246.381	128.0	
17:33:05	20.00	1246.381	128.0	
17:43:07	30.02	1246.381	128.0	
17:53:06	40.02	1246.381	128.0	
18:03:06	50.02	1246.381	128.0	
18:13:06	60.02	1246.381	128.0	
18:23:06	70.02	1246.381	128.0	
18:27:52	74.78	1246.381	128.0	
		*** End of Period 4 ***		
18:27:53		1307.949	128.0	
18:28:00				OPEN BYPASS, PULL OUT OF HOLE
18:28:02		1195.183	128.0	
18:28:24		1248.258	128.0	
18:29:04		1251.158	128.0	
18:29:18		1324.314	128.0	
18:29:29		1188.354	128.0	
18:29:59		1317.325	128.0	
18:30:05		1206.108	128.0	
18:30:15		1250.817	128.0	
18:31:31		1250.817	128.0	
18:31:58		1250.817	128.0	
18:33:28		1247.917	128.0	
18:36:18		1242.969	128.0	
18:39:46		1240.751	128.0	
18:40:13		1266.170	128.0	
18:40:46		1237.339	128.0	
18:42:43		1236.997	128.0	
18:42:57		1189.719	128.0	
18:43:00		1208.839	128.0	
18:48:35		1208.668	128.0	
18:48:47		1231.025	128.0	
18:49:12		1167.864	128.0	
18:49:30		1208.497	128.0	
18:51:41		1208.497	128.0	

Date: 9-11-90 Ticket No: 000380 Page No: 3.2.4

PRESSURE VS TIME

MECHANICAL gauge no.: 8822 Gauge Depth: 2813.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
18:52:30		1193.305	128.0	
18:56:39		1181.695	128.0	
18:57:06		1222.834	128.0	
18:57:51		1132.165	128.0	
18:58:11		1209.521	128.0	
18:58:51		1178.280	128.0	
18:59:53		1185.110	128.0	
19:01:16		1182.890	128.0	
19:01:32		1143.098	128.0	
19:01:59		1152.664	128.0	
19:06:25		1151.468	128.0	
19:06:39		1108.926	128.0	
19:07:33		1152.322	128.0	
19:08:50		1153.005	128.0	
19:09:25		1116.787	128.0	
19:09:52		1123.280	128.0	
19:13:18		1121.913	128.0	
19:13:52		1166.497	128.0	
19:14:10		1089.784	128.0	
19:14:35		1121.059	128.0	
19:16:07		1116.958	128.0	
19:17:42		1097.817	128.0	
19:20:09		1094.228	128.0	
19:20:31		1128.748	128.0	
19:20:56		1059.865	128.0	
19:21:25		1092.861	128.0	
19:22:24		1072.347	128.0	
19:26:09		1063.114	128.0	
19:26:36		1092.519	128.0	
19:27:11		1011.288	128.0	
19:27:42		1052.341	128.0	
19:31:17		1042.593	128.0	
19:31:48		1076.108	128.0	
19:32:19		1005.641	128.0	
19:33:43		1040.198	128.0	
19:35:56		1015.394	128.0	
19:38:05		995.374	128.0	
19:38:39		1053.025	128.0	
19:39:04		956.860	128.0	
19:39:49		988.700	128.0	
19:40:38		995.716	128.0	
19:43:36		1013.170	128.0	
19:44:51		971.754	128.0	
19:47:29		960.627	128.0	
19:49:29		952.751	128.0	
19:52:40		933.229	128.0	

Date: 9-11-90 Ticket No: 000380 Page No: 3.2.5

PRESSURE VS TIME

MECHANICAL gauge no.: 8822 Gauge Depth: 2813.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
9-NOV-90		Data Print Frequency: 1		
19:57:36		910.277	128.0	
20:04:13		881.148	128.0	
20:10:59		850.980	128.0	
20:17:43		812.225	128.0	
20:22:43		765.557	128.0	
20:29:07		727.276	128.0	
20:36:13		688.803	128.0	
20:42:46		647.906	128.0	
20:50:08		611.458	128.0	
20:57:03		569.660	128.0	
21:03:45		521.469	128.0	
21:08:47		474.109	128.0	
21:15:53		422.927	128.0	
21:22:57		376.713	128.0	
21:30:08		343.587	128.0	
21:37:10		302.332	128.0	
21:45:20		264.509	128.0	
21:52:22		227.877	128.0	
21:59:30		193.474	128.0	
22:03:12		177.910	128.0	
22:15:29		177.910	128.0	
22:20:43		155.250	128.0	
22:23:34		151.963	128.0	
22:31:42		147.811	128.0	
22:36:35		129.987	128.0	
22:40:30		123.410	128.0	
22:57:23		121.680	128.0	
23:04:15		136.909	128.0	
23:18:17		136.736	128.0	
23:22:19		126.180	128.0	
23:32:41		126.699	128.0	
23:41:16		124.968	128.0	
23:45:30		108.524	128.0	
23:51:56		100.387	128.0	
23:58:20		75.971	128.0	
10-NOV-90				
00:05:10		70.602	128.0	
00:08:34		45.656	128.0	
00:13:27		42.537	128.0	
00:18:14		29.714	128.0	
00:22:40		21.395	128.0	
00:23:40		19.489	128.0	
00:34:17		18.969	128.0	
00:42:22		17.755	128.0	
00:51:51		17.582	128.0	
00:59:42		17.582	128.0	

Date: 9-11-90 Ticket No: 000380 Page No: 3.2.6

PRESSURE VS TIME

MECHANICAL gauge no.: 8822 Gauge Depth: 2813.00 ft
Clock no.: Hour: 24

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
10-NOV-90		Data Print Frequency: 1		
01:00:00				TOOL AT TABLE
01:00:00				ANCHOR PIPE & SAFETY JOINT
01:00:00				BACKED OFF
01:21:10		17.235	128.0	
01:22:59		17.235	128.0	
03:00:00				MANDREL AT TABLE
04:00:00				RUN IN HOLE WITH MANDREL
08:00:00				ENGAGED FISH
08:30:00				PULL FISH OUT OF HOLE
14:20:00				FISH AT TABLE

NOMENCLATURE

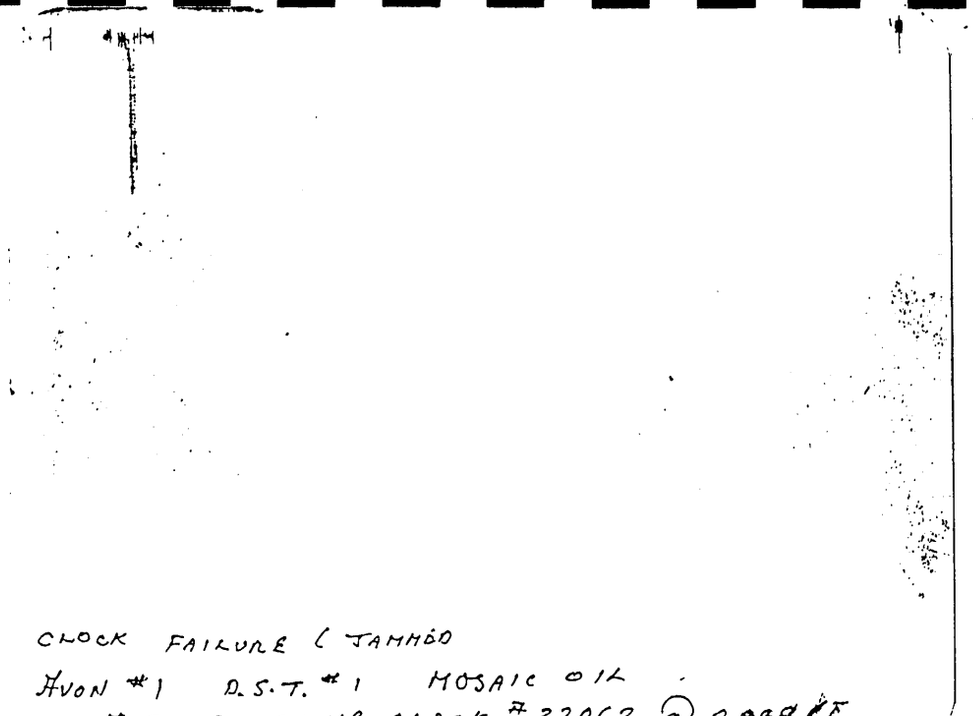
B	=	Formation Volume Factor	(Res Vol/Std Vol)
c_t	=	System Total Compressibility	(Vol/Vol)/psi
DR	=	Damage Ratio	
h	=	Estimated Net Pay Thickness	Ft
k	=	Permeability	md
m	=	(Liquid) Slope Extrapolated Pressure Plot	psi/cycle
	=	(Gas) Slope Extrapolated m(P) Plot	MM psi^2/cp/cycle
$m(P^*)$	=	Real Gas Potential at P^*	MM psi^2/cp
$m(P_f)$	=	Real Gas Potential at P_f	MM psi^2/cp
AOF_1	=	Maximum Indicated Absolute Open Flow at Test Conditions	MCFD
AOF_2	=	Minimum Indicated Absolute Open Flow at Test Conditions	MCFD
P^*	=	Extrapolated Static Pressure	Psig
P_f	=	Final Flow Pressure	Psig
Q	=	Liquid Production Rate During Test	BPD
Q_1	=	Theoretical Liquid Production w/Damage Removed	BPD
Q_g	=	Measured Gas Production Rate	MCFD
r_i	=	Approximate Radius of Investigation	Ft
r_w	=	Radius of Well Bore	Ft
S	=	Skin Factor	
t	=	Total Flow Time Previous to Closed-in	Minutes
Δt	=	Closed-in Time at Data Point	Minutes
T	=	Temperature Rankine	°R
ϕ	=	Porosity (fraction)	
μ	=	Viscosity of Gas or Liquid	cp
Log	=	Common Log	

EQUATIONS FOR DST LIQUID WELL ANALYSIS

Transmissibility	$\frac{kh}{\mu} = \frac{162.6\ QB}{m}$	$\frac{\text{md-ft}}{\text{cp}}$
Indicated Flow Capacity	$kh = \frac{kh}{\mu}\,\mu$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151\left[\frac{P^*-P_i}{m} - \text{LOG}\left(\frac{k\,(t/60)}{\phi\,\mu\,c_t r_w^{\,2}}\right) + 3.23\right]$	
Damage Ratio	$DR = \frac{P^* - P_i}{P^* - P_i - 0.87\,mS}$	
Theoretical Potential w/Damage Removed	$Q_t = Q\,DR$	BPD
Approx. Radius of Investigation	$r_i = 0.032\sqrt{\frac{k\,(t/60)}{\phi\mu c_t}}$	ft

EQUATIONS FOR DST GAS WELL ANALYSIS

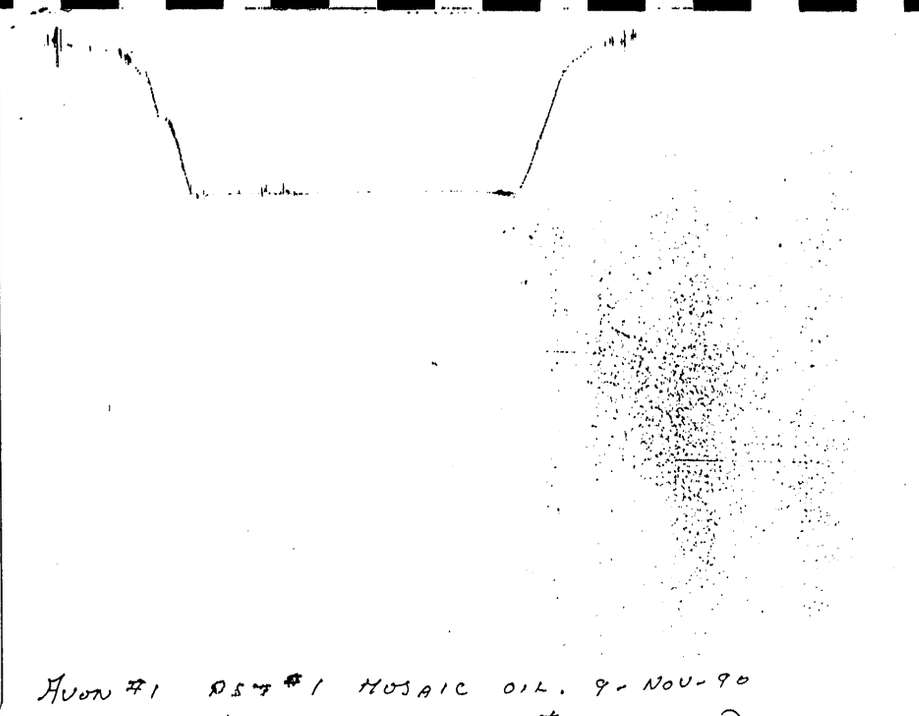
Indicated Flow Capacity	$kh = \frac{.001637\,Q_g\,T}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151\left[\frac{m(P^*)-m(P_i)}{m} - \text{LOG}\left(\frac{k\,(t/60)}{\phi\,\mu\,c_t r_w^{\,2}}\right) + 3.23\right]$	
Damage Ratio	$DR = \frac{m(P^*) - m(P_i)}{m(P^*) - m(P_i) - 0.87\,mS}$	
Indicated Flow Rate (Maximum)	$AOF_1 = \frac{Q_g\,m(P^*)}{m(P^*) - m(P_i)}$	MCFD
Indicated Flow Rate (Minimum)	$AOF_2 = Q_g\sqrt{\frac{m(P^*)}{m(P^*) - m(P_i)}}$	MCFD
Approx. Radius of Investigation	$r_i = 0.032\sqrt{\frac{k\,(t/60)}{\phi\,\mu\,c_t}}$	ft



CLOCK FAILURE (JAMMED

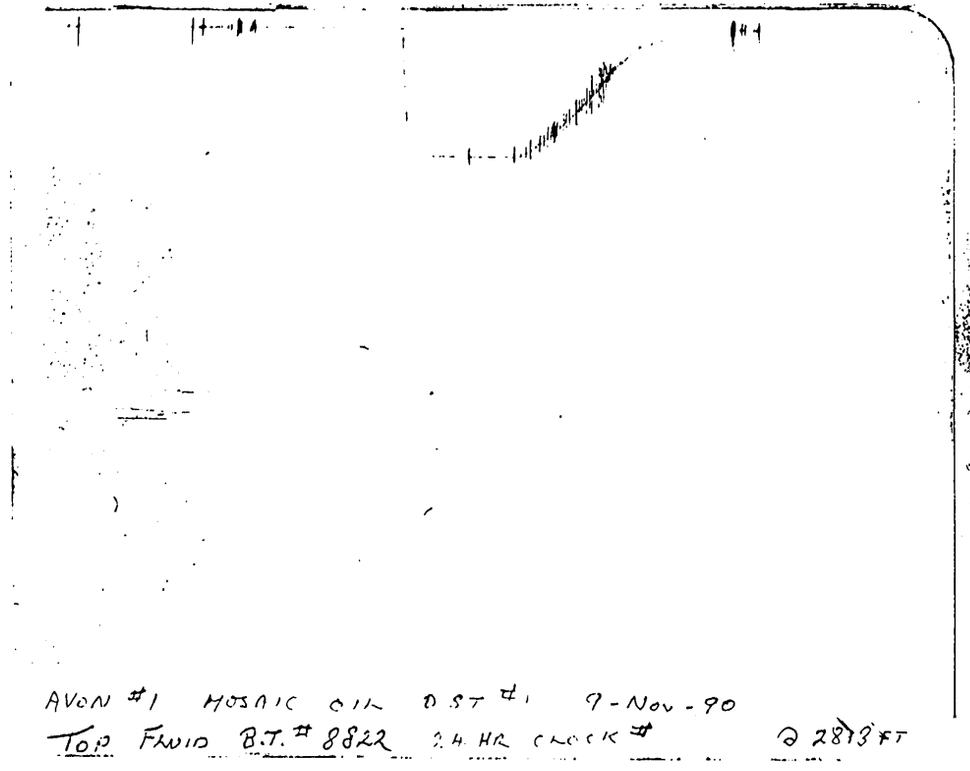
AVON #1 D.S.T. #1 MOSAIC OIL

BT # 8008 . 2HNR CLOCK # 32062 @ 2888 FT



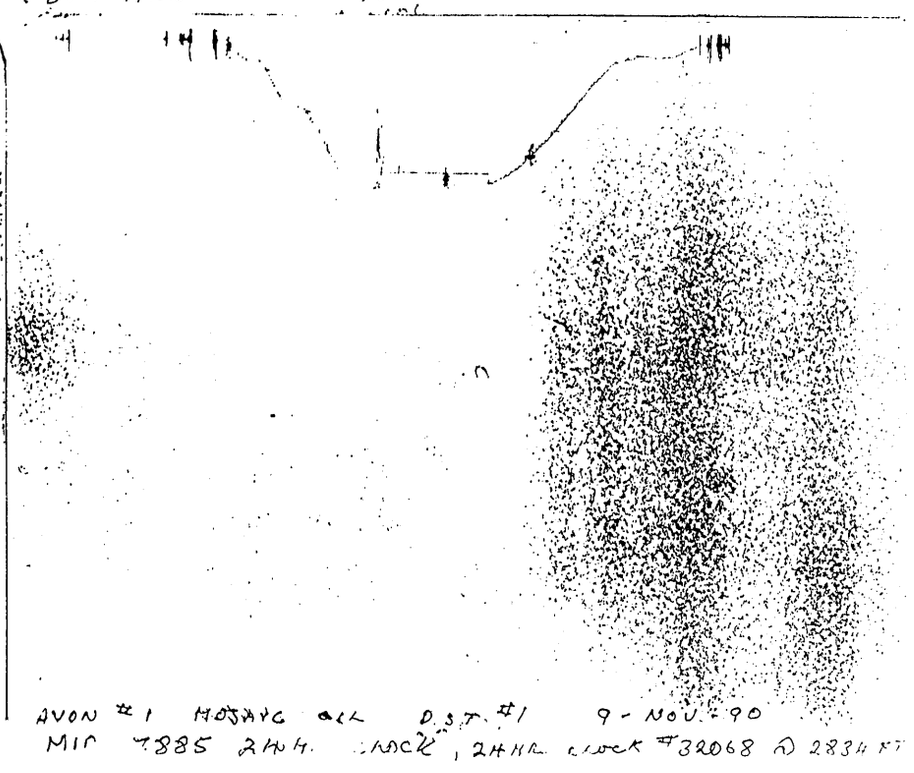
AVON #1 DST #1 MOSAIC OIL. 9-NOV-90

BTM ANN # 6106 48HR CLOCK # @ 3055 FT



AVON #1 MOSAIC OIL DST #1 9-Nov-90

TOP FLUID B.T. # 8822 24 HR CLOCK # @ 2813 FT



AVON #1 MOSAIC OIL D.S.T. #1 9-NOV-90

MIF 7885 2HR. CLOCK, 2HR CLOCK # 32068 @ 2834 FT

APPENDIX IV

DST
WATER
SAMPLES
ANALYSES

AMDEL
CORE
SERVICES

31st December 1990

Mosaic Oil N.L.
Level 2
Export House
22-24 Pitt Street
SYDNEY NSW 2000

Attention: John Carmody

REPORT: 009/655

CLIENT REFERENCE:	Letter 22/11/90
MATERIAL:	Water samples
LOCALITY:	Avon-1 (DST-1)
WORK REQUIRED:	Extraction and Characterisation of Hydrocarbons

Please direct technical enquiries regarding this work to the signatory below under whose supervision the work was carried out.

