AMPOL EXPLORATION LIMITED

WELL COMPLETION REPORT

COMLEY 1

Petroleum Exploration Permit 98

NOVEMBER, 1985

W909

COMLEY #1

WELL COMPLETION REPORT

COMPILED FOR

AMPOL EXPLORATION LIMITED

Prepared by:

M. SCHMEDJE
E. de VRIES
B. CASSIE

November, 1985

COMLEY #1

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CARDS

WELL DATA CARDS

AMPOL EXPLORATION LTD.

WELL: COMLEY #1

Location: Latitude: 37° 54' 03.717" S

Longitude: 147° 33' 27.181 E

Seismic S.P. 206.5
LINE GM83A-18

Elevation: G.L.: 48 m ASL K.B. 51.96 m ASL

Map: BAIRNSDALE
1:50,000

Grid:

Spudded: 1300 HRS 17/6/85 Completed: 1600 HRS 23/6/85

Type Structure: DRAPE OF TERTIARY SEDIMENTS OVER BASEMENT HIGH

Status: PLUGGED AND ABANDONED

Rig: ATCO-3

Total Depth: Driller: 528.4 m. Log: 529.0 m.

Completion Details: ABANDONMENT PLUGS SET AT
1. 495-445 m.
2. 159-114 m.

Casing Size	Shoe Depth
244 mm	134.4 m (DRILLER)
	134.6 m (LOGGER)

Cutting Samples Collected from: 137 m. to T.D.

FORMATIONS PENETRATED

Age	Formation	Depth	Elevation (ASL)	Thickness
PLIOCENE TO PLEISTOCENE	HAUNTED HILLS GRAVELS	3.96 m	+42m	
PLIOCENE	JEMMYS POINT FM.	94± 4 m	42 ± 4m	90±4m
LATE MIOCENE TO PLIOCENE	TAMBO RIVER FM.	121± 4 m	69 ± 8m	27±8m
EARLY TO LATE MIOCENE	GIPPSLAND LIMESTONE	133± 2 m	81 ± 6m	12±6m
LATE OLIGOCENE TO EARLY MIOCENE	LAKES ENTRANCE FM.	438. 2 m	386 . 2 m	305.2m
EARLY TO LATE OLIGOCENE	LATROBE GROUP	476. 0 m	424 m	37.8m
ORDOVICIAN	BASEMENT	497. 0 m	445 m	21.0m
	T.D.	529. 0 m	477 m	

AMPOL EXPLORATION LTD.

WELL: COMLEY #1

SIDEWALL CORES

412.5 CLAYSTONE

Depth	Lithology	Depth	Lithology	Depth	Lithology	Depth	Lithology
517 m	CLAYSTONE	401.5m	SANDSTONE				
505 m	SANDSTONE	379 m	CLAYSTONE				
500.3n	NO REC,	352 n	CLAYSTONE				
494.5m	NO REC.	347.5m	SANDSTONE				
491.5m	NO REC.	321 m	SANDSTONE				
486.5m	CLAYSTONE	314 m	SANDSTONE				
480 m	SANDSTONE	290 m	SANDSTONE				
478.5m	SANDSTONE	266.5m	SANDSTONE				
476.5m	CLAYSTONE	246 m	SANDSTONE				
473 m	SANDSTONE	236.5m	SANDSTONE				
465 m	CLAYSTONE	205 m	SANDSTONE				
447.5m	CLAYSTONE	178.3m	SANDSTONE				
438 m	CLAYSTONE	168.5m	SANDSTONE				
427 m	CLAYSTONE	161 m	CLAYSTONE				
424 m	CLAYSTONE						

SUMMARY: COMLEY #1 is an exploration well located approximately 10 km. south of Bairnsdale in PEP 98 in the onshore Gippsland Basin.

The Comley prospect was prognosed to be a four-way closed drape of Tertiary sediments over a basement high. The primary objectives were sandstone reservoirs in the Latrobe Valley Coal Measures.

The well reached a total depth of 529 m in metasedimentary Basement of Ordovician age.

All Formations were low to prognosis; the Lakes Entrance Formation was 72.2 m low, the Latrobe Group was 32 m low and Basement was 34 m low. A core was cut in the Latrobe Group (50% recovery). No significant hydrocarbon shows were encountered and log interpretation showed the Latrobe Group to be 100% water-saturated. The well was plugged and abandoned.

Re-mapping of the seismic over the Comley prospect shows that the structure has approximately 20 millisecs of closure and is likely to be fault-controlled.

Wellsite Geologist: E. de Vries, M. Schmedje   Card Prepared By M. SCHMEDJE   Date: September 1985

AMPOL EXPLORATION LTD.

WELL: COMLEY #1

LOGS

Type Log	Run. No.	Interval	BHT/Time	Type Log	Run. No	Interval	BHT/Time
LDT-CNL-GR	1	528-134	36°C/	WSS			
			5½ hrs	CST			
BHC-GR	1	526-134	36.6°C/				
			8 hrs				
NGT	1	527-227 m	38.8°C/				
			10¼ hrs				
DLL-MSFL	1	528-134 m	38.8°C/				
			14 hrs				

FORMATION TESTS

Test No.	Interval	Formation	Flow (min)	Shut in (min)	Bottom gauge IP/FP	Shut in Press	Fluid to Surf. (min)	Max Press	T.C.	B.C.	Rev. Circ.	Results
	NIL											

FULL HOLE CORES

No.	Interval	Formation	Cut	Rec.
1	477.9-487 m	LATROBE	9.1 m	50%

PERFORATIONS

Interval	Formation	Shots/ft.
NIL		

AMPOL EXPLORATION LTD.

WELL: COMLEY #1

LOG INTERPRETATION

Interval	Formation	Ø %	Sw.%	Interval	Formation	Ø	Sw.
476-478 m	LATROBE	0					
480-483.2 m	LATROBE	20.3	100				
485-495 m	LATROBE	36.8	100				
498-517 m	BASEMENT	28.8	(NO EFFECTIVE POROSITY)				

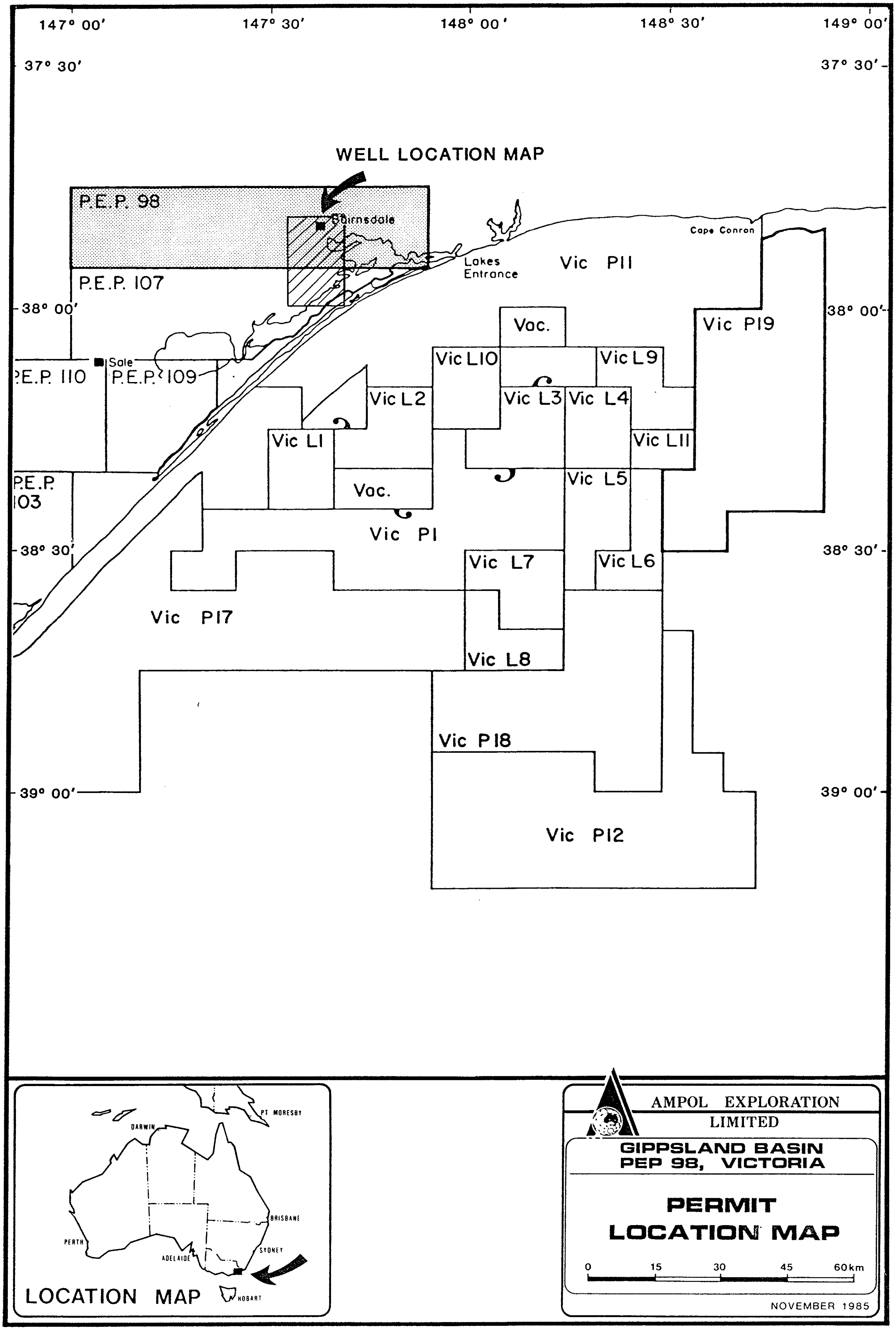
Net Pay Intervals: NO PAY FOR COMLEY #1

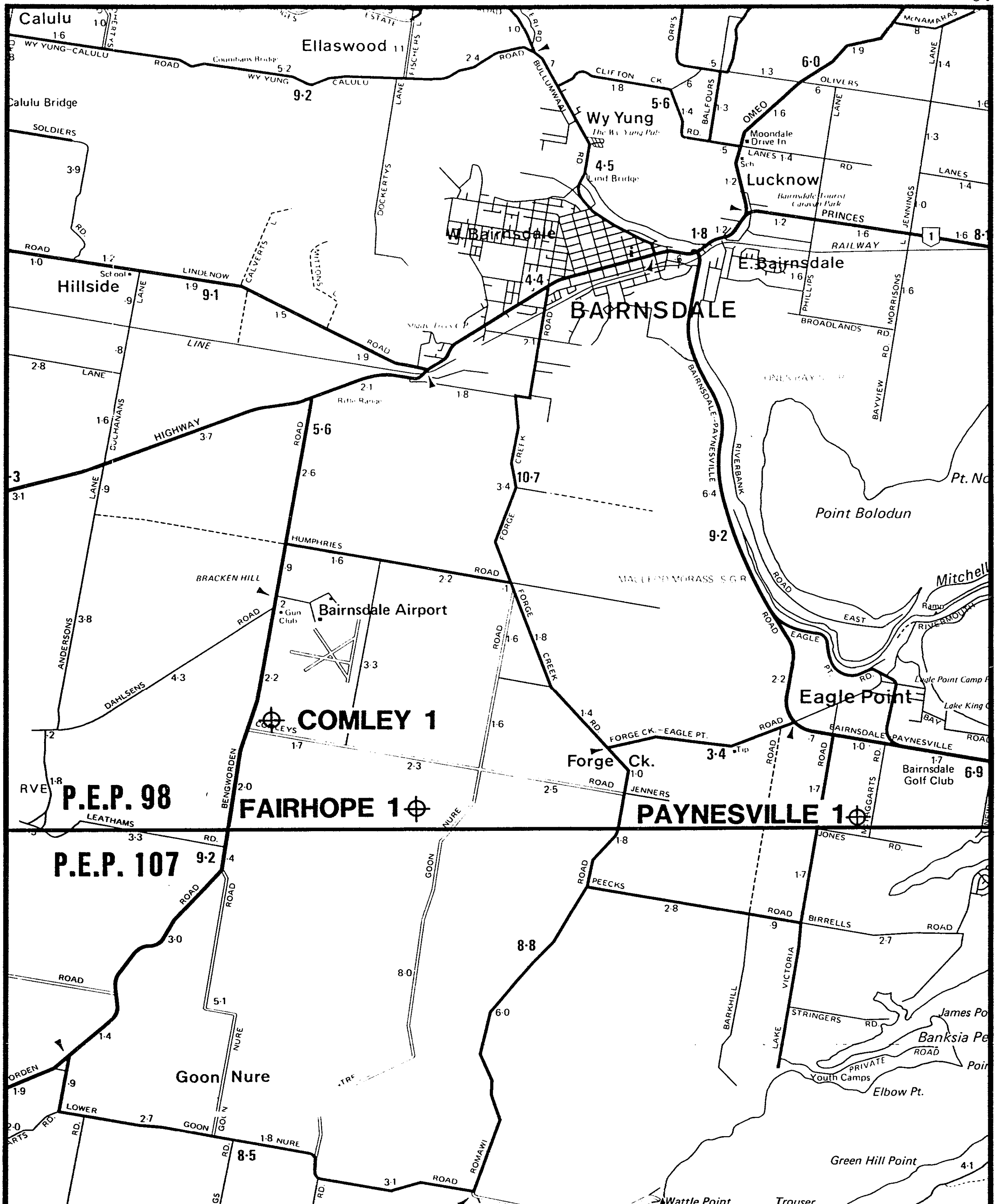
CORE ANALYSIS (INTERVAL AVERAGES) - LOGGERS DEPTH

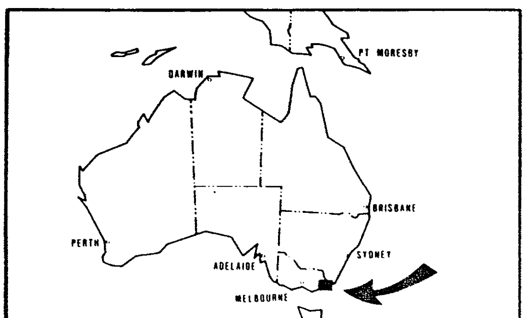
Interval	Ø %	K(MD)	So.	Sw.	Interval	Ø	K.	So.	Sw.
477.95m -478.05m	35.4	46							
479.85 -480.00m	38.8	1380							
481.42m -481.55m	37.8	870							

LOCATION

LOCATION


147° 00'
147° 30'
148° 00'
148° 30'
149° 00'
37° 30'
38° 00'
38° 30'
39° 00'
WELL LOCATION MAP
P.E.P. 98
Bairnsdale
P.E.P. 107
Lakes Entrance
Cape Conran
Vic P11
Vac.
Vic P19
Sale
P.E.P. 110
P.E.P. 109
Vic L10
Vic L9
Vic L2
Vic L3
Vic L4
Vic L1
Vic L11
P.E.P. 103
Vac.
Vic L5
Vic P1
Vic L7
Vic L6
Vic P17
Vic L8
Vic P18
Vic P12
DARWIN
PT MORESBY
BRISBANE
PERTH
SYDNEY
ADELAIDE
HOBART
LOCATION MAP
AMPOL EXPLORATION LIMITED
GIPPSLAND BASIN
PEP 98, VICTORIA
PERMIT LOCATION MAP
0
15
30
45
60km
NOVEMBER 1985





LOCATION MAP

AMPOL EXPLORATION LIMITED

GIPPSLAND BASIN
PEP 98, VICTORIA

WELL LOCATION MAP

0 1 2 3 4km.

AUTHOR

DATE NOV. 1985

WELL HISTORY

WELL HISTORY

1. GENERAL DATA

Well Name & Number:	COMLEY NO. 1	
Location:	Latitude: 37° 54' 03.717" S Longitude: 147° 33' 27.181" E Seismic Line: 83A - 18 Shot Point: 206.5 Elevation-GL: 48M A.S.L. Elevation-KB: 51.96 A.S.L.	
Licence Area:	Onshore Victoria PEP-98	
Interest Holders:	Ampol Exploration Limited	38.32%*
	Mincorp Petroleum N.L.	27.30%
	National Oil	8.75%
	Texas Gas	6.88%
	Messrs. A.R. Burns & D.R. Gascoine	5.00%
	Phoenix Oil & Gas N.L.	5.00%
	Victoria Exploration	5.00%*
	Bralorne International	1.25%
	Petroleum Royalties Pty. Ltd.	1.25%
	Versatile Farm Equipment	1.25%

* Ampol Exploration and Victoria Exploration currently earning interest.

Participating Interests:	Ampol Exploration Limited	81.15%
	Victoria Exploration	11.10%
	Phoenix Oil & Gas N.L.	3.75%
Operator:	Ampol Exploration Limited on behalf of Mincorp Petroleum N.L.	
District:	Bairnsdale, Victoria	
Total Depth:	528.4 m (Driller) 529.0 m (Logger)	
Date Spudded:	June 17, 1985	
Date T.D. Reached:	June 21, 1985	
Date Rig Released:	June 23, 1985	
Drilling time to T.D.:	5 days	
Status:	Dry hole. Plugged and abandoned.	

2. DRILLING DATA

Drilling Contractor: Atco-APM Drilling Pty. Ltd.,
33 Barfield Crescent,
ELIZABETH WEST. S.A. 5112

Rig: Atco Rig No. A3

DRILLING RIG:

Trailer mounted Franks Cabot drilling rig
Mounted on a 12'8" wide x 47' long Goose Neck trailer
Tandem Rear Axles: 16 - 11R 22.5 Radial Tyres
Hydraulic support legs: Four Locknut Feature
Dog House and Generator Set are mounted on trailer
Trailer Weight: 40.857 tonnes
Axle Loading: 28.0 tonnes

DRAWWORKS

Franks Cabot, Model 1287-TD Single Drum Drawworks
Hydromatic: 22" SR Parmac

DRAWWORKS MOTOR

G.E. Series SGE-76101 electric motor, complete with blower driven by a 5 h.p. electric motor.

HYDRAULIC SYSTEM

1 - 1/4" x 2" hydraulic pump, driven by a 50 h.p. electric motor 575 volts, ID# 9002764-049, connected to a 270 gallon fluid reservoir.

S.C.R. SYSTEM

Manufactured by Integrated Power Systems Corporation

Ratings:	Input Voltage	:	600 VAC 30-3W
	Output Voltage	:	0-750 VDC
	Input Current	:	600 ADC Cont 1250 ADC Int

GENERATORS A.C.

Generators Nos. 1 and 2
E.M. Bemac Brushless Generator
500 KVA, 400 KW, 600 Volts, 60HZ/110V/220V Rig Supply
Powered by a Caterpillar Model D-353E Diesel engine
S.C.R. generator system fully inter-dependent

TABLE ROTARY MACHINE

Ideco Model C-175 Rotary Table
Size: 17 1/2" x 44" complete with split master bushings

SUBSTRUCTURE

Two Section Box Style Substructure
Top Section : 11'W x 11'L x 9' high (BOP Rack)
Pony Sub : 11'W x 11'L x 3'8" high
Overall Size : 11'W x 11'L x 12'8" high

LIGHTING

Including: Mast Light String, Flood Lights, Building Lighting

MAST

96' Two Section Telescoping Type Mast, manufactured by Greco Steel Corp.
Deadline Anchor: Attached to Carrier
Crown Blocks:
Working Sheaves : 4 - 22" dia. - 1" grooving
Fastline Sheave : 1 - 32" dia. - 1" grooving

BLOCKS AND HOOK

Sowa Hook-Block Assembly, 150 ton capacity, Model 3630-4, S/N: 3896-1 with 4 - 30" sheaves, grooved for 1" drilling line

SWIVEL

Oilwell Model No. SA-150 Swivel, Job No. 2048
Kelly Spinner, Foster Model 77, S/N: 77-1-412 complete with 2 - 1" x 60' Long Hydraulic Hoses

KELLY, KELLY BUSHING, KELLY COCK AND STABBING VALVE

1 - 1-1/4" x 40' long Kelly with 4-1/2" XH pin & 6-5/8" Reg. box
1 - Baash Ross 2RCS4 Kelly Bushings
1 - Griffith Upper Kelly Cock, 5000 psi, S/N: 5139 452U-33
1 - Hydril Stabbing Valve with 4-1/2" XH pin and box
1 - Grey Inside B.O.P. with 4-1/2" XH pin and box

PUMPS - SLUSH NO. 1 AND 2

1 - TSM-500 Duplex Slush Pump, Size: 7-1/2" x 16"
Maximum Pump Speed: 65 S.P.M.
Maximum Fluid End Test Pressure: 3000 psi
Pumps loaded w/- 5-1/2" liners
Rated at 1902 psi @D 65 SP.M
5.31 Gallons (U.S)/Stroke @ 90% effic.

NO. 1 PUMP ENGINE

G.E. Electric Motor, Model 5-GE-761-JI

NO. 2 PUMP ENGINE

Caterpillar Model D-353 Diesel Engine, 435 H.P.

TANKS - MUD AND MUD SYSTEM

Mud Tanks - Total Capacity 650 BBL

Tank 1
265 BBL capacity in 3 compartments with sand trap
Low pressure mud system with 3 subsurface guns
2 Grey Agitators model 72-0-5 powered by 2 x 5 hp electric motors
1 Harrisburg double deck shale shaker powered by 5 h.p. electric motor
1 x 3 cone Desander complete sq header manifold and overflow trough
1 Mission 5" x 6" centrifugal pump 1 7/8 shaft
powered by 50 HP 575 volt electric motor
1 x 16" Poorboy Degasser fed by 3" mud line

Tank 2
385 BBL capacity in two compartments (suction tank 342 BBL's and pill) tank of 43 BBL's
Connected to tank 1 via 10" suctions and 12" mud trough
Low pressure mud systems with 4 subsurface guns
Fitted with 2 - 4 x 2 standard mud mix hopper
1 Mission 5" x 6" centrifugal powered by 60 HP 575 volts electric motor
1 x 10 Cone Desilter (Swabco) @D 500 GPM

BLOWOUT AND WELL CONTROL EQUIPMENT

1 - Shaffer "Annular" Blowout Preventer 3000 psi, Assembly No. 5820

Trim	:	Internal H_2S
Top Connection	:	Studded
Btm Connection	:	Flanged
Bore Size	:	11"

1 - Cameron 3000 psi Double Gate Blowout Preventer, Type "SS" No. 165. Fitted with 4 1/2" Rams x Blind Rams

Bore Size	:	11"
Top and Bottom Connections	:	Studded
Outlets	:	2 - 3" 3000 psi Flanged

Extra Rams to Fit - 2 3/8", 2 7/8", 5 1/2" and 7"

HYDRAULIC FLUID ACCUMULATOR

1 - Wagner Model 5-80-1BN Hydraulic Fluid Accumulator Unit Four Station Control Manifold with 4 - 20 gallon bladder type Accumulator Bottles, hydraulic pump powered by a 5 HP electric motor
2 - 220 cu. ft. Nitrogen Bottle Back-up System
2 - CIW 3000 and 5000 PSI Hydro Poise Readout Gauges, A-B On/Off Switch panel
System is complete with Remote Control Panel, mounted in Dog House

B.O.P SPOOLS AND VALVES

Including:
1 - 900 Series 11" Adaptor Spool with 2 - 3" Flanged Outlets
1 - 3" 3000 PSI McEvoy Gale Valve with Otis Actuator
2 - 3" McEvoy 3000 PSI Gate Valves
2 - 3" 3000 PSI National Ball Valves
1 - 3" 3000 PSI Check Valve

WELL CONTROL MANIFOLD

McEvoy 3" x 2" Well Control Manifold consisting of:

8 - 2" 3000 PSI Flanged McEvoy Gate Valves
2 - 3" 3000 PSI Flanged McEvoy Gate Valves
2 - 2" Three Way Block Connectors
2 - 3" x 3" x 2" Four Way Block Connectors
2 - Willis Multi-Orifice Chokes
1 - CIW, 3000 PSI Pressure Gauge
1 - Marsh 3000 PSI Gauge complete with 100' 1/2" Hydraulic Hose

DRILL PIPE

90 - Joints (approx 900M) 4 1/2" 16.60# Grade "E" Range 2 Drill Pipe W/ 6 1/4" ID 18 Deg. Reed 4 1/2" XH Tool Joints. Drill Pipe is complete with Hardfacing, Series 200 inspected and internall coated with PA-2000.

10 - Joints 4 1/4" XH Heavi-Wate Drill Pipe Range 2 with 4 1/2" XH Box to pin complete ID Tube cote and Hardfacing Premium No. 1.

DRILL COLLARS

20 - 6 1/4" OD Drill Collars, Hardbanded with 4 1/2" Xh Connections
3 - 8" O.D. Drill Collars - Hardbanded - W/- 6 5/8" reg Connections

INSTRUMENTATION

1 - Cameron Type "C" Weight Indicator, 180,000 LB.
2 - 2" Gauges Int. Mud Gauges type "D" (Standpipe)
1 - 2" Cameron type "F" Pressure Gauge (Pump)

TOOL HOUSE

11'6" wide x 30' long x 8'4" high Broken Panel Steel Construction

DOG HOUSE

Mounted on Rig Carrier - Size: 12'W x 12'L x 7'H
Dog House Contents:
1 - Knowledge Box
2 - NRL Light Fixtures recessed into roof of building

COMBINATION BUILDING

S.C.R. Building/Generator Room/Fuel Tank

Fuel Tank Size: 10'L x 6'6"H x 45" Deep (approx. 1500 gallons) or 6860
Overall Skid Size: 10'W x 38'L x 10'6"H

CATWALK - PIPE RACKS

Catwalk - 8'W x 40'L
2 - Sets Pipe Racks built with 4" Square Tubing

PUMPS CENTRIFUGAL

Water Circulating:

1 - 2" x 2" Centrifugal Pump driven by a 5 HP Lincoln Electric Motor

Rig Wash Pump:

Magikist Model 32-C Triplex pump driven by a 3HP Brook Electric Motor, 230-460 Volts Type "DP", S/N: X807080.

Fuel Transfer Pump:

1 - 1" x 1" Fuel Transfer Pump driven by a 3/4 HP Electric Motor.

MATTING - RIG

4 - 8' Wide x 20' Long x 8" High Rig Mats.

WINCHES

Gearmatic Pullmaster Model H-10 powered by a Commercial 1" x 1" Hydraulic motor, Model D230-154-2, S/N: C39-647, complete with approx. 300' - 1/2" steel cable.

1 - Wireline Survey unit, powered by a Hydrailic motor and complete with 7000' of.092 Wire Line.

FISHING EQUIPMENT

1 - 8 1/8" OD S.H. Series 150 Overshot with 4 1/2" FH Box Connection, complete with 4 3/8", 4 1/2", 5 3/4", 6", 6 1/8", 6 1/4" Basket Grapples and Mill Control Packers for each.

CAMP AND FACILITIES

1 - Toolpush Shack - fully furnished and airconditioned

2 - Toyotas - four wheel drive (crewcab, ute)

3. DRILLING SUMMARY: (K.B. DEPTHS)

Comley No. 1 was spudded at 1300 hours on June 17, 1985 in 1201/4" hole and drilled to 137 m with surveys. The hole was conditioned and 9 joints of 9-5/8" 40 PPF N80 Range 3 BT&C casing run, landed at 134.4 m and cemented with 259 sacks, Class "A" neat cement. Although good returns were noticed throughout, there were no cement returns to surface and a top job was conducted using 64 sacks, Class "A" neat cement.