BRIAN L WATSON
Laboratory Supervisor
on behalf of Amdel Core Services Pty Ltd

Please Reply To: P.O. Box 109 Eastwood SA 5063 Australia
Telephone: 61-8-372 2834 Facsimile: 61-8-372 2861

Amdel Core Services Pty Limited
(Incorporated in South Australia)

1. INTRODUCTION

Five water samples from Avon-1 (DST-1) were received for analysis to determine concentration of benzene, toluene and other hydrocarbons.

2. RESULTS

Hydrocarbon concentrations are presented in Table 1. Gas chromatograms of the hydrocarbons extracted from these waters are presented as Figures 1-5.

3. INTERPRETATION

Alkane/isoprenoid and alkane distributions of the hydrocarbons extracted from these water samples are consistent with those of a typical diesel refined from an Australian crude oil. Variations between samples may be attributed to variations in biodegradation and aromatic content.

These factors indicate that the hydrocarbons present in these waters most likely represent diesel which has contaminated the mud system and the invasion zone of the producing reservoir. A comparison of the hydrocarbons extracted from these waters with that of the rig diesel would be useful to substantiate these indications.

TABLE 1: HYDROCARBON CONCENTRATIONS

AVON-1 DST-1

Sample	Benzene (ppm)	Toluene (ppm)	Total Hydrocarbons (ppm)
Sample 1	<1	<1	45.2
Sample 2, 170m	<1	<1	0.4
Sample 3, 560m	<1	<1	1.2
Sample 4, 730m	<1	<1	0.2
Sample 5, TOOL	<1	<1	2.8

FIGURE 1 AVON-1 DST-1

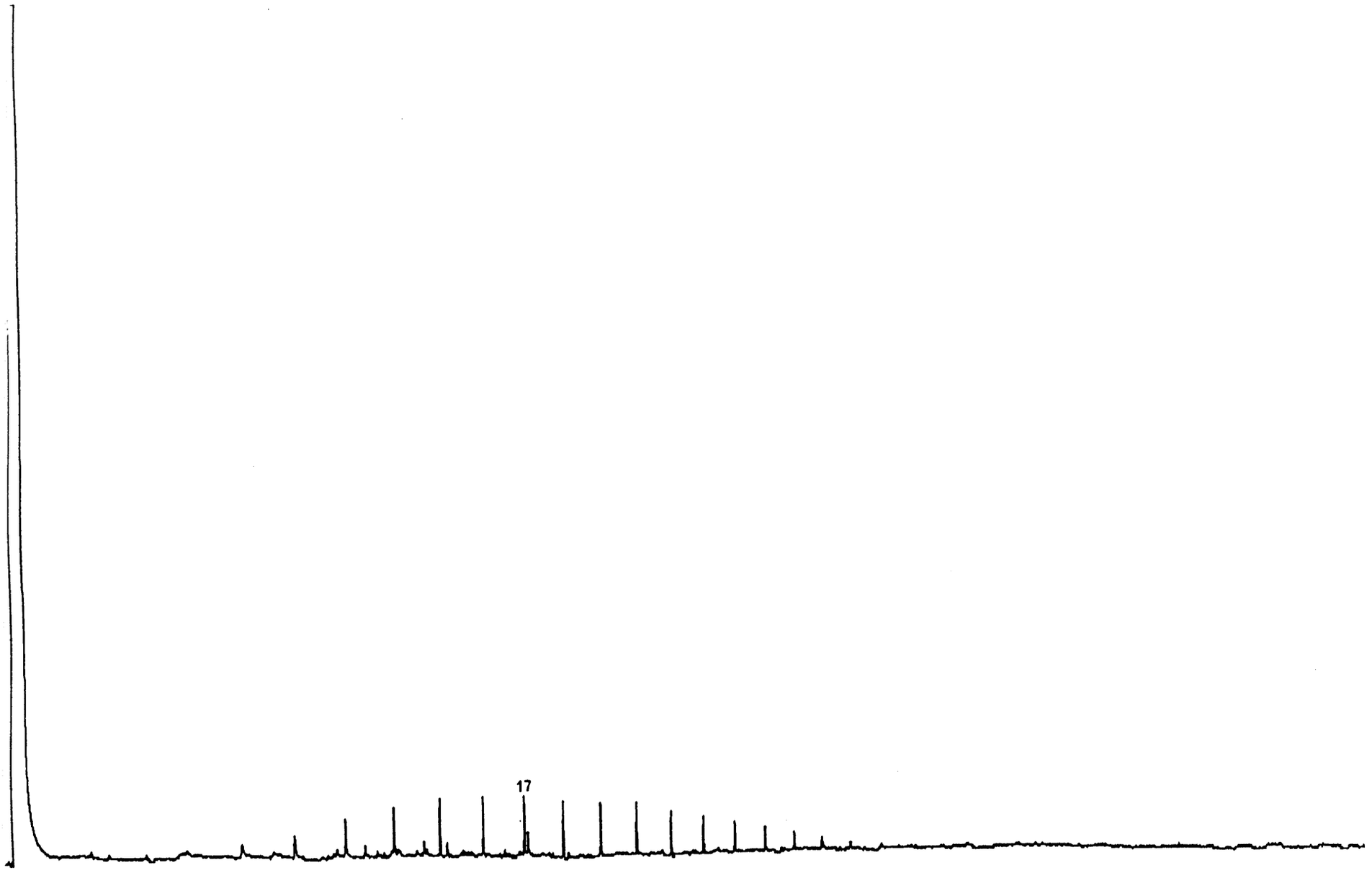


FIGURE 2 AVON-1 DST-1 170m

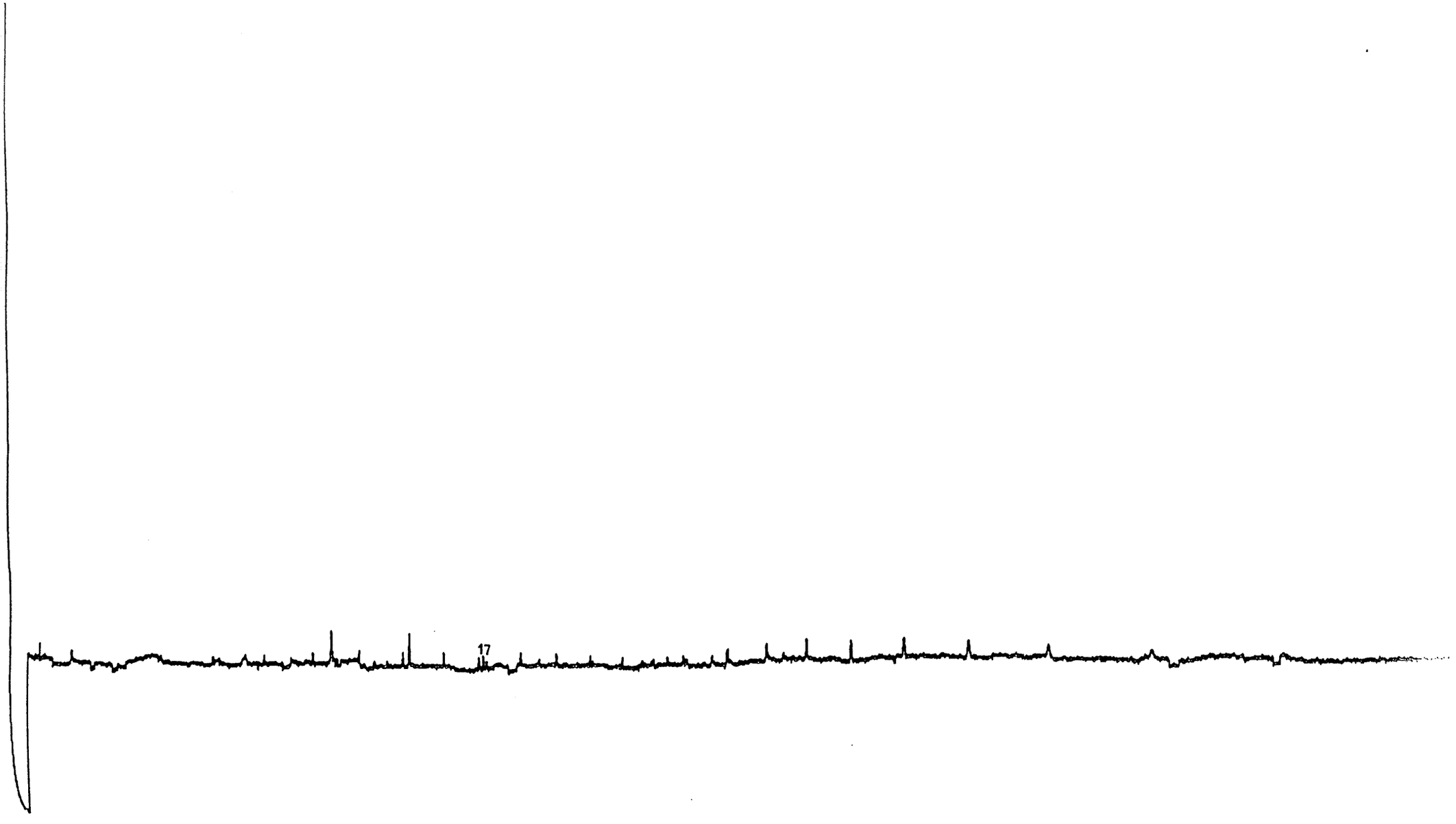


FIGURE 3 AVON-1 DST-1 560m

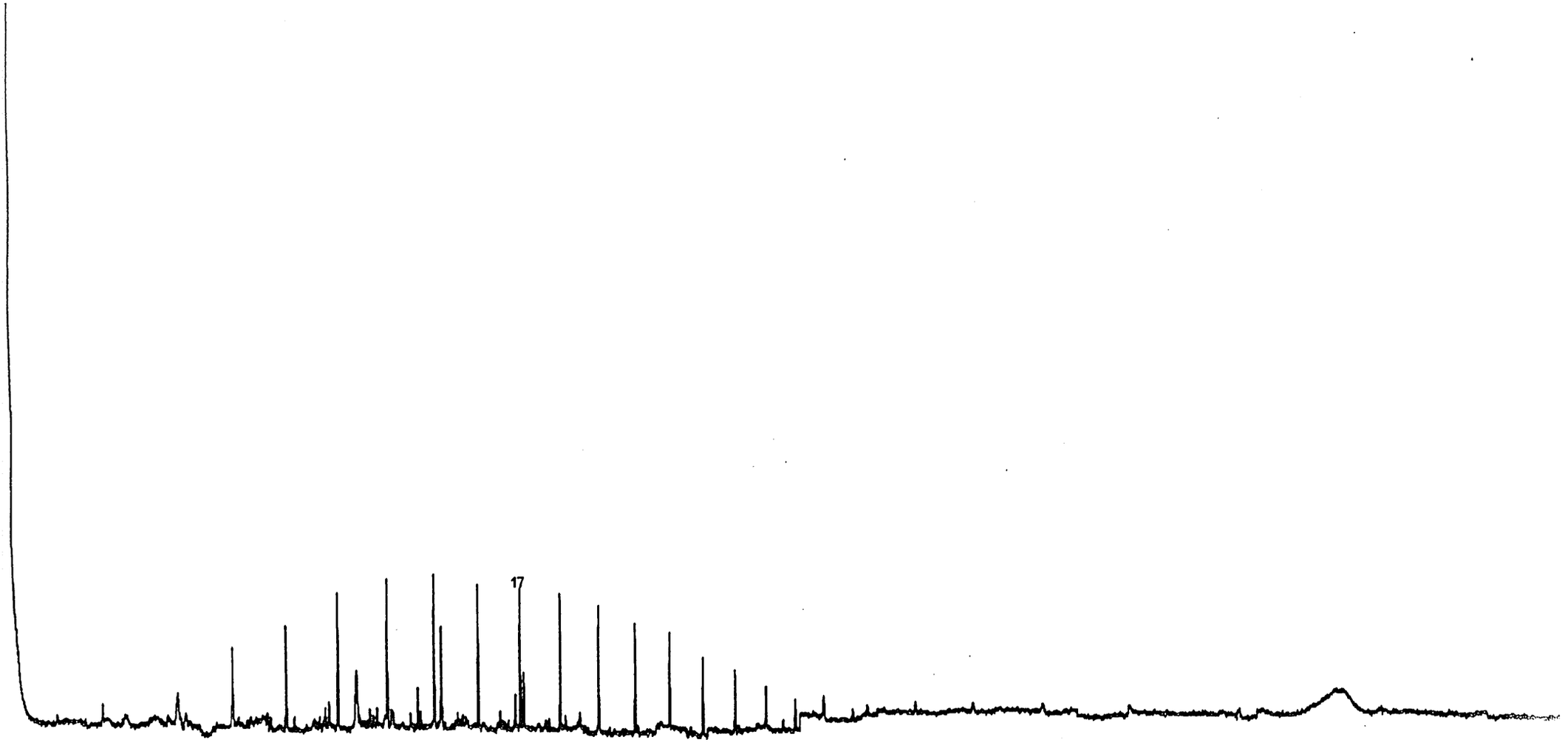
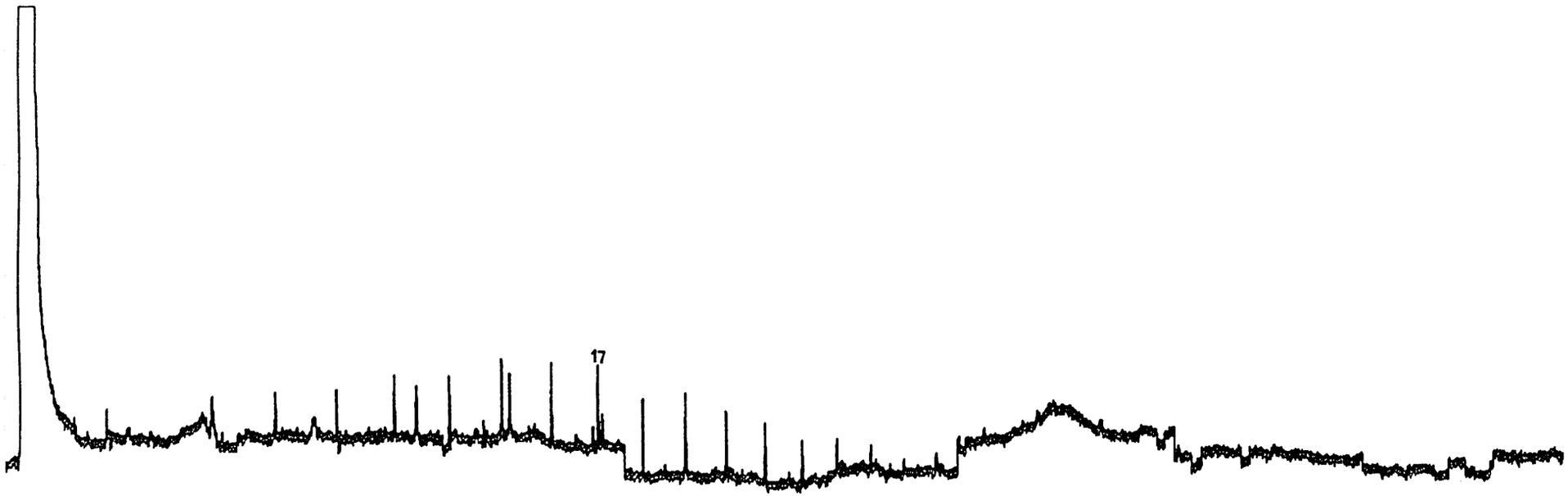
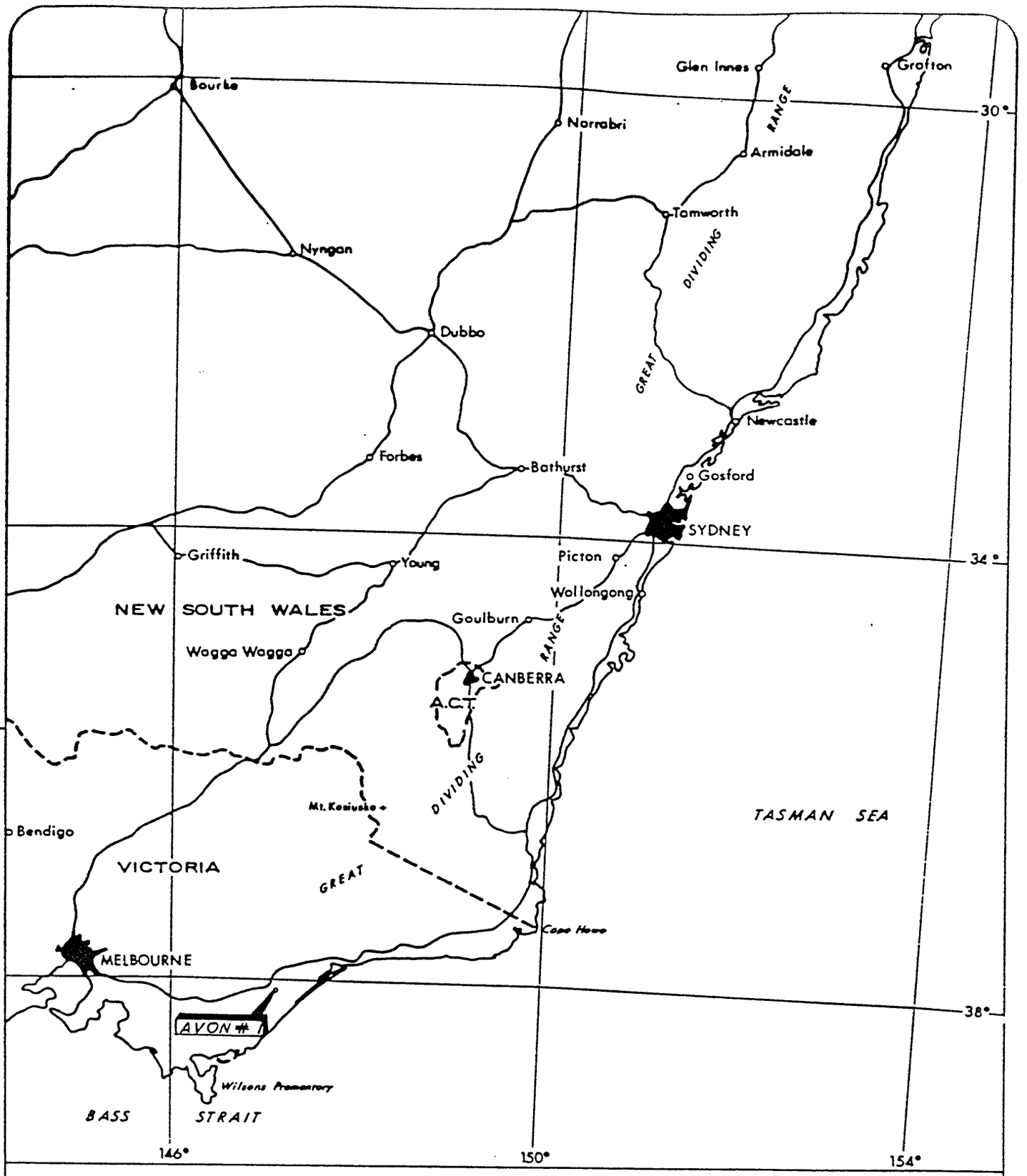


FIGURE 4 AVON-1 DST-1 730m





AVON # 1
MOSAIC OIL N.L

WELL LOCATION MAP

Scale 1:5000000

MILES 0 25 50 100 150 200 MILES

KILOMETRES 0 25 50 100 150 200 250 KILOMETRES

Figure 1

CONTENTS

Velocity Data

WELL VELOCITY SURVEY

AVON #1

PEP 107

SALE

for

MOSAIC OIL N.L.

recorded by

VELOCITY DATA PTY. LTD.

processed by

VELSEIS PTY LTD

Integrated Seismic Technologies

Brisbane, Australia

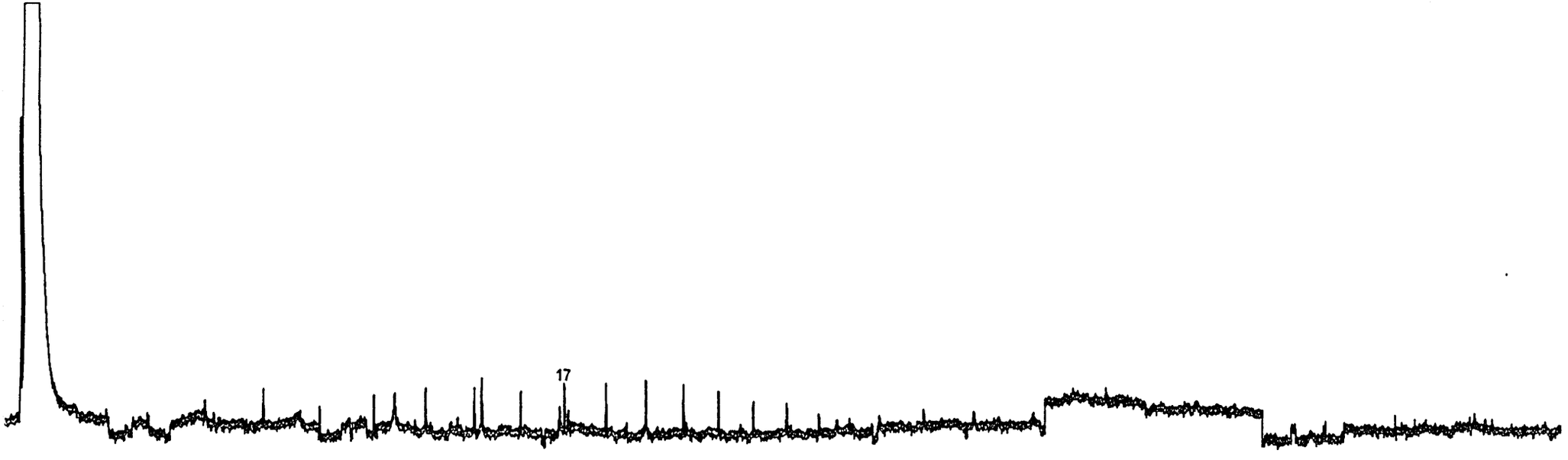
March 7, 1991

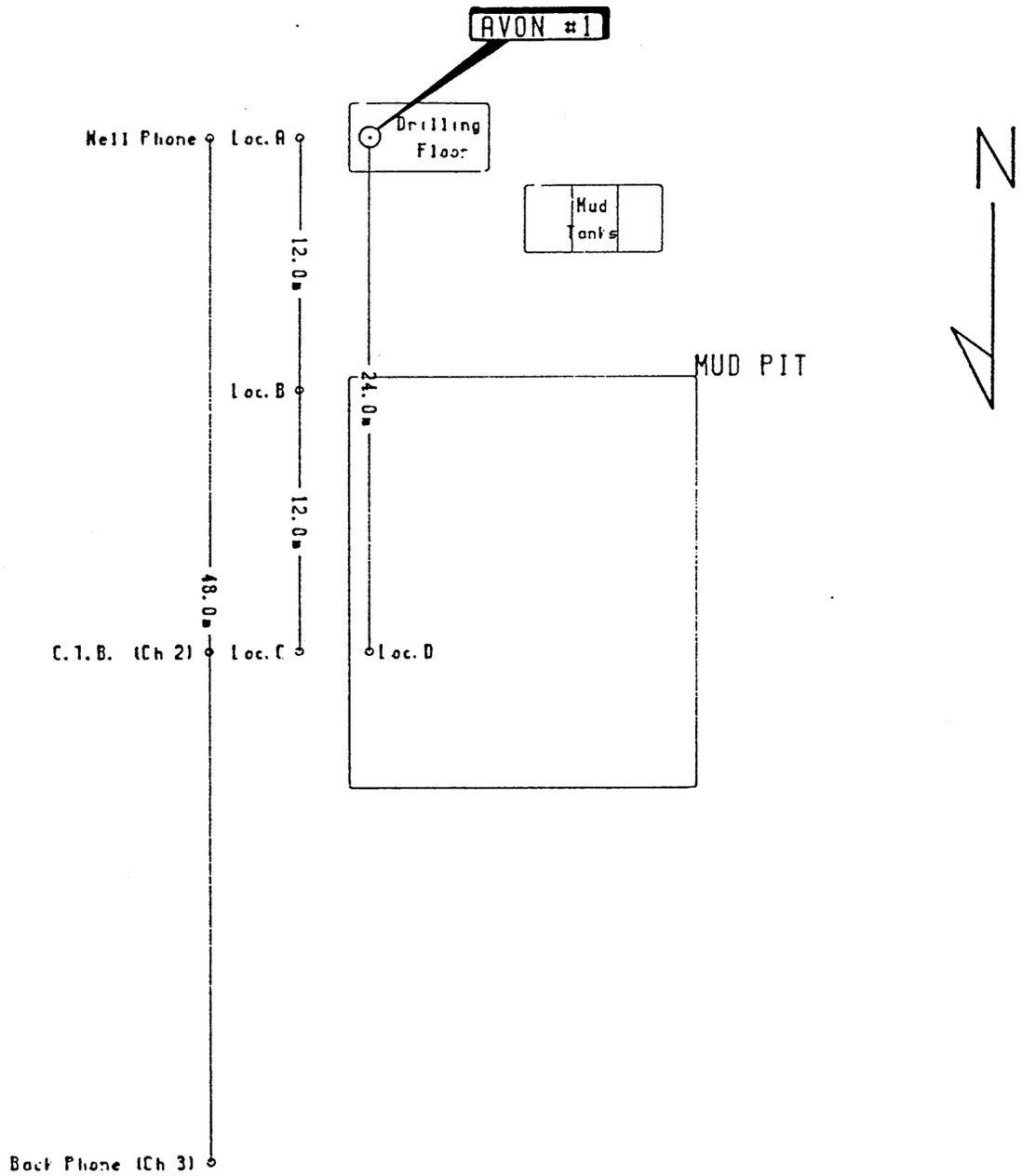
APPENDIX V

VELOCITY

SURVEY

FIGURE 5 AVON-1 DST-1 TOOL





AVON #1

MOSAIC OIL N.L.

SHOT POINT LOCATION SKETCH

Figure 2

SUMMARY

Velocity Data Pty Ltd conducted a velocity survey for Mosaic Oil N.L.in the Avon No 1 well , PEP 107, Sale, Victoria.

The date of the survey was the 8th November 1990.

The results of the survey, which are considered to be reliable, have been used to calibrate the sonic log.

Explosives were used as an energy source with shots being fired in the mud pit in the majority of instances.

GENERAL INFORMATION

Name of Well	:	Avon #1
Location (Figure 1)	:	PEP 107
Coordinates	:	Latitude 038 02 56
	:	Longitude 147 08 13
Date of Survey	:	November 8th, 1990.
Wireline Logging	:	BPB
Weather	:	Fine
Operational Base	:	Brisbane
Operator	:	H Hunt
Shooter	:	J Brown
Client Representative	:	Mr. J. Carmody

EQUIPMENT

Downhole Tool

Veldata Camlock 100 (90 mm)

Sensors:

6 HSI 4.5 Hz 215 ohm, high temperature (300 degrees F) detectors connected in series parallel. Frequency response 8-300 Hz within 3 dB.

Preamplifier:

48 dB fixed gain.
Frequency response 5-200 Hz within 3 dB.

Reference Geophone

Mark Products L1 4.5 Hz

Recording Instrument

VDLS 11/10 software controlled digital recording system utilising SIE OPA-10 floating point amplifiers for digital recording and SIE OPA-4 amplifiers for analog presentation. The system includes a DEC LSI-11 CPU,twin cassette tape unit and printer.

RECORDING

Energy Source	:	Explosive, AN-60
Shot Location	:	Mud pit
Charge Size	:	.125 / .5 (125grm) sticks
Average Shot Depth	:	2.0 metres
Average Shot Offset	:	24.0 metres
Recording Geometry	:	Figure 2

Shots were recorded on digital cassette tape. Printouts of the shots used are included with this report.(Enclosure 2)

The sample rate was 1 ms with 0.5 ms sampling over a 200ms window encompassing the first arrivals. The scale of the graphic display varies with signal strength and is noted on each playout.

The times were picked from the printouts using the numerical value of the signal strength. (Enclosure 2)

PROCESSING

Elevation Data

Elevation of KB	:	9.2m above sea level
Elevation of Ground	:	6.0m above sea level
Elevation of Seismic Datum	:	0.0m above sea level
Depth Surveyed	:	934.0m below KB
Total Depth	:	934.0m below KB
Depth of Casing	:	450.0m below KB
Sonic Log Interval	:	13.0 to 931.0m below KB

PROCESSING

Recorded Data

Number of Shots Used	:	17
Number of Levels Recorded	:	15
Data Quality	:	Good
Noise Level	:	Low

Correction for Instrument Delay and Shot Offset

The 'corrected' times shown on the calculation sheet have been obtained by:

(i) Subtraction of the instrument delay (4msec) from the recorded arrival times
(ii) geometric correction for non-verticality of ray paths resulting from shot offset.
(iii) shot static correction to correct for the depth of shot below ground level at the well head using a correction velocity of 920 metres/sec
(iv) readdition of the instrument delay (4msec).

Correction to Datum

The datum chosen was 0.0 metres ASL that is 9.2 metres below KB . This level was shot four times during the survey of which two have been used to calculate the effective datum correction of 10.8msecs. This value includes the instrument delay of 4msecs.

PROCESSING

Calibration of Sonic Log - Method

The sonic log was modified to exclude erroneous values above 159m. It was also necessary to extend the log in order to include the deepest checkshot in the range of the sonic.

Sonic times were adjusted to checkshot times using a polynomial derived least squares fit correction of the sonic transient times.

These differences arise as the sonic tool measures the local velocity characteristics of the formation with a high frequency signal, whereas the downhole geophone records the bulk velocity character using a signal of significantly lower frequency.

Calibration of Sonic Log - Results (Enclosure 1)

The discrepancies between shot and sonic interval velocities were over some intervals quite large, the largest sonic drift being 140.6 μsecs/m between the interval 160m and 224m below KB.

With the little information available it is difficult to pin point the cause for such large discrepancies. The only conclusion that can be drawn is that variations between the sonic and interval velocities have been brought about due to unfavorable borehole conditions.

In aggregate, the shot and sonic interval times differed by 29.8 msec over the logged portion of the well.

PROCESSING

Trace Playouts (Figure 4)

Figure 4A is a plot of all traces used. No filter or gain recovery has been applied.

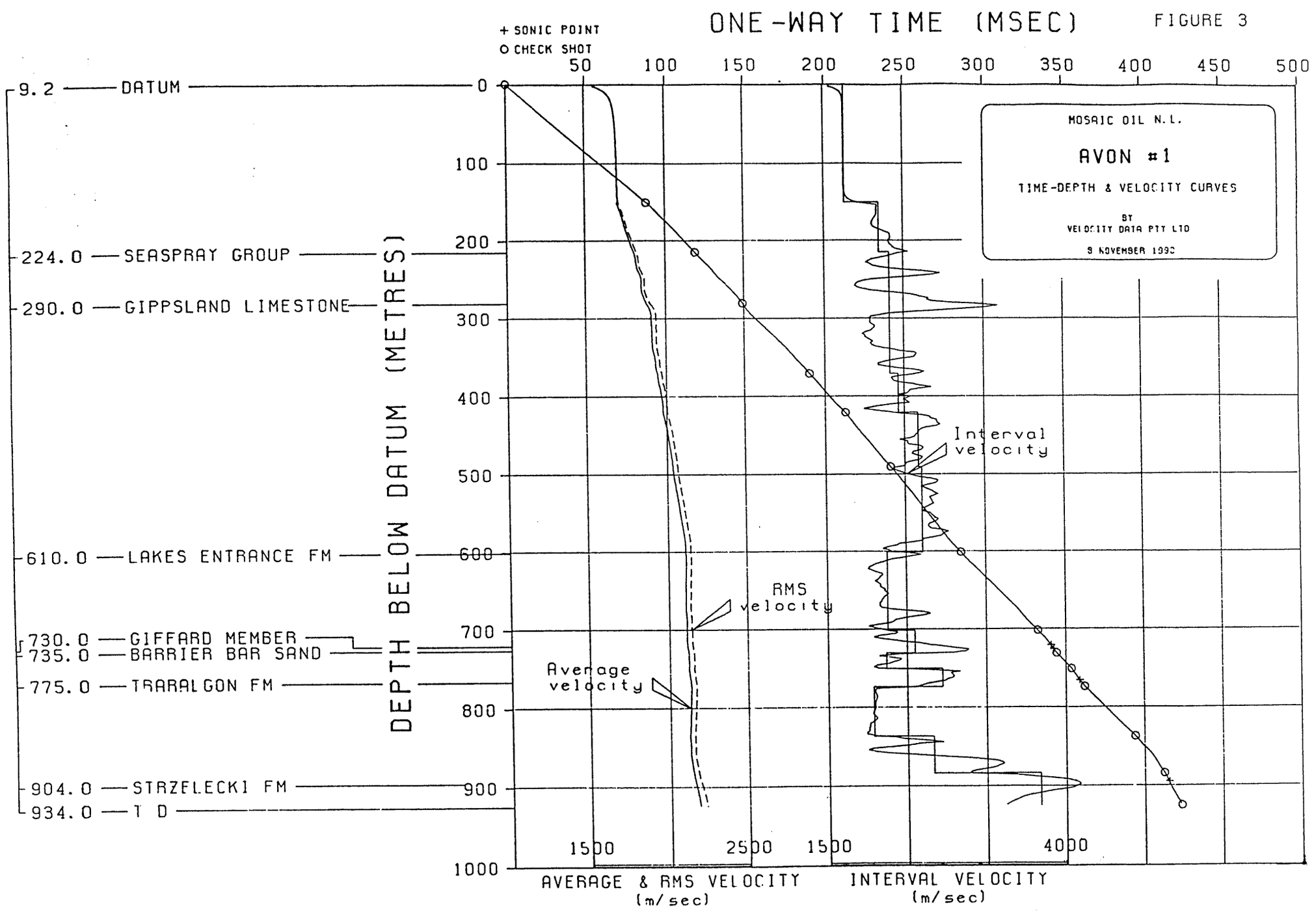
Figure 4B is a plot to scale in depth and time of selected traces. No filter or gain recovery has been applied.

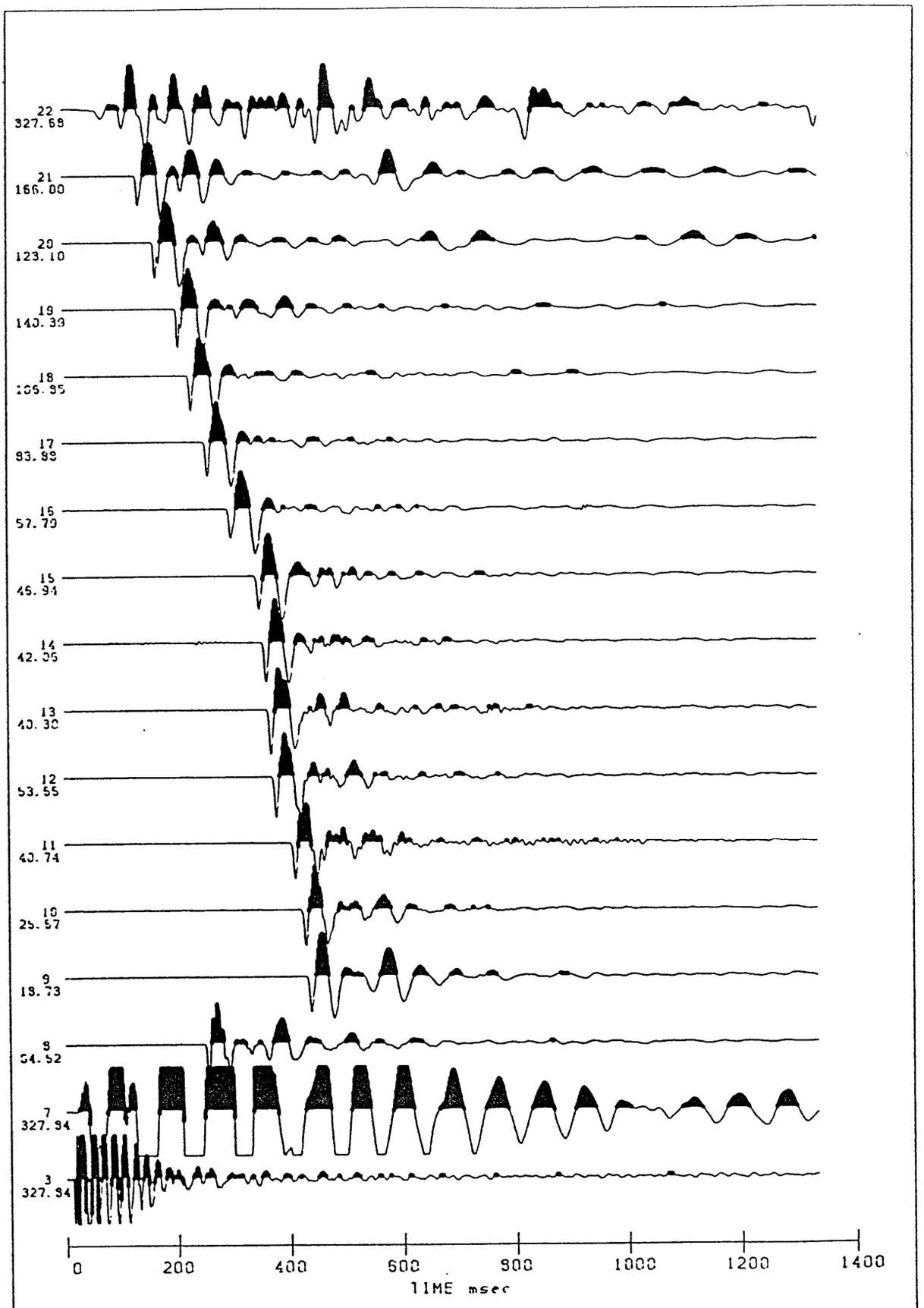
Figure 4C is a plot to scale in depth and time of selected traces with a 5 Hz - 40 Hz filter and a gain recovery function of t^2 applied.