After waiting on cement, the Bradenhead and B.O.P's were installed and nippled up and then tested to the required pressures.

A Pressure Integrity Test conducted 4 m below the shoe gave a mudweight limit of 14.5 P.P.G.

Drilling continued in 8-1/2" hole with surveys to 478 m, having improved the mud properties of the Gel/Polymer system at 300 m.

Core No. 1 was cut from 478 m to 487 m in the Latrobe Section with a 50% recovery.

Drilling continued in 8-1/2" hole to 528 m (T.D) where the hole was conditioned and electric logs were run.

The well was plugged and abandoned with 2 plugs plus a topping at surface and the rig was released at 1600 hours on June 23, 1985.

(a) Drilling Fluid

Chemical additives and mud control services were supplied by Geofluids Pty. Ltd. Drilling Fluids.

Spud mud was used from surface to 137 m and 137 m to 300 m and then water-gel-polymer additions to total depth.

Properties:

Date:	June 17	June 18	June 20	June 21
Weight (P.P.G)	8.6	8.6	8.9	8.8
Viscosity (secs)	28	28	44	41
Water Loss (mls/30min)	N/A	N/A	9.6	9.7
P.H.	10.5	9.0	9.5	9.5
Solids	1.5%	2.0%	4.0%	4.0%

Chemicals Used: (12-1/4" Hole)

Milgel	47 sacks	(100 lbs)	2136 kgs
Caustic	4 drums	(50 kgs)	200 kgs

Chemicals Used: (8-1/2" hole)

Milgel	66 sacks	(100 lbs)	3000 kgs
Caustic	1 drum	(50 kgs)	50 kgs
Soda Ash	4 sacks	(40 kgs)	160 kgs
Celpol	5 sacks	(25 kgs)	125 kgs
Unical	5 sacks	(25 kgs)	125 kgs
Noxygen	2 drums	(32 kgs)	64 kgs

(b) Water Supply

Make-up water for drilling was obtained from the local Shire Council and trucked to location about 3 kilometres.

(c) Logging and Testing

(i) Formation Sampling

Mudlogging was provided by Geoservice Overseas S.A. Spot samples of ditch cuttings were collected at 10 m intervals from 10 m to 137 m. Regular ditch cutting samples were collected at 5 m intervals from 137 m to 350 m and then at 3 m intervals to total depth. All samples were washed, bagged and described, and were checked for fluorescence and visual porosity. One set of washed and dried cutting samples was forwarded to:

Oil & Gas Division,
Office of Minerals & Energy,
Dept. of Industry, Technology & Resources

(d) Coring

Coring equipment and wellsite services were provided by Christensen Inc. A 9 m core was cut using a 30' x 6-3/4" x 4" core barrel with an RC-4 corehead. The 50% core recovery could be attributed to jamming in the barrel.

(e) Sidewall Cores

One gun of sidewall cores was shot. 30 shots were fired and 26 samples were recovered.

(f) Wireline Logging

Wireline logging and velocity survey were carried out by Schlumber Seaco Inc.

Log	From (m)	To (m)	Temperature
DLL-MSFL	494	340	
LDT-CNL-GR	528	134	36.0°C
BHC-GR	526	134	36.6°C
NGT (GR to Surface)	527	227	38.8°C
DLL-MSFL	528	134	38.8°C
WSS	529	456	
CST	517	161	

Hole Problems: Bridged at 494 m, could not get through with DLL.

(g) Formation Testing

No D.S.T's were attempted.

(h) Deviation Surveys

Depth (m)	Deviation
20	1/4°
66	1/2°
113	0°
242	3/4°
316	1/4°

(i) Velocity Survey

Job was done with sea slim hole WST tool with shots taken going down with tool closed. 21 shots were attempted with 4 levels being recorded as follows:

Level No. 1: 528.0 m Stacked Shots: 10, 11

Level No. 2: 525.0 m Stacked Shots: 12, 14

Level No. 3: 501.0 m Stacked Shots: 16, 17, 18

Level No. 4: 485.0 m Stacked Shots: 19, 20, 21

No other shots were attempted as tool was not working properly.

(j) Bits

3 bits were used to drill Comley No. 1.

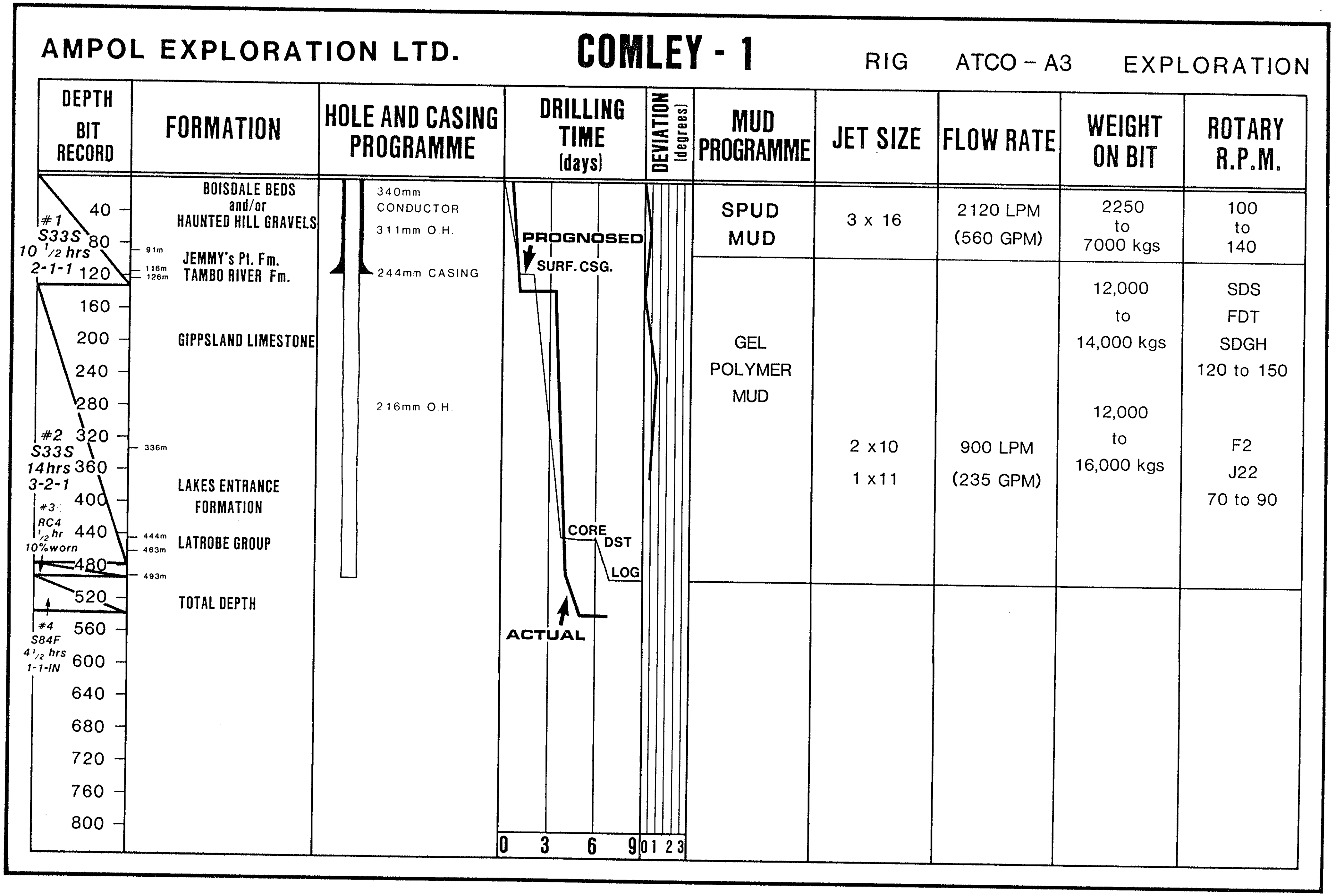
Size	IADC Type	Depth Out (m)	Hours
12-1/4"	1-1-4	137	10.5
8-1/2"	1-1-4	487.5	14
8-1/2"	5-1-7	528	4.5

(k) Completion

Comley No. 1 was plugged and abandoned, cemented at surface with a plate welded across the top of the casing.

Plug Interval (m)	Remarks
1. 495-445 m	50 sacks of Class "A" cement across the top of the Gurnard Formation.
2. 159-114 m	50 sacks of Class "A" cement across the surface casing shoe. Tagged at 114 m.

DRILLING SUMMARY



GEOLOGY

GEOLOGY

1. SUMMARY

COMLEY #1 is an exploration well located approximately 10 km. south of Bairnsdale in PEP 98 in the onshore Gippsland Basin.

The Comley prospect was prognosed to be a four-way closed drape of Tertiary sediments over a basement high. The primary objectives were sandstone reservoirs in the Latrobe Valley Coal Measures.

The well reached a total depth of 529 m in metasedimentary Basement of Ordovician age.

All Formations were low to prognosis; the Lakes Entrance Formation was 72.2 m low, the Latrobe Group was 32 m low and Basement was 34 m low. A core was cut in the Latrobe Group (50% recovery). No significant hydrocarbon shows were encountered and log interpretation showed the Latrobe Group to be 100% water-saturated. The well was plugged and abandoned.

Re-mapping of the seismic over the Comley prospect shows that the structure has approximately 20 millisecs of closure and is likely to be fault-controlled.

2. REGIONAL GEOLOGY

Tectonic Setting

PEP 98 is located in the onshore portion of the Gippsland Basin. The Gippsland Basin is the most easterly of several small Mesozoic-Cainozoic basins along the south coast of Australia. The development of the basin was controlled by the opening of the Tasman Sea as the Lord Howe Rise separated from the east coast of Australia late in the Cretaceous.

The basin proper can be considered as that area west of the Lakes Entrance granite high, south of the Tertiary-Paleozoic contact on the north side of the basin and east of a line between the Wilson's Promontory granite and the town of Warragul. The position of the south boundary of the basin is not known as it lies in the area of Bass Strait.

The Gippsland Basin formed on the site of an earlier infilled rift system, (Strzelecki Basin) which developed across the southern margin of Australia during the early Mesozoic. A new rift, the Gippslnd Basin, formed during the Late Cretaceous by down-faulting between two east-west fault systems. The southern margin of the new graben, the Foster Fault System, closely follows that of the ancient rift while the northern boundary, the Rosedale Fault and its offshore extensions, lies some kilometres to the south of the ancient rift margin. Mid-Eocene to Miocene transgressive events combined with progressive subsidence of the platform north of the Rosedale Fault system resulted in deposition of an onlapping series of formations which extended the basin northward to the line of present day paleozoic outcrop. Although normal fault movements predominate, a major phase of wrench faulting along the trend of the Rosedale Fault System during the Late Eocene resulted in the formation of a number of large anticlines which host the major known hydrocarbon reserves of the offshore Gippsland Basin. Although the influence of this event is less pronounced in the onshore areas it probably had significant effects on the stratigraphy, facies distribution and structure. The northern flank of the Gippsland Basin underwent basinwards tilting during the Kosciusko uplift in the Late Pliocene.

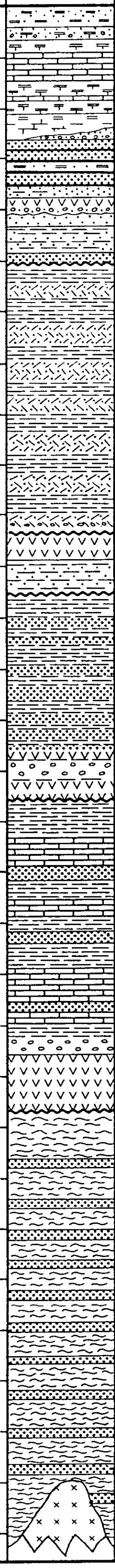
Stratigraphy

The basement of the Gippsland Basin is probably very similar to the area of Paleozoic outcrops on the north side of the basin. Ordovician and Silurian sediments, altered by dynamic metamorphism and intruded by granite, probably underlie Mesozoic strata over most of the basin. Highly folded marine strata of Middle Devonian age occur as erosional remnants, or down-faulted blocks, north of the eastern half of the basin. Isolated occurrences of Middle Devonian rocks could be expected in the subsurface in the eastern half of the basin. Overlying these altered and highly folded older Paleozoic rocks on the northern side of the basin is a thick continental sequence of red shales, sandstones, conglomerates and volcanics of Upper Devonian-Lower Carboniferous age. These beds are slightly to moderately folded and probably extend south at least as far as the Lake Wellington area.

Generalised Stratigraphy
GIPPSLAND BASIN

Aggregate Thickness (ft): 2000 – 4000 – 6000 – 8000 – 10000 – 12000 – 14000 – 16000 – 18000 – 20000 – 22000 – 24000 – 26000 – 28000 – 30000

Lithology:



Name	Description	Unit Thickness		Age
Haunted Hills Gravels and/or Lake Wellington Fm	Sand,gravel and clay	0-400'	TERTIARY	U.PLIOCENE to PLEISTOCENE
Jemmy's Point Formation	Shelleys sand and marl	100-1000'	TERTIARY	L.PLIOCENE
Tambo River Formation	Shelley marl	20-250	TERTIARY	U.MIOCENE
Gippsland Limestone	Limestone and marl	500-1650'	TERTIARY	MIOCENE
Lakes Entrance Fm	Shale,clay & marl-Greensand Mbr & Colquhoun Gravel at base	200-776'	TERTIARY	OLIGOCENE
Latrobe Valley Coal Measures	Sand, brown coal,clay and gravel	0-2500'	TERTIARY	L.OLIGOCENE to U.EOCENE
Narracan Group	Basalt,gravel,coal	0-400'	TERTIARY	EOCENE
Marine Cretaceous? Hollands Landing Bore only	Siltstone - mudstone	Unknown,probably very thin	MESOZOIC	L.CRETACEOUS
Strzelecki Group? seen only in Merriman No.1	Shale,mudstone and porous sand	0-650'	MESOZOIC	L.CRETACEOUS
Possible Unconformity				
Strzelecki Group	Monotonous sequence of shale, mudstone,graywacke, sub-graywacke, thin coal beds and minor conglomerate. Non - marine	0-20,000' Missing in northern part of basin. 490' in Duck Bay No.1. 8236'+ in Wellington Park No.1. 10,000-20,000' estimated in Strzelecki Ranges	MESOZOIC	L.CRETACEOUS to U.JURASSIC
Unnamed,seen only in Duck Bay No.1	Volcanics	325' in Duck Bay No.1	PALEOZOIC	PERMIAN?
Unnamed,seen only in Duck Bay No.1	Argillaceous,fine grained sandstones	624' in Duck Bay No.1	PALEOZOIC	L.PERMIAN?
Avon River Group or Iguana Creek Beds	Red and green shale, sandstone,siltstone and conglomerate with volcanics in basal part. Non-marine	0-10,000'. 2398' in Southwest Bairnsdale No.1. Absent in eastern part of the basin	PALEOZOIC	L.CARBONIFEROUS to U.DEVONIAN
Tabberabbera Beds, Buchan Group and Waratah Bay Limestones	Limestone,dolomite, siltstone and shale with basal conglomerate. Bioherms in Buchan Group. Marine	5000'+ at Tabberabbera. 2500'± at Buchan. 1200'+ at Waratah Bay	PALEOZOIC	MIDDLE DEVONIAN
Snowy River Volcanics	Flows and pyroclastics	0-2500'	PALEOZOIC	MIDDLE to LOWER DEVONIAN
Basement	Strongly folded slate,shale, sandstone and quartzite with quartz veins intruded by granite and other igneous rocks	30,000'+	PALEOZOIC	SILURIAN and ORDOVICIAN Undifferentiated

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DATE NOV 1985

No Permian sediments are known in the subsurface of the basin. However, conglomerate exposed along a major fault on the south side of the Carrajung uplift, is thought to be glacial tillite of Permian age.

The major structural trend in the Tasman geosyncline is north-south, and because the Paleozoic rocks in the sub-surface of the Gippsland Basin are an extension of this geosyncline the same trend is thought to persist.

No sediments of Triassic age are known in the Gippsland Basin.

The oldest sediments in the basin are those of the Early Cretaceous Strzelecki Group which were deposited in the earlier Strzelecki rift system. Where it is known on the uplifted and eroded flanks of the basin, the Strzelecki Group consists of distinctive non-marine greywackes, shales and minor coals. These rocks were deposited in coalescing alluvial fan and alluvial plain complexes.

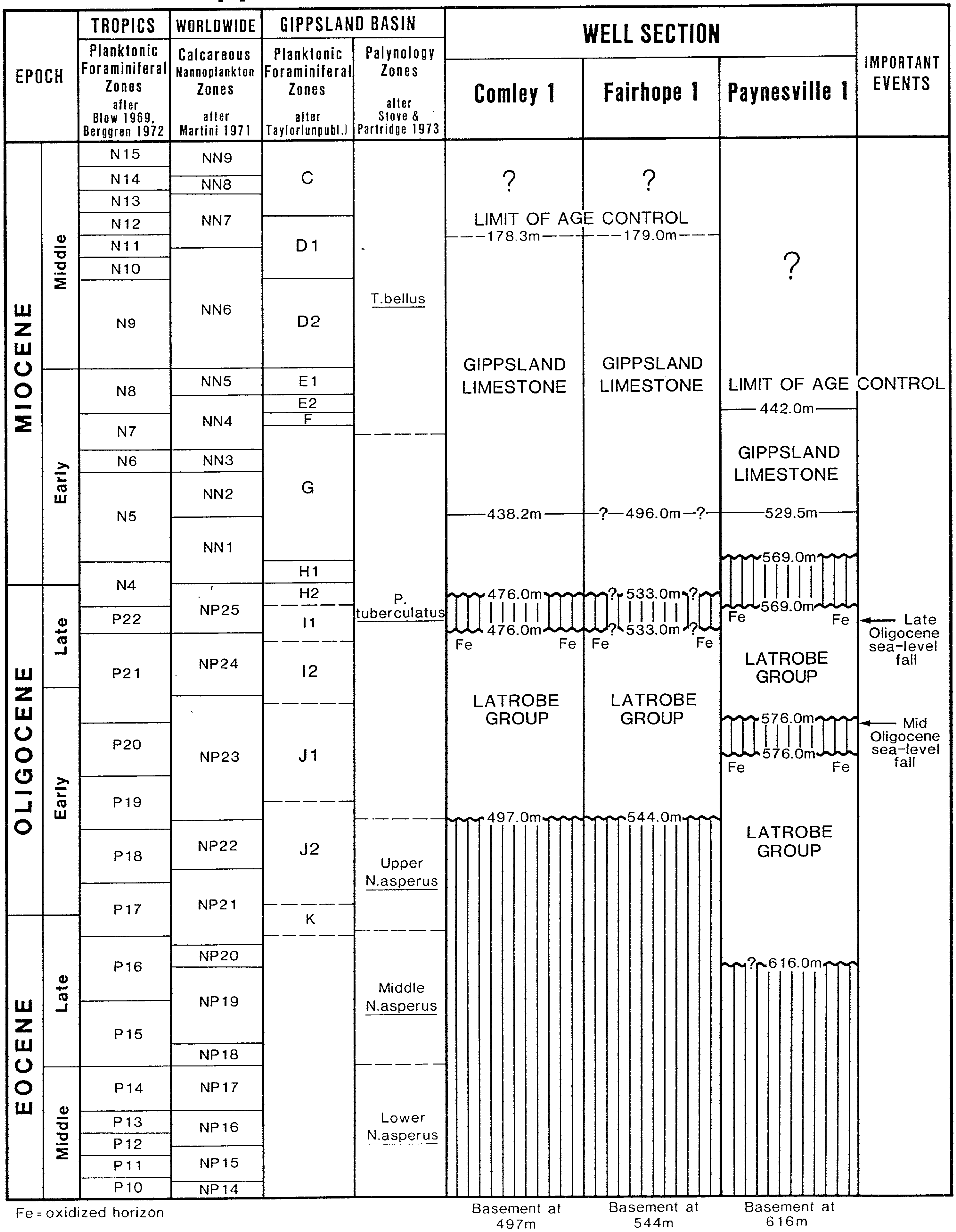
Overlying the Strzelecki Group, often with pronounced angular unconformity, is the Latrobe Group. Onshore in the western portion of the basin, the "Latrobe Valley Coal Measures" contain the world's largest commercial brown coal deposits. These are Miocene to Oligocene in age. Offshore a similar sequence is known from exploratory oil wells where the Latrobe Group ranges in age from Late Cretaceous to Late Eocene. The group thins rapidly north of the Rosedale fault system but is still present at Bairnsdale (located in PEP 98) near the northern limit of the Basin. Well control is very sparse but there may have been several of these embayment areas along the northern basin edge interspersed with locally high areas of non-deposition during Late Latrobe time.

Offshore the Latrobe Group consists of up to 5,000 metres of sandstone, siltstone, shale and coal deposited largely in non-marine environments. Marine incursions are indicated by zones rich in dinoflagellates which have assisted in the subdivision of this otherwise monotonous sequence. In the southeastern part of the basin, foresetted strandline sandstones which have been recognized in well intersections and on seismic records, represent a limit of non-marine sedimentation in the basin at that time. Since the Tasman Sea existed as early as the Late Cretaceous, marine sediments laterally-equivalent to the Latrobe Group may be preserved in deep water along the southeastern margin of the basin.

Onshore to the north of the basin centre, the Latrobe Group consists of up to some hundred metres of fluvial sandstones and gravels interbedded with siltstones and shales and some coals. The sequence appears to be fining upwards with braided stream deposits succeeded by meandering stream deposits with perhaps some marine influence towards the top of the Latrobe transgressive sequence. The Latrobe group here is probably intermediate in age between the older sequence in the offshore area and the younger sequence in the western onshore Coal Measures area.

Uplift of the northeastern part of the basin during Late Eocene periods of wrench faulting, led to the formation of submarine channels in the top of the Latrobe Group which was simultaneously subject to marine

Tentative chronostratigraphic correlation between COMLEY 1, FAIRHOPE 1 & PAYNESVILLE 1 wells, onshore Gippsland Basin - revised by Ampol Exploration Ltd



Fe = oxidized horizon

transgression. Marine greensands at the top of the Latrobe Group mark the onset of Late Eocene transgression, and are overlain by marine shales and marls of the Lakes Entrance Formation (Oligocene to Early Miocene). Deposition of shallow marine shelf carbonates of the Gippsland Limestone began in the Early Miocene with laterally equivalent shales of the Lakes Entrance Formation in deeper water.

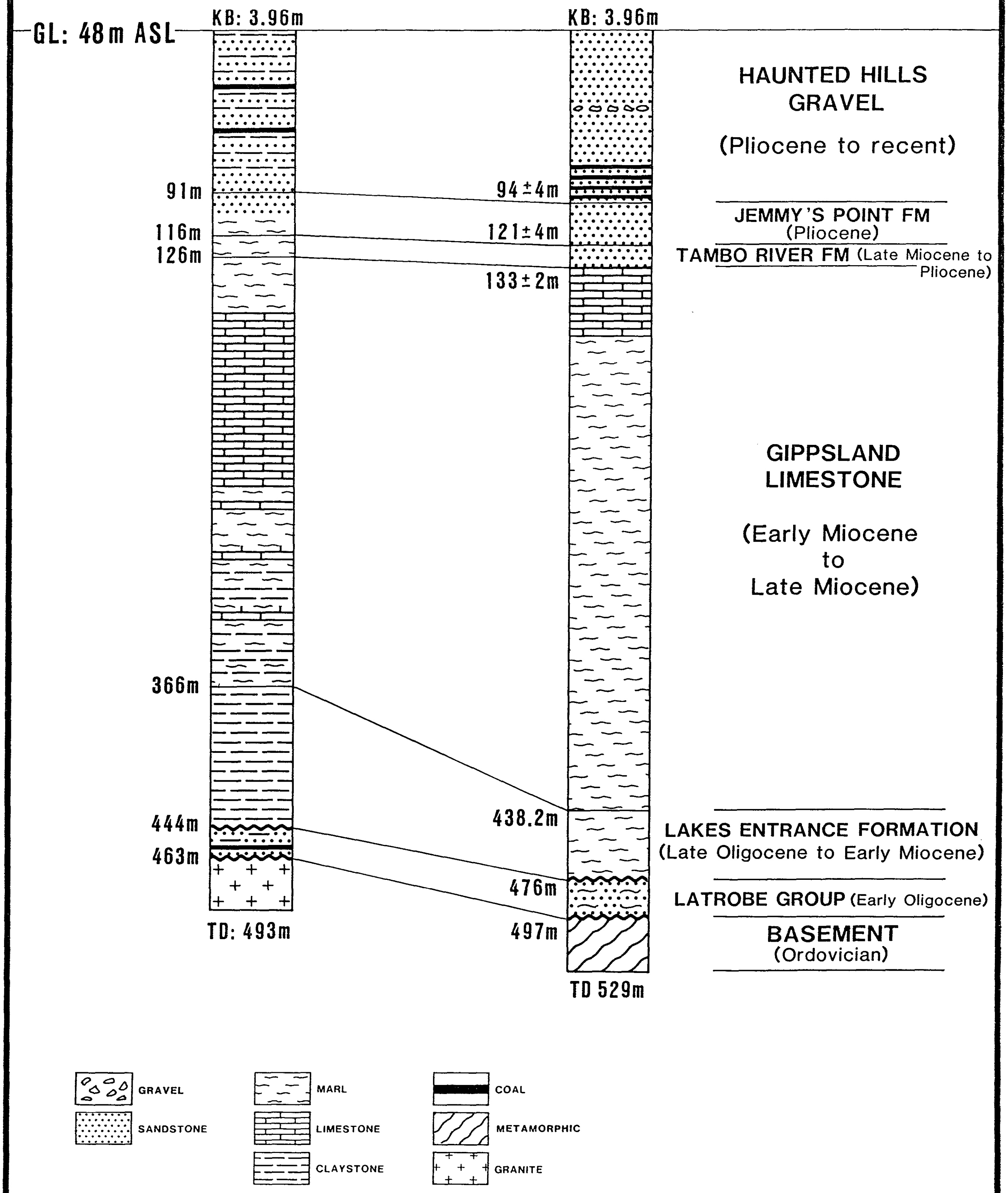
A marine environment continued into Pliocene time but then gradual retreat of the sea ended marine deposition in the Gippsland area of the Gippsland basin. From Upper Pliocene to recent time non-marine conditions prevailed, and a cover of sand, gravel and clay was deposited over part of the basin (Haunted Hills Gravel).

Although only a limited amount of time-stratigraphic data is publicly available it is clear that many of the lithostratigraphic units recognised in the Gippsland Basin are diachronous.

Hydrocarbon Occurrence

Apart from the vast accumulations of oil and gas in the offshore Gippsland Basin, only one field has been discovered onshore to date. The Lakes Entrance oil field is located within the original limits of PEP 98 and was discovered in 1924. During the life of the field 64 bores were drilled and a total of 10,000 barrels of 15.7^{o} A.P.I. gravity crude oil produced (peak production was 572 barrels per annum). The oil is an asphaltic base crude which is devoid of gasoline and kerosene fractions. The oil is stratigraphically trapped in a glauconitic sandstone (greensand) placed at the base of the Lakes Entrance Formation/top Latrobe Group. The areal extent of the greensand is approxmately 15 km^2. Porosity and permeability are highly variable throughout the reservoir but it is usually tight and unproductive. Geochemical analysis of the Lakes Entrance oil shows that it is heavily biodegraded. The gas associated with the oil is rich in CH_4 (up to 94%) and N_2 (up to 71%). The composition of this gas is markedly different to that produced in the offshore Gippsland Basin. The gas in the Lakes Entrance field is likely to have been derived from biodegradation of the crude oil after it had migrated into the Lakes Entrance trap. Gravel (Colquhoun Gravel) with excellent reservoir potential underlies the greensand. Wireline logs show the gravel to be 100% water-saturated. Prior to the Kosciusko uplift late in the Pliocene it is possible that the gravel may have contained significant quantities of oil. Basinward tilting would have resulted in the flushing of the gravel leaving only residual oil in the less porous overlying greensand.

COMLEY 1
PREDICTED v's ACTUAL



DEPTH IN METRES BELOW KB
VERTICAL SCALE 1:3000

AMPOL EXPLORATION LIMITED

AUTHOR : M.SCHMEDJE | DATE : SEPT.'85

4. STRATIGRAPHY

HAUNTED HILLS GRAVEL: Surface to 94±4 m. (90± 4m)
(Pliocene to Recent)

Predominantly SAND: unconsolidated, medium to coarse grained, subangular to subrounded, milky to translucent, moderately sorted quartz. Occasional lithic grains and coarse to very coarse grained muscovite. Good visual porosity.

With common GRAVEL at 45 m: pebbles up to 1 cm. in diameter, subrounded, poorly sorted, predominantly very fine grained acid to intermediate volcanic varieties.

With abundant LIGNITE from 75 m.: black to brown, dull, stringy, soft, fibrous, woody fragments.

JEMMY'S POINT FORMATION: 94±4 m to 121± 4 m. (27±8 m.)
(Pliocene)

Predominantly SAND: A/A and COAL: A/A likely to be cavings.

With common CARBONATE: unconsolidated, coarse to very coarse, angular to subrounded, off-white fossil fragments.

TAMBO RIVER FORMATION: 121±4 m. to 133± 2 m. (12±6m)
(Late Miocene to Pliocene)

Predominantly CARBONATE: A/A, off-white and pale grey.

GIPPSLAND LIMESTONE: 133±2 to 438.2 m. (305±2 m.)
(Early Miocene to Late Miocene)

Predominantly CARBONATE to 170 m.: A/A. Good visual porosity.

Predominantly MARL from 170 m.: grey unconsolidated, soft, cohesive, very poorly sorted fossil fragments and micrite. No visual porosity.

With occasional ARENACEOUS LIMESTONE: bone to pale grey, very fine to fine grained, glauconitic massive. Poor visual porosity.

With trace CLAYSTONE: green, poorly indurated, calcareous, glauconitic.

LAKES ENTRANCE FORMATION: 438.2 to 476 m. (37.8 m.)
(Late Oligocene to Early Miocene)

Predominantly MARL: A/A, becoming very glauconitic in lower part. No visual porosity.

LATROBE GROUP: - 476 to 497 m. (21 m.)
(Early Oligocene)

Predominantly SANDSTONE: fine grained, translucent quartz, massive, glauconitic, pyritic, calcareous, fossiliferous (oxidized at 476 m.). Poor visual porosity, becoming medium to coarse grained from 487.6 m. with moderate to good visual porosity.

BASEMENT: 497 to 529 m. (32 m.)
(Ordovician)

Predominantly QUARTZITE: pale pink to dark pink, sucrosic texture, fine grained, well indurated and hard. Nil visual porosity.

5. GEOPHYSICAL ANALYSIS

Comley-1 penetrated the key horizons, the top of the Latrobe Group and the basement, 32m and 34m respectively, low to prediction. Interpretation of the well results shows that the error in depth prediction was due to the incorrect identification of the seismic horizons and the use of a lower-than-actual velocity.

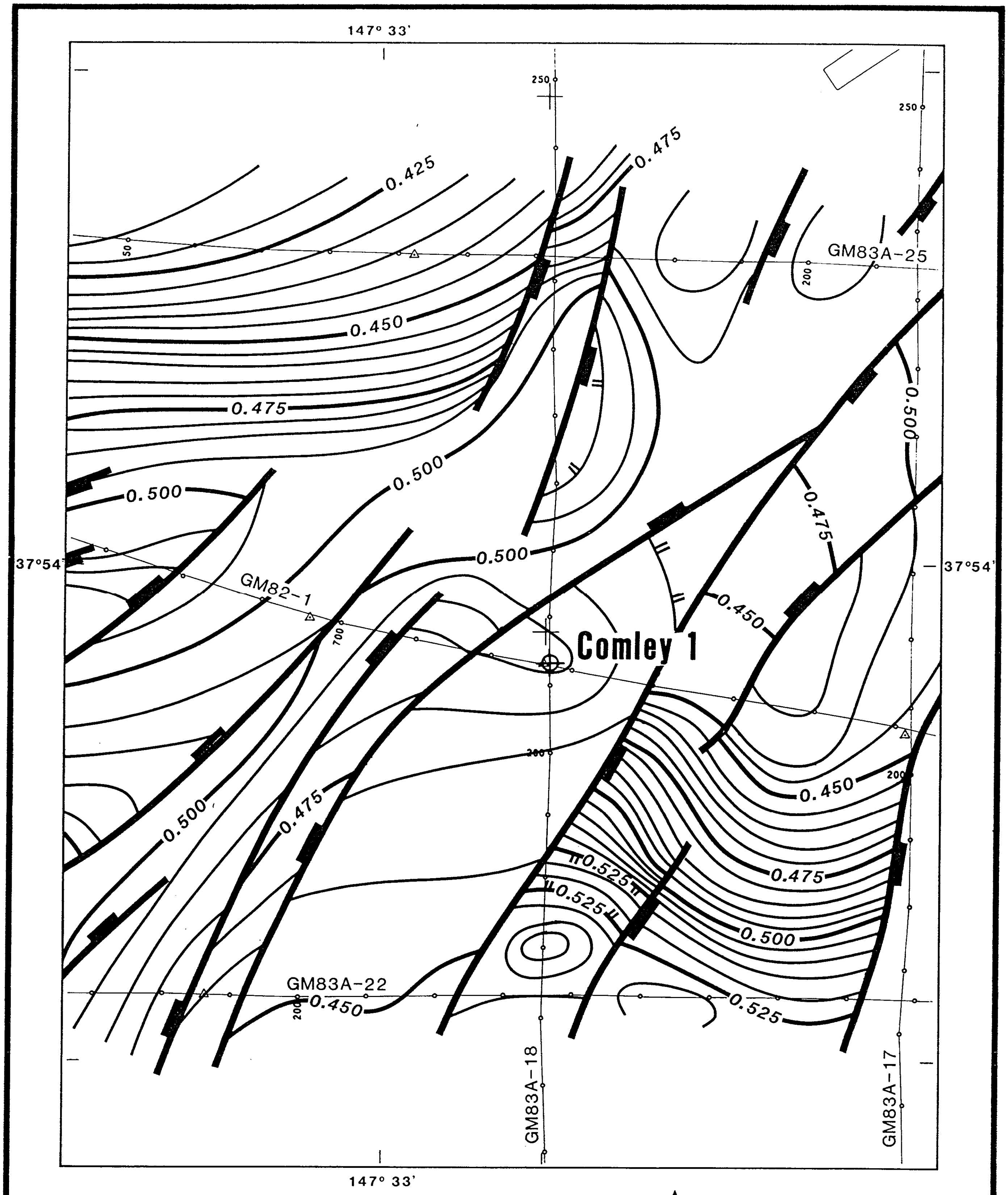
The predicted top of the Latrobe Group was at 0.410s while the basement was at 0.430s. Interpretation of the velocity survey and the sonic log shows that the actual times were 0.424s to the top of the Latrobe Group and 0.440s to the top of the basement. The actual velocities to the top of the Latrobe Group and the basement were 2028 m/s and 2050 m/s respectively; approximately 5% faster than the predicted velocities.

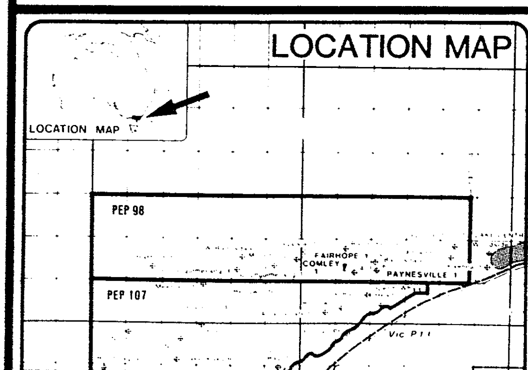
The pre-drill structural mapping showed that Comley-1 was located on a simple, unfaulted anticline produced by drape over a basement high, however the post-drill mapping shows a more complex structure. The top of the Latrobe Group is now believed to be the reflector previously identified as the top of the basement and apparently the well was located on a horst formed by two northeast trending faults. Comley-1 is located within a small fault-dependent closure. The 21m section of Latrobe Group is believed to represent a thin veneer over the basement highs, while greater thicknesses of the Latrobe Group could occur off the flanks of the basement features. Mapping of both the top of Latrobe Group and the basement is made difficult by the lack of migrated seismic data and the apparently pervasive faulting.

6. POROSITY AND PERMEABILITY

Wireline log evaluation indicates the Latrobe Group is the only sequence in Comley #1 with effective porosity. Log calculated porosities for the Latrobe Group range between 0% and 42% with an average of 26%. Porosities of 42% are only obtained where the hole is badly washed out. Conventional core analysis does support the presence of high porosity values.

Conventional core analysis of core #1 (477.95 to 482.4m) cut from the Latrobe Group gives porosities ranging between 35.4% and 38.8% with an average of 36.2%. Permeabilities range from 46 to 1380 M.D. with an arithmetic and geometric average of 343 M.D. and 109 M.D. respectively. Grain density measurements range from 2.68 to 2.84 gm/cc with an average of 2.74. The relatively high values for grain density measurements reflect the concentration of heavy minerals (pyrite, glauconite, carbonate) in the Latrobe Group in Comley #1.





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GIPPSLAND BASIN
PEP 98, VICTORIA

COMLEY 1

TIME STRUCTURE MAP
Top of Latrobe Group

0 — 400m
1:10 000

AUTHOR A. NELSON	DATE NOVEMBER 1985
CONTOUR INT. 5 msec	

7. SUMMARY OF HYDROCARBONS

No significant indications of hydrocarbons were encountered in Comley #1. Wireline log evaluation shows that the Latrobe Group is 100% water-saturated.

Analysis of the headspace gas from ditch cuttings yielded the highest readings from 459 m. to 477 m. in the Lakes Entrance Formation (480 ppm C1, 5 ppm C2, 2 ppm C3, 4 ppm C4 and 1 ppm C5). In the Latrobe Group headspace gas levels were significantly lower (114 ppm C1, 6 ppm C2, 5 ppm C3, 4 ppm C4, 1 ppm C5).

8. CONCLUSIONS AND CONTRIBUTIONS TO GEOLOGICAL KNOWLEDGE

- Comley #1 was drilled to test sandstone reservoirs of the Latrobe Group. The objective was encountered at 476m KB, 32m low to prognosis.
- Basement was encountered at 497m KB, 34m low to prognosis, giving a total thickness for the Latrobe Group of 21m.
- Comley #1 was drilled on a horst formed by two northeast trending faults and is located within a small fault dependent closure.
- The Latrobe Group consists of well-sorted glauconitic fine to very fine sandstones and siltstones. The high percentage of glauconite (increasing to the top) indicates a relatively low rate of deposition in a marine environment (water depth ranging from 50-150m).
- At the top of the Latrobe Group an oxidised horizon is present.
- Core analysis of a core cut in the Latrobe Group gives an average porosity of 36.2% and permeabilities ranging from 46 to 1380mD.
- No significant source rocks were observed in the well. Vitrinite reflectance of 0.24-0.27% indicates the interval penetrated was immature.
- No significant hydrocarbon shows were encountered.
- The well was plugged and abandoned.

APPENDICES

APPENDICES

APPENDIX 1.

DAILY DRILLING REPORTS

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1

DAILY DRILLING REPORT 1

RIG SUPERVISOR	CONTRACTOR	RIG	TOOLPUSHER
J. HANSEN	ATCO	# 3	NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT
18.6.85	1	137M	0	137M	311mm	406mm	6m

ACTIVITY TRIPPING OUT TO RUN 244mm SURFACE CASING.

BHA	SLICK		MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt S.G.	1.03		MAKE		
LENGTH	131.2		Vis	28		MODEL	TSM-500	TSM-500
BHA TOTAL WT	22,000kg		W.L.	–		LINER	140	140
DRILL PIPE	–		PV	–		STROKE	406	406
TOT. STR. WT.	22,000kg		YP	–		S.P.M.	52	52
W.O.B.	4,500-9,000kg		GELS			PRESSURE	–	–
BIT NO	1		FILT CK.			G.P.M.	1045	1045
TYPE	S,33S		Chlorides			Total G.P.M.	2,090	
JETS	3 x 16		pH	10.0		D.C. Annul Vel	47.9 M/MIN	
DEPTH IN	0		KCl	–		D.P. Annul Vel	37.2 M/MIN	
FOOTAGE	137		Solids	1.5		Circ. Time	–	
RPM	120		TEMP.	–		Hole Volume	10.4 m^3	
ROT. HRS	10'		Additives	CAUSTIC: 4 GEL: 47		Pit Volume	39.7 m^3	
CONDITION	IN							

FROM	TO	HRS	OPERATIONS SUMMARY	DAY COST	
0600	1300	7	RIG UP: DRILL RATHOLE	Previous Cost	
1300	1830	5½	SPUD COMLEY#1: DRILL 311mm HOLE TO 61M	Cumulative Cost	
1830	1900	½	CIRC & SURVEY - ¼ DEGREE	Major Items	
1900	2130	2½	DRILL 311MM HOLE TO 109M		
2130	2200	½	CIRCULATE HOLE CLEAN		
2200	2230	½	REPAIR RIG : WASHPIPE		
2230	0100	2½	CIRC.HOLE; PUMP PILL & SHORT TRIP 3 STDS.	BUDGET	
0100	0130	½	DRILL 311MM HOLE TO 123M	Cond.	
0130	0200	½	CIRC. HOLE & PUMP HI-VIS PILL	Surf.	
0200	0330	1½	SHORT TRIP 5 STDS.	Int.	
0330	0500	1½	DRILL 311MM HOLE TO 137M	Prod.	
0500	0600	1	CIRC & COND. HOLE PRIOR TO P.O.H.		

NEXT 24 HRS P.O.H. - RUN 244MM SURF. CSG & CMT - NIPPLE UP B.O.P's.

DISCUSSION LOST CIRCULATION WHILST DRILLING RATHOLE & REGAINED W/HI-VIS SLUG: NO COST CIRC. IN MAIN HOLE.

CONTRACTOR PERS.		AMPOL PERS.		OTHERS	TOTAL
16		2		6	24

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1

DAILY DRILLING REPORT 2

RIG SUPERVISOR	CONTRACTOR	RIG	TOOLPUSHER
J. HANSON	ATCO	3	B. NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT
19.6.85	2	137M	137M	-	-	244m	134.4M

ACTIVITY: RIG TO PRESSURE TEST B.O.P.

BHA			MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt			MAKE		
LENGTH			Vis			MODEL		
BHA TOTAL WT			W.L.			LINER		
DRILL PIPE			PV			STROKE		
TOT. STR. WT.			YP			S.P.M.		
W.O.B.			GELS			PRESSURE		
BIT NO			FILT CK.			G.P.M.		
TYPE			Chlorides			Total G.P.M.		
JETS			pH			D.C. Annul Vel		
DEPTH IN			KCl			D.P. Annul Vel		
FOOTAGE			Solids			Circ. Time		
RPM			TEMP.			Hole Volume		
ROT. HRS			Additives			Pit Volume		
CONDITION								

FROM	TO	HRS	OPERATIONS SUMMARY		
0600	0700	1	DROP SURVEY & P.O.H. (STRAP OUT)	DAY COST	$ 38,390
0700	0730	½	LAY OUT 2-203mm D.C. (SURVEY=0 DEGREE)	Previous Cost	$134,219
0730	0830	1	RIG TO RUN 244mm CASING	Cumulative Cost	$172,609
0830	0930	1	RUN 9 JNTS: 244mm CSG	Major Items	CASING
0930	1000	½	RIG UP CEMENT HEAD		LEASE PREP
1000	1030	½	INSTALL LANDING JNT. & BREAK COLLAR		CMT
1030	1100	½	CIRCULATE HOLE CLEAN		RIG MOB
1100	1230	1½	CMT W/259 sx 'A' CMT & DISPL. W/5.2m³ H_2O: BUMP PLUG @ 12:38	BUDGET	
1230	1330	1	(GOOD RETURNS - NO CMT NO SURF) - CUT CONDUCTOR PIPE		
1330	1500	1½	RUN 14M - 51MM PIPE OUTSIDE SURF		
1500	1530	½	PUMP 64 sx 'A' CMT w/2% CACL	Prod.	
1530	2130	6	W.O.C.		.....2/...

NEXT 24 HRS: TEST B.O.P.; CSG; RUN P.I.T. & DRILL AHEAD IF SUCCESSFUL

DISCUSSION

CONTRACTOR PERS.		AMPOL PERS.		OTHERS	TOTAL
17		3		6	26

AMPOL EXPLORATION LIMITED

(2)

WELL: COMLEY # 1

DAILY DRILLING REPORT 2

RIG SUPERVISOR	CONTRACTOR	RIG	TOOLPUSHER
J. HANSON	ATCO	3	B. NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT

ACTIVITY

BHA			MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt			MAKE		
LENGTH			Vis			MODEL		
BHA TOTAL WT			W.L.			LINER		
DRILL PIPE			PV			STROKE		
TOT. STR. WT.			YP			S.P.M.		
W.O.B.			GELS			PRESSURE		
BIT NO			FILT CK.			G.P.M.		
TYPE			Chlorides			Total G.P.M.		
JETS			pH			D.C. Annul Vel		
DEPTH IN			KCl			D.P. Annul Vel		
FOOTAGE			Solids			Circ. Time		
RPM			TEMP.			Hole Volume		
ROT. HRS			Additives			Pit Volume		
CONDITION								

FROM	TO	HRS	OPERATIONS SUMMARY	DAY COST	
2130	2300	1½	BACK OUT LANDING JNT & INSTALL 244MM BRADEN HEAD	Previous Cost	
2300	0530	6½	NIPPLE UP B.O.P's	Cumulative Cost	
0530	0600	½	RIG UP HOWCO TO TEST B.O.P's	Major Items	
				BUDGET	
				Cond.	
				Surf.	
				Int.	
				Prod.	

NEXT 24 HRS

DISCUSSION

CONTRACTOR PERS.		AMPOL PERS.		OTHERS	

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1	DAILY DRILLING REPORT 3

RIG SUPERVISOR J. HANSON	CONTRACTOR ATCO	RIG 3	TOOLPUSHER B. NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT
20.6.85	3	137M	137M	-	216 MM	244 MM	134.4 M

ACTIVITY DRILLING PLUG & FLOAT

BHA SLICK			MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt			MAKE		
LENGTH			Vis			MODEL		
BHA TOTAL WT			W.L.			LINER		
DRILL PIPE			PV			STROKE		
TOT. STR. WT.			YP			S.P.M.		
W.O.B.			GELS			PRESSURE		
BIT NO			FILT CK.			G.P.M.		
TYPE			Chlorides			Total G.P.M.		
JETS			pH			D.C. Annul Vel		
DEPTH IN			KCl			D.P. Annul Vel		
FOOTAGE			Solids			Circ. Time		
RPM			TEMP.			Hole Volume		
ROT. HRS			Additives	MILGEL: 33 S.ASH:2		Pit Volume		
CONDITION								

FROM	TO	HRS	OPERATIONS SUMMARY		
0600	0700	1	M/U TEST PLUG & R/U HOWCO TO TEST	DAY COST	$ 11,485
0700	0730	½	P/TEST MANIFOLD - LEAKING	Previous Cost (ADJ)	$166,809
0730	0900	1½	REPAIR RIG: MANIFOLD LEAK	Cumulative Cost	$178,294
0900	0930	½	P/TEST MANIFOLD - LEAKING VALVE	Major Items	
0930	1100	1½	REPAIR RIG: MANIFOLD VALVE		
1100	1200	1	P/TEST BLIND RAMS; HCR-250-3000 PSI - OK		
1200	1600	4	DRILL MOUSE HOLE WHILE W.O. PARTS	BUDGET	
1600	2200	6	P/TEST MANIFOLD - BOP LEAK: REPAIR B.O.P's		
2200	2400	2	P/TEST MANIFOLD - 250-3000 PSI - OK	Surf.	
2400	0200	2	REPAIR RIG: B.O.P. LEAK	Int.	
0200	0530	3½	P/TEST PIPE RAMS; HYDRIL & SURF. CONTROL EQUIPMENT - OK		
0530	0600	½	M/U BIT & R.I.H. TO DRILL OUT PLUG & FLOAT.		

NEXT 24 HRS RUN CASING & P.I.T. & DRILL AHEAD

DISCUSSION MOUSE HOLE DRILLED WHILST W.O. PARTS: RAN INTO CONCRETE FROM CONDUCTOR

CONTRACTOR PERS.		AMPOL PERS.		OTHERS	TOTAL
17		3		6	26

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1 | DAILY DRILLING REPORT 4

RIG SUPERVISOR	CONTRACTOR	RIG	TOOLPUSHER
J. HANSON	ATCO	3	B. NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT
21.6.85	4	487.5M	137M	350.5	216MM	244MM	134.4M

ACTIVITY: CIRCULATING - PREPARING TO CORE

BHA	SLICK		MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt	1.07		MAKE		
LENGTH	165.2M		Vis	44		MODEL	TSM-500	TSM-500
BHA TOTAL WT	15,000kg		W.L.	9.5		LINER	140	140
DRILL PIPE	312.2M		PV	14		STROKE	406	406
TOT. STR. WT.	29,000kg		YP	14		S.P.M.	45	
W.O.B.	4,500kg		GELS	3/15		PRESSURE	950	
BIT NO	2		FILT CK.	1/32		G.P.M.	900	
TYPE	S33S		Chlorides	-		Total G.P.M.	900	
JETS	2 x 10 1 x 11		pH	9.5		D.C. Annul Vel	49.4 M/SEC	
DEPTH IN	137 M		KCl	-		D.P. Annul Vel	34.4 M/SEC	
FOOTAGE	350.5M		Solids	4.7%		Circ. Time	20 MINS.	
RPM	100		TEMP.			Hole Volume	11.1M³	
ROT. HRS	16		Additives	MILGEL:15 CELPOL: 3		Pit Volume	44.5M³	
CONDITION	IN		UNICAL: 2 S.ASH: 2 NOXYGEN: 1					

FROM	TO	HRS	OPERATIONS SUMMARY
0600	0630	½	R.I.H.
0630	0900	2½	DRILL CEMENT & FLOAT
0900	0930	½	PRESSURE TEST CASING TO 500 PSI-OK
0930	1000	½	DRILL SHOE & OPEN HOLE TO 141M
1000	1030	½	RUN P.I.T. HELD 140PSI W/1.05 SG MUD = 1.74 S.G. CAPACITY
1030	1500	4½	DRILL 216MM HOLE: 141M TO 254.5M
1500	1530	½	CIRCULATE & RUN SURVEY @ 242M= 3/4 DEGREE
1530	2100	5½	DRILL 216MM HOLE: 254.5M TO 373M
2100	2130	½	CIRCULATE & RUN SURVEY @ 361M = ½ DGR.
2130	2200	½	REPAIR RIG: HYDRAULIC HOSE
2200	2400	2	DRILL 216MM HOLE: 373M to 425M
2400	0600	6	DRILL 216MM HOLE TO 487.5M: CIRCULATING SAMPLES (2 HRS)

DAY COST	$ 13,710
Previous Cost	$178,294
Cumulative Cost	$192,004
Major Items	
BUDGET	
Cond.	
Surf.	
Int.	
Prod.	

NEXT 24 HRS: CUT CORE ; DRILL TO T.D. & LOG.

DISCUSSION

CONTRACTOR PERS.	AMPOL PERS.	OTHERS	TOTAL
17	3	6	26

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1

DAILY DRILLING REPORT 5

RIG SUPERVISOR	J. HANSON	CONTRACTOR	ATCO	RIG	3	TOOLPUSHER	B. NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT
22.6.85	5	528M	CORRECTED:478.5	40.5	216MM	244MM	134.4M

ACTIVITY: LOGGING W/SCHLUMBERGER

BHA	14 x 152mmDC/ 10 HWDP		MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt S.G.	1.06		MAKE		
LENGTH	223.1		Vis	38		MODEL	TSM-500	
BHA TOTAL WT	20,500kg		W.L.	9.7		LINER	140	
DRILL PIPE	12,250kg		PV	10		STROKE	406	
TOT. STR. WT.	32,750kg		YP	10		S.P.M.	45	
W.O.B.	16,000kg		GELS	2/10		PRESSURE	1100	
BIT NO	3	2	FILT CK.	1/32		G.P.M.	900	
TYPE	S84F	S33S (~~SDS~~)	Chlorides	–		Total G.P.M.	900	
JETS	2 x 10 1 x 11	2 x 10 1 x 11	pH	9.0		D.C. Annul Vel	49.4 M/SEC	
DEPTH IN	487.5M	137M	KCl	–		D.P. Annul Vel	34.4 M/SEC	
FOOTAGE	40.5M	350.5M	Solids	3.5%		Circ. Time	28 MINS	
RPM	70	100	TEMP.	–		Hole Volume	14.3M^3	
ROT. HRS	3½	16	Additives	GEL: 18 CELPOL: 2		Pit Volume	44.5M^3	
CONDITION	1-1-1	3-1-1	UNICAL: 3 CAUSTIC: 1 NOXYGEN: 1					

FROM	TO	HRS	OPERATIONS SUMMARY		
0600	0630	½	CIRCULATE & CONDITION MUD	DAY COST	$ 15,620
0630	0900	2½	P.O.H. (STRAP OUT:CORR.-9M) TO CORE	Previous Cost	$192,004
0900	1000	1	P/U CORE BBL	Cumulative Cost	$207,624
1000	1200	2	R.I.H. & WASH 20' TO BTM	Major Items	
1200	1230	½	DROP BALL & CUT CORE: 9M		
1230	1430	2	P.O.H. - CHAIN OUT		
1430	1500	½	RECOVER CORE - 50%	BUDGET	
1500	1600	1	SERVICE & LAY DOWN CORE BBL	Cond.	
1600	1730	1½	P/U BIT & R.I.H.	Surf.	
1730	2100	3½	DRILL 216MM HOLE TO 528M	Int.	
2100	2130	½	CIRCULATE & CONDITION MUD	Prod.	
2130	2200	½	5 STD WIPER TRIP		.....2/..