Figure 4D is a plot of selected surface traces. No filter or gain recovery has been applied.

Troy Peters
Geophysical Analyst.

FIGURE 3


+ SONIC POINT
O CHECK SHOT
ONE-WAY TIME (MSEC)
50
100
150
200
250
300
350
400
450
500
9.2 — DATUM
0
100
200
224.0 — SEASPRAY GROUP
290.0 — GIPPSLAND LIMESTONE
300
400
500
600
610.0 — LAKES ENTRANCE FM
700
730.0 — GIFFARD MEMBER
735.0 — BARRIER BAR SAND
775.0 — TRARALGON FM
800
900
904.0 — STRZELECKI FM
934.0 — T D
1000
DEPTH BELOW DATUM (METRES)
MOSAIC OIL N.L.
AVON #1
TIME-DEPTH & VELOCITY CURVES
BY
VELOCITY DATA PTY LTD
8 NOVEMBER 1990
Interval velocity
RMS velocity
Average velocity
1500
2500
1500
4000
AVERAGE & RMS VELOCITY (m/sec)
INTERVAL VELOCITY (m/sec)



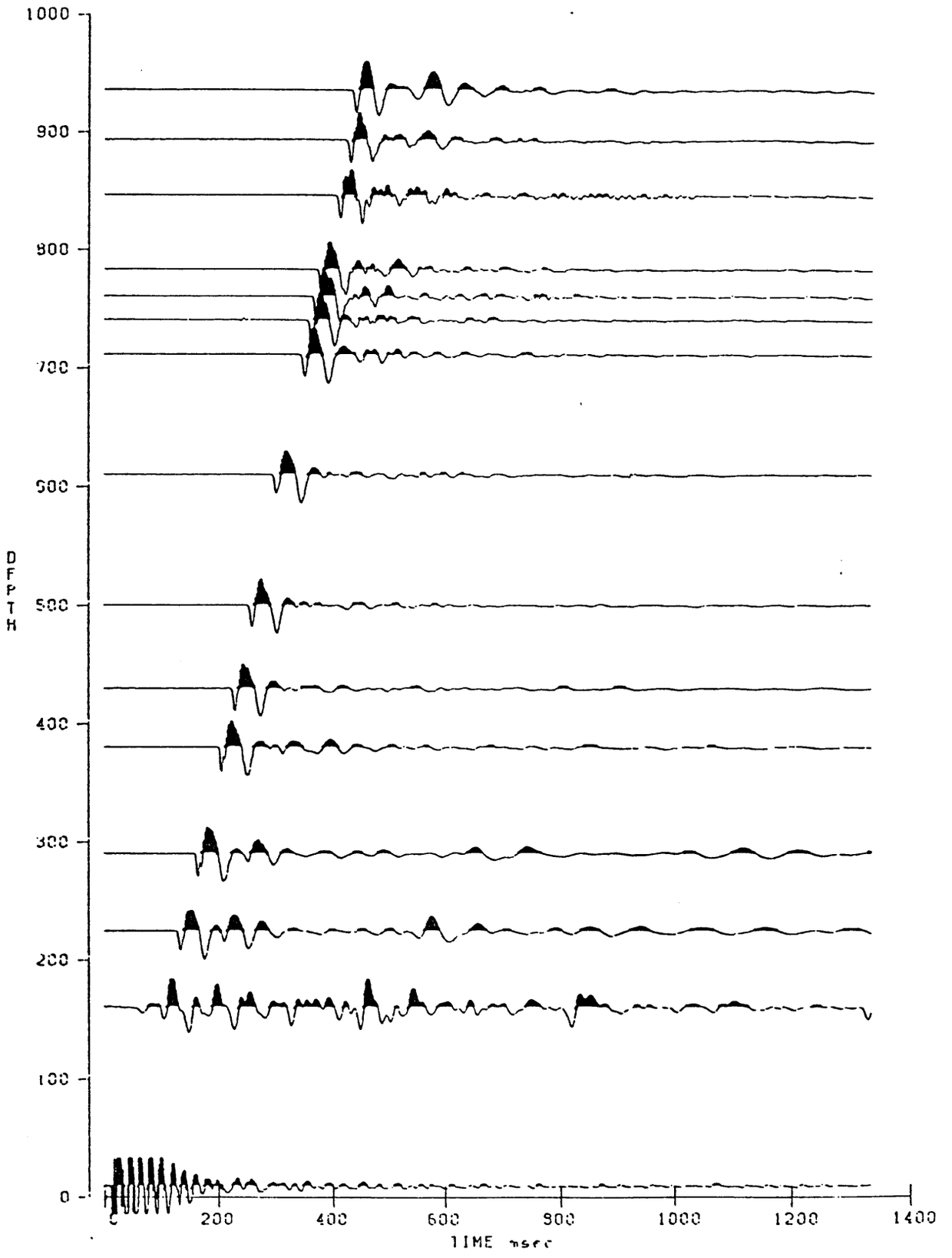
AVON #1

VELOCITY SURVEY TRACE DISPLAY

Filter OUT - OUT

No gain recovery

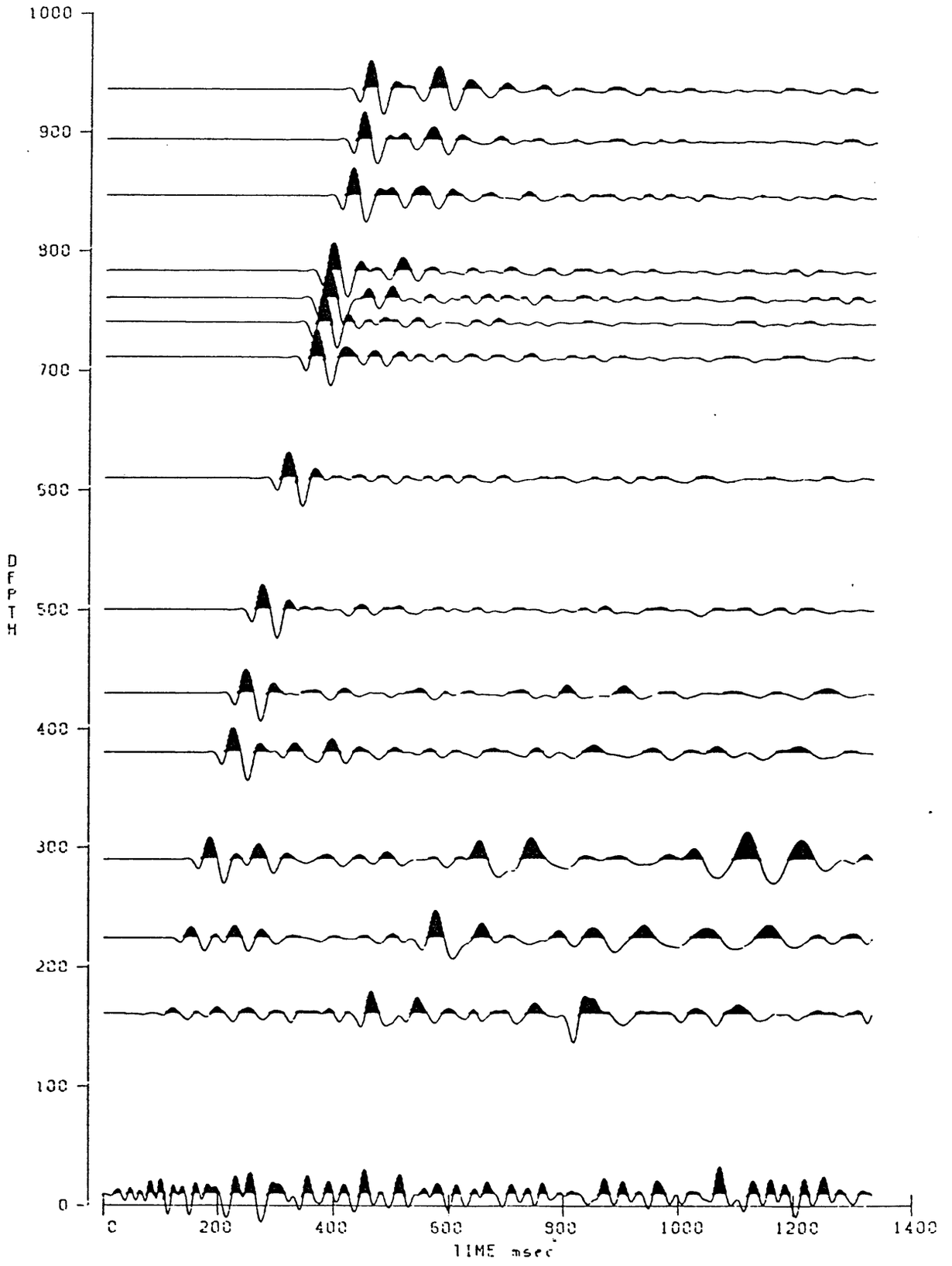
Figure 4A



AVON #1

VELOCITY SURVEY TRACE DISPLAY
Filter OUT - OUT
No gain recovery

Figure 4B



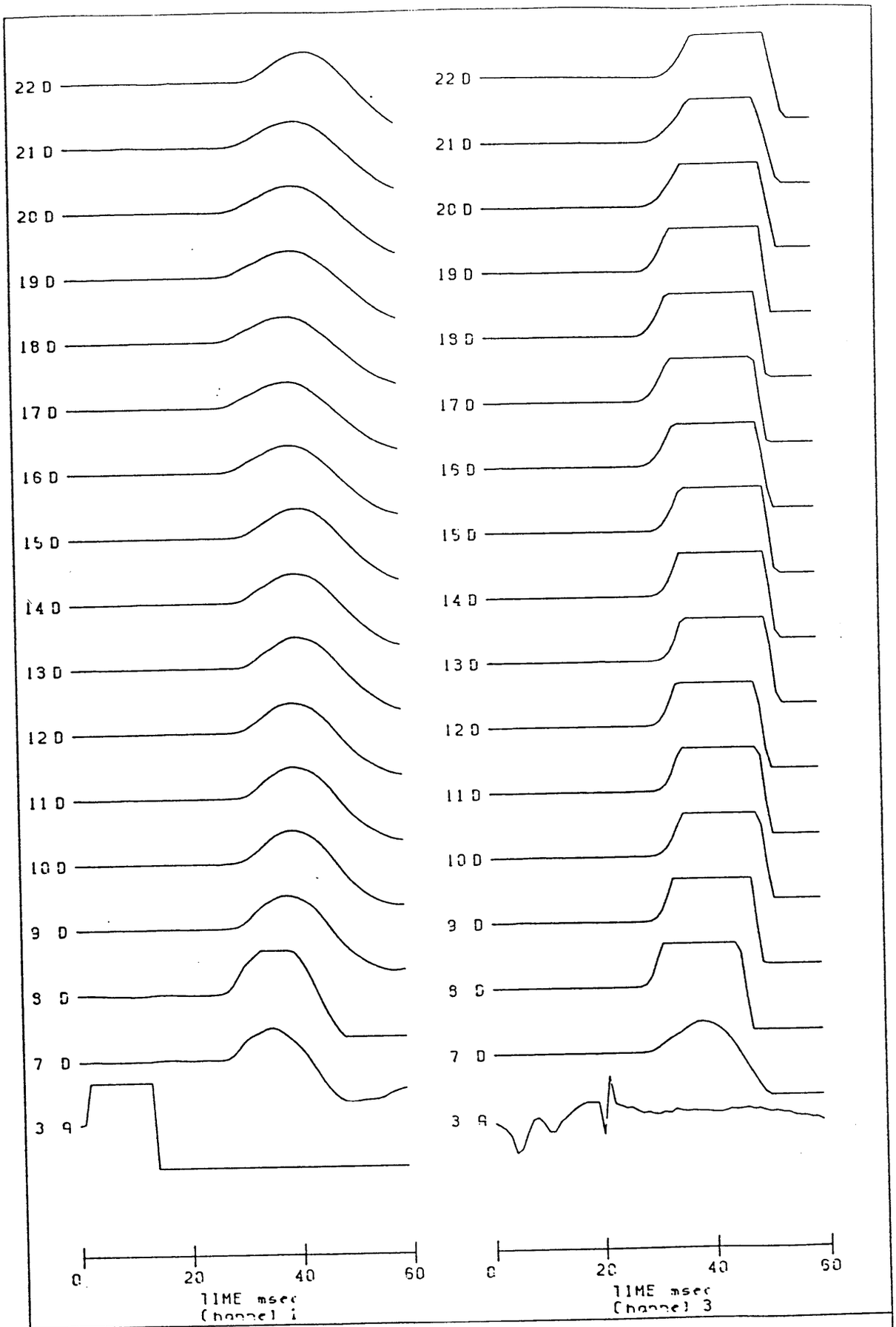
AVON #1

VELOCITY SURVEY TRACE DISPLAY

Filter 5-40

Gain $T^{2.0}$

Figure 40



AVON #1

VELOCITY SURVEY TRACE DISPLAY

Auxiliary channels

Filter OUT - OUT

Figure 4D

TABLE 1. Time-Depth curve values

Well : AVON #1 Client : MOSAIC OIL N.L.
Survey units : METRES Datum : 0.0
Calibrated sonic interval velocities used from 152.0 to 924.0

Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval	Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval
2.0	1.3	1552	1552	1552	82.0	48.3	1698	1698	1710
4.0	2.5	1579	1579	1606	84.0	49.5	1698	1699	1710
6.0	3.8	1599	1600	1642	86.0	50.6	1699	1699	1710
8.0	5.0	1616	1616	1666	88.0	51.8	1699	1699	1710
10.0	6.1	1628	1629	1682	90.0	53.0	1699	1699	1710
12.0	7.3	1639	1639	1692	92.0	54.1	1699	1700	1710
14.0	8.5	1647	1648	1698	94.0	55.3	1700	1700	1710
16.0	9.7	1654	1654	1702	96.0	56.5	1700	1700	1710
18.0	10.8	1659	1660	1705	98.0	57.6	1700	1700	1710
20.0	12.0	1664	1665	1707	100.0	58.8	1700	1700	1710
22.0	13.2	1668	1668	1708	102.0	60.0	1700	1701	1710
24.0	14.4	1671	1672	1708	104.0	61.2	1700	1701	1710
26.0	15.5	1674	1675	1709	106.0	62.3	1701	1701	1710
28.0	16.7	1676	1677	1709	108.0	63.5	1701	1701	1710
30.0	17.9	1679	1679	1709	110.0	64.7	1701	1701	1710
32.0	19.0	1680	1681	1709	112.0	65.8	1701	1701	1710
34.0	20.2	1682	1683	1709	114.0	67.0	1701	1701	1710
36.0	21.4	1684	1684	1709	116.0	68.2	1701	1702	1710
38.0	22.6	1685	1685	1710	118.0	69.3	1702	1702	1710
40.0	23.7	1686	1687	1710	120.0	70.5	1702	1702	1710
42.0	24.9	1687	1688	1710	122.0	71.7	1702	1702	1710
44.0	26.1	1688	1689	1710	124.0	72.9	1702	1702	1710
46.0	27.2	1689	1690	1710	126.0	74.0	1702	1702	1710
48.0	28.4	1690	1690	1710	128.0	75.2	1702	1702	1710
50.0	29.6	1691	1691	1710	130.0	76.4	1702	1703	1711
52.0	30.7	1691	1692	1710	132.0	77.5	1702	1703	1711
54.0	31.9	1692	1693	1710	134.0	78.7	1703	1703	1712
56.0	33.1	1693	1693	1710	136.0	79.9	1703	1703	1714
58.0	34.3	1693	1694	1710	138.0	81.0	1703	1703	1716
60.0	35.4	1694	1694	1710	140.0	82.2	1703	1703	1720
62.0	36.6	1694	1695	1710	142.0	83.4	1704	1704	1727
64.0	37.8	1695	1695	1710	144.0	84.5	1704	1704	1737
66.0	38.9	1695	1696	1710	146.0	85.6	1705	1705	1753
68.0	40.1	1696	1696	1710	148.0	86.8	1706	1706	1779
70.0	41.3	1696	1696	1710	150.0	87.9	1707	1707	1821
72.0	42.4	1696	1697	1710	152.0	88.8	1711	1709	1889
74.0	43.6	1697	1697	1710	154.0	89.9	1714	1713	1970
76.0	44.8	1697	1697	1710	156.0	90.9	1717	1716	1963
78.0	46.0	1697	1698	1710	158.0	91.9	1719	1719	1967
80.0	47.1	1698	1698	1710	160.0	92.9	1722	1722	1973

TABLE 1. Time-Depth curve values

Well : AVON #1
Survey units : METRES
Client : MOSAIC OIL N.L.
Datum : 0.0
Calibrated sonic interval velocities used from 152.0 to 924.0

Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval	Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval
162.0	93.9	1725	1724	1960	242.0	131.5	1840	1853	3282
164.0	94.9	1727	1727	1971	244.0	132.2	1846	1862	3140
166.0	96.0	1730	1730	1967	246.0	133.0	1850	1866	2500
168.0	97.0	1732	1732	1964	248.0	133.8	1853	1870	2361
170.0	98.0	1735	1735	1948	250.0	134.8	1855	1871	2012
172.0	99.0	1737	1737	1934	252.0	135.8	1856	1872	2031
174.0	100.1	1739	1739	1922	254.0	136.8	1857	1873	1946
176.0	101.1	1741	1741	1917	256.0	137.8	1857	1873	1946
178.0	102.2	1742	1743	1912	258.0	138.9	1858	1874	1950
180.0	103.2	1744	1745	1902	260.0	139.9	1858	1874	1928
182.0	104.3	1746	1746	1921	262.0	140.9	1859	1875	1979
184.0	105.3	1748	1748	1939	264.0	141.9	1861	1877	2125
186.0	106.3	1750	1751	1997	266.0	142.7	1864	1879	2285
188.0	107.2	1753	1754	2095	268.0	143.6	1867	1883	2375
190.0	108.2	1756	1758	2117	270.0	144.2	1872	1890	3080
192.0	109.2	1759	1761	2068	272.0	144.9	1877	1896	2938
194.0	110.1	1762	1764	2155	274.0	145.7	1880	1900	2467
196.0	111.1	1765	1767	2058	276.0	146.5	1884	1904	2648
198.0	112.0	1768	1771	2123	278.0	147.1	1889	1911	2999
200.0	113.0	1771	1774	2098	280.0	147.8	1895	1917	3074
202.0	113.9	1773	1776	2064	282.0	148.4	1900	1924	3023
204.0	114.9	1775	1779	2044	284.0	149.1	1905	1931	3279
206.0	115.8	1778	1782	2126	286.0	149.6	1911	1939	3382
208.0	116.8	1781	1785	2180	288.0	150.3	1917	1946	3211
210.0	117.7	1785	1789	2200	290.0	151.1	1920	1949	2478
212.0	118.6	1787	1792	2105	292.0	151.9	1922	1952	2385
214.0	119.5	1791	1796	2267	294.0	152.9	1923	1953	2066
216.0	120.3	1795	1800	2407	296.0	154.0	1923	1952	1865
218.0	121.1	1800	1806	2573	298.0	155.0	1922	1952	1883
220.0	122.0	1803	1810	2220	300.0	156.0	1923	1952	1950
222.0	122.9	1807	1814	2347	302.0	157.1	1922	1951	1869
224.0	123.9	1809	1816	2004	304.0	158.2	1922	1951	1903
226.0	124.8	1811	1818	2106	306.0	159.2	1922	1950	1905
228.0	125.8	1813	1820	2067	308.0	160.3	1922	1950	1922
230.0	126.7	1815	1822	2103	310.0	161.3	1922	1950	1902
232.0	127.7	1817	1825	2088	312.0	162.3	1923	1951	2084
234.0	128.6	1820	1828	2260	314.0	163.3	1923	1951	1970
236.0	129.5	1823	1831	2214	316.0	164.4	1923	1950	1842
238.0	130.2	1828	1837	2725	318.0	165.5	1922	1949	1841
240.0	130.9	1833	1844	2839	320.0	166.5	1921	1949	1830

TABLE 1. Time-Depth curve values

Well : AVON #1 Client : MOSAIC OIL N.L.
Survey units : METRES Datum : 0.0
Calibrated sonic interval velocities used from 152.0 to 924.0

Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval	Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval
322.0	167.7	1921	1948	1807	402.0	204.4	1967	1995	1962
324.0	168.8	1920	1947	1818	404.0	205.2	1969	1997	2508
326.0	169.8	1920	1947	2003	406.0	206.0	1970	1998	2265
328.0	170.9	1920	1947	1819	408.0	206.9	1972	1999	2257
330.0	171.9	1920	1947	1993	410.0	207.8	1973	2001	2444
332.0	172.9	1920	1947	1957	412.0	208.7	1974	2002	2101
334.0	173.9	1920	1947	1908	414.0	209.9	1973	2000	1699
336.0	175.0	1920	1946	1884	416.0	210.9	1972	2000	1909
338.0	176.1	1920	1946	1857	418.0	212.1	1971	1998	1706
340.0	176.9	1922	1948	2375	420.0	213.0	1972	1999	2153
342.0	177.8	1924	1950	2298	422.0	213.8	1974	2002	2629
344.0	178.6	1926	1952	2454	424.0	214.6	1976	2004	2523
346.0	179.5	1928	1954	2206	426.0	215.4	1978	2006	2543
348.0	180.3	1930	1957	2532	428.0	216.1	1980	2009	2622
350.0	181.1	1933	1959	2444	430.0	216.9	1983	2011	2669
352.0	182.0	1934	1961	2263	432.0	217.6	1985	2014	2737
354.0	182.9	1935	1962	2118	434.0	218.4	1987	2017	2651
356.0	184.0	1935	1961	1849	436.0	219.1	1990	2019	2683
358.0	185.0	1935	1961	2049	438.0	219.9	1992	2022	2658
360.0	186.0	1936	1962	2006	440.0	220.6	1995	2025	2778
362.0	187.0	1936	1962	1996	442.0	221.4	1997	2027	2560
364.0	188.0	1936	1962	2039	444.0	222.3	1997	2027	2113
366.0	188.8	1939	1965	2531	446.0	223.1	1999	2029	2592
368.0	189.5	1942	1968	2561	448.0	223.8	2001	2032	2643
370.0	190.2	1945	1972	3006	450.0	224.6	2003	2034	2578
372.0	191.1	1946	1973	2131	452.0	225.5	2004	2035	2208
374.0	192.1	1947	1974	2042	454.0	226.4	2005	2036	2249
376.0	193.0	1948	1975	2225	456.0	227.2	2007	2037	2487
378.0	194.0	1948	1975	2003	458.0	228.1	2008	2038	2257
380.0	194.9	1950	1977	2409	460.0	229.0	2009	2039	2215
382.0	195.8	1951	1977	2039	462.0	229.8	2010	2041	2474
384.0	196.7	1952	1979	2378	464.0	230.7	2012	2042	2357
386.0	197.5	1954	1981	2392	466.0	231.4	2014	2045	2783
388.0	198.2	1957	1985	2764	468.0	232.1	2016	2047	2671
390.0	199.0	1960	1987	2607	470.0	233.0	2017	2048	2349
392.0	199.8	1962	1990	2506	472.0	233.8	2019	2050	2422
394.0	200.9	1962	1989	1890	474.0	234.7	2019	2050	2177
396.0	201.7	1963	1990	2258	476.0	235.5	2021	2052	2617
398.0	202.5	1965	1993	2609	478.0	236.3	2023	2054	2581
400.0	203.4	1967	1995	2387	480.0	237.1	2025	2056	2480

TABLE 1. Time-Depth curve values

Well : AVON #1 Client : MOSAIC OIL N.L.
Survey units : METRES Datum : 0.0
Calibrated sonic interval velocities used from 152.0 to 924.0

Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval	Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval
482.0	237.8	2027	2058	2711	562.0	267.4	2101	2140	3045
484.0	238.7	2028	2059	2216	564.0	268.2	2103	2142	2775
486.0	239.5	2029	2060	2428	566.0	268.9	2105	2144	2719
488.0	240.4	2030	2061	2239	568.0	269.6	2107	2146	2720
490.0	241.3	2030	2062	2248	570.0	270.3	2109	2148	2851
492.0	242.1	2032	2063	2413	572.0	271.0	2111	2150	2897
494.0	243.0	2033	2064	2333	574.0	271.7	2113	2153	3028
496.0	243.8	2034	2065	2398	576.0	272.3	2115	2156	3131
498.0	244.6	2036	2067	2507	578.0	273.0	2118	2158	3125
500.0	245.4	2038	2069	2649	580.0	273.7	2119	2160	2629
502.0	246.2	2039	2070	2551	582.0	274.4	2121	2162	2881
504.0	246.9	2041	2072	2644	584.0	275.1	2123	2164	2844
506.0	247.7	2043	2075	2735	586.0	275.9	2124	2166	2696
508.0	248.3	2046	2078	3041	588.0	276.7	2125	2167	2477
510.0	248.9	2049	2082	3271	590.0	277.4	2127	2169	2863
512.0	249.7	2051	2084	2725	592.0	278.3	2127	2169	2203
514.0	250.4	2053	2086	2739	594.0	279.2	2127	2169	2141
516.0	251.2	2054	2088	2601	596.0	280.0	2129	2170	2531
518.0	251.9	2056	2090	2781	598.0	281.0	2128	2169	1993
520.0	252.6	2058	2092	2758	600.0	281.7	2130	2171	2684
522.0	253.3	2061	2095	2911	602.0	282.6	2130	2171	2371
524.0	254.0	2063	2098	3009	604.0	283.4	2131	2172	2486
526.0	254.7	2065	2100	2761	606.0	284.2	2132	2173	2391
528.0	255.4	2067	2102	2825	608.0	285.2	2132	2173	2039
530.0	256.1	2070	2105	3022	610.0	286.2	2132	2172	2071
532.0	256.8	2072	2107	2653	612.0	287.2	2131	2172	1990
534.0	257.5	2073	2109	2725	614.0	288.2	2130	2171	1895
536.0	258.2	2076	2112	2854	616.0	289.2	2130	2170	2050
538.0	258.9	2078	2115	3088	618.0	290.3	2129	2169	1817
540.0	259.6	2080	2117	2745	620.0	291.4	2127	2168	1772
542.0	260.3	2082	2119	2851	622.0	292.6	2126	2166	1792
544.0	261.1	2083	2120	2491	624.0	293.6	2125	2165	1846
546.0	261.8	2085	2123	2882	626.0	294.7	2124	2164	1906
548.0	262.5	2087	2125	2792	628.0	295.7	2124	2164	2040
550.0	263.3	2089	2127	2776	630.0	296.7	2123	2163	1958
552.0	264.0	2091	2129	2727	632.0	297.6	2123	2163	2103
554.0	264.7	2093	2131	2877	634.0	298.7	2122	2162	1838
556.0	265.4	2095	2133	2964	636.0	299.8	2122	2161	1891
558.0	266.1	2097	2136	2878	638.0	300.8	2121	2160	1921
560.0	266.8	2099	2138	2778	640.0	301.9	2120	2160	1937

TABLE 1. Time-Depth curve values

Well : AVON #1
Survey units : METRES
Client : MOSAIC OIL N.L.
Datum : 0.0
Calibrated sonic interval velocities used from 152.0 to 924.0

Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval	Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval
642.0	302.9	2120	2159	1916	722.0	341.9	2111	2148	2286
644.0	303.9	2119	2158	1983	724.0	342.7	2113	2149	2622
646.0	304.9	2119	2158	2013	726.0	343.3	2115	2152	3457
648.0	306.0	2118	2157	1877	728.0	344.0	2117	2154	2982
650.0	307.0	2117	2156	1995	730.0	344.7	2118	2155	2553
652.0	307.9	2117	2156	2120	732.0	345.7	2118	2155	2177
654.0	308.9	2117	2156	1981	734.0	346.5	2118	2156	2367
656.0	309.9	2117	2155	2081	736.0	347.2	2120	2157	2749
658.0	310.9	2116	2155	1962	738.0	347.9	2121	2159	2886
660.0	311.9	2116	2154	1988	740.0	348.6	2123	2161	3148
662.0	313.0	2115	2154	1919	742.0	349.3	2124	2162	2626
664.0	314.0	2115	2153	1998	744.0	350.2	2125	2163	2313
666.0	315.0	2114	2153	1965	746.0	351.0	2126	2164	2557
668.0	316.0	2114	2152	1922	748.0	351.7	2127	2164	2542
670.0	317.1	2113	2151	1900	750.0	352.6	2127	2165	2393
672.0	318.1	2113	2150	1939	752.0	353.3	2128	2166	2723
674.0	319.1	2112	2150	2000	754.0	354.1	2129	2167	2448
676.0	320.0	2112	2150	2130	756.0	355.0	2130	2168	2380
678.0	320.8	2113	2151	2545	758.0	355.8	2130	2168	2444
680.0	321.6	2115	2152	2711	760.0	356.7	2131	2168	2162
682.0	322.3	2116	2154	2774	762.0	357.4	2132	2170	2863
684.0	323.3	2116	2154	2055	764.0	358.3	2132	2170	2337
686.0	324.3	2116	2153	1974	766.0	359.1	2133	2171	2401
688.0	325.2	2116	2153	2184	768.0	360.1	2133	2170	2058
690.0	326.1	2116	2154	2269	770.0	360.9	2133	2171	2372
692.0	327.1	2116	2153	1987	772.0	361.9	2133	2171	2117
694.0	328.1	2115	2152	1941	774.0	362.8	2133	2171	2075
696.0	329.2	2114	2151	1816	776.0	363.8	2133	2170	2062
698.0	330.4	2113	2150	1709	778.0	364.8	2133	2170	2028
700.0	331.5	2112	2149	1771	780.0	365.8	2133	2170	2044
702.0	332.3	2113	2150	2528	782.0	366.7	2132	2169	2040
704.0	333.2	2113	2150	2259	784.0	367.7	2132	2169	2096
706.0	334.2	2112	2149	1945	786.0	368.7	2132	2169	2079
708.0	335.3	2112	2149	1901	788.0	369.6	2132	2169	2063
710.0	336.4	2111	2148	1813	790.0	370.6	2132	2168	2048
712.0	337.5	2109	2146	1714	792.0	371.6	2131	2168	2049
714.0	338.6	2109	2146	1916	794.0	372.6	2131	2168	2060
716.0	339.4	2110	2146	2371	796.0	373.5	2131	2167	2036
718.0	340.1	2111	2148	2727	798.0	374.5	2131	2167	2049
720.0	341.1	2111	2148	2187	800.0	375.5	2131	2167	2046

TABLE 1. Time-Depth curve values

Well : AVON #1 Client : MOSAIC OIL N.L.
Survey units : METRES Datum : 0.0
Calibrated sonic interval velocities used from 152.0 to 924.0

Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval	Datum Depth	One-way time(ms)	-----VELOCITIES----- Average	RMS	Interval
802.0	376.5	2130	2167	2068	864.0	405.3	2132	2167	3080
804.0	377.4	2130	2166	2039	866.0	406.0	2133	2169	3117
806.0	378.4	2130	2166	2046	868.0	406.6	2135	2171	3318
808.0	379.4	2129	2165	1954	870.0	407.1	2137	2174	3689
810.0	380.4	2129	2165	2042	872.0	407.7	2139	2176	3514
812.0	381.4	2129	2165	2073	874.0	408.3	2140	2178	3125
814.0	382.3	2129	2165	2155	876.0	408.9	2142	2180	3229
816.0	383.3	2129	2165	2059	878.0	409.6	2144	2182	3278
818.0	384.3	2129	2164	2000	880.0	410.1	2146	2185	3505
820.0	385.3	2128	2164	1970	882.0	410.8	2147	2186	2845
822.0	386.3	2128	2163	1981	884.0	411.6	2148	2187	2723
824.0	387.3	2127	2163	1972	886.0	412.2	2149	2189	2992
826.0	388.3	2127	2162	2078	888.0	412.8	2151	2191	3247
828.0	389.3	2127	2162	1906	890.0	413.4	2153	2193	3650
830.0	390.3	2126	2161	1985	892.0	414.0	2155	2195	3475
832.0	391.4	2126	2161	1980	894.0	414.5	2157	2198	3536
834.0	392.4	2126	2160	1972	896.0	415.1	2159	2200	3587
836.0	393.4	2125	2160	1940	898.0	415.6	2161	2203	3648
838.0	394.4	2125	2159	1942	900.0	416.2	2163	2206	3786
840.0	395.1	2126	2161	3116	902.0	416.7	2164	2208	3527
842.0	395.8	2127	2163	2836	904.0	417.3	2166	2210	3388
844.0	396.7	2128	2163	2223	906.0	417.9	2168	2212	3431
846.0	397.3	2130	2165	3359	908.0	418.5	2170	2214	3313
848.0	398.1	2130	2166	2347	910.0	419.1	2171	2216	3153
850.0	399.1	2130	2165	2116	912.0	419.8	2173	2218	3113
852.0	400.1	2130	2165	2011	914.0	420.4	2174	2219	3080
854.0	401.1	2129	2164	1836	916.0	421.1	2175	2221	3047
856.0	402.2	2128	2163	1827	918.0	421.8	2177	2222	3014
858.0	403.3	2128	2163	1973	920.0	422.4	2178	2224	2981
860.0	404.0	2129	2164	2834	922.0	423.1	2179	2225	2948
862.0	404.7	2130	2166	2790	924.0	423.8	2180	2226	2916

VELSEIS PTY LTD

WELL SURVEY CALCULATIONS

Company : MOSAIC OIL N.L.
Well : AVON #1
Elevations : Datum : 0.0 Ground : 6.0 Kelly : 9.2
Shot data : Location Elevation Offset

Location	Elevation	Offset
A	6.0	3.0
B	6.0	12.4
C	6.0	24.2
D	6.0	24.0

Latitude : 038 02 55
Longitude : 147 08 13
Rig identification : DRILLCORP
Energy source : AN60
Logger : V1030
Near surface velocity for shot statics: 920
Instrument delay: 4.0 ms

Survey date : 08-NOV-90
Survey units : METRES
Times in milliseconds.