NEXT 24 HRS: LOGGING & P&A

DISCUSSION: ONLY SAND @ 475-494M (FROM LOGS) & POSS. H_2O

P&A : DEPTHS 495-445M & 159-109M (TAG 2ND PLUG)

CONTRACTOR PERS.		AMPOL PERS.		OTHERS	TOTAL
14		3		5	22

AMPOL EXPLORATION LIMITED (2)

WELL: COMLEY # 1

DAILY DRILLING REPORT 5

RIG SUPERVISOR J. HANSON	CONTRACTOR ATCO	RIG 3	TOOLPUSHER B. NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT

ACTIVITY

BHA			MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt			MAKE		
LENGTH			Vis			MODEL		
BHA TOTAL WT			W.L.			LINER		
DRILL PIPE			PV			STROKE		
TOT. STR. WT.			YP			S.P.M.		
W.O.B.			GELS			PRESSURE		
BIT NO			FILT CK.			G.P.M.		
TYPE			Chlorides			Total G.P.M.		
JETS			pH			D.C. Annul Vel		
DEPTH IN			KCl			D.P. Annul Vel		
FOOTAGE			Solids			Circ. Time		
RPM			TEMP.			Hole Volume		
ROT. HRS			Additives			Pit Volume		
CONDITION								

FROM	TO	HRS	OPERATIONS SUMMARY	DAY COST	
2200	2230	½	CIRCULATE & CONDITION MUD	Previous Cost	
2230	2330	1	P.O.H. TO LOG (STRAP OUT)	Cumulative Cost	
2330	2400	½	R/U SCHLUMBERGER	Major Items	
2400	0130	1½	HIT BRIDGE @ 494M - RIG DOWN		
0130	0230	1	R.I.H. W/BIT TO 494M		
0230	0330	1	WASH & REAM FROM 494M TO BTM		
0330	0400	½	CIRCULATE HOLE CLEAN	BUDGET	
0400	0500	1	P.O.H. TO LOG	Cond.	
0500	0600	1	RIG UP & LOG W/SCHLUMBERGER	Surf.	
				Int.	
				Prod.	

NEXT 24 HRS

DISCUSSION

CONTRACTOR PERS.		AMPOL PERS.		OTHERS	

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1	DAILY DRILLING REPORT 6

RIG SUPERVISOR	CONTRACTOR	RIG	TOOLPUSHER
J. HANSON	ATCO	3	B. NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT
23.6.85	6	528M	528M (T.D.)	-	-	244MM	134.4M

ACTIVITY RUNNING IN HOLE TO SET PLUGS F/

BHA OPEN-ENDED D.PIPE			MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt S.G.	1.04		MAKE		
LENGTH			Vis	32		MODEL		
BHA TOTAL WT			W.L.			LINER		
DRILL PIPE			PV			STROKE		
TOT. STR. WT.			YP			S.P.M.		
W.O.B.			GELS			PRESSURE		
BIT NO			FILT CK.			G.P.M.		
TYPE			Chlorides			Total G.P.M.		
JETS			pH			D.C. Annul Vel		
DEPTH IN			KCl			D.P. Annul Vel		
FOOTAGE			Solids			Circ. Time		
RPM			TEMP.			Hole Volume		
ROT. HRS			Additives			Pit Volume		
CONDITION								

FROM	TO	HRS	OPERATIONS SUMMARY	DAY COST	$ 47,906
0600	0330	21½	LOGGING W/SCHLUMBERGER	Previous Cost	$207,624
0330	0400	½	RIG DOWN SCHLUMBERGER	Cumulative Cost	$255,530
0400	0530	1½	LAY DOWN DRILL COLLARS	Major Items LOGS	:$37,100
0530	0600	½	PICK UP DRILL PIPE TO R.I.H.		
				BUDGET	
				Cond.	
				Surf.	
				Int.	
				Prod.	

NEXT 24 HRS SET PLUGS @ 495-445M & 159M-109M: TAG & RELEASE RIG.

DISCUSSION SCHLUMBERGER HAD NUMEROUS BREAKDOWNS.

CONTRACTOR PERS.		AMPOL PERS.		OTHERS	TOTAL
14		3		5	22

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1	DAILY DRILLING REPORT 7

RIG SUPERVISOR J. HANSON	CONTRACTOR ATCO	RIG 3	TOOLPUSHER B. NIEHAUS

DATE	SINCE SPUD	DEPTH	PREVIOUS DEPTH	FOOTAGE	BIT SIZE	CASING	SHOE AT
24.6.85	7	T.D.	528M (T.D.)	-	-	244 MM	134.4M

ACTIVITY RIG RELEASED @ 1600 hrs.

BHA			MUD RECORD	IN	OUT	PUMP DATA	1	2
			Wt			MAKE		
LENGTH			Vis			MODEL		
BHA TOTAL WT			W.L.			LINER		
DRILL PIPE			PV			STROKE		
TOT. STR. WT.			YP			S.P.M.		
W.O.B.			GELS			PRESSURE		
BIT NO			FILT CK.			G.P.M.		
TYPE			Chlorides			Total G.P.M.		
JETS			pH			D.C. Annul Vel		
DEPTH IN			KCl			D.P. Annul Vel		
FOOTAGE			Solids			Circ. Time		
RPM			TEMP.			Hole Volume		
ROT. HRS			Additives			Pit Volume		
CONDITION								

FROM	TO	HRS	OPERATIONS SUMMARY		
0600	0800	2	R.I.H. TO 495 M & CIRC.	DAY COST	$ 9,443
0800	0830	½	R/U HALLIBURTON	Previous Cost	$255,530
0830	1000	1½	MIX & SPOT PLUG#1 : 495M-445M	Cumulative Cost	$264,973
			50 sx 'A' CMT W/2% CACL	Major Items P&A	$ 5,160
1000	1030	½	PULL 4 STDS & CIRCULATE		
1030	1130	1	P.O.H. TO 159M		
1130	1200	½	MIX & SPOT PLUG#2: 159M-109M	BUDGET	
			W/50 sx 'A' CMT W/2% CACL	Cond.	
1200	1500	3	W.O.C.	Surf.	
1500	1600	1	TAG TOP OF CMT W/5,000kg @ 114M	Int.	
1600			RELEASE RIG & MOVE TO	Prod.	
	2400		FAIRHOPE # 1		

NEXT 24 HRS RIG MOVE & SPUD @ FAIRHOPE # 1

DISCUSSION

CONTRACTOR PERS.		AMPOL PERS.		OTHERS	TOTAL
14		2		5	21

APPENDIX 2.

DAILY GEOLOGICAL REPORTS

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 | PERMIT: PEP 98 | DATE: 18/6/85

DEPTH: 137.16 m | PROGRESS: 137.16 m | DAYS FROM SPUD: 1

REPORT PERIOD: 6:00, 17/6 to 6:00, 18/6 | OPERATION: SETTING SURFACE CASING

FORMATION: TAMBO RIVER FORMATION | PAGE: 1 OF: 3

FORMATION TOPS: HAUNTED HILLS GRAVELS, JEMMY'S POINT FORMATION (94m ± 4m), TAMBO RIVER FORMATION (133 ± 2m). NOTE: NO MUD LOGGING OVER TOP HOLE, SPOT SAMPLES ONLY.

DEPTH INTERVAL	ROP			LITHOLOGY
	MIN	AVE	MAX	
3.96 - 94m		-		UNCONSOLIDATED SAND (45-100%)
samples at 24m				(a) QUARTZ SAND (45-100%). med. - coarse
33m				grained (predominantly coarse), milky white
42m				to translucent, yellow staining in part,
51m				subang to subrounded, poor to well sorted
61m				(predominantly moderately sorted). Trace
70m				fine grained, granular pyrite disseminated
79m				in and attached to grains. Inferred good
89m				porosity.
				(b) LITHIC SAND (Trace-20%) yellow brown
				(weathered), predominantly fine grained
				metamorphic rock fragments rich in quartz
				and mica, sucrosic texture or phyllitic
				cleavage common. Trace multi-coloured
				volcanic rock fragments.
				COAL (NIL-50%) black, poorly indurated,
				brittle, flat fracture, well preserved
				woody structure, pyritic in part.
				GRAVEL (NIL-45%) (predominant at 45m)
				pebbles up to 1cm in diameter, subrounded,

GAS: BACKGROUND: UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS: NIL

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 18/6/85

DEPTH: 137.16m PROGRESS: DAYS FROM SPUD: 1

REPORT PERIOD: to . OPERATION:

FORMATION: PAGE: 2 OF: 3

FORMATION TOPS:

DEPTH INTERVAL	ROP MIN	ROP AVE	ROP MAX	LITHOLOGY
				very hard and very well indurated,
				predominant very fine grained acid to
				intermediate volcanics. Poorly sorted,
				inferred mod-good porosity.
				CLAY (TRACE-10%) easily dispersed, uncon-
				solidated, in unwashed sample only, yellow-
				brown.
				MUSCOVITE (NIL-5%) coarse to very coarse
				grained flakes, excellent basal cleavage,
				fresh unweathered appearance, occasional
				red oxidation in part.
94-133m		-		SAND (10-90%) as for unconsolidated qtz.
samples at 98m				sand above.
107m				COAL (5-80%)
116m				1) BLACK COAL (5-50%) A/A
125m				2) BROWN COAL "Lignite" (NIL-25%) dull
130m				brown, stringy, soft, fibrous, woody
				fragments.
				CARBONATE (5-15%) off white with pink tinge,
				mod indurated, brittle, abundant unconsoli-

GAS: BACKGROUND: UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS: NIL

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: DATE: 18/6/85

DEPTH: 137.16 PROGRESS: DAYS FROM SPUD: 1

REPORT PERIOD: to . OPERATION:

FORMATION: PAGE: 3 OF: 3

FORMATION TOPS:

DEPTH INTERVAL	ROP MIN	ROP AVE	ROP MAX	LITHOLOGY
				dated shell and fossil fragments (includ-
				ing forams and gastropods). Moderately
				calcareous.
				CLAY (5%) A/A
				MUSCOVITE (NIL-5%) A/A
133-137.16m		-		CARBONATE: (90%) unconsolidated shells &
SAMPLES AT 135m				fossil fragments, very pale grey to off-
137.16m				white, brittle, strongly calcareous.
				UNCONSOLIDATED SAND (5%) A/A
				CLAY (5%) A/A

GAS: BACKGROUND: UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS: NIL

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 19/6/85

DEPTH: 137.16 M PROGRESS: 0 M DAYS FROM SPUD: 2

REPORT PERIOD: 6:00, 18/6 to 6:00,19/6 . OPERATION: W.O.C.

FORMATION: TAMBO RIVER FORMATION PAGE: 1 OF: 1

FORMATION TOPS:

DEPTH INTERVAL	ROP			LITHOLOGY
	MIN	AVE	MAX	

GAS: BACKGROUND: UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS:

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 20/6/85

DEPTH: 137.16 M PROGRESS: O M DAYS FROM SPUD: 3

REPORT PERIOD: 6:00, 19/6 to 6:00, 20/6. OPERATION: DRILLING OUT CEMENT

FORMATION: TAMBO RIVER FM. PAGE: 1 OF: 1

FORMATION TOPS:

DEPTH INTERVAL	ROP			LITHOLOGY
	MIN	AVE	MAX	

GAS: BACKGROUND: UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS:

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 21/6/85

DEPTH: 477.9M PROGRESS: 340.7M DAYS FROM SPUD: 4

REPORT PERIOD: 6:00, 20/6 to 6:00, 21/6. OPERATION: DRILLING AHEAD

FORMATION: LATROBE VALLEY COAL MEAS. PAGE: 1 OF: 4

FORMATION TOPS: GIPPSLAND LIMESTONE (170M) 44M LOW.
LAKES ENTRANCE FORMATION (350M) 16M HIGH
LATROBE VALLEY COAL MEASURES (474M) 30M LOW

DEPTH INTERVAL	ROP M/hr MIN	AVE	MAX	LITHOLOGY
137.16 - 170M		46		CARBONATE 100%.
				a) FOSSIL FRAGMENTS (95-100%) unconsolidated, off-white and smokey grey coral and shell fragments. Coarse-v.coarse, angular, well sorted fragments becoming medium grained and very well sorted at base. Trace glauconite infilling primary vugs.
				b) MICRITE (NIL-5%) grey, easily dispersed calcareous mud in unwashed sample only.
				c) QUARTZ (NIL-TRACE) coarse grained, subrounded, translucent, unconsolidated.
170 - 230M	60	96	200	MARL (100%) unconsolidated, pale grey, micrite (10-40%) A/A and fossil fragments (60-90%) A/A. Becomes fine grained and more micritic near base. Poorly sorted, poor visual porosity. More glauconitic than above, trace chlorite? & quartz, rare pyrite.

GAS: BACKGROUND: NIL GAS UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS: NIL (Rare dull-bright yellow MINERAL FLUORESCENCE).

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 21/6/85

DEPTH: PROGRESS: DAYS FROM SPUD: 4

REPORT PERIOD: to . OPERATION:

FORMATION: PAGE: 2 OF: 4

FORMATION TOPS:

DEPTH INTERVAL	ROP M/hr MIN	AVE	MAX	LITHOLOGY
230-325m	24	40.3	200	MARL (75-100%) A/A but slightly consolidated in parts. Occasional blue and green fossil fragments.
				ARENACEOUS LIMESTONE (TR-25%) bone white, mod to well-indurated, very calcareous, poorly sorted with 30-40% fine grained, translucent quartz, massive, very well cemented, glauconitic, Nil visual porosity
				NOTE: sand content decrease towards base.
325-350m	24	35	60	MARL (100%). Micrite (50%) A/A and Fossil fragments (50%) A/A
				CLAYSTONE (Trace) green, poorly indurated, slightly calcareous, glauconitic, chloritic.
350-381m	19	25.4	38	MARL (100%) A/A but higher clay content (i.e. has a distinct cohesiveness and plastic texture).
				ARENACEOUS LIMESTONE (NIL-TRACE) A/A
				SANDSTONE (NIL-TRACE) pale grey, very poorly indurated, very fine to fine grained, slightly calcareous, 20% matrix, chloritic,

GAS: NIL BACKGROUND: UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS: NIL

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 21/6/85

DEPTH: PROGRESS: DAYS FROM SPUD: 4

REPORT PERIOD: to . OPERATION:

FORMATION: PAGE: 3 OF: 4

FORMATION TOPS:

DEPTH INTERVAL	ROP M/hr MIN	ROP M/hr AVE	ROP M/hr MAX	LITHOLOGY
				/glauconitic?, Nil visual porosity.
381-465m	16	30.2	100	MARL (90-100%) A/A but slightly more indurated in part and glauconitic (up to 5%).
				ARENACEOUS LIMESTONE (NIL-5%) A/A.
				SANDSTONE (NIL-5%) A/A
465-474M	40	48.6	66.7	MARL (100%) A/A very glauconitic (5-15%)
				SANDSTONE (TR-5%) A/A
474-476m	60	63	66.7	MARL (30%)A/A.
				SANDSTONE (70%) red-brown, very fine to fine grained quartz, mod. hard and indurated, well cemented with dolomite, poorly sorted, 5% matrix, massive glauconite pellets, poor visual porosity. Trace unconsolidated coarse-v. coarse grained, subrounded - well rounded, yellow quartz grains.
476-477.9m	14	22.6	60	MARL (30%) A/A
				SANDSTONE (70%)
				-35% A/A (red-brown type)

NIL GAS: BACKGROUND: UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS: NIL

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 21/6/85

DEPTH: PROGRESS: DAYS FROM SPUD: 4

REPORT PERIOD: to . OPERATION:

FORMATION: PAGE: 4 OF: 4

FORMATION TOPS:

DEPTH INTERVAL	ROP			LITHOLOGY
	MIN	AVE	MAX	
				- 35% unconsolidated, translucent,
				subrounded, medium grained, qtz.

GAS: BACKGROUND: UNITS; C_1, C_2, C_3, C_{4^+}.

PEAK @ M: UNITS; C_1, C_2, C_3, C_{4^+}.

SHOWS:

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 22/6/85

DEPTH: 528.4M PROGRESS: 50.5M DAYS FROM SPUD: 5

REPORT PERIOD: 6:00, 21/6 to 6:00, 22/6. OPERATION: WIRE LINE LOGGING

FORMATION: BASEMENT PAGE: 1 OF: 2

FORMATION TOPS: TOP LATROBE? 474m (possible Gurnaid Fm.)

BASEMENT 498m

NOTE: GEOSERVICES DEPTH METRE NOT WORKING, R.O.P.s FROM GEOLOGRAPH

DEPTH INTERVAL	ROP M/hr MIN	AVE	MAX	LITHOLOGY
477.9-487m		25		SANDSTONE (100%) Massive (Bioturbated?)
				fine grained, subang-subrounded, transluc-
				ent qtz. Common glauconitic pellets,
				fossil fragments, pyrite aggregates up to
				20%. Non-calcareous, argillaceous matrix.
				Poorly sorted, predominantly poorly cem-
				ented, poorly indurated. Poor to moderate
				visual porosity.
				NOTE: Localised hard streaks result of
				extensive cementation (off-white carbonate)
				and extremely pyritic. These zones have
				Nil visual porosity.
487-498m	24	42	60	SANDSTONE (30-80%) A/A, becomes med to
	(app	rox	.)	coarse grained, (occasional very coarse)
				with inferred mod-good porosity from
				494m to 498m.
				PYRITE (10-45%) fine grained, medium sized
				aggregates of granular and cubic types.
				CARBONATE (10%) shell fragments A/A

GAS: BACKGROUND: NO GAS UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS: NIL

AMPOL EXPLORATION LIMITED

DAILY GEOLOGICAL REPORT

WELL: COMLEY #1 PERMIT: PEP 98 DATE: 22/6/85

DEPTH: PROGRESS: DAYS FROM SPUD: 5

REPORT PERIOD: to . OPERATION:

FORMATION: PAGE: 2 OF: 2

FORMATION TOPS:

DEPTH INTERVAL	ROP M/hr MIN	AVE	MAX	LITHOLOGY
498-528.4m W.O.B.				QUARTZITE (15-80%) pale pink to dark pink,
(498-499) 10 k.	-	5.7	-	sucrosic texture, fine grained qtz, well-
(499-507) 25 k.	6	11.2	13	indurated to very well indurated, hard.
(507-528.4) 35 k.	13	15.9	20	Nil visual porosity.
				NOTE: remainder of samples sandstone,
				fossil fragments, pyrite glauconite
				cavings.

GAS: BACKGROUND: NO GAS UNITS; C_1, C_2, C_3, C_4^+.

PEAK @ M: UNITS; C_1, C_2, C_3, C_4^+.

SHOWS: NIL

APPENDIX 3.

FIELD ELECTRIC LOG REPORT

AMPOL EXPLORATION LIMITED

FIELD ELECTRIC LOG REPORT

GENERAL INFORMATION

WELL: COMLEY # 1

PROGNOSED TO T.D.: 493M

CO-ORDINATES: 37° 54'05" / 147° 33'26"

MUD TYPES: FRESH GEL POLYMER

AREA: ONSHORE GIPPSLAND BASIN

LOGGING COMPANY: SCHLUMBERGER

PERMIT: P.E.P. 98

LOGGING ENGINEER: JON ELLIS

ELEVATION: GL 42M ;KB 45.96M

GEOLOGIST: E. De VRIES

LOGS RUN

RUN No: 1

DRILLERS DEPTH: 528.4M

HOLE SIZE: 8½"

LOGGERS DEPTH: 529.0M

CASING SHOE: 137.16M

DATE LOGGED: 22/6/85

HOLE PROBLEMS:
1. Bridged @ 494M, spud DLL TO TRY & GET THROUGH.
2. Second run DDL hit wedge @ 494M tool stopped working.

TYPE OF LOG	FROM	TO	REPEAT SECTION	Time Since Last Circ/BHT
DLL-MSFL	494	340	LOG AFTER BRIDGE NOT TAKEN	
LDT-CNL-GR	528	134	528-340	5½ / 36 DGRS. C
BHC - GR	526	134	526-380	8 / 36.6 DGRS.C
NGT	527	227	527-445	10¼ / 38.8 DGRS.C
DLL-MSFL	528	134	528-430	14 / 38.8 DGRS.C
WSS	529	456		hrs
CST	517	161		

S.W.C. No. OF ATTEMPTS: 30 RECOVERED: 26 MISFIRED: 4

R.F.T. No. OF ATTEMPTS: NIL FLUID SAMPLES: NIL

FORMATION TOPS

FORMATION	PROGNOSED	CUTTINGS	LOGS	DIFF.FROM PROGNOSED
HAUNTED HILLS	9M	-		
JEMMY'S POINT	91	94	97M	0
TAMBO RIVER	116	133	-	
GIPPSLAND LIMESTONE	126	170	167	+41
LAKES ENTRANCE	366	350	414.5M	+48.5
LATROBE/GURNAID	444	474	476	+32
BASEMENT	463	498	497	+34
T.D.	493	528.4	529.0	+36

COMMENTS ON LOGGING RUN: HOLE SEVERELY WASHED OUT FROM 487M - 500M (i.e. BASE LATROBE/GURNAID)

APPENDIX 4.

SIDEWALL CORE REPORT

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1

SIDEWALL CORE REPORT

DEPTH INTERVAL: 529-379M

GEOLOGIST: M. SCHMEDJE

GUN NO. : 1

SHEET : 1 OF: 2

SWC NO.	DEPTH M	REC.	BOUGHT/ REJECT	PALYN. EVAL.	LITHOLOGICAL DESCRIPTION, FLUORESCENCE, ETC.
1	517	90%	BOUGHT	*PAL	Calcareous CLAYSTONE has phyllitic cleavage, very fine grained sand, extremely argillaceous, green-grey. No fluorescence.
2	505	60%	BOUGHT	*PAL	SANDSTONE, very pale grey, fine grained Nil Fluorescence.
3	500.3	NIL	NOT B		-
4	494.5	NIL	NOT B		-
5	491.5	NIL	NOT B		-
6	486.5	50%	BOUGHT	*PAL	CLAYSTONE; unconsolidated, fine sand in part. NIL FLUORESCENCE.
7	480	100%	BOUGHT	*PAL	SANDSTONE; very fine-fine grained, very argillaceous. NIL FLUORESCENCE.
8	478.5	100%	BOUGHT	*PAL	SANDSTONE, fine grained, glauconite. Nil fluorescence.
9	476.5	100%	BOUGHT	*PAL	Sandy CLAYSTONE; Nil Fluorescence
10	473	90%	BOUGHT	*PAL	SANDSTONE; Very fine grained. Nil Fluorescence.
11	465	100%	BOUGHT	*PAL	CLAYSTONE; Nil fluorescence.
12	447.5	100%	BOUGHT	*PAL	CLAYSTONE: hard streaks caused by pyrite laminae. Nil fluorescence.
13	438	100%	BOUGHT	*PAL	CLAYSTONE - silt-very fine sand in part. Nil fluorescence.
14	427	80%	BOUGHT		Calcareous CLAYSTONE. Nil fluorescence.
15	424	100%	BOUGHT	*PAL	Calcareous CLAYSTONE - silty-fine sand in part. Nil fluorescence.
16	412.5	100%	BOUGHT	*PAL	As above. Mineral fluorescence (carbonate)
17	401.5	80%	BOUGHT		SANDSTONE: Very fine-fine grained. NIL FLUORESCENCE.
18	379	80%	BOUGHT	*PAL	Calcareous CLAYSTONE; silt-fine sand in part. Nil fluorescence.

COMMENTS: SAMPLE 1-13 SHOT IN RUN 1; SAMPLES 14-24 SHOT IN RUN 2

NOTE: NO FLUORESCENCE, ONLY OCCASIONAL MINERAL FLUORESCENCE.

NOTE: if more than one gun of SWC is shot please number the cores consecutively.

AMPOL EXPLORATION LIMITED

WELL: COMLEY # 1

SIDEWALL CORE REPORT

DEPTH INTERVAL: 379 - 134M   GEOLOGIST: M. SCHMEDJE

GUN NO. : 1   SHEET : 2   OF: 2

SWC NO.	DEPTH M	REC.	BOUGHT/ REJECT	PALYN. EVAL.	LITHOLOGICAL DESCRIPTION, FLUORESCENCE, ETC.
19	352	100%	BOUGHT	*PAL	Calcareous CLAYSTONE, extremely fossiliferous. Nil fluorescence.
20	347.5	100%	BOUGHT	*PAL	Calcareous SANDSTONE: very fine - fine grained, very argillaceous. Nil fluorescence.
21	321	100%	BOUGHT		As above. Nil fluorescence.
22	314	100%	BOUGHT		As above. Nil fluorescence.
23	290	100%	BOUGHT		As above. Nil fluorescence.
24	266.5	90%	BOUGHT		As above. Nil fluorescence.
25	246	100%	BOUGHT		Calcareous SANDSTONE, silty-very fine sand, nil fluorescence.
26	236.5	30%	BOUGHT		Calcareous SANDSTONE, as above, extremely argillaceous. Nil fluorescence.
27	205	10%	BOUGHT		As above; abundant fine-medium fossil fragments. Nil fluorescence.
28	178.3	100%	BOUGHT	*PAL	Calcareous sandstone; silt-very fine sand, argillaceous. Nil fluorescence.
29	168.5	5%	NOT B		As above. Nil fluorescence. (i.e. extremely poor recovery)
30	161	100%	BOUGHT	*PAL	Calcareous CLAYSTONE, silty - fine sand in part. Nil fluorescence.

COMMENTS: NO.SHOT: 30
NO.RECOVERED: 26

NOTE: if more than one gun of SWC is shot please number the cores consecutively.

APPENDIX 5.

CORE REPORT

AMPOL EXPLORATION LIMITED

ONSHORE GIPPSLAND BASIN

CORE DESCRIPTION

WELL: COMLEY No.1		FORMATION: LATROBE/GURNAID	
DATE: 21.6.85		CORE NUMBER: 1	
AUTHOR: M.SCHMEDJE/E.DdeVRIES		INTERVAL: 477.9-487m	
SCALE: 1:20		RECOVERED: 4.56m (50%)	
SHEET NO: 1	OF: 1	CORE SIZE: 95mm dia.	

DEPTH (m)	LITHOLOGY	SED. STR.	Grain Size (s L f m crs crs)	DIP	BIOT.	ϕ		HARD.	CEM.	OIL	POR. (P F G)	COMMENTS	SAMP.
478					FULLY HOMOGENIZED	NO PLANT FRAGMENTS	ϕ		C / CALCITE	NO OIL STAIN / NO OIL FLUORESCENCE		Massive fine grained sandstone, subangular-subrounded; translucent quartz with common glauconite pellets, fossil fragments & pyrite. Up to 20% non-calcareous argillaceous matrix. Poorly sorted, predominately poorly cemented, poorly indurated, poor moderate visual porosity.	S.P.-1
479							ϕ					NOTE: Hard streaks result of extensive carbonate (offwhite) cementation & extremely pyritic. Nil visual porosity assoc. with hard beds.	
480							ϕ		C				S.P.-2
							ϕ		C			Fossil bed.	
481							ϕ					WHOLE CORE ANALYSIS: S.P.-1 ø = 35.4% k = 46MD Grain Density = 2.84 S.P.-2 ø = 38.8% k = 1380MD Grain Density = 2.74 S.P.-3 ø = 37.8% k = 870MD Grain Density = 2.70	S.P.-3
482							ϕ					22 minutes to cut core	

APPENDIX 6.

WHOLE CORE ANALYSIS

PE603181

This is an enclosure indicator page.
The enclosure PE603181 is enclosed within the container PE902392 at this location in this document.

The enclosure PE603181 has the following characteristics:

```
     ITEM_BARCODE = PE603181
CONTAINER_BARCODE = PE902392
             NAME = Correlation Coregraph
            BASIN = GIPPSLAND
           PERMIT = PEP 98
             TYPE = WELL
          SUBTYPE = WELL_LOG
      DESCRIPTION = Comley 1 Correlation Coregraph from
                    Appendix 6
          REMARKS =
     DATE_CREATED = 30/07/85
    DATE_RECEIVED = 12/12/85
             W_NO = W909
        WELL_NAME = Comley-1
       CONTRACTOR = Core Laboratories INC.
     CLIENT_OP_CO = Ampol Australia
```

(Inserted by DNRE - Vic Govt Mines Dept)

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

PERMEABILITY VS POROSITY

COMPANY: AMPOL AUSTRALIA
FIELD : COMLEY

WELL : COMLEY # 1
COUNTY, STATE: AUSTRALIA, VICTORIA

AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
POROSITY : PERCENT (HELIUM)

DEPTH INTERVAL	RANGE & SYMBOL	PERMEABILITY MINIMUM	PERMEABILITY MAXIMUM	POROSITY MIN.	POROSITY MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
479.3 - 1568.8	1 (+)	46.000	1380.0	35.4	38.8	36.2	343.	62.	109.

EQUATION OF REDUCED LINE RELATING PERMEABILITY(K) TO POROSITY :
LOG(K) = (SLOPE)(POROSITY) + LOG OF INTERCEPT
K = ANTILOG((SLOPE)(POROSITY) + LOG OF INTERCEPT)

RANGE	EQUATION OF THE LINE
1	PERM = ANTILOG((0.4660)(POROSITY) + -14.8309)

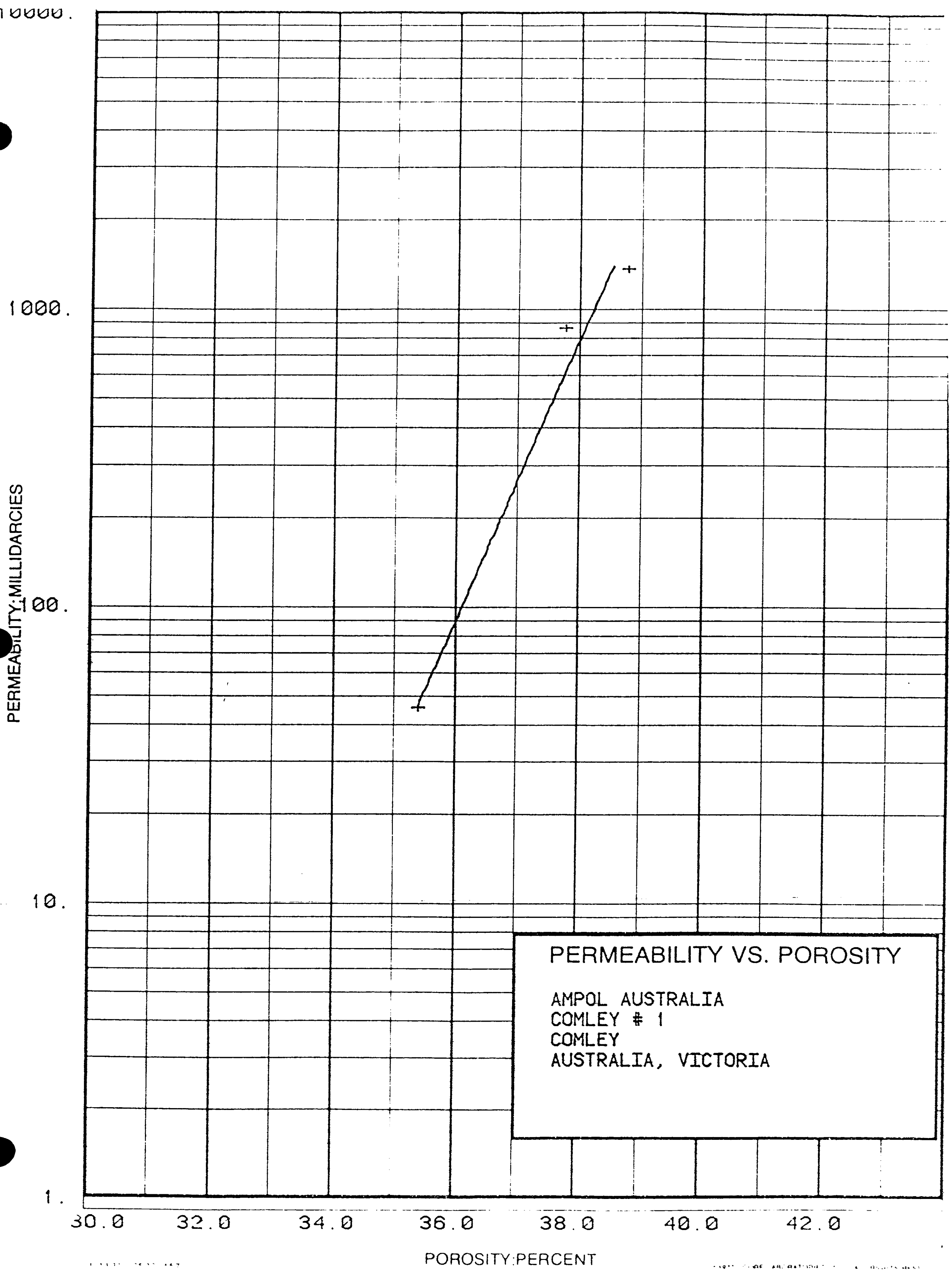
CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

AMPOL AUSTRALIA	DATE : 30/7/85	FILE NO : ADCA85012
COMLEY # 1	FORMATION :	LABORATORY: ADELAIDE
COMLEY	DRLG. FLUID:	ANALYSTS : RM; OOI
AUSTRALIA VICTORIA	LOCATION : VICTORIA	ELEVATION :

CONVENTIONAL CORE ANALYSIS

SAMPLE NUMBER	DEPTH METERS	PERM MD HORIZ Ka	He POR	GRAIN DEN M	DESCRIPTION
	CORE # 1				
1	477.95-78.05	46.	35.4	2.84	SST DKGY VF-FG SBANG-SBRND MOD WL SRT V CALC SLTY GLAUC INCL
2	478.20			2.80	
3	478.50			2.83	
4	478.80			2.74	
5	479.10			2.73	
7	479.40			2.73	
6	479.85-80.00	1380.	38.8	2.74	SST DKBRN/GY VF-FG FRI SBANG-SBRND MOD WL SRT V CALC SLTY GLAUC INCL
8	480.00			2.74	
9	480.30			2.74	
10	480.60			2.82	
11	480.90			2.77	
12	481.20			2.72	
13	481.42-81.55	870.	37.8	2.70	SST DKBRN VF-FG FRI SBANG-SBRND MOD WL SRT V CALC SLTY GLAUC INCL
14	481.55			2.70	
15	481.80			2.69	
16	482.10			2.68	
17	482.40			2.68	

SAMPLE NOS 1, 6 AND 13 HE. INJ. POROSITY
MEASURED ON WHOLE CORE SAMPLES


10000.
1000.
100.
10.
1.
PERMEABILITY:MILLIDARCIES
30.0
32.0
34.0
36.0
38.0
40.0
42.0
POROSITY:PERCENT
PERMEABILITY VS. POROSITY
AMPOL AUSTRALIA
COMLEY # 1
COMLEY
AUSTRALIA, VICTORIA

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR GRAIN DENSITY HISTOGRAM

COMPANY: AMPOL AUSTRALIA
FIELD : COMLEY

WELL : COMLEY # 1
COUNTRY : AUSTRALIA, VICTORIA

GRAIN DENSITY : gm/cc (MEASURED) RANGE USED 2.42 TO 3.02

DEPTH LIMITS : 478.5 - 1598.0 INTERVAL LENGTH : 1119.5
FEET ANALYZED IN ZONE : 14.9 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

GRAIN DENSITY ARITHMETIC MEAN	GRAIN DENSITY MEDIAN
2.74	2.74

STATISTICAL DATA FOR GRAIN DENSITY HISTOGRAM

COMPANY: AMPOL AUSTRALIA
FIELD : COMLEY

WELL : COMLEY # 1
COUNTRY : AUSTRALIA, VICTORIA

GROUPING BY GRAIN DENSITY RANGES

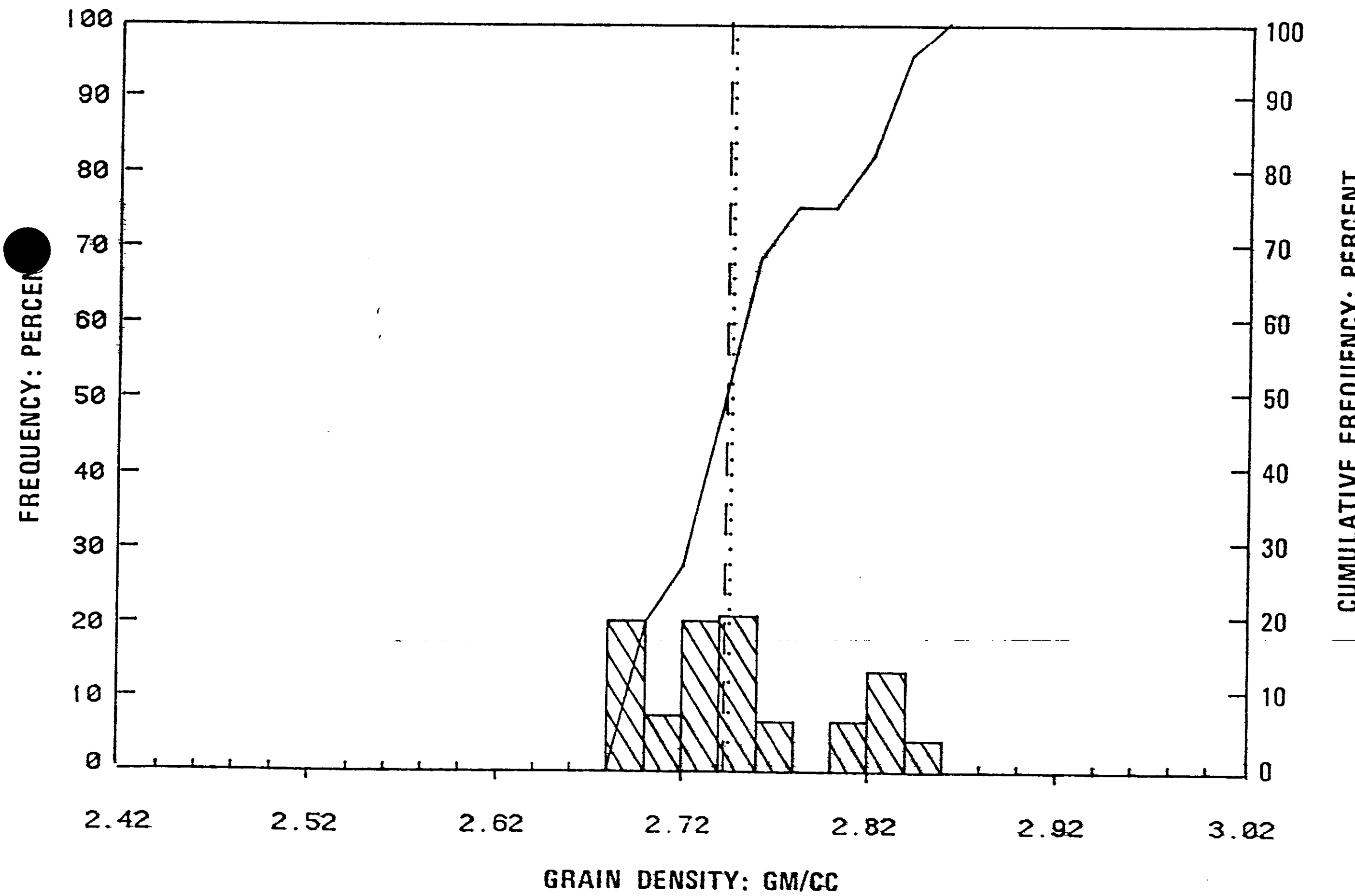
GRAIN DENSITY RANGE	FEET IN RANGE	AVERAGE DENSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
2.68 - 2.70	3.0	2.68	20.1	20.1
2.70 - 2.72	1.1	2.70	7.5	27.6
2.72 - 2.74	3.0	2.73	20.1	47.7
2.74 - 2.76	3.1	2.74	21.0	68.8
2.76 - 2.78	1.0	2.77	6.7	75.5
2.80 - 2.82	1.0	2.80	6.7	82.2
2.82 - 2.84	2.0	2.83	13.4	95.6
2.84 - 2.86	0.7	2.84	4.4	100.0

TOTAL NUMBER OF FEET = 14.9

CORE LABORATORIES, INC. CORE LAB *Petroleum Reservoir Engineering*

COMPANY AMPOL AUSTRALIA FILE NO. ADCA 85012
WELL COMLEY # 1 DATE 30/7/85
FIELD COMLEY FORMATION ELEV.
COUNTRY AUSTRALIA, VICTORIA DRLG. FLD. CORES
LOCATION VICTORIA

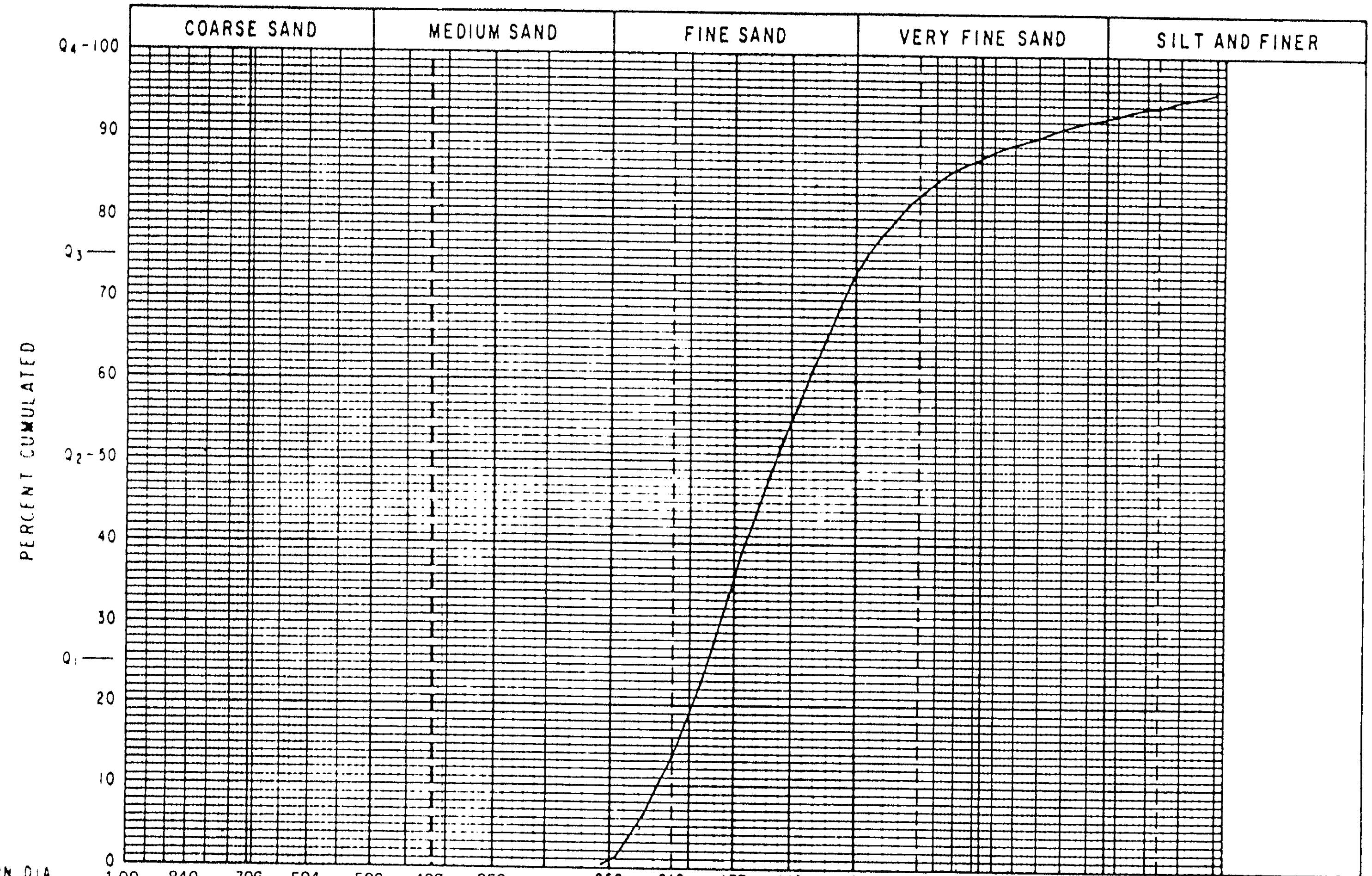
GRAIN DENSITY HISTOGRAM



LEGEND
ARITHMETIC MEAN GRAIN DENSITY ....
MEDIAN VALUE — — —
CUMULATIVE FREQUENCY ———

CORE LABORATORIES, INC.
SIEVE ANALYSIS REPORT

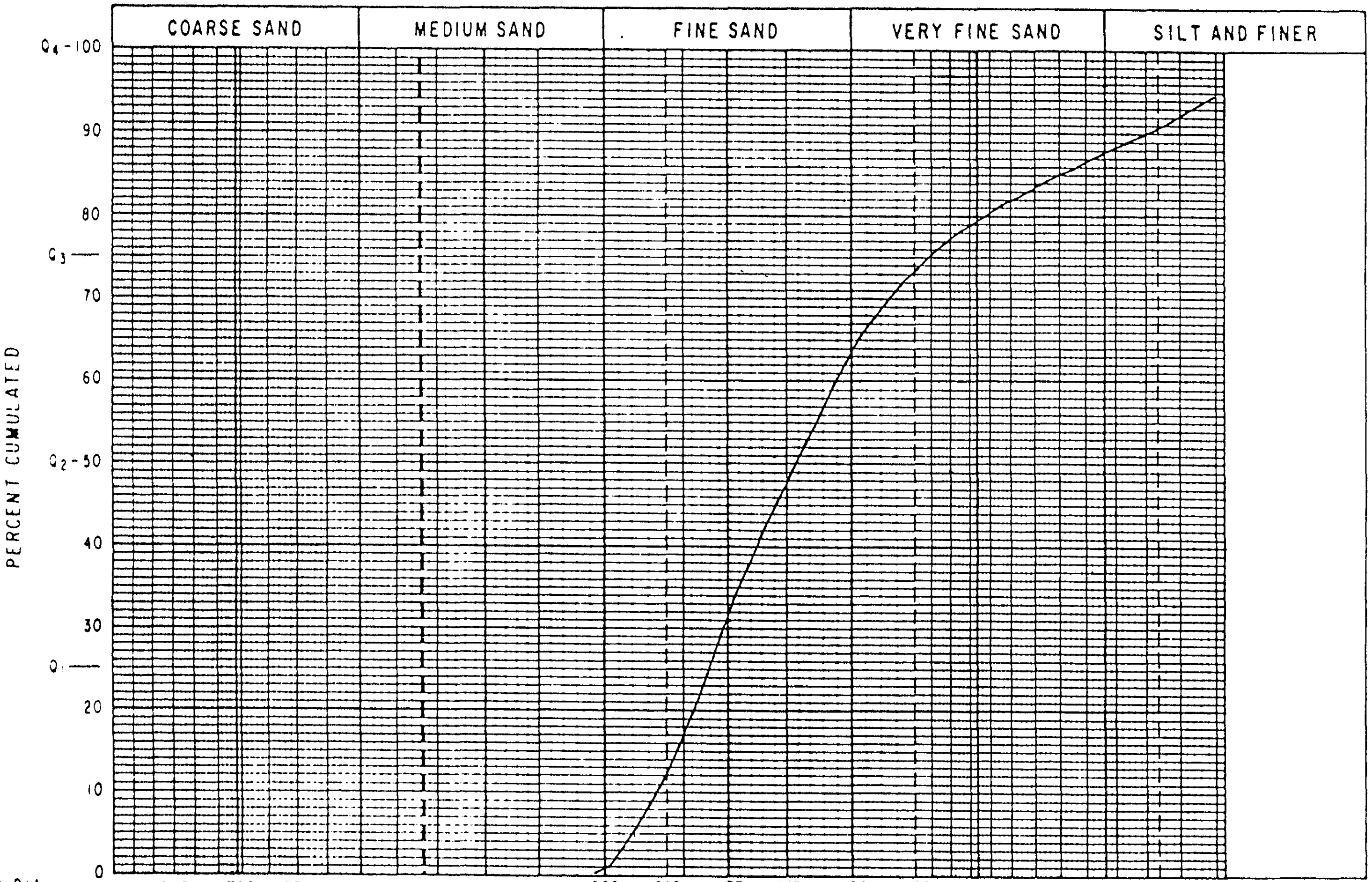
COMPANY AMPOL AUSTRALIA
WELL COMLEY # 1
FIELD COMLEY
COUNTY VICTORIA
STATE
DESCRIPTION DK GY,V CALC, SLTY,TR GLAUC
DEPTH 477.95
FILE NO ADCA 85012
DATE 18/7/85
SOURCE



GRAIN DIA M.M	840	.706	.594	.500	.420	.350	.250	.210	.177	.149	.125	.105	.088	.062	.053	.044	< .044		
	1/1.19	1.142	1/1.68	1/2.00	1/2.38	1/2.86	1/4.00	1/4.76	1/5.65	1/6.71	1/8.00	1/9.52	1/11.36	1/16.13	1/18.87	1/22.73	<1/22.73		
INCHES	.0331	.0278	.0234	.0197	.0165	.0138	.0098	.0083	.0070	.0059	.0049	.0041	.0035	.0024	.0021	.0017	< .0017		
U.S. SIEVE NUMBERS	20	25	30	35	40	45	60	70	80	100	120	140	170	230	270	325	< 325	ORIGINAL SPL. WT.	LOSS
CUMULATIVE WEIGHT							0.05		7.22		14.77		17.58		18.88	19.28	20.01	20.02 g	0.00 g
CUMULATIVE PERCENT							0.2		36.1		73.8		87.9		94.4	96.3	100.0		0.00 %

CORE LABORATORIES, INC.
SIEVE ANALYSIS REPORT

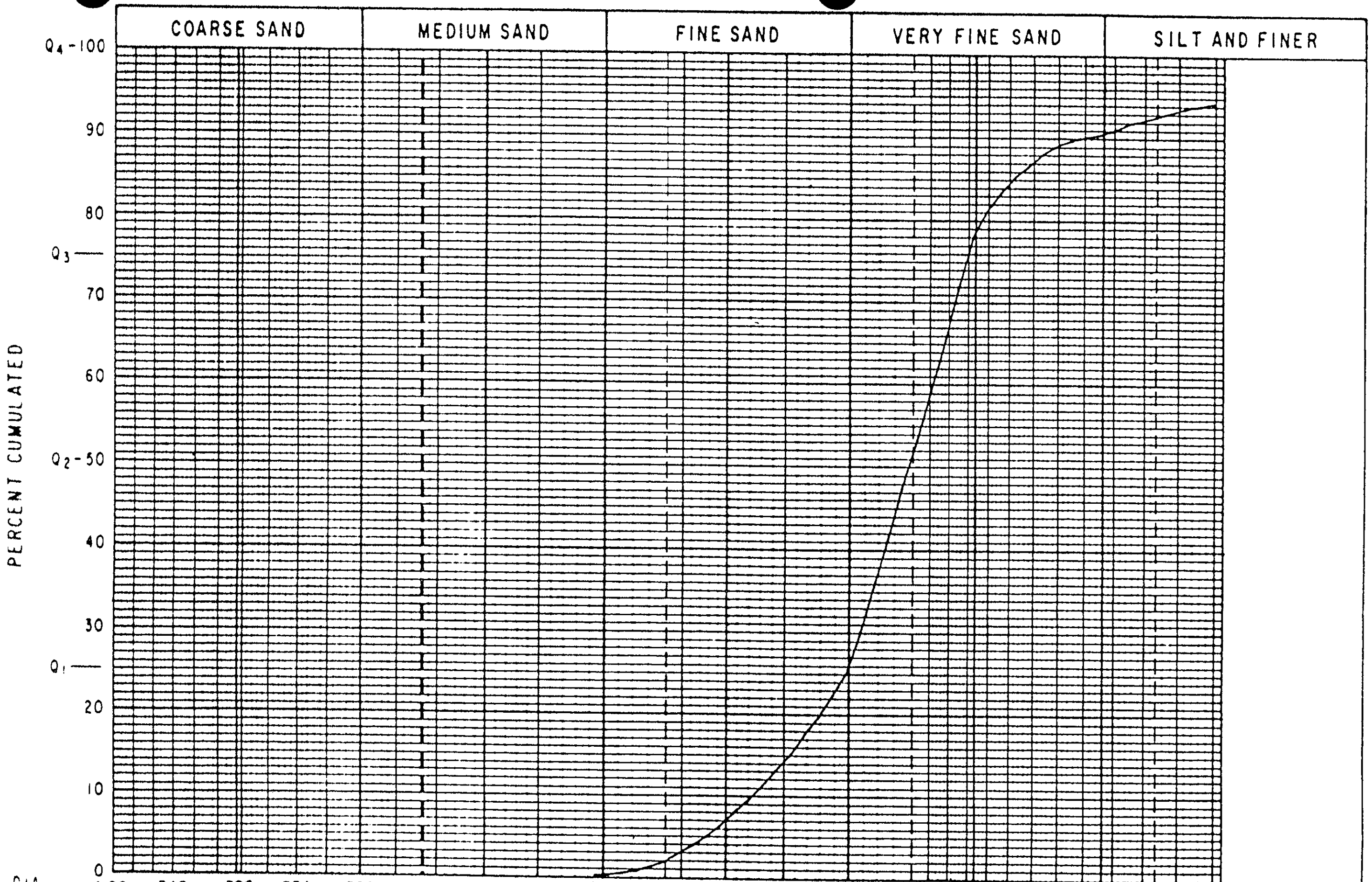
COMPANY: AMPOL AUSTRALIA — DEPTH: 478.80
WELL: COMLEY # 1 — FILE NO: ADCA 85012
FIELD: COMLEY — DATE: 18/7/85
COUNTY: VICTORIA — STATE:
DESCRIPTION: DK BRN/GY,V CALC,SLTY,GLAUC
SOURCE:



GRAIN DIA MM	1.00	.840 1/1.19	.706 1.142	.594 1/1.68	.500 1/2.00	.420 1/2.38	.350 1/2.86	.250 1/4.00	.210 1/4.76	.177 1/5.65	.149 1/6.71	.125 1/8.00	.105 1/9.52	.088 1/11.36	.062 1/16.13	.053 1/18.87	.044 1/22.73	< .044 <1/22.73		
INCHES		.0331	.0278	.0234	.0197	.0165	.0138	.0098	.0083	.0070	.0059	.0049	.0041	.0035	.0024	.0021	.0017	< .0017	ORIGINAL SPL. WT.	LOSS
U S SIEVE NUMBERS		20	25	30	35	40	45	60	70	80	100	120	140	170	230	270	325	< 325		
CUMULATIVE WEIGHT								0.01		6.27		12.72		15.88		18.21	19.08	19.99	19.99 g	0.00 g
CUMULATIVE PERCENT								0.1		31.4		63.6		79.5		91.1	95.5	100.0		%

CORE LABORATORIES, INC.
SIEVE ANALYSIS REPORT

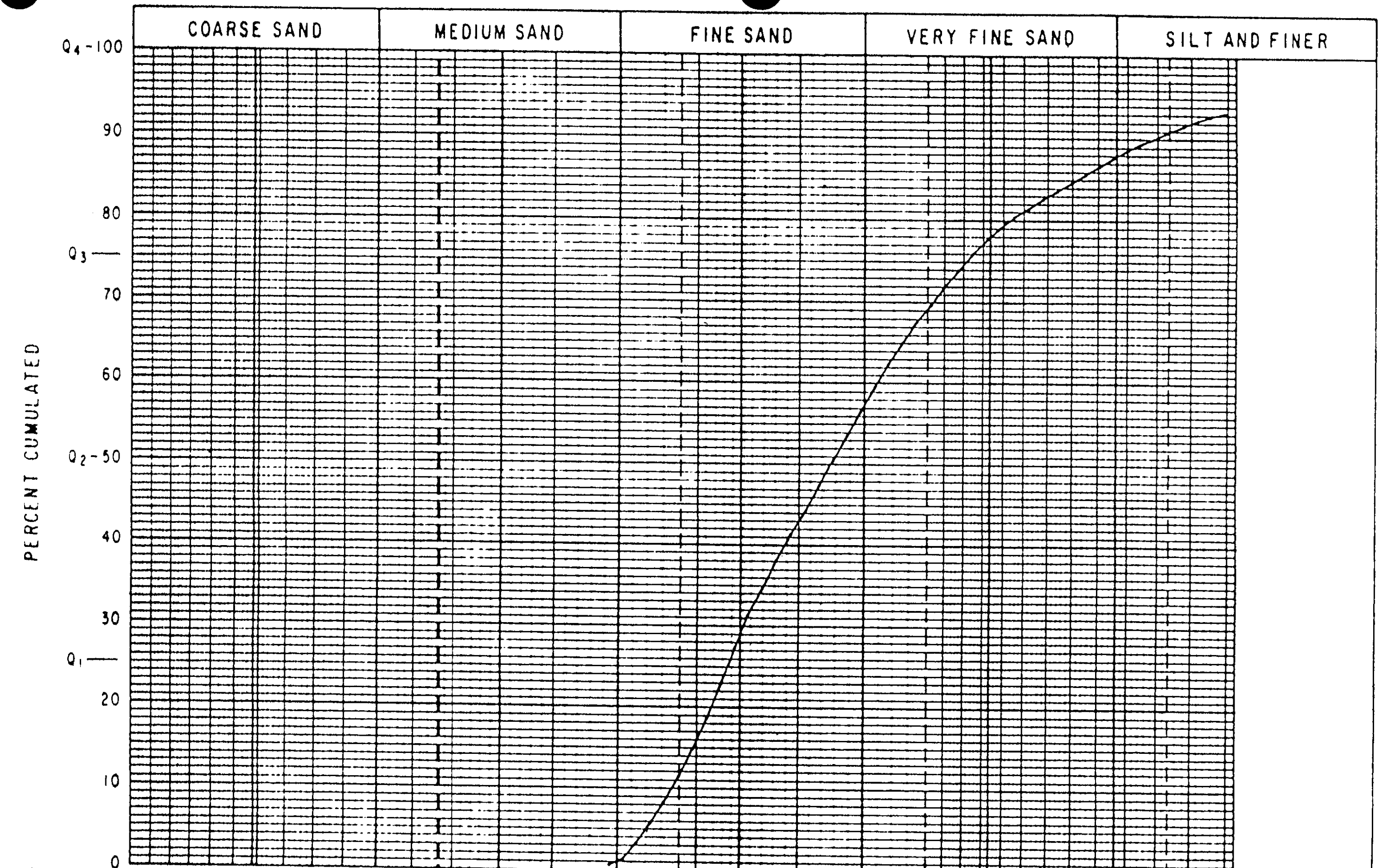
COMPANY: AMPOL AUSTRALIA
DEPTH: 479.85
WELL: COMLEY # 1
FILE NO.: ADCA 85012
FIELD: COMLEY
DATE: 18/7/85
COUNTY: VICTORIA
STATE:
DESCRIPTION: DK BRN,V CALC,SLTY,GLAUC
SOURCE:



GRAIN DIA MM	1.00	.840 1/1.19	.706 1.142	.594 1/1.68	.500 1/2.00	.420 1/2.38	.350 1/2.86	.250 1/4.00	.210 1/4.76	.177 1/5.65	.149 1/6.71	.125 1/8.00	.105 1/9.52	.088 1/11.36	.062 1/16.13	.053 1/18.87	.044 1/22.73	< .044 < 1/22.73		
INCHES		.0331	.0278	.0234	.0197	.0165	.0138	.0098	.0083	.0070	.0059	.0049	.0041	.0035	.0024	.0021	.0017	< .0017		
U S SIEVE NUMBERS		20	25	30	35	40	45	60	70	80	100	120	140	170	230	270	325	< 325	ORIGINAL SPL. WT.	LOSS
CUMULATIVE WEIGHT								0.01				5.24		16.04	18.46		19.32	20.37	20.37 g	0.00 g
CUMULATIVE PERCENT								0.0				25.7		78.7	90.6		94.9	100.0		0.00 %

CORE LABORATORIES, INC.
SIEVE ANALYSIS REPORT

COMPANY AMPOL AUSTRALIA | DEPTH 480.90
WELL COMLEY # 1 | FILE NO. ADCA 85012
FIELD COMLEY | DATE 18/7/85
COUNTY VICTORIA | STATE
DESCRIPTION DK BRN/GRN,V CALC,SLTY,GLAUC | SOURCE



U S SIEVE NUMBERS	GRAIN DIA MM	INCHES	CUMULATIVE WEIGHT	CUMULATIVE PERCENT
	1.00			
20	.840 1/1.19	.0331		
25	.706 1/1.42	.0278		
30	.594 1/1.68	.0234		
35	.500 1/2.00	.0197		
40	.420 1/2.38	.0165		
45	.350 1/2.86	.0138		
60	.250 1/4.00	.0098	0.08	0.4
70	.210 1/4.76	.0083		
80	.177 1/5.65	.0070	5.79	29.1
100	.149 1/6.71	.0059		
120	.125 1/8.00	.0049	11.37	57.3
140	.105 1/9.52	.0041		
170	.088 1/11.36	.0035	15.50	78.0
230	.062 1/16.13	.0024		
270	.053 1/18.87	.0021	18.12	91.2
325	.044 1/22.73	.0017	18.65	93.8
< 325	< .044 <1/22.73	< .0017	19.86	100.0
ORIGINAL SPL. WT.			19.86 g	
LOSS			0.00 g	%

CORE LABORATORIES, INC.
SIEVE ANALYSIS REPORT

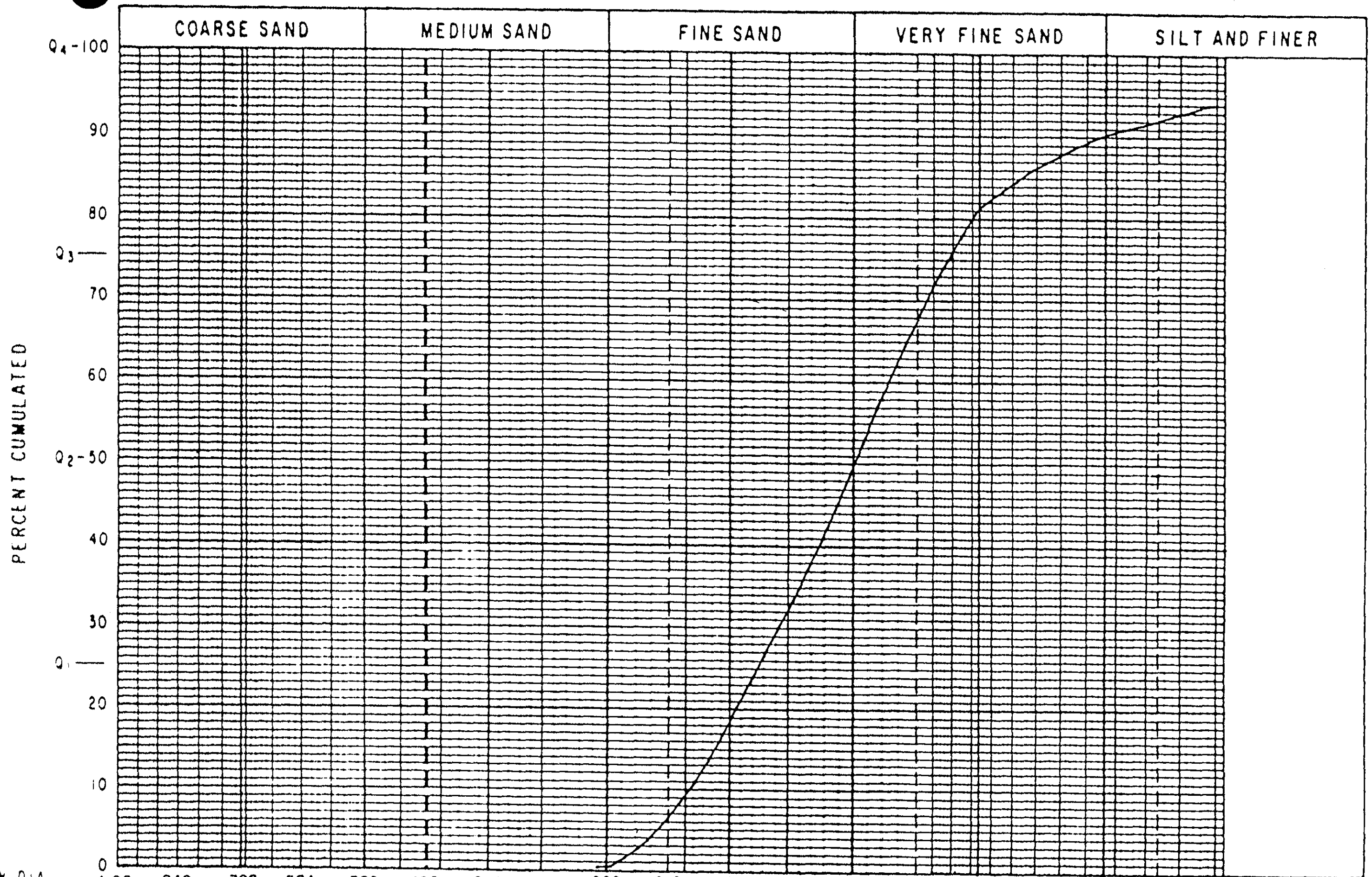
COMPANY AMPOL AUSTRALIA — DEPTH 481.42 — SOURCE

WELL COMLEY # 1 — FILE NO. ADCA 85012

FIELD COMLEY — DATE 18/7/85

COUNTY VICTORIA — STATE

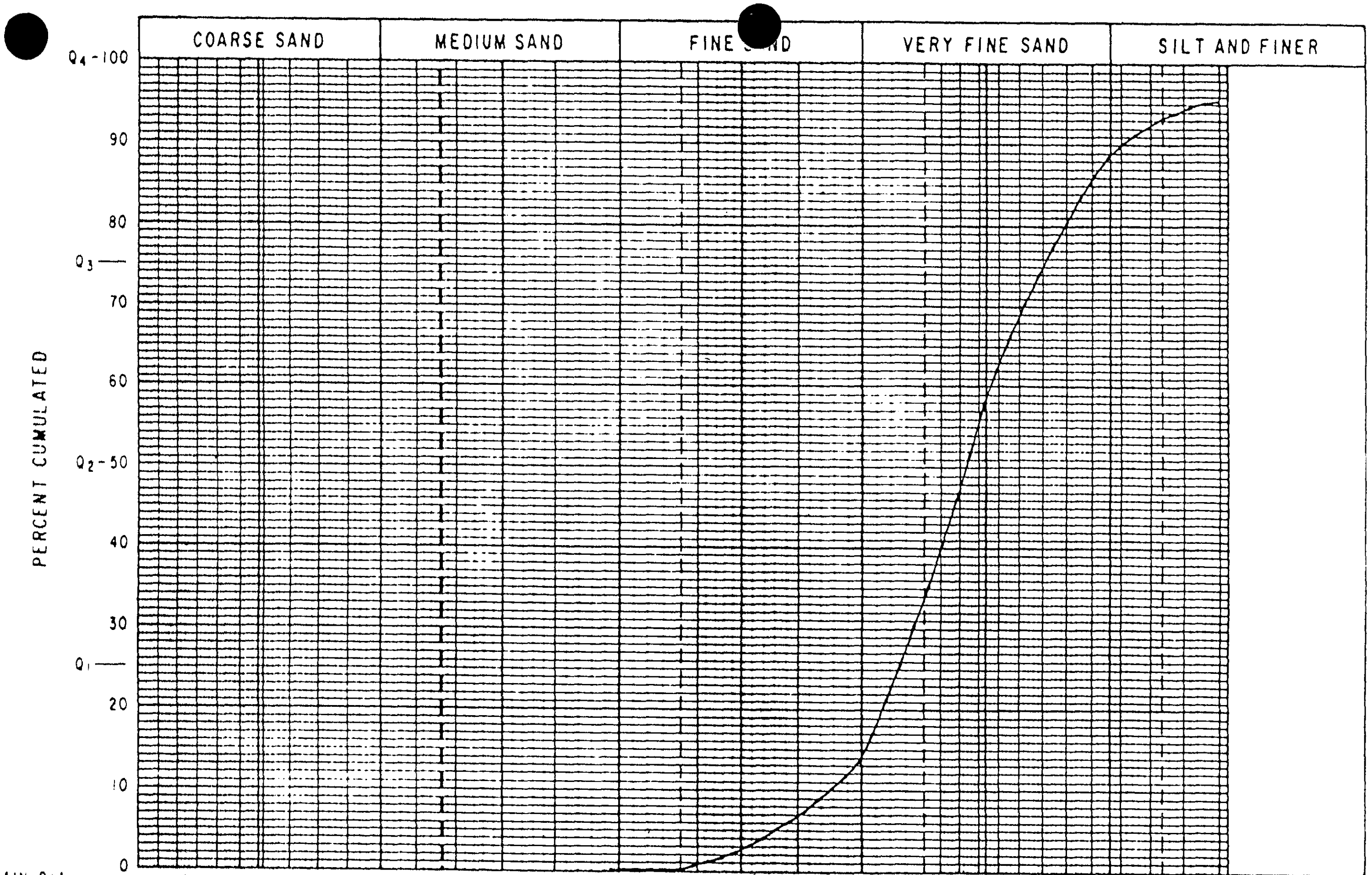
DESCRIPTION DK BRN/GY,V CALC,SLTY,GLAUC



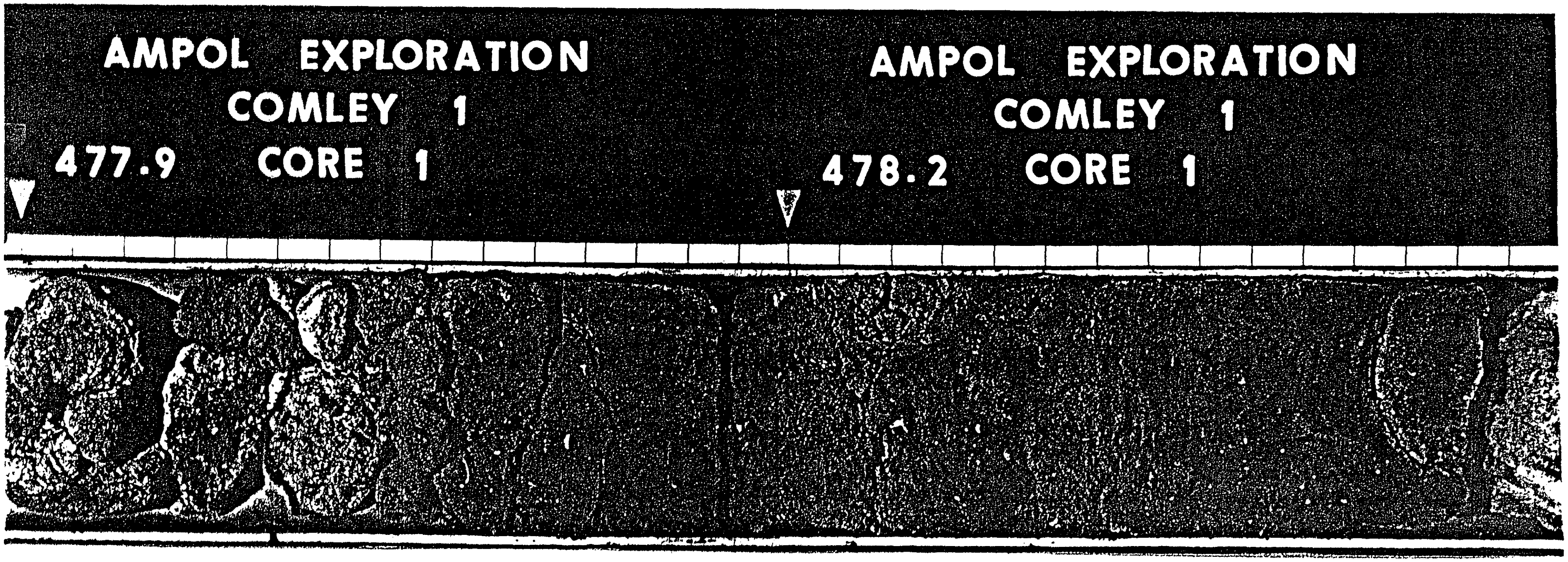
GRAIN DIA MM	1.00	.840 1/1.19	.706 1.142	.594 1/1.68	.500 1/2.00	.420 1/2.38	.350 1/2.86	.250 1/4.00	.210 1/4.76	.177 1/5.65	.149 1/6.71	.125 1/8.00	.105 1/9.52	.088 1/11.36	.062 1/16.13	.053 1/18.87	.044 1/22.73	< .044 <1/22.73		
INCHES		.0331	.0278	.0234	.0197	.0165	.0138	.0098	.0083	.0070	.0059	.0049	.0041	.0035	.0024	.0021	.0017	< .0017		
U S SIEVE NUMBERS		20	25	30	35	40	45	60	70	80	100	120	140	170	230	270	325	< 325	ORIGINAL SPL. WT.	LOSS
CUMULATIVE WEIGHT								0.02		3.63		9.88		16.28		18.53	18.98	20.08	20.08 g	0.00 g
CUMULATIVE PERCENT								0.1		18.1		49.3		81.1		92.3	94.6	100.0		%

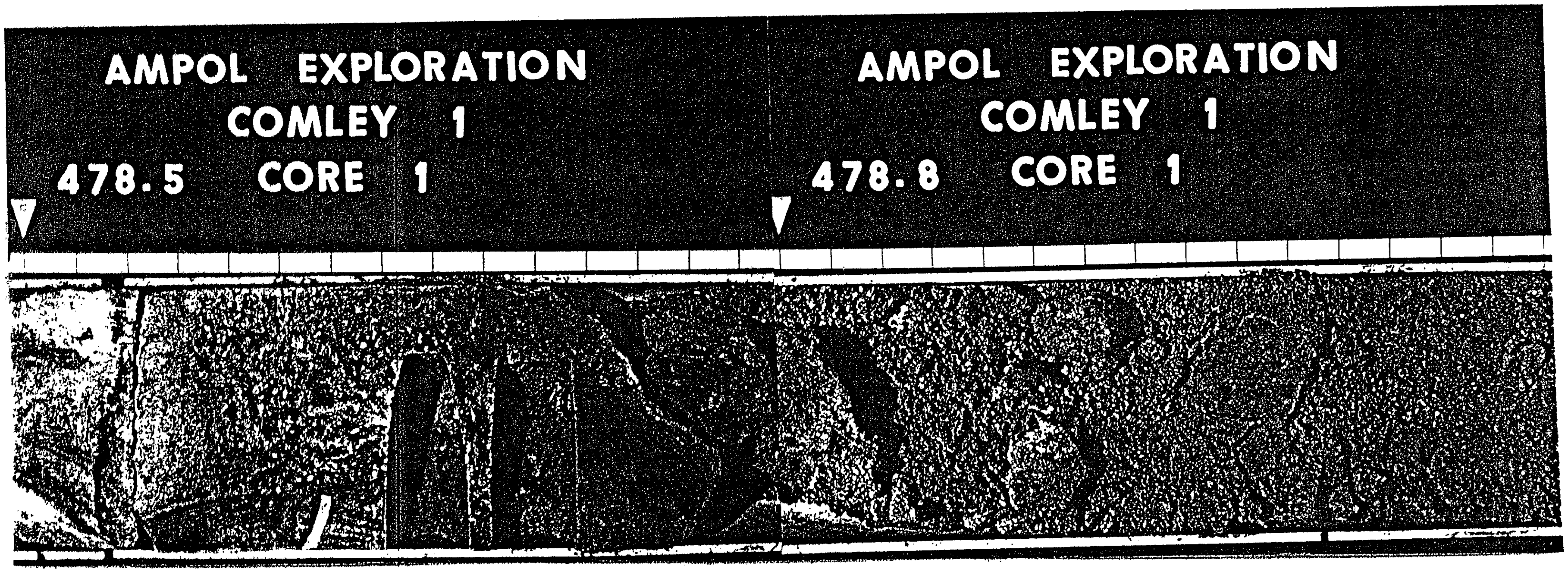
CORE LABORATORIES, INC.
SIEVE ANALYSIS REPORT

COMPANY AMPOL AUSTRALIA — DEPTH 482.10
WELL COMLEY # 1 — FILE NO ADCA 85012
FIELD COMLEY — DATE 18/7/85
COUNTY VICTORIA — STATE
DESCRIPTION DK BRN,V CALC,SLTY,GLAUC — SOURCE



GRAIN DIA MM	1.00	.840 1/1.19	.706 1/1.42	.594 1/1.68	.500 1/2.00	.420 1/2.38	.350 1/2.86	.250 1/4.00	.210 1/4.76	.177 1/5.65	.149 1/6.71	.125 1/8.00	.105 1/9.52	.088 1/11.36	.062 1/16.13	.053 1/18.87	.044 1/22.73	< .044 <1/22.73		
INCHES		.0331	.0278	.0234	.0197	.0165	.0138	.0098	.0083	.0070	.0059	.0049	.0041	.0035	.0024	.0021	.0017	< .0017		
U S SIEVE NUMBERS		20	25	30	35	40	45	60	70	80	100	120	140	170	230	270	325	< 325	ORIGINAL SPL. WT.	LOSS
CUMULATIVE WEIGHT								0.02				2.78		11.67	17.74		19.18	20.00	20.05 g	0.05 g
CUMULATIVE PERCENT								0.1				13.9		58.3	88.7		95.8	100.0		0.00%


AMPOL EXPLORATION
COMLEY 1
477.9 CORE 1
AMPOL EXPLORATION
COMLEY 1
478.2 CORE 1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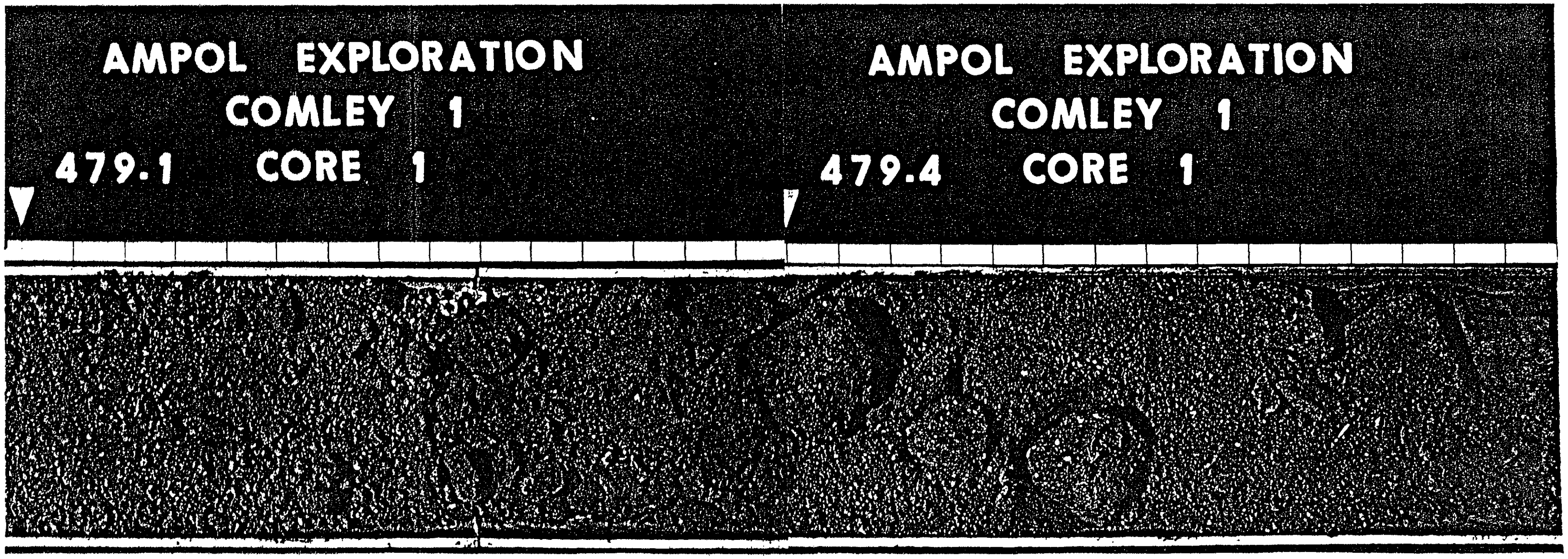
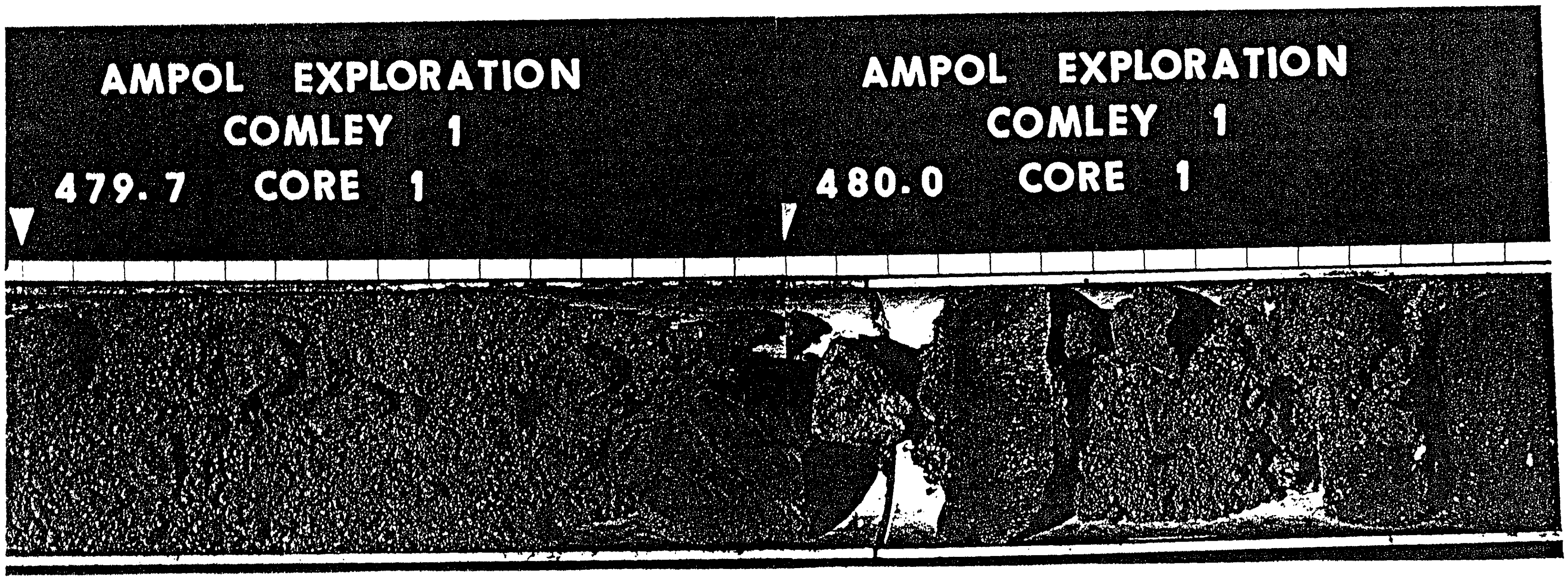
COMLEY 1
478.5 CORE 1
AMPOL EXPLORATION
COMLEY 1
478.8 CORE 1


AMPOL EXPLORATION
COMLEY 1
479.1 CORE 1
AMPOL EXPLORATION
COMLEY 1
479.4 CORE 1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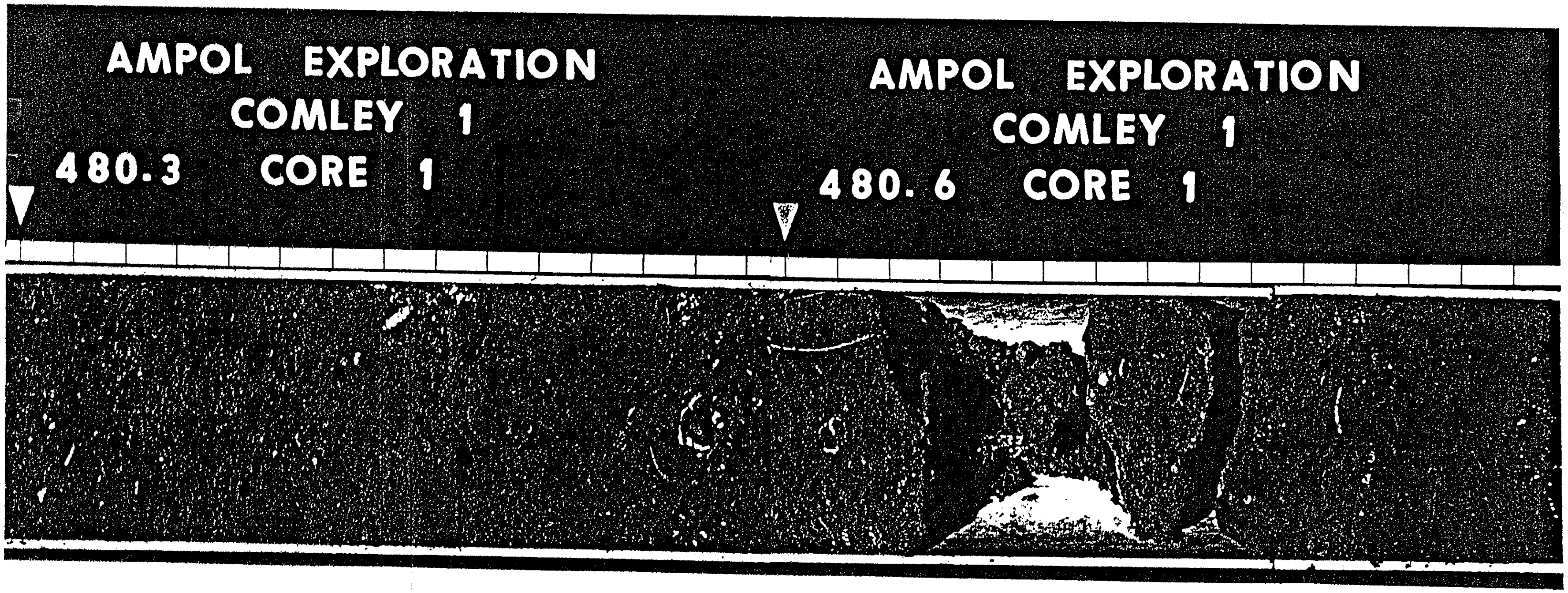
COMLEY 1
479.7 CORE 1
AMPOL EXPLORATION
COMLEY 1
480.0 CORE 1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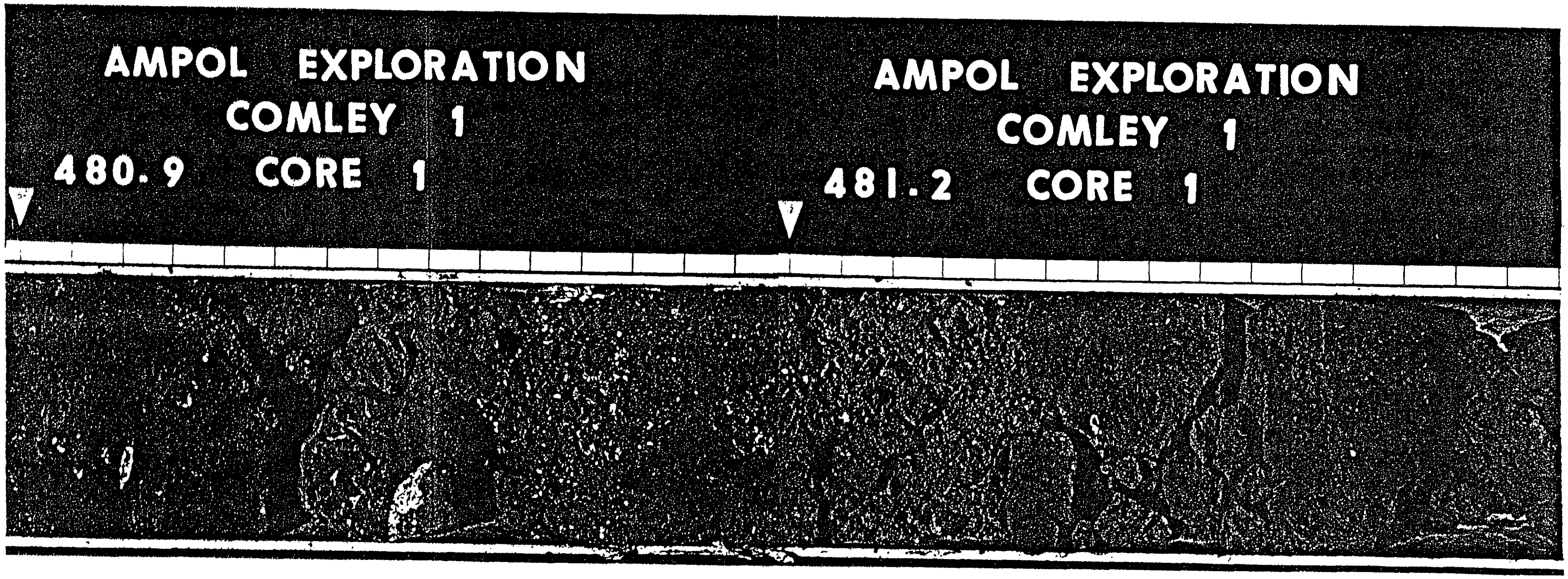
COMLEY 1
480.3 CORE 1
AMPOL EXPLORATION
COMLEY 1
480.6 CORE 1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COMLEY 1
480.9 CORE 1
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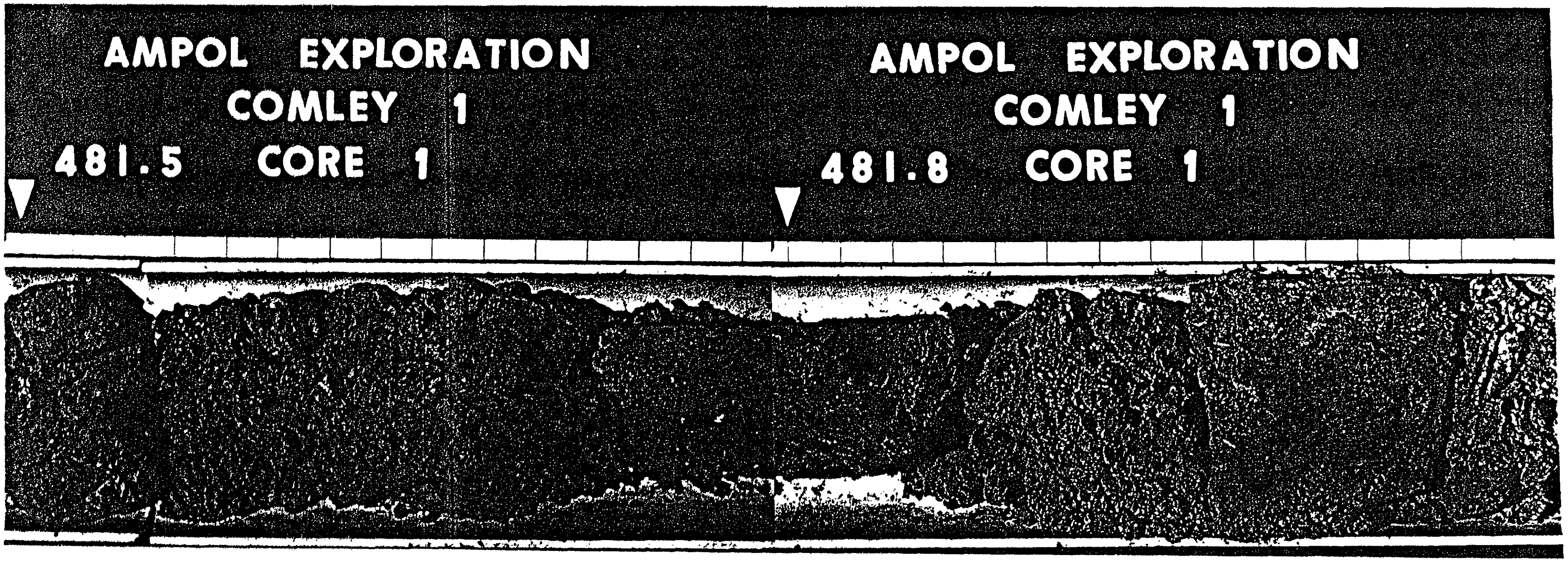
COMLEY 1
481.2 CORE 1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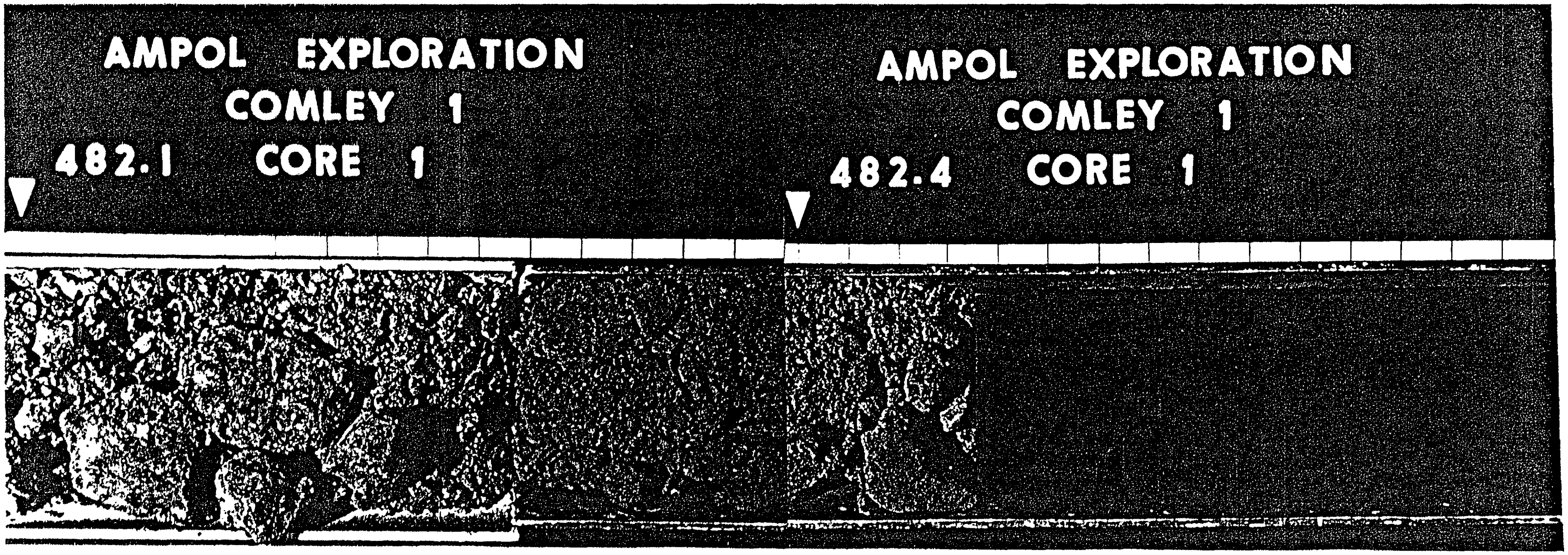
COMLEY 1
481.5 CORE 1
AMPOL EXPLORATION
COMLEY 1
481.8 CORE 1


AMPOL EXPLORATION
COMLEY 1
482.1 CORE 1
AMPOL EXPLORATION
COMLEY 1
482.4 CORE 1

APPENDIX 7.

WIRE LINE LOG EVALUATION

BOWLER LOG CONSULTING SERVICES PTY. LTD.

JACK BOWLER
Telephone: (051) 56 6170

P.O. BOX 2,
PAYNESVILLE, VICTORIA.
AUSTRALIA, 3880.

Ms Erna de Vries
Ampol Exploration Limited
7th Floor
76 Berry Street
North Sydney, NSW, 2060

14 July, 1985

Dear Erna,

Please find my evaluation of the Latrobe and Basement for Comley #1. Log computions listed in Table Two show the Latrobe to be water wet. The Basement has no effective porosity.

<u>Latrobe 476-497meters</u>

The top meter from 476-477 meters has similar log characteristics to the top 7 meters in Paynesville #1 and is most likely the same kind of glauconitic siltstone with no effective porosity. The lower resistivity suggests that it may contain more clay. A sidewall core at 476.5 meters was described as a sandy claystone. See the Density-Neutron and Resistivity-Porosity plots.

Below this, down to 497 meters, there is a trend with increasing depth, of decreasing PEF and RHOB. Travel time increases with depth and as in Paynesville #1 reaches some very high values due probably to poorly compacted sandstone. The SP deflection is -20mv over the complete interval suggesting a permeable formation. This all suggests an increasing sand content with depth and a decreasing clay and gauconite content with depth. Porosities range from 17 to 42% depending on clay content which is around 40 to 50% except at those levels where the hole is badly washed out. At these levels it is not possible to obtain an accurate porosity measurement so porosity has been set at 42% and V_{clay}=0

The Latrobe then is very clayey to clean? and maximum porosity is 42% ?? The Density-Neutron plot clearly shows that most of the the sands with valid log data are not as clean as the better sands of Paynesville #1. It may be that the assumed clean 42% porosity sands do not exist and all of the sands are clay bearing and porosities are lower.

<u>Basement 497-529 meters</u>

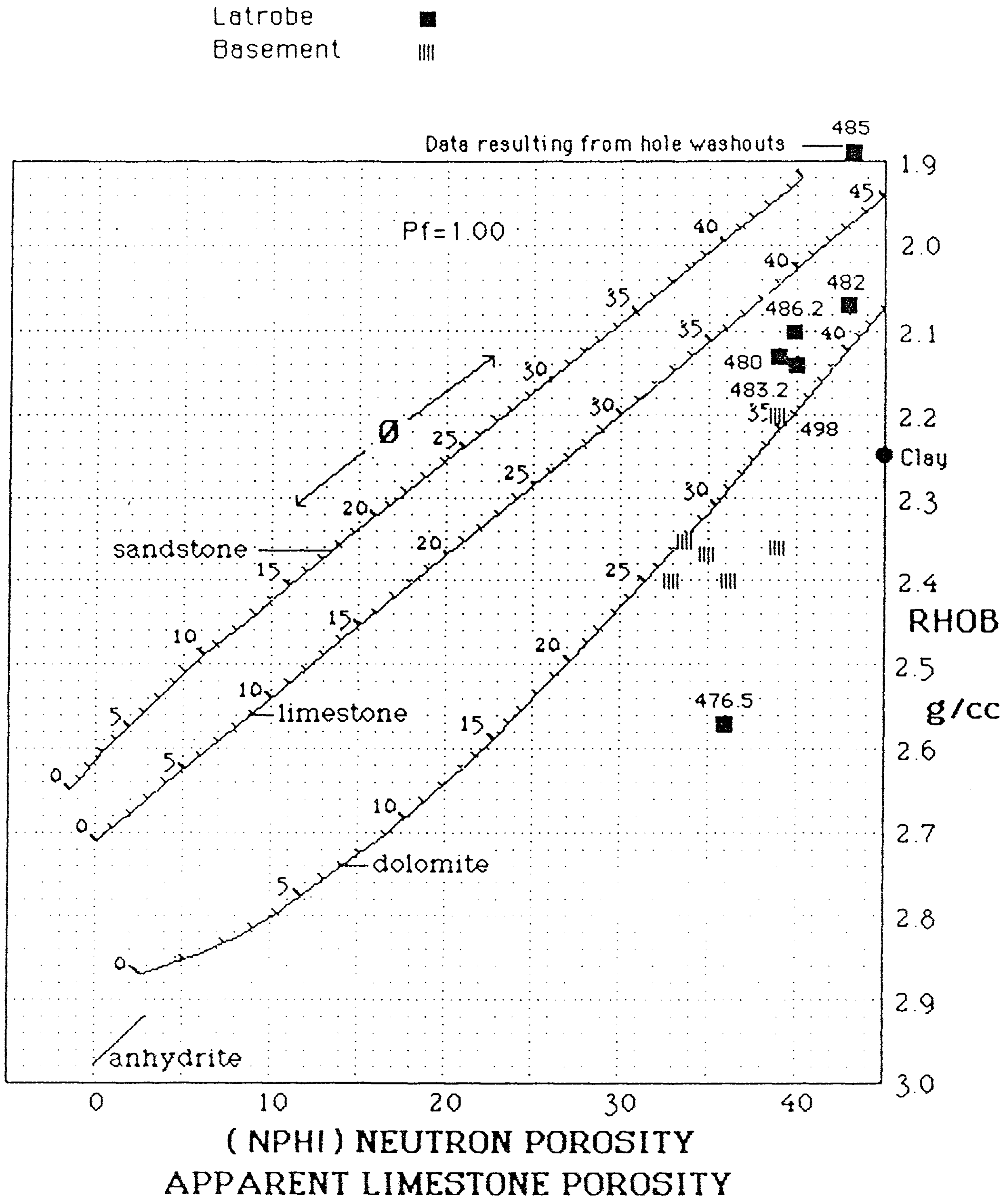
Basement is characterized by a constant NPHI of around 35%. The position of the data on the Density-Neutron and Resistivity-Porosity plots is not too different than some of the data in Paynesville #1 so the lithology may be somewhat similar except that there is a constant clay content in the Basement rock of Comley #1. There is no effective porosity.

Yours truly,

Jack Bowler

Comley #1

DENSITY-NEUTRON
POROSITY AND LITHOLOGY



Comley #1

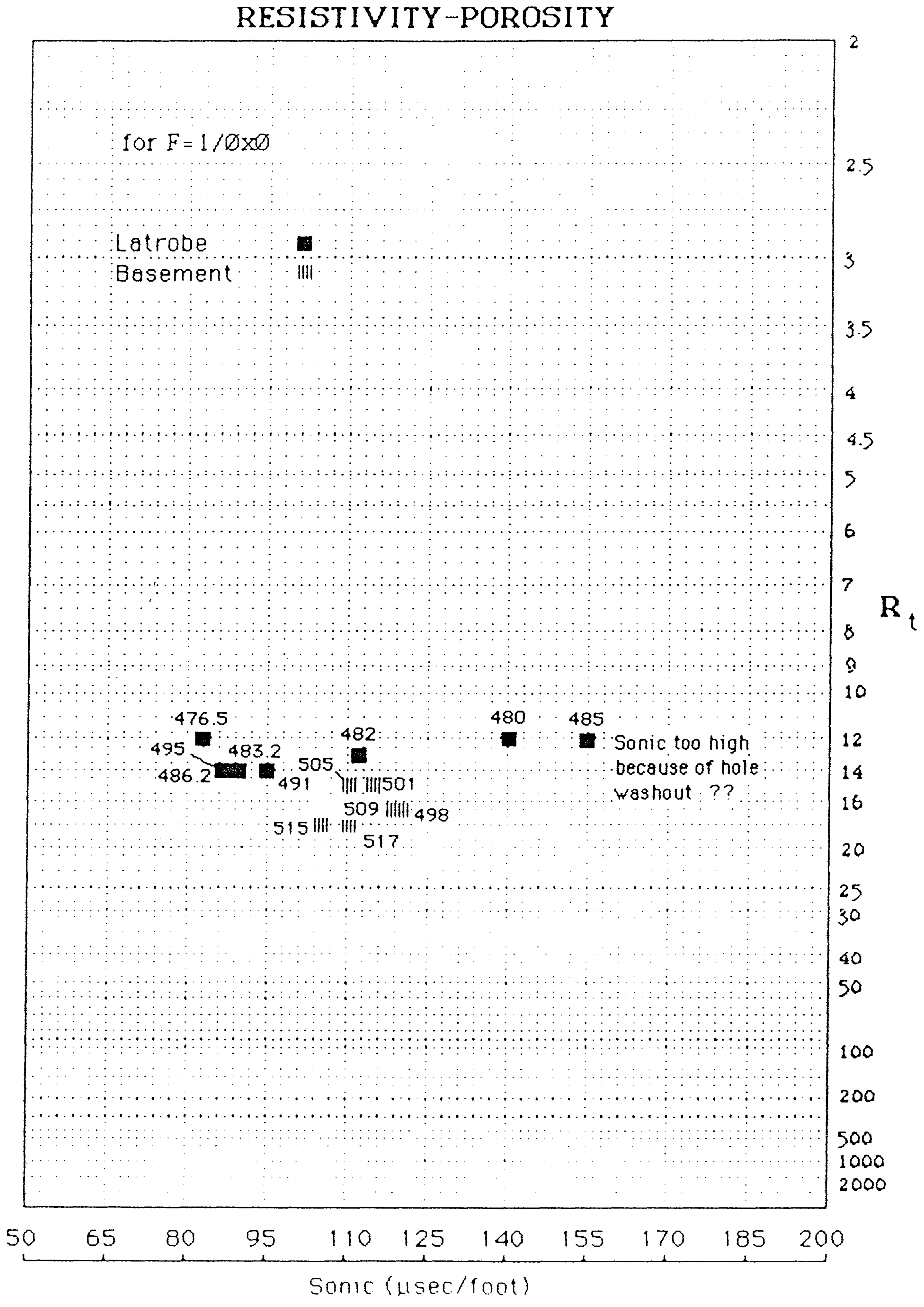

RESISTIVITY-POROSITY
for F=1/ØxØ
Latrobe
Basement
476.5
495
483.2
486.2
491
482
505
501
509
498
515
517
480
485
Sonic too high because of hole washout ??
2
2.5
3
3.5
4
4.5
5
6
7
8
9
10
12
14
16
20
25
30
40
50
100
200
500
1000
2000
R t
50 65 80 95 110 125 140 155 170 185 200
Sonic (µsec/foot)

TABLE ONE Comley #1

Level	Depth (meters)	MSFL (ohm.m)	RT (ohm.m)	GR (API)	RHOB (g/cc)	NPHI (ls. por.)	SONIC (µsec/ft)
1			LATROBE				
2	476.5	17.0	12	60	2.57	36	83
3	480.0	12.0	12	75	2.13	39	140
4	482.0	13.0	13	75	2.07	43	112
5	483.2	19.0	14	105	2.14	40	90
6	485.0	10.0	12	40	1.88?	43	155
7	486.2	14.0	14	75	2.10	40	89
8	491.0		14	50			95
9	495.0	16.0	14	60		39	88
10			BASEMENT				
11	498.0	17.0	17	110	2.20	39	120
12	501.0	15.0	15	120	2.40	33	115
13	505.0	15.0	15	130	2.36	39	110
14	509.0	30.0	17	120	2.35	34	118
15	515.0	20.0	18	130	2.40	36	105
16	517.0	25.0	18	140	2.37	35	110
17							
18							
19							
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40							

TABLE TWO Comley #1

Level	Depth (meters)	RMFA (ohm.m)	RWA (ohm.m)	PHIT %	Vclay %	Porosity %	Sw %	Sxo %
1			LATROBE					
2	476.5	0.82	0.58	22	100	0		
3	480.0	1.64	1.64	37	44	21	108	113
4	482.0	2.29	2.29	42	46	23	97	102
5	483.2	2.60	1.92	37	55	17	98	87
6	485.0	1.76	2.12	42	0	42	109	131
7	486.2	2.02	2.02	38	44	21	99	103
8	491.0		2.47	42	0	42	101	
9	495.0	2.82	2.47	42	0	42	101	103
10			BASEMENT					
11	498.0	2.08	2.08	35	0	35		
12	501.0	1.01	1.01	26	0	26		
13	505.0	1.35	1.35	30	0	30		
14	509.0	2.35	1.33	28	0	28		
15	515.0	1.46	1.31	27	0	27		
16	517.0	1.82	1.31	27	0	27		
17								
18								
19	Porosity values at levels 6, 8 and 9 are estimated at 42%							
20	because bad hole will not allow an accurate determinatiopnation							
21								
22								
23								
24								
25								
26								
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39								
40								

TABLE ONE & TWO comments

Formation	Levels	Rmf	Rw	Temp. °F	Source of Rw	Rclay
Latrobe	2-9	3.02	2.5	102	R_{wa}	15
Basement	11-16	3.02				

Rmf=4.6 ohm.m @ 64.4°F measured. BHT = 102°F @ 529 meters.

R_t is determined from LLD, LLS, MSFL and Schlumberger Chart Rint-9.

R_{wa} and R_{mfa} are computed from density-neutron porosity prior to clay correction. $R_{wa}=PHIT^2R_t$ $R_{mfa}=PHIT^2R_{MSFL}$

Porosity values are clay corrected. Porosity and V_{clay} are determined from the density-neutron crossplot. Porosity=$(1-V_{clay})$PHIT.

The density and neutron log characteristics for the micrite at 588-591 meters in Paynesville #1 have been used again as the densit-neutron clay parameters. The Latrobe data falls between this clay point and the clean sandstone line. Four sidewall cores between 476.5 to 486.5 meters recovered sandy claystone, glauconitic sandstone, very argillaceous sandstone and claystone so the choice of the clay point seems reasonable.

Water saturations are computed from the Indonesian Water Saturation Equation and thus are clay corrected.

a=1 and m=n=2.

APPENDIX 8.

BIOSTRATIGRAPHIC REPORT AND SOURCE ROCK EVALUATION

CONTENTS

1. ABSTRACT

Comley-1 was drilled to 529m KB in Permit PEP 98, onshore Gippsland Basin. Sidewall core samples from 161.0 to 486.0m have been examined for calcareous nannoplankton, foraminifera and palynomorphs.

DEPTH (m)	UNIT	ZONE	AGE
161	Gippsland Limestone	T. bellus or younger	Middle Miocene or younger
178.3	Gippsland Limestone	D	Middle Miocene
347.5-379	Gippsland Limestone	NN4-NN5, G-F	Upper Early Miocene
412.5-438	Gippsland Limestone	NN2-NN3, H1-G	Early Miocene
447.5-465	Lakes Entrance Fm. ('upper member')	NN1, I1-H1	Lower Early Miocene
473	Lakes Entrance Fm. ('upper member')	NP25	Late Oligocene
478.5-480	Lakes Entrance Fm. ('lower member')	NP23-24, P. tuberculatus	Oligocene
486.5	Lakes Entrance Fm. ('lower member')	P. tuberculatus	Oligocene

The sequence from 161m to 478.5m was deposited in inner to middle neritic conditions. A marine environment is also indicated from 480m to 486.5m.

No significant source rocks were observed in the well. Spore colours of light yellow, white fluorescence and vitrinite reflectance of 0.24%-0.27% indicates the interval penetrated was immature.

II. INTRODUCTION

ECL Geological Laboratory was contracted by Ampol Exploration Ltd to undertake laboratory studies of sidewall core samples of the well Comley-1. The well is located in onshore exploration Permit PEP 98, Gippsland Basin, Victoria, and was drilled to a total depth of 529m KB.

Sidewall core samples from the interval 161.0 to 486.0m were analysed for calcareous nannoplankton, foraminifera, palynomorphs, source rock potential and maturity. The objective of this study was to provide biostratigraphic zonations, interpretation of depositional environment and information on hydrocarbon habitat for geological evaluation of the well section.

III. ROCK-STRATIGRAPHIC NOMENCLATURE

(A) Lakes Entrance Formation (Lower Member)

In this investigation Early-Late Oligocene glauconitic sandstone, oxidized glauconitic sandstone-siltstone and glauconitic marl, are referred to informally as the "lower member" of the Lakes Entrance Formation. The "lower member" includes the following formal onshore stratigraphic units : Colquhoun Sandstone Member, Cunninghame Greensand Member, Metung Marl Member, Giffard Sandstone Member and Seacombe Marl Member.

(B) Lakes Entrance Formation (Upper Member)

In this investigation Late Oligocene-Early Miocene marls are referred to informally as the "upper member" of the Lakes Entrance Formation.

(C) Gippsland Limestone

In Comley-1 Early-Middle Miocene clean skeletal limestone and calcarenites with common bryozoan fragments are referred to as the Gippsland Limestone.

IV. GEOLOGICAL COMMENTS

On the basis of wireline log character a disconformity is inferred at 481m (See Figure 2). The sonic kick between 481m and 482m is interpreted to represent an oxidized horizon. The interval 481-486.5m is definitely no older than Early Oligocene (no older than P. tuberculatus) and more likely to be Early Oligocene in age. The occurrence of common dinoflagellates at 486.5m indicates that the interval 481-486.5m represents part of the 'lower member' of the Lakes Entrance Formation. The section from 486.5m to basement (497m) was not examined palynologically but is tentatively interpreted to also represent 'lower member' of the Lakes Entrance Formation.

A mid-Oligocene hiatus is inferred at 481m although this cannot be demonstrated on palaeontological evidence. The oxidized horizon between 481m and 482m in Comley-1 is considered to correlate with oxidized horizons between 536-537m in Fairhope-1 and 576-577m in Paynesville-1 (See Figure 2). The oxidized horizon formed during Zone NP23-NP24 time (based on biostratigraphic evidence in Fairhope-1) and is interpreted to have formed during and after the major mid-Oligocene global fall in sea-level (30Ma event) proposed by Vail et. al. (1977). This event has certainly resulted in a widespread mid-Oligocene disconformity in offshore Gippsland Basin wells (unpublished data).

A 5m thick glauconitic sandy marl of Early/Late Oligocene (Zone NP23-NP24) age is inferred to rest on the mid-Oligocene disconformity surface in Comley-1. The top of this sequence is defined by another oxidized horizon between 476-478m (defined by sonic kick). The sidewall core sample at 476.5m penetrated a highly oxidized siltstone. A second and younger intra-Lakes Entrance Formation disconformity is inferred at 476m with 'upper member' marls of Late Oligocene (Zone NP25) age resting on 'lower member' oxidized glauconitic facies of Zone NP23/24 age. The oxidized horizon has also been recorded in Fairhope-1 between 530.5m and 534m, and in Paynesville-1 between 569m and 570.5m (see Figure 2).

The boundary between the Gippsland Limestone and the Lakes Entrance Formation has been selected at the log break at 438.5m. The sidewall core sample immediately above the log break at 438.0m is a bryozoan rich calcarenite.

V. MICROPALAEONTOLOGY

A total of 14 sidewall core samples from the interval 161.0-486.5m were analysed for foraminifera and calcareous nannoplankton. Calcareous microfossil species identified in the well section, interpreted zonation and depositional environment subdivision have been plotted on the micropalaeotological distribution chart (Enclosure 1).

The planktonic foraminiferal letter zonal scheme of Taylor (in prep.) and the NP-NN calcareous nannoplankton letter scheme of Martini (1971) are used in this investigation. Foraminiferal studies by Carter (1964) and Jenkins (1971), and calcareous nannoplankton investigations by Edwards (1971) and Siesser (1979), have also been consulted.

(A) Calcareous Nannoplankton Biostratigraphy

i) 161.0m-178.3m : Indeterminate

The low yielding and poorly preserved calcareous nannofossil assemblages at 161.0m and 178.3m are not age diagnostic.

ii) 347.5m-379.0m : Zones NN4-NN5 (Upper Early Miocene-Lower Middle Miocene)

The occurrence of *Sphenolithus heteromorphous* in the interval indicates a Zone NN4 to NN5 age.

iii) 412.5m-438.0 : Zones NN2-NN3 (Early Miocene)

The downhole extinction of *Sphenolithus heteromorphous* at 412.5m and the uphole appearance of *Discoaster druggii* at 438.0 indicates that the interval is NN2 to NN3 in age.

iv) 447.5m-465.0m : Zone NN1 (basal Early Miocene)

The association of Helicosphaera cf. cartieri without Zygrhablithus bijugatus (extinction marker that approximates the top of the Oligocene in the Gippsland Basin and New Zealand) and Discoater druggii (defining event for base of Zone NN2) indicates that the rich nannofossil assemblage in the interval is assignable to the upper part of Zone NN1.

v) 473.0m : Zone NP25 (Late Oligocene)

The common occurrence of Dictyococcites bisectus without Chiasmolithus oamaruensis indicates that the sample at 473.0m is Zone NP25 in age. The nannofossil assemblage equates with the Discoaster deflandre Zone of Edwards (1971).

vi) 476.5m : Indeterminate

The moderate yielding nannofossil assemblage at 476.5m comprises mainly downhole contaminants from the Early Miocene section higher in the well. The absence of Oligocene marker species indicates that in situ nannofossils are absent or rare.

vii) 478.5m-480.0m : Zones NP23-NP24 (Early/Late Oligocene boundary).

The uphole extinction of Chiasmolithus oamaruensis at 478.5m defines the top of Zone NP24 in the well (= top of Syrocosphaera clathrata Zone of Edwards, 1971). The absence of Reticofenestra umbilica (= R. placomorpha of Edwards 1971) indicates that the nannofossil assemblage in the interval is no older than Zone NP23. The base of Zone NP23 correlates with the base of the Cyclococcolithus neogammation and the top of the Reticulofenestra placomorpha Zones of Edwards (1971).

B) Planktonic Foraminiferal Biostratigraphy

i) 161.0m : Indeterminate

The very low yielding planktonic foraminiferal assemblage at 161.0m is not age-diagnostic.

ii) 178.3m : Zone D (Middle Miocene)

The association of Orbulina universa and Globorotalia mayeri at 178.3m is indicative of Zone D.

iii) 347.5m : Zone F (Early Miocene)

The occurrence of Globigerinoides sicanus without the Orbulina-Praeorbulina group indicates that the sample at 347.5m is Zone F in age.

iv) 352.0m-424.0m : Zone G (Early Miocene)

The uphole appearance of Globigerinoides trilobus at 424.0m defines the base of Zone G in the well.

v) 438.0m : Zone H1 or younger (Early Miocene)

The moderately high yielding assemblage at 438.0m is dominated by Globigerina praebulloides. The occurrence of Globorotalia obesa indicates an age no older than Zone H1 (based on range of species in New Zealand as defined by Jenkins, 1971).

vi) 447.5m : Zone H1 (Early Miocene)

The occurrence of Globigerina woodi connecta without Globigerinoides trilobus at 447.5m indicates a Zone H1 age.

vii) 465.0m : No older than I1 (no older than Late Oligocene)

The presence of Globoquadrina dehiscens at 465.0m indicates an age no older than Zone I1. The high yielding planktonic foraminiferal assemblage is dominated by juveniles, turborotalids and globigerinids.

viii) 473.0m-478.5m : Indeterminate.

Samples at 473.0 and 476.5m contain planktonic foraminiferal assemblages which are not age-diagnostic while the sample at 478.5m is barren.

C) Environment of Deposition

i) 161.0m-178.3m : Inner neritic

An inner neritic benthonic foraminiferal assemblage comprising a moderately diverse calcareous benthonic fauna including common Elphidium crassatum is represented in the interval. The abundance of bryozoan fragments in the interval confirms an inner neritic environment of deposition.

ii) 347.5m : Inner/middle neritic

The common occurrence of bryozoan fragments, the very low yield of planktonic foraminifera, and the presence of moderate numbers of Cassidulina subglobosa and Brizalina spp, indicates that the sample at 347.5m was deposited in an inner to middle neritic environment.

iii) 352.0m : Middle Neritic

The sample at 352.0m comprises approximately 10% planktonic foraminifera with a rich calcareous benthonic foraminiferal assemblage including high numbers of Brizalina spp. and moderate numbers of Uuvigerina spp. This foraminiferal assemblage is typical of a middle neritic environment.

iv) 379.0m - 424.0m : Inner neritic

An inner neritic environment of deposition for the interval is reflected by the low yield of planktonic foraminifera, very low numbers of Brizalina spp and Euvigerina spp. and the common occurrence of bryozoan fragments.

v) 438.0m : Inner/middle neritic

The sample at 438.0m comprises approximately 15% planktonic foraminifera, lacks Euvigerina spp. and Brizalina spp., but contains moderate numbers of Sphaeroidina bulloides. Bryozoan fragments represent a common constituent of the fossil assemblage in the sample. The foraminifera and associated macrofossil debris are indicative of an inner to middle neritic environment of deposition.

vi) 447.5-473.0m : Middle neritic

The interval contains moderately high numbers of planktonic foraminifera dominated by juveniles, turborotalids and globigerinids. The planktonic foraminiferal percentage ranges between 10 and 25%. The benthonic foraminiferal assemblage in the interval is very diverse with moderate to high numbers of Sphaeroidina bulloides and Euvigerina spp. Bryozoan fragments are lacking. The foraminiferal assemblage in the interval is indicative of a middle neritic environment.

vii) 478.5m : Inner neritic

The common occurrence of Parrellina crespinae together with the lack or absence of Brizalina spp., Euvigerina spp., Sphaeroidina bulloides and planktonic foraminifera, indicate that the sample at 478.5m was deposited in an inner neritic environment.

viii) 480.0m : Marine

Only calcareous nannoplankton was scrutinized for the sample at 480.0m. The occurrence of common nannofossils in the sample indicates a marine environment of deposition.

VI. PALYNOLOGY

Four samples, three between 478.5m and 486.5m inclusive, and one at 161.0m, were palynologically analysed. The upper two samples were low to moderate in organic and palynomorph contents while the lower two were rich on both accounts. The following palynological zones are recognised:

A) Palynostratigraphy

i) 161.0m : Triporopollenites bellus Zone or younger (Miocene)

The sample is not older than the Triporopollenites bellus Zone of Early-Middle Miocene as indicated by Rugulatisporites micraulaxus which has its base occurrence in the zone. The dinoflagellate cyst Operculodiunium giganteum occurring in the sample is known to be restricted to the Miocene.

ii) 478.5m - 486.5m : Proteacidites tuberculatus Zone (Oligocene).

The interval is correlated with the Proteacidites tuberculatus Zone of Oligocene age on account of the following evidence: Cyathidites subtilis, Foveotriletes crater and Proteacidites symphyonemoides have their basal occurrences in the zone; and Nothofagidites asperus, Parvisaccites catastas and Proteacidites stipplatus have their top occurrences in the same zone. Also, the dinoflagellate cyst Hystrichokolpoma rigaudae occurring in all samples has its known top in the Oligocene.

B) Environment of Deposition

All samples examined contain abundant and diverse dinoflagellate cysts and common foraminiferal chamber-linings indicating deposition in a marine environment.

VII. SOURCE ROCK POTENTIAL AND MATURITY

Two samples at 480.0m and 486.5m were examined for source rock potential and organic maturity. The results are given in Tables 1A, 1B and 1C, and the methods and terms used are explained in Appendix No. 1.

Both samples yielded less than 0.5ml/10g organic matter suggesting a poor source-rock potential countered slightly by moderate liptinite and fluorescing liptinite percentages. The spore colours varied from light yellow through yellow to light orange and gave white and yellow fluorescence colours. These data are indicative of immaturity to early oil generating capabilities.

Vitrinite reflectance determinations were made on both the samples (Appendix 2). At 480m the 12 readings indicate a mean reflectance of 0.24% with a range of 0.19% to 0.32%. At 486.5m 27 readings gave a mean of 0.27% with a range of 0.19% to 0.34%. These confirm the immaturity of the section.

VIII. REFERENCES

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FIGURE 1 : SUMMARY CHART, COMLEY-1

DEPTH (mkB)	LITHOLOGY *	UNIT	NANNOFOSSIL ZONE	PLANK FORAM ZONE	PALYNOLOGY ZONE	AGE	ENVIRONMENT
161.0	Calcarenite		Indeterm.	Indeterm.	T. bellus or or younger	Upper Early Miocene or younger	Inner neritic
178.3	Calcarenite		Indeterm.	D	Not studied	Middle Miocene	Inner neritic
347.5	Calcarenite		NN4-NN5	F	Not studied	Upper Early Miocene	Inner-middle nerit
352.0	Calcisiltite	Gippsland	NN4-NN5	G	Not studied	Upper Early Miocene	Middle neritic
379.0	Calcarenite	Limestone	NN4-NN5	G	Not studied	Upper Early Miocene	Inner neritic
412.5	Calcarenite		NN2-NN3	G	Not studied	Early Miocene	Inner neritic
424.0	Calcarenite		NN2-NN3	G	Not studied	Early Miocene	Inner neritic
438.0	Calcarenite		NN2-NN3	H1 or younger	Not studied	Early Miocene	Inner/middle nerit
--- log break at 438.5m ---							
447.5	Marl	Lakes	NN1	H1	Not studied	Lower Early Miocene	Middle neritic
465.0	Marl	Entrance	NN1	No older than I1	Not studied	Lower Early Miocene	Middle neritic
473.0	Marl	Formation (upper member)	NP25	Indeterm.	Not studied	Late Oligocene	Middle neritic
--- log break at 476.0m ---							
#476.5	Oxidized siltstone		Indeterm.	Indeterm.	Not studied		Indeterm.
478.5	Sandy glauconitic marl	Lakes Entrance	NP23-NP24	Indeterm.	P. tuberculatus	Early/Late Oligocene	Inner neritic
480.0	?	Formation (lower member)	NP23-NP24	Not studied	P. tuberculatus	Early/Late Oligocene	+ Marine
--- log break at 481.0m ---							
486.5	?		Not studied	Not studied	P. tuberculatus	Early Oligocene	+ Marine

* Lithology based on washed residue
# Downhole contamination noted.
+ Environment based on palynomorph data.

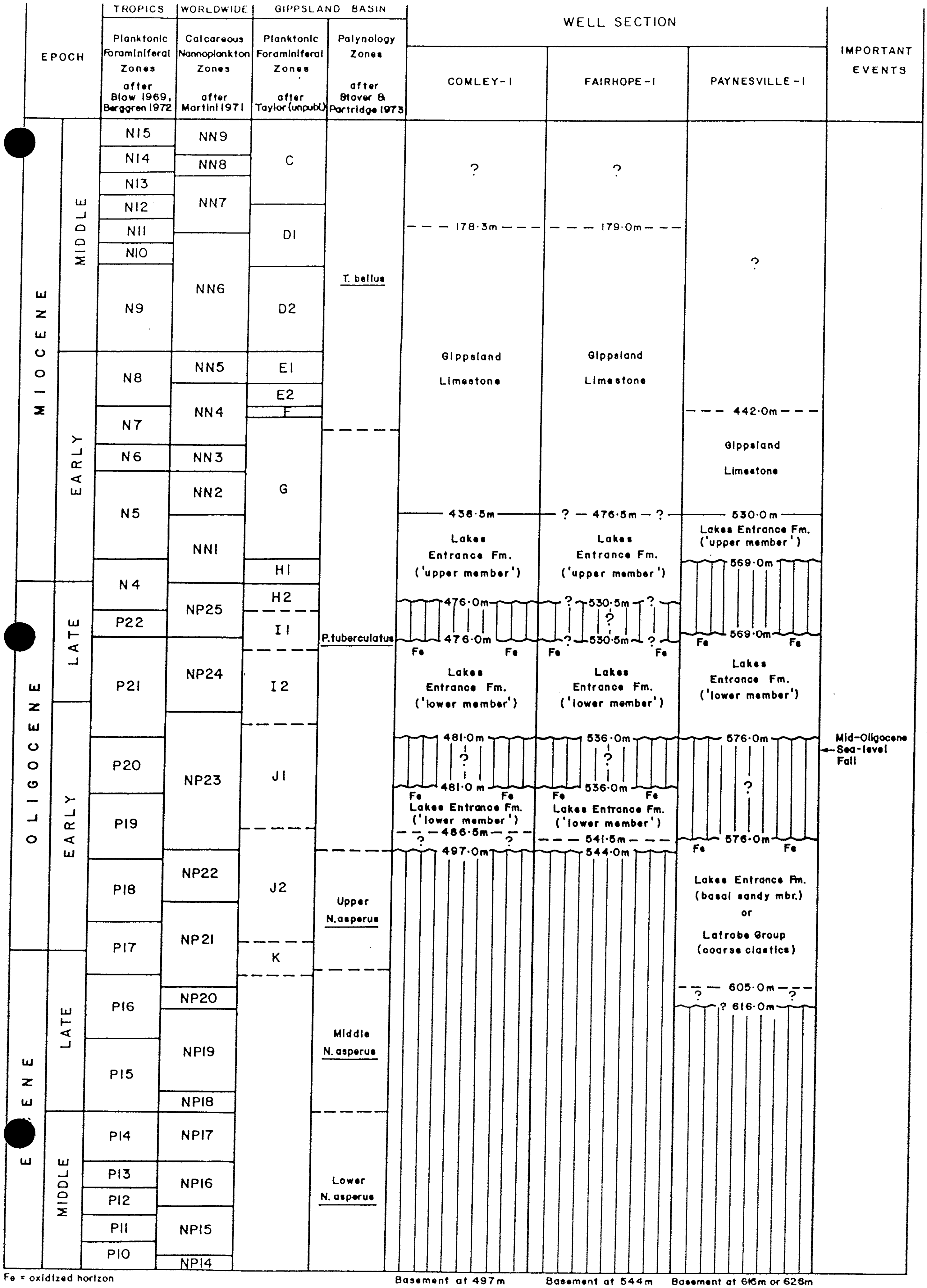

Fig. 2 Tentative chronostratigraphic correlation between Comley-1, Fairhope-1, & Paynesville-1 wells, onshore Gippsland Basin.

Tentative chronostratigraphic correlation between COMLEY 1, FAIRHOPE 1 & PAYNESVILLE 1 wells, onshore Gippsland Basin - revised by Ampol Exploration Ltd

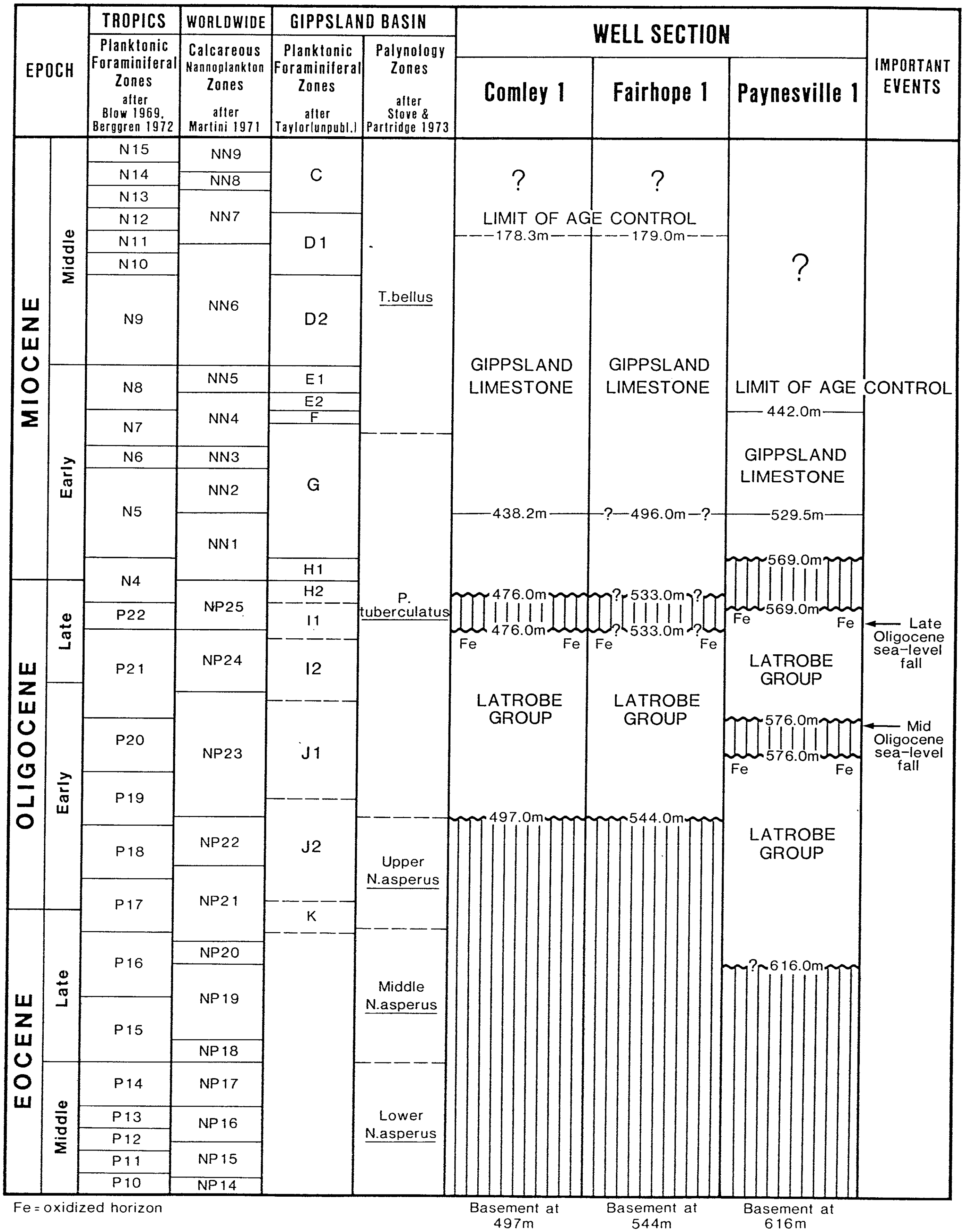

FIGURE 3

Spores and pollen recorded in Comley-1

KEY:

x = present
c = common
cf = compared with

	161.0m	468.5m	478.5m	480.0m
Alisporites varius	x			x
Araucariacites australis		x	x	x
Baculatisporites comaumensis		x	x	
Baculatisporites disconformis	x			
Cyathidites australis	x	x	x	x
Cyathidites minor	x	x	c	x
Cyathidites subtilis	x	x	x	x
Cycadopites follicularis	x		x	
Dacrycarpites australiensis	x	x	x	
Gleicheniidites senonicus		x		x
Haloragacidites harrisii	x	x	x	x
Herkosporites elliottii		x	x	x
Laevigatosporites major	x	x	x	x
Laevigatosporites ovatus	x	x	x	
Liliacidites lanceolatus	x			
Lygistepollenites florinii	x	x	x	x
Malvacipollis subtilis		x	x	x
Myrtaceidites eugenioides		x		
Myrtaceidites verrucosus				x
Nothofagiditee brachyspinulosus		x	x	
Nothofagidites asperus		x	x	
Nothofagidites deminutus		x		
Nothofagidites emarcidus	x	x	x	x
Nothofagidites falcatus		x		
Nothofagidites flemingii		x	x	
Nothofagidites goniatus		x		
Nothofagidites heterus		x	x	x
Nothofagidites incrassatus	x	x	x	
Nothofagidites vansteenisii		x	x	x
Osmundacidites wellmanii		x	x	
Parvisaccites catastus		x		x
Phyllocladidites verrucatus	x	x	x	x
Podocarpidites ellipticus	x	x	x	x
Propylipollis beddoesii		x		x
Proteacidites