SHOT CALCULATIONS

Shot No	Geophone depth Kelly	Geophone depth Datum	Shot Locn	Shot Depth	TIMES Record	TIMES Corr.	TIMES Avg.	TIMES Below datum	Check shot interval Distance	Check shot interval Time	Velocities Average	Velocities RMS	Velocities Interval
DATUM													
3	9.2	0.0	A	0.5	13.0	12.4							
7	9.2	0.0	D	2.0	22.0	9.1	10.8	0.0					
									150.8	88.3			1707.8
22	160.0	150.8	D	2.0	98.0	99.1	99.1	88.3			1707.8	1707.8	
									64.0	30.8			2077.9
SEASPRAY GROUP													
21	224.0	214.8	D	2.0	128.5	129.9	129.9	119.1			1803.5	1810.8	
									66.0	30.2			2185.4
GIPPSLAND LIMESTONE													
20	290.0	280.8	D	2.0	158.5	160.1	160.1	149.3			1880.8	1892.6	
									90.0	41.2			2184.5
19	380.0	370.8	D	2.0	199.5	201.3	201.3	190.5			1946.5	1959.4	
									50.0	22.0			2272.7
18	430.0	420.8	D	2.0	221.5	223.3	223.3	212.5			1980.2	1994.1	
									70.0	28.3			2473.5
8	500.0	490.8	D	2.0	248.5	250.4							
17	500.0	490.8	D	2.0	251.0	252.9	251.6	240.8			2038.2	2056.3	
									110.0	43.8			2511.4
LAKES ENTRANCE FM													
16	610.0	600.8	D	2.0	293.5	295.4	295.4	284.6			2111.0	2132.6	
									101.0	47.6			2121.8
15	711.0	701.8	D	2.0	341.0	343.0	343.0	332.2			2112.6	2131.1	
									29.0	12.0			2416.7
14	740.0	730.8	D	2.0	353.0	355.0	355.0	344.2			2123.2	2141.7	
									20.0	9.5			2105.3
13	760.0	750.8	D	2.0	362.5	364.5	364.5	353.7			2122.7	2140.7	
									23.0	8.5			2705.9
12	783.0	773.8	D	2.0	371.0	373.0	373.0	362.2			2136.4	2155.7	
									63.0	32.0			1968.7
11	846.0	836.8	D	2.0	403.0	405.0	405.0	394.2			2122.8	2141.1	
									47.0	18.0			2611.1
10	893.0	883.8	D	2.0	421.0	423.0	423.0	412.2			2144.1	2163.8	
									41.0	11.0			3727.3
T D													
9	934.0	924.8	D	2.0	432.0	434.0	434.0	423.2			2185.3	2218.4	

Company : MOSAIC OIL N.L.
Well : AVON #1
Elevations : Datum : 0.0 Ground : 6.0 Kelly : 9.2

Latitude : 038 02 55
Longitude : 147 08 13

Survey date : 08-NOV-90
Survey units : METRES
Times in milliseconds.

SONIC DRIFT

	Geophone depth Kelly	Datum	Check shot times Average	Below datum	Check shot interval Distance	Time	Sonic Int. time	Interval sonic drift usec/m	msec	Cumulative drift msec
DATUM										
	9.2	0.0	10.8	0.0						
					150.8	88.3				
	160.0	150.8	99.1	88.3						
					64.0	30.8	39.8	-140.62	-9.0	-9.0
SEASPRAY GROUP										
	224.0	214.8	129.9	119.1						
					66.0	30.2	34.1	-59.09	-3.9	-12.9
GIPPSLAND LIMESTONE										
	290.0	280.8	160.1	149.3						
					90.0	41.2	46.4	-57.78	-5.2	-18.1
	380.0	370.8	201.3	190.5						
					50.0	22.0	23.2	-24.00	-1.2	-19.3
	430.0	420.8	223.3	212.5						
					70.0	28.3	27.9	5.71	0.4	-18.9
	500.0	490.8	251.6	240.8						
					110.0	43.8	40.5	30.00	3.3	-15.6
LAKES ENTRANCE FM										
	610.0	600.8	295.4	284.6						
					101.0	47.6	53.3	-56.44	-5.7	-21.3
	711.0	701.8	343.0	332.2						
					29.0	12.0	14.4	-82.76	-2.4	-23.7
	740.0	730.8	355.0	344.2						
					20.0	9.5	9.0	25.00	0.5	-23.2
	760.0	750.8	364.5	353.7						
					23.0	8.5	11.3	-121.74	-2.8	-26.0
	783.0	773.8	373.0	362.2						
					63.0	32.0	34.6	-41.27	-2.6	-28.6
	846.0	836.8	405.0	394.2						
					47.0	18.0	18.8	-17.02	-0.8	-29.4
	893.0	883.8	423.0	412.2						
					41.0	11.0	11.4	-9.76	-0.4	-29.8
T D										
	934.0	924.8	434.0	423.2						

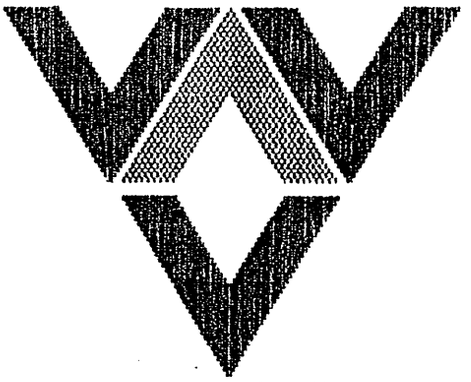
Company : MOSAIC OIL N.L.
Well : AVON #1
Elevations : Datum : 0.0 Ground : 6.0 Kelly : 9.2

Latitude : 038 02 55
Longitude : 147 08 13

Survey date : 08-NOV-90
Survey units : METRES
Times in milliseconds.

SONIC CALIBRATION

Geophone depth Kelly	Geophone depth Datum	Interval Distance	Original sonic times Interval	Original sonic times Cumulative	Adjusted sonic times Interval	Adjusted sonic times Calibrated	Velocities Average	Velocities RMS	Velocities Interval
DATUM									
9.2	0.0								
		150.8							1707.8
160.0	150.8						1707.8	1707.8	
		64.0	39.8		30.8				2077.9
SEASPRAY GROUP									
224.0	214.8			39.8		119.1	1803.5	1810.8	
		66.0	34.1		30.2				2185.4
GIPPSLAND LIMESTONE									
290.0	280.8			73.9		149.3	1880.8	1892.6	
		90.0	46.4		41.2				2184.5
380.0	370.8			120.3		190.5	1946.5	1959.4	
		50.0	23.2		22.0				2272.7
430.0	420.8			143.5		212.5	1980.2	1994.1	
		70.0	27.9		28.3				2473.5
500.0	490.8			171.4		240.8	2038.2	2056.3	
		110.0	40.5		43.8				2511.4
LAKES ENTRANCE FM									
610.0	600.8			211.9		284.6	2111.0	2132.6	
		101.0	53.3		47.6				2121.8
711.0	701.8			265.2		332.2	2112.6	2131.1	
		19.0	10.1		8.5				2228.1
GIFFARD MEMBER									
730.0	720.8			275.3		340.7	2115.5	2133.6	
		5.0	2.2		1.8				2799.2
BARRIER BAR SAND									
735.0	725.8			277.5		342.5	2119.0	2137.6	
		5.0	2.1		1.7				2965.2
740.0	730.8			279.6		344.2	2123.2	2142.4	
		20.0	9.0		9.5				2105.3
760.0	750.8			288.6		353.7	2122.7	2141.4	
		15.0	7.0		5.2				2899.2
TRARALGON FM									
775.0	765.8			295.6		358.9	2133.9	2154.2	
		8.0	4.3		3.3				2405.2
783.0	773.8			299.9		362.2	2136.4	2156.7	
		63.0	34.6		32.0				1968.7
846.0	836.8			334.5		394.2	2122.8	2142.0	
		47.0	18.8		18.0				2611.1
893.0	883.8			353.3		412.2	2144.1	2164.7	
		11.0	3.2		3.1				3556.8
STRZELECKI FM									
904.0	894.8			356.5		415.3	2154.6	2178.3	
		30.0	8.2		7.9				3794.0
T D									
934.0	924.8			364.7		423.2	2185.3	2219.3	



Velocity Data Pty Ltd

WELL VELOCITY SURVEY

CLIENT : MOSAIC OIL N.L.
WELL IDENTIFICATION : AVON #1
SURVEY DATE : 08-NOV-90
SURVEY TIME : 16:02:00
SURVEY UNITS : METRES
AUTHORITY TO PROSPECT : PEP 107

WELL LATITUDE : 038 02 55
WELL LONGITUDE : 147 08 13

KELLY ELEVATION : 9.2
GROUND ELEVATION : 6.0

WEATHER : FINE

ENERGY SOURCE : AN60

CLIENT REP : MR J. CARMODY
OBSERVER : H. HUNT
SHOOTER : J. BROWN

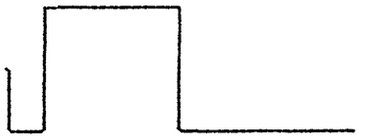
RIG IDENTIFICATION : DRILLCORP
CASING DEPTH : 450
LOGGING UNIT : V1030

RECORDING INSTRUMENTS : VDLS11/10
SYSTEM DELAY TIME 4 MSEC.

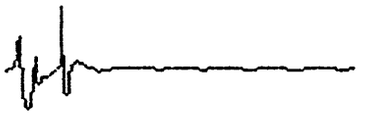
TRACE DISPLAY.

SHOT 3 Time 16:25:46 Level : 9.2 Shot location : A
Shot depth : 0.5 Charge size : CAP
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 10000mV



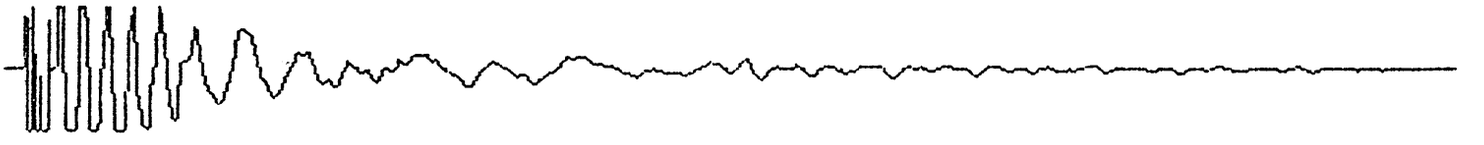
AUX. CHANNEL 2 Max. 2763mV



AUX. CHANNEL 3 Max. 527mV

AUX. CHANNEL 4 Max. 10000mV

WELL PHONE CHANNEL - floating point amplifier

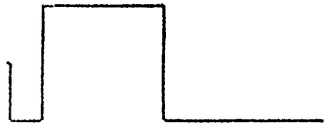


Data maximum (mV) : down hole channel - 327.840

TRACE DISPLAY.

SHOT 3 Time 16:25:46 Level : 9.2 Shot location : A
Shot depth : 0.5 Charge size : CAP
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

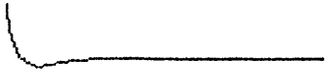
AUX. CHANNEL 1 Max. 10000mV



AUX. CHANNEL 2 Max. 2763mV

AUX. CHANNEL 3 Max. 527mV

AUX. CHANNEL 4 Max. 10000mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 327.840

FIRST ARRIVAL PLOT — Shot 3 Level 9.2

Sample time	Value uV	Well phone data
0.0	160.	*
1.0	1111.	*
2.0	1446.	*
3.0	1728.	*
4.0	1643.	*
5.0	1363.	*
6.0	1331.	*
7.0	1698.	*
8.0	2013.	*
9.0	1593.	*
10.0	494.	*
11.0	-705.	*
12.0	830.	*
13.0	3174.	*
14.0	-80039.	* |
15.0	-277095. *	|
16.0	-327840. *	|
17.0	-269572. *	|
18.0	55547.	| *
19.0	327680.	| *
20.0	68514.	| *
21.0	-327840. *	|
22.0	-327840. *	|
23.0	-78358.	* |
24.0	327680.	| *
25.0	327680.	| *
26.0	318396.	| *
27.0	47383.	| *
28.0	20480.	| *
29.0	327680.	| *
30.0	327680.	| *
31.0	327680.	| *
32.0	129984.	| *
33.0	-251003. *	|
34.0	-212104. *	|
35.0	12406.	| *
36.0	197857.	| *
37.0	39.	* |
38.0	-327840. *	|
39.0	-327840. *	|
40.0	-327840. *	|
41.0	-327840. *	|
42.0	-327840. *	|
43.0	-327840. *	|
44.0	-248281. *	|
45.0	37899.	| *
46.0	327680.	| *
47.0	327680.	| *
48.0	327680.	| *
49.0	327680.	| *
50.0	327680.	| *

TRACE DISPLAY.

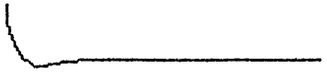
SHOT 7 Time 16:48:36 Level : 9.2 Shot location : D
Shot depth : 2.0 Charge size : 1/8
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 10000mV

AUX. CHANNEL 2 Max. 3178mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 7178mV

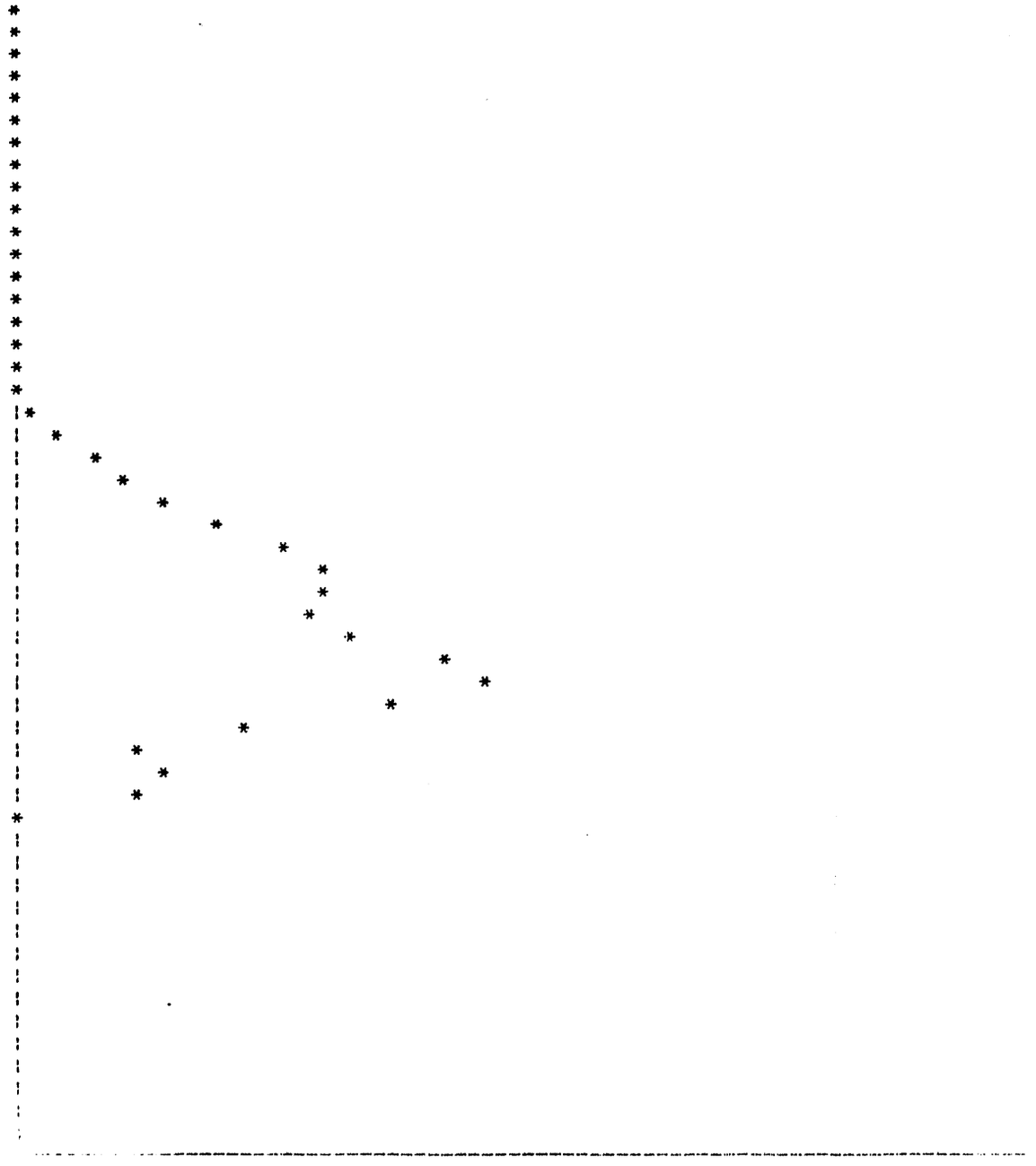


WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 327.840

FIRST ARRIVAL PLOT — Shot 7 Level 9.2

Sample time	Value uV
6.0	2151.
7.0	2249.
8.0	2211.
9.0	1886.
10.0	1311.
11.0	782.
12.0	261.
13.0	-340.
14.0	-1231.
15.0	-1976.
16.0	-2404.
17.0	-2556.
18.0	-2596.
19.0	-2556.
20.0	-2391.
21.0	-2006.
22.0	-1041.
23.0	1888.
24.0	8434.
25.0	22531.
26.0	37578.
27.0	53706.
28.0	74196.
29.0	97888.
30.0	129503.
31.0	151274.
32.0	150474.
33.0	143430.
34.0	162640.
35.0	207301.
36.0	227631.
37.0	185050.
38.0	108773.
39.0	62190.
40.0	70514.
41.0	58268.
42.0	-4692.
43.0	-164881.
44.0	-230193.
45.0	-237716.
46.0	-238517.
47.0	-266210.
48.0	-313593.
49.0	-327840.
50.0	-327840.
51.0	-327840.
52.0	-302548.
53.0	-260287.
54.0	-243959.
55.0	-257406.
56.0	-277256.



TRACE DISPLAY.

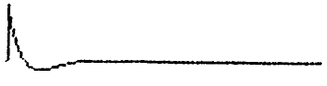
SHOT 8 Time 17:08:15 Level : 500.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 10000mV

AUX. CHANNEL 2 Max. 10000mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 4389mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 83.401

FIRST ARRIVAL PLOT - Shot 8 Level 500.0

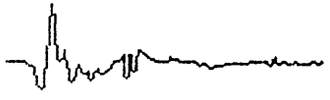
Sample time	Value uV	Well phone data
232.0	-84.	*
232.5	-75.	*
233.0	-59.	*
233.5	-45.	*
234.0	-32.	*
234.5	-21.	*
235.0	-9.	*
235.5	-2.	*
236.0	-0.	*
236.5	-2.	*
237.0	-5.	*
237.5	-10.	*
238.0	-12.	*
238.5	-13.	*
239.0	-14.	*
239.5	-17.	*
240.0	-23.	*
240.5	-32.	*
241.0	-42.	*
241.5	-48.	*
242.0	-51.	*
242.5	-53.	*
243.0	-55.	*
243.5	-58.	*
244.0	-60.	*
244.5	-66.	*
245.0	-58.	*
245.5	-53.	*
246.0	-49.	*
246.5	-44.	*
247.0	-42.	*
247.5	-48.	*
248.0	-58.	*
248.5	-85.	*
249.0	-124.	*
249.5	-215.	*
250.0	-355.	*
250.5	-716.	*
251.0	-1728.	*
251.5	-3267.	*|
252.0	-5353.	* |
252.5	-8924.	* |
253.0	-13967.	* |
253.5	-23652.	* |
254.0	-32816.	* |
254.5	-42901.	* |
255.0	-53706.	* |
255.5	-65872.	* |
256.0	-74837.	* |
256.5	-81320.	* |
257.0	-84521.	* |

TRACE DISPLAY.

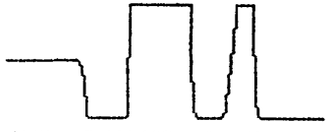
SHOT 9 Time 17:22:42 Level : 934.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 159 400 849
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

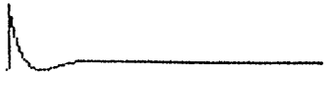
AUX. CHANNEL 2 Max. 4741mV



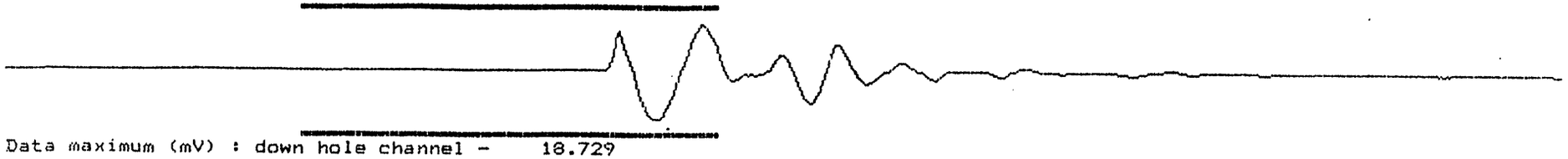
AUX. CHANNEL 3 Max. 10000mV



AUX. CHANNEL 4 Max. 2373mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 18.729

FIRST ARRIVAL PLOT - Shot 9 Level 934.0

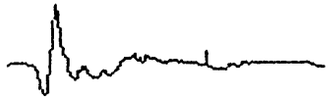
Sample time	Value uV	Well phone data
416.0	37.	*
416.5	40.	*
417.0	38.	*
417.5	27.	*
418.0	12.	*
418.5	5.	*
419.0	10.	*
419.5	23.	*
420.0	43.	*
420.5	59.	*
421.0	58.	*
421.5	54.	*
422.0	36.	*
422.5	15.	*
423.0	-2.	*
423.5	4.	*
424.0	23.	*
424.5	65.	*
425.0	107.	*
425.5	139.	*
426.0	147.	*
426.5	131.	*
427.0	98.	*
427.5	50.	*
428.0	26.	*
428.5	-5.	*
429.0	-15.	*
429.5	-13.	*
430.0	1.	*
430.5	10.	*
431.0	14.	*
431.5	-4.	*
432.0	-44.	*
432.5	-187.	*
433.0	-340.	*
433.5	-673.	*
434.0	-1341.	*
434.5	-2101.	*
435.0	-3102.	*
435.5	-4142.	*
436.0	-5563.	*
436.5	-7174.	*
437.0	-8904.	*
437.5	-10645.	*
438.0	-12286.	*
438.5	-13647.	*
439.0	-14627.	*
439.5	-15107.	*
440.0	-15077.	*
440.5	-14507.	*
441.0	-13517.	*

TRACE DISPLAY.

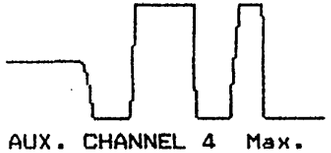
SHOT 10 Time 17:35:04 Level : 893.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 144 400 864
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

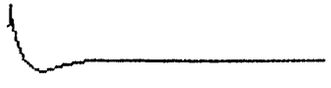
AUX. CHANNEL 2 Max. 3613mV



AUX. CHANNEL 3 Max. 10000mV



AUX. CHANNEL 4 Max. 3496mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 25.853

FIRST ARRIVAL PLOT — Shot 10 Level 893.0

Sample time	Value uV	Well phone data
404.0	-16.	*
404.5	-19.	*
405.0	-19.	*
405.5	-17.	*
406.0	-11.	*
406.5	-4.	*
407.0	4.	*
407.5	9.	*
408.0	12.	*
408.5	11.	*
409.0	7.	*
409.5	-1.	*
410.0	-7.	*
410.5	-16.	*
411.0	-19.	*
411.5	-18.	*
412.0	-13.	*
412.5	-9.	*
413.0	-8.	*
413.5	-15.	*
414.0	-22.	*
414.5	-31.	*
415.0	-35.	*
415.5	-32.	*
416.0	-21.	*
416.5	6.	*
417.0	25.	*
417.5	53.	*
418.0	80.	*
418.5	99.	*
419.0	111.	*
419.5	116.	*
420.0	108.	*
420.5	86.	*
421.0	58.	*
421.5	-20.	*
422.0	-97.	*
422.5	-226.	*
423.0	-361.	*
423.5	-615.	*|
424.0	-1096.	* |
424.5	-1653.	* |
425.0	-2406.	* |
425.5	-3379.	* |
426.0	-4462.	* |
426.5	-5943.	* |
427.0	-7654.	* |
427.5	-9575.	* |
428.0	-11696.	* |
428.5	-13827.	* |
429.0	-16928.	* |

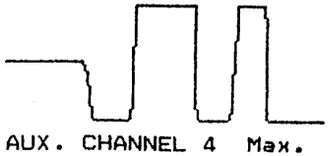
TRACE DISPLAY.

SHOT 11 Time 17:41:44 Level : 846.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 126 400 882
Sample rates : 500 1000 usec Delay : 0

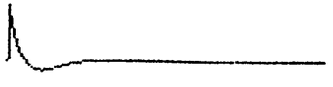
AUX. CHANNEL 1 Max. 9995mV

AUX. CHANNEL 2 Max. 2749mV

AUX. CHANNEL 3 Max. 10000mV



AUX. CHANNEL 4 Max. 3090mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 41.060

FIRST ARRIVAL PLOT — Shot 11 Level 846.0

Sample time	Value uV	Well phone data
386.0	20.	*
386.5	24.	*
387.0	22.	*
387.5	13.	*
388.0	-3.	*
388.5	-11.	*
389.0	-22.	*
389.5	-28.	*
390.0	-32.	*
390.5	-36.	*
391.0	-42.	*
391.5	-51.	*
392.0	-60.	*
392.5	-59.	*
393.0	-64.	*
393.5	-68.	*
394.0	-71.	*
394.5	-76.	*
395.0	-80.	*
395.5	-81.	*
396.0	-77.	*
396.5	-67.	*
397.0	-48.	*
397.5	-45.	*
398.0	-25.	*
398.5	-8.	*
399.0	1.	*
399.5	-1.	*
400.0	-4.	*
400.5	-7.	*
401.0	-9.	*
401.5	-9.	*
402.0	-12.	*
402.5	-21.	*
403.0	-45.	*
403.5	-100.	*
404.0	-204.	*
404.5	-323.	*
405.0	-573.	*
405.5	-958.	*|
406.0	-1758.	* |
406.5	-2624.	* |
407.0	-3804.	* |
407.5	-5133.	* |
408.0	-7073.	* |
408.5	-9385.	* |
409.0	-12106.	* |
409.5	-15147.	* |
410.0	-19850.	* |
410.5	-23291.	* |
411.0	-26413.	* |

TRACE DISPLAY.

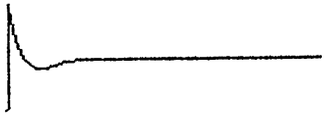
SHOT 12 Time 17:46:28 Level : 783.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 102 400 906
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

AUX. CHANNEL 2 Max. 2851mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 2143mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 53.666

FIRST ARRIVAL PLOT — Shot 12 Level 783.0

Sample time	Value uV	Well phone data
354.0	-182.	*
354.5	-199.	*
355.0	-204.	*
355.5	-197.	*
356.0	-179.	*
356.5	-154.	*
357.0	-131.	*
357.5	-121.	*
358.0	-133.	*
358.5	-170.	*
359.0	-229.	*
359.5	-273.	*
360.0	-325.	*
360.5	-343.	*
361.0	-327.	*
361.5	-278.	*
362.0	-184.	*
362.5	-104.	*
363.0	-34.	*
363.5	30.	*
364.0	81.	*
364.5	103.	*
365.0	101.	*
365.5	78.	*
366.0	49.	*
366.5	-4.	*
367.0	-52.	*
367.5	-116.	*
368.0	-159.	*
368.5	-192.	*
369.0	-210.	*
369.5	-217.	*
370.0	-214.	*
370.5	-212.	*
371.0	-235.	*
371.5	-286.	*
372.0	-444.	*
372.5	-762.	*
373.0	-1513.	*|
373.5	-2476.	* |
374.0	-4157.	* |
374.5	-5563.	* |
375.0	-8114.	* |
375.5	-11256.	* |
376.0	-15047.	* |
376.5	-21370.	* |
377.0	-26693.	* |
377.5	-31495.	* |
378.0	-36738.	* |
378.5	-41260.	* |
379.0	-45062.	* |

TRACE DISPLAY.

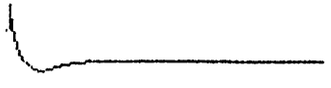
SHOT 13 Time 17:51:26 Level : 760.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 93 400 915
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

AUX. CHANNEL 2 Max. 1894mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 4570mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - . 40.300

FIRST ARRIVAL PLOT — Shot 13 Level 760.0

Sample time	Value uV	Well phone data
346.0	33.	
346.5	11.	
347.0	-6.	
347.5	-17.	
348.0	-24.	
348.5	-27.	
349.0	-29.	
349.5	-31.	
350.0	-36.	
350.5	-42.	
351.0	-50.	
351.5	-56.	
352.0	-58.	
352.5	-55.	
353.0	-45.	
353.5	-31.	
354.0	-9.	
354.5	13.	
355.0	33.	
355.5	55.	
356.0	68.	
356.5	71.	
357.0	62.	
357.5	51.	
358.0	28.	
358.5	4.	
359.0	-7.	
359.5	-7.	
360.0	4.	
360.5	16.	
361.0	32.	
361.5	39.	
362.0	26.	
362.5	-26.	
363.0	-170.	
363.5	-324.	
364.0	-663.	
364.5	-1411.	
365.0	-2406.	
365.5	-3679.	
366.0	-5263.	
366.5	-7604.	
367.0	-10595.	
367.5	-14217.	
368.0	-20210.	
368.5	-24772.	
369.0	-29254.	
369.5	-33456.	
370.0	-36698.	
370.5	-39059.	
371.0	-40300.	

TRACE DISPLAY.

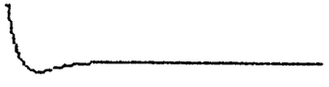
SHOT 14 Time 17:59:09 Level : 740.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 86 400 922
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

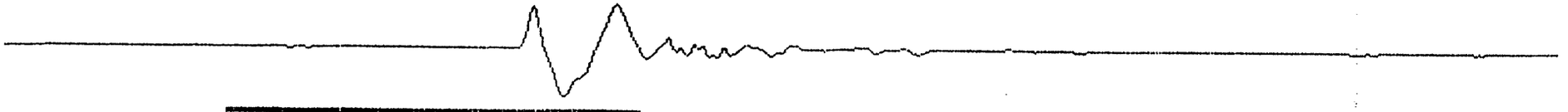
AUX. CHANNEL 2 Max. 1792mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 5771mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 42.061

FIRST ARRIVAL PLOT — Shot 14 Level 740.0

Sample time	Value uV	Well phone data
336.0	3.	*
336.5	18.	*
337.0	31.	*
337.5	32.	*
338.0	17.	*
338.5	-24.	*
339.0	-53.	*
339.5	-110.	*
340.0	-143.	*
340.5	-161.	*
341.0	-167.	*
341.5	-166.	*
342.0	-164.	*
342.5	-171.	*
343.0	-184.	*
343.5	-198.	*
344.0	-205.	*
344.5	-198.	*
345.0	-178.	*
345.5	-148.	*
346.0	-114.	*
346.5	-81.	*
347.0	-45.	*
347.5	-17.	*
348.0	8.	*
348.5	21.	*
349.0	26.	*
349.5	18.	*
350.0	-6.	*
350.5	-28.	*
351.0	-53.	*
351.5	-84.	*
352.0	-96.	*
352.5	-105.	*
353.0	-119.	*
353.5	-148.	*
354.0	-209.	*
354.5	-283.	*
355.0	-450.	*
355.5	-725.	*
356.0	-1296.	*
356.5	-2028.	*
357.0	-3061.	*
357.5	-4282.	*
358.0	-6173.	*
358.5	-8484.	*
359.0	-11306.	*
359.5	-14607.	*
360.0	-19930.	*
360.5	-23772.	*
361.0	-27694.	*

TRACE DISPLAY.

SHOT 15 Time 18:03:58 Level : 711.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 75 400 933
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

AUX. CHANNEL 2 Max. 1967mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 2021mV

WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 46.943

FIRST ARRIVAL PLOT — Shot 15 Level 711.0

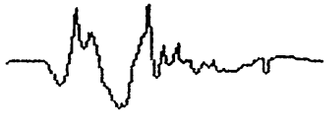
Sample time	Value uV	Well phone data
324.0	15.	*
324.5	11.	*
325.0	6.	*
325.5	2.	*
326.0	1.	*
326.5	2.	*
327.0	9.	*
327.5	19.	*
328.0	31.	*
328.5	43.	*
329.0	54.	*
329.5	62.	*
330.0	68.	*
330.5	75.	*
331.0	80.	*
331.5	85.	*
332.0	85.	*
332.5	81.	*
333.0	71.	*
333.5	56.	*
334.0	44.	*
334.5	21.	*
335.0	-5.	*
335.5	-23.	*
336.0	-37.	*
336.5	-36.	*
337.0	-20.	*
337.5	14.	*
338.0	44.	*
338.5	77.	*
339.0	92.	*
339.5	90.	*
340.0	74.	*
340.5	51.	*
341.0	9.	*
341.5	-40.	*
342.0	-143.	*
342.5	-312.	*
343.0	-449.	*
343.5	-788.	*
344.0	-1483.	* |
344.5	-2344.	* |
345.0	-3524.	* |
345.5	-4932.	* |
346.0	-6933.	* |
346.5	-9395.	* |
347.0	-12306.	* |
347.5	-17168.	* |
348.0	-20810.	* |
348.5	-24452.	* |
349.0	-28014.	* |

TRACE DISPLAY.

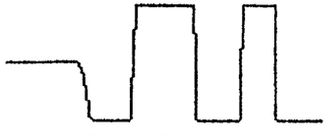
SHOT 16 Time 18:15:36 Level : 610.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 37 400 971
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

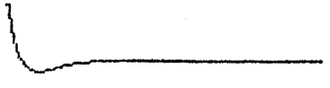
AUX. CHANNEL 2 Max. 3447mV



AUX. CHANNEL 3 Max. 10000mV



AUX. CHANNEL 4 Max. 5698mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 57.788

FIRST ARRIVAL PLOT — Shot 16 Level 610.0

Sample time	Value uV	Well phone data
276.0	27.	*
276.5	27.	*
277.0	27.	*
277.5	27.	*
278.0	27.	*
278.5	246.	*
279.0	253.	*
279.5	256.	*
280.0	253.	*
280.5	249.	*
281.0	244.	*
281.5	26.	*
282.0	26.	*
282.5	26.	*
283.0	26.	*
283.5	26.	*
284.0	26.	*
284.5	26.	*
285.0	250.	*
285.5	258.	*
286.0	262.	*
286.5	258.	*
287.0	253.	*
287.5	243.	*
288.0	26.	*
288.5	26.	*
289.0	26.	*
289.5	26.	*
290.0	26.	*
290.5	26.	*
291.0	26.	*
291.5	26.	*
292.0	26.	*
292.5	26.	*
293.0	26.	*
293.5	-6.	*
294.0	-76.	*
294.5	-257.	*
295.0	-644.	*
295.5	-2139.	* |
296.0	-3267.	* |
296.5	-4632.	* |
297.0	-6723.	* |
297.5	-9425.	* |
298.0	-12756.	* |
298.5	-18049.	* |
299.0	-22331.	* |
299.5	-26773.	* |
300.0	-30655.	* |
300.5	-34057.	* |
301.0	-36658.	* |

TRACE DISPLAY.

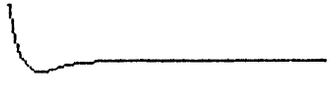
SHOT 17 Time 18:22:11 Level : 500.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

AUX. CHANNEL 2 Max. 3305mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 5434mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 84.041

FIRST ARRIVAL PLOT — Shot 17 Level 500.0

Sample time	Value uV	Well phone data
234.0	35.	*
234.5	39.	*
235.0	38.	*
235.5	32.	*
236.0	25.	*
236.5	16.	*
237.0	1.	*
237.5	-9.	*
238.0	-21.	*
238.5	-31.	*
239.0	-38.	*
239.5	-41.	*
240.0	-43.	*
240.5	-44.	*
241.0	-46.	*
241.5	-51.	*
242.0	-56.	*
242.5	-59.	*
243.0	-59.	*
243.5	-55.	*
244.0	-48.	*
244.5	-39.	*
245.0	-29.	*
245.5	-18.	*
246.0	-8.	*
246.5	-2.	*
247.0	0.	*
247.5	-1.	*
248.0	-5.	*
248.5	-9.	*
249.0	-15.	*
249.5	-24.	*
250.0	-45.	*
250.5	-60.	*
251.0	-188.	*
251.5	-366.	*
252.0	-775.	*
252.5	-1858.	*
253.0	-3192.	*
253.5	-4852.	*
254.0	-7494.	*
254.5	-11125.	*
255.0	-17689.	*
255.5	-23451.	*
256.0	-30295.	*
256.5	-36978.	*
257.0	-43982.	*
257.5	-50585.	*
258.0	-56348.	*
258.5	-60910.	*
259.0	-63871.	*

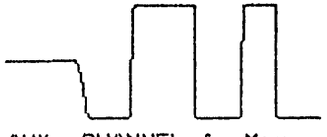
TRACE DISPLAY.

SHOT 18 Time 18:29:34 Level : 430.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

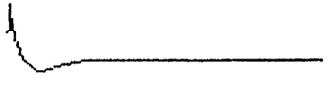
AUX. CHANNEL 1 Max. 9995mV

AUX. CHANNEL 2 Max. 3740mV

AUX. CHANNEL 3 Max. 10000mV



AUX. CHANNEL 4 Max. 3286mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 107.092

FIRST ARRIVAL PLOT — Shot 18 Level 430.0

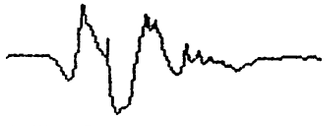
Sample time	Value uV	Well phone data
204.0	108.	*
204.5	50.	*
205.0	25.	*
205.5	4.	*
206.0	-8.	*
206.5	-13.	*
207.0	-12.	*
207.5	-7.	*
208.0	2.	*
208.5	6.	*
209.0	10.	*
209.5	8.	*
210.0	-0.	*
210.5	-7.	*
211.0	-14.	*
211.5	-17.	*
212.0	-12.	*
212.5	4.	*
213.0	12.	*
213.5	21.	*
214.0	32.	*
214.5	47.	*
215.0	107.	*
215.5	128.	*
216.0	150.	*
216.5	172.	*
217.0	193.	*
217.5	214.	*
218.0	231.	*
218.5	242.	*
219.0	252.	*
219.5	256.	*
220.0	253.	*
220.5	231.	*
221.0	196.	*
221.5	131.	*
222.0	-77.	*
222.5	-294.	*
223.0	-575.	*
223.5	-1788.	*
224.0	-3339.	*|
224.5	-5513.	* |
225.0	-9084.	* |
225.5	-14067.	* |
226.0	-23532.	* |
226.5	-32376.	* |
227.0	-42061.	* |
227.5	-52546.	* |
228.0	-64592.	* |
228.5	-73636.	* |
229.0	-80599.	* |

TRACE DISPLAY.

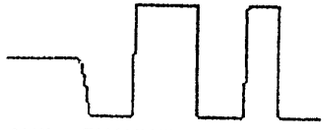
SHOT 19 Time 18:34:16 Level : 380.0 Shot location : D
Shot depth : 2.0 Charge size : 1/2
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

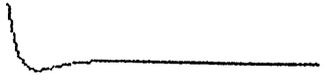
AUX. CHANNEL 2 Max. 3540mV



AUX. CHANNEL 3 Max. 10000mV



AUX. CHANNEL 4 Max. 6040mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 140.068

FIRST ARRIVAL PLOT — Shot 19 Level 380.0

Sample time	Value uV	Well phone data
182.0	141.	*
182.5	131.	*
183.0	123.	*
183.5	118.	*
184.0	118.	*
184.5	129.	*
185.0	148.	*
185.5	168.	*
186.0	185.	*
186.5	194.	*
187.0	188.	*
187.5	171.	*
188.0	145.	*
188.5	118.	*
189.0	95.	*
189.5	85.	*
190.0	86.	*
190.5	98.	*
191.0	113.	*
191.5	125.	*
192.0	134.	*
192.5	138.	*
193.0	137.	*
193.5	131.	*
194.0	122.	*
194.5	110.	*
195.0	102.	*
195.5	98.	*
196.0	96.	*
196.5	97.	*
197.0	96.	*
197.5	91.	*
198.0	81.	*
198.5	62.	*
199.0	46.	*
199.5	-6.	*
200.0	-96.	*
200.5	-352.	*
201.0	-603.	*
201.5	-2289.	*
202.0	-4122.	*|
202.5	-7414.	* |
203.0	-13186.	* |
203.5	-25973.	* |
204.0	-40260.	* |
204.5	-57548.	* |
205.0	-79639.	* |
205.5	-98448.	* |
206.0	-113576.	* |
206.5	-121980.	* |
207.0	-122140.	* |

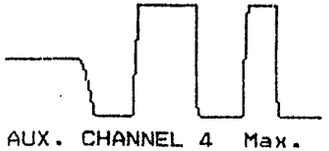
TRACE DISPLAY.

SHOT 20 Time 18:41:41 Level : 290.0 Shot location : D
Shot depth : 2.0 Charge size : 1/4
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

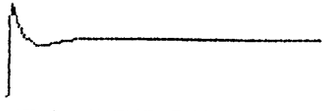
AUX. CHANNEL 1 Max. 9995mV

AUX. CHANNEL 2 Max. 2553mV

AUX. CHANNEL 3 Max. 10000mV



AUX. CHANNEL 4 Max. 1826mV



WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 122.940

FIRST ARRIVAL PLOT — Shot 20 Level 290.0

Sample time	Value uV	Well phone data
142.0	-66.	*
142.5	-65.	*
143.0	-66.	*
143.5	-67.	*
144.0	-68.	*
144.5	-67.	*
145.0	-62.	*
145.5	-52.	*
146.0	-38.	*
146.5	-51.	*
147.0	-38.	*
147.5	-29.	*
148.0	-26.	*
148.5	-29.	*
149.0	-36.	*
149.5	-47.	*
150.0	-42.	*
150.5	-58.	*
151.0	-72.	*
151.5	-86.	*
152.0	-93.	*
152.5	-95.	*
153.0	-89.	*
153.5	-79.	*
154.0	-68.	*
154.5	-58.	*
155.0	-52.	*
155.5	-46.	*
156.0	-42.	*
156.5	-38.	*
157.0	-60.	*
157.5	-50.	*
158.0	-71.	*
158.5	-111.	*
159.0	-180.	*
159.5	-276.	*
160.0	-530.	*
160.5	-1386.	*
161.0	-2701.	*
161.5	-4802.	*
162.0	-8614.	*
162.5	-14517.	*
163.0	-26693.	*
163.5	-38379.	*
164.0	-52145.	*
164.5	-68514.	*
165.0	-82360.	*
165.5	-92925.	*
166.0	-99569.	*
166.5	-100529.	*
167.0	-96047.	*

TRACE DISPLAY.

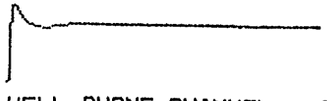
SHOT 21 Time 18:47:14 Level : 224.0 Shot location : D
Shot depth : 2.0 Charge size : 1/4
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

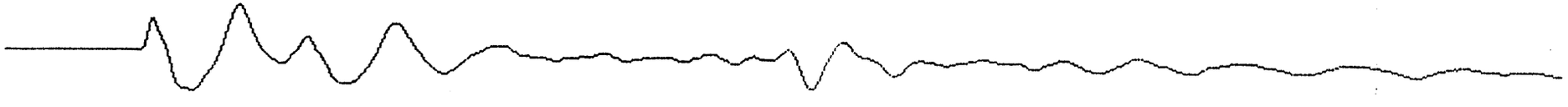
AUX. CHANNEL 2 Max. 2192mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 2544mV



WELL PHONE CHANNEL - floating point amplifier



Data maximum (mV) : down hole channel - 165.041

FIRST ARRIVAL PLOT — Shot 21 Level 224.0

Sample time	Value uV	Well phone data
112.0	99.	*
113.0	131.	*
114.0	133.	*
115.0	100.	*
116.0	58.	*
117.0	7.	*
118.0	-30.	*
119.0	-58.	*
120.0	-92.	*
121.0	-108.	*
122.0	-92.	*
123.0	-64.	*
124.0	-53.	*
125.0	-84.	*
126.0	-119.	*
127.0	-146.	*
128.0	-173.	*
128.5	-209.	*
129.0	-268.	*
129.5	-492.	*
130.0	-1363.	*
130.5	-2966.	*
131.0	-5643.	*
131.5	-10615.	*
132.0	-21971.	*
132.5	-33216.	*
133.0	-47223.	*
133.5	-64351.	*
134.0	-79399.	*
134.5	-92765.	*
135.0	-103170.	*
135.5	-109494.	*
136.0	-111655.	*
136.5	-109734.	*
137.0	-104611.	*
137.5	-97007.	*
138.0	-88363.	*
138.5	-78999.	*
139.0	-70274.	*
139.5	-62190.	*
140.0	-56107.	*
140.5	-49704.	*
141.0	-43741.	*
141.5	-37658.	*
142.0	-30655.	*
142.5	-22651.	*
143.0	-11786.	*
143.5	-5373.	*
144.0	6363.	*
144.5	22411.	*
145.0	35577.	*

TRACE DISPLAY.

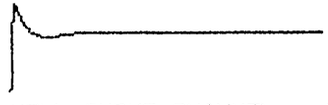
SHOT 22 Time 18:56:46 Level : 160.0 Shot location : D
Shot depth : 2.0 Charge size : 1/4
No. surface samples : 128 Down hole sample nos : 0 400 1008
Sample rates : 500 1000 usec Delay : 0

AUX. CHANNEL 1 Max. 9995mV

AUX. CHANNEL 2 Max. 1718mV

AUX. CHANNEL 3 Max. 10000mV

AUX. CHANNEL 4 Max. 2055mV



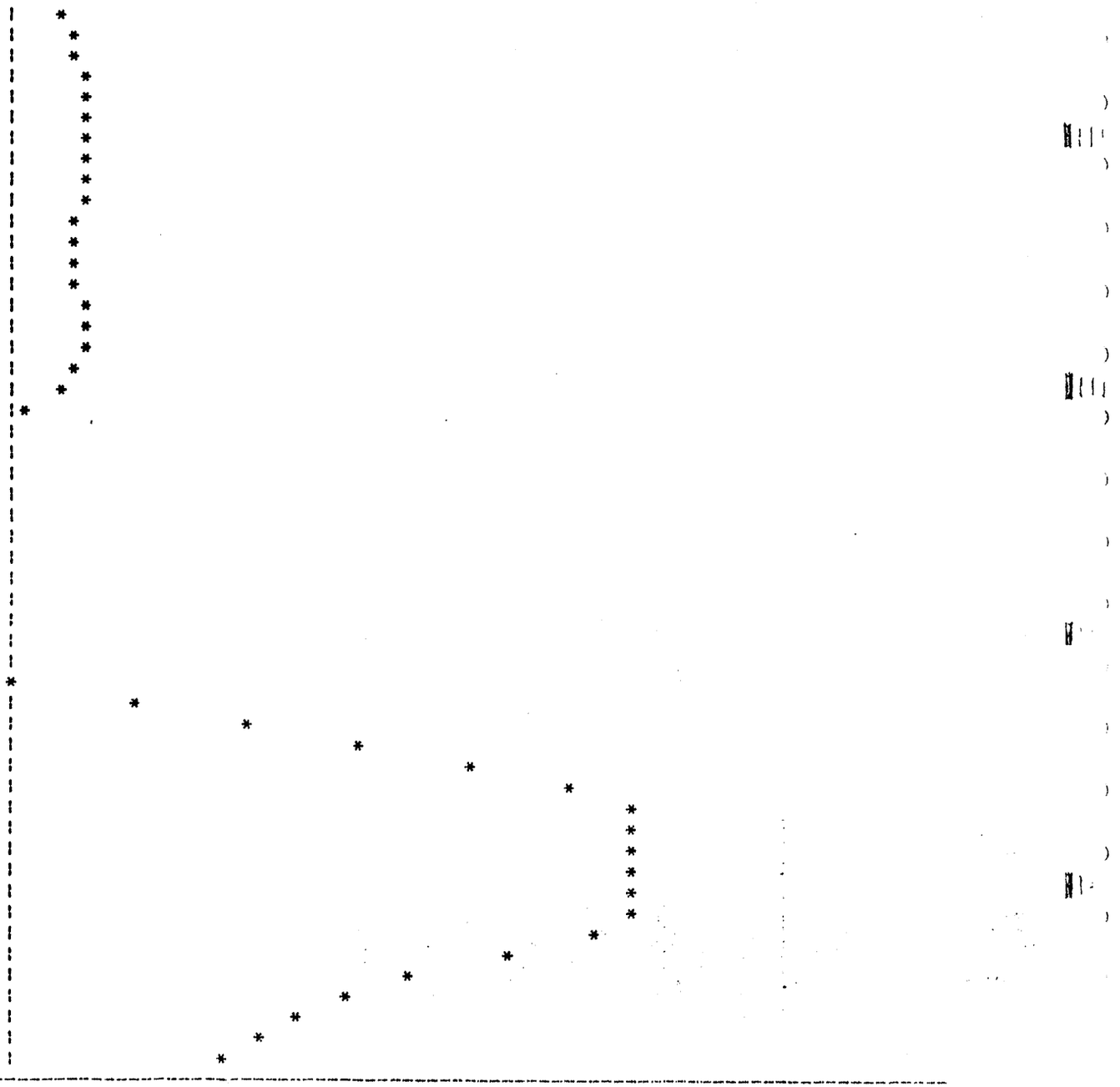
WELL PHONE CHANNEL - floating point amplifier

Data maximum (mV) : down hole channel - 327.680

FIRST ARRIVAL PLOT — Shot 22 Level 160.0

Sample time	Value uV
82.0	23171.
83.0	29775.
84.0	34777.
85.0	38139.
86.0	40060.
87.0	40780.
88.0	40460.
89.0	39579.
90.0	38339.
91.0	37018.
92.0	35898.
93.0	35257.
94.0	35017.
95.0	35377.
96.0	36218.
97.0	37138.
98.0	37378.
99.0	34497.
100.0	24652.
101.0	9495.
102.0	-23652.
103.0	-54186.
104.0	-86522.
105.0	-113816.
106.0	-133825.
107.0	-141189.
108.0	-138788.
109.0	-130304.
110.0	-115657.
111.0	-93806.
112.0	-62991.
113.0	-28894.
114.0	-51.
115.0	66513.
116.0	121339.
117.0	184090.
118.0	241558.
119.0	295344.
120.0	327680.
121.0	327680.
122.0	327680.
123.0	327680.
124.0	327680.
125.0	327680.
126.0	310712.
127.0	261728.
128.0	208902.
128.5	175126.
129.0	153035.
129.5	129503.
130.0	110214.

Well phone data



PE600861

This is an enclosure indicator page.
The enclosure PE600861 is enclosed within the container PE902061 at this location in this document.

The enclosure PE600861 has the following characteristics:

ITEM_BARCODE	= PE600861
CONTAINER_BARCODE	= PE902061
NAME	= Mud Log
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Mud Log (enclosure 1 from WCR) for Avon-1
REMARKS	= In the table of contents it is listed as a Composite Log
DATE_CREATED	= 06/11/1990
DATE_RECEIVED	= 10/04/1991
W_NO	= W1039
WELL_NAME	= Avon-1
CONTRACTOR	= Gearhart P/L
CLIENT_OP_CO	= Mosaic oil N.L.

(Inserted by DNRE - Vic Govt Mines Dept)

PE600862

This is an enclosure indicator page.
The enclosure PE600862 is enclosed within the container PE902061 at this location in this document.

The enclosure PE600862 has the following characteristics:

ITEM_BARCODE	= PE600862
CONTAINER_BARCODE	= PE902061
NAME	= Seismic Section, Line GT89-102
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= SEISMIC
SUBTYPE	= SECTION
DESCRIPTION	= Seismic Section, Line GT89-102 (enclosure 2 of WCR) for Avon-1
REMARKS	=
DATE_CREATED	= 26/04/1989
DATE_RECEIVED	= 10/04/1991
W_NO	= W1039
WELL_NAME	= Avon-1
CONTRACTOR	= Velseis
CLIENT_OP_CO	= Mosaic oil N.L.

(Inserted by DNRE - Vic Govt Mines Dept)

PE902062

This is an enclosure indicator page.
The enclosure PE902062 is enclosed within the container PE902061 at this location in this document.

The enclosure PE902062 has the following characteristics:

ITEM_BARCODE	= PE902062
CONTAINER_BARCODE	= PE902061
NAME	= Barrier shore face sands Isochron map
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= SEISMIC
SUBTYPE	= ISOCHRON_MAP
DESCRIPTION	= Barrier shore face sands Isochron map (enclosure 3 of WCR) for Avon-1
REMARKS	=
DATE_CREATED	= 31/12/1989
DATE_RECEIVED	= 10/04/1991
W_NO	= W1039
WELL_NAME	= Avon-1
CONTRACTOR	=
CLIENT_OP_CO	= Mosaic oil N.L.

(Inserted by DNRE - Vic Govt Mines Dept)

PE600863

This is an enclosure indicator page.
The enclosure PE600863 is enclosed within the container PE902061 at this location in this document.

The enclosure PE600863 has the following characteristics:

ITEM_BARCODE	= PE600863
CONTAINER_BARCODE	= PE902061
NAME	= Dual Laterolog MLL Sonic GR
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Dual Laterolog MLL Sonic GR, scale 1:500. (From enclosure 4 of WCR) for Avon-1
REMARKS	=
DATE_CREATED	= 08/11/1990
DATE_RECEIVED	= 10/04/1991
W_NO	= W1039
WELL_NAME	= Avon-1
CONTRACTOR	= BPB
CLIENT_OP_CO	= Mosaic oil N.L.

(Inserted by DNRE - Vic Govt Mines Dept)

PE603705

This is an enclosure indicator page.
The enclosure PE603705 is enclosed within the container PE902061 at this location in this document.

The enclosure PE603705 has the following characteristics:

ITEM_BARCODE	= PE603705
CONTAINER_BARCODE	= PE902061
NAME	= Avon 1 Density Neutron Gamma Ray Caliper log
BASIN	= GIPPSLAND
PERMIT	= PEP107
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Avon 1 Density Neutron Gamma Ray Caliper log, scale 1:500. (1 of 4 logs in Enclosure 4, WCR)
REMARKS	=
DATE_CREATED	= 8/11/90
DATE_RECEIVED	= 10/04/91
W_NO	= W1039
WELL_NAME	= Avon-1
CONTRACTOR	= BPB
CLIENT_OP_CO	= Mosaic Oil N.L

(Inserted by DNRE - Vic Govt Mines Dept)

PE603706

This is an enclosure indicator page.
The enclosure PE603706 is enclosed within the container PE902061 at this location in this document.

The enclosure PE603706 has the following characteristics:

ITEM_BARCODE	= PE603706
CONTAINER_BARCODE	= PE902061
NAME	= Avon 1 Dual Laterolog MLL-sonic-GR log
BASIN	= GIPPSLAND
PERMIT	= PEP107
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Avon 1 Dual Laterolog MLL-sonic-GR log, scale 1:200. (1 of 4 logs in enclosure 4, WCR)
REMARKS	=
DATE_CREATED	= 8/11/90
DATE_RECEIVED	= 10/04/91
W_NO	= W1039
WELL_NAME	= Avon-1
CONTRACTOR	= BPB
CLIENT_OP_CO	= Mosaic Oil N.L

(Inserted by DNRE - Vic Govt Mines Dept)

PE603707

This is an enclosure indicator page.
The enclosure PE603707 is enclosed within the container PE902061 at this location in this document.

The enclosure PE603707 has the following characteristics:

ITEM_BARCODE	= PE603707
CONTAINER_BARCODE	= PE902061
NAME	= Avon 1 Density Neutron-GR-CALI log
BASIN	= GIPPSLAND
PERMIT	= PEP107
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Avon 1 Density Neutron GR CALI log, scale 1:200. (1 of 4 logs in enclosure 4, WCR)
REMARKS	=
DATE_CREATED	= 8/11/90
DATE_RECEIVED	= 10/04/91
W_NO	= W1039
WELL_NAME	= Avon-1
CONTRACTOR	= BPB
CLIENT_OP_CO	= Mosaic Oil N.L

(Inserted by DNRE - Vic Govt Mines Dept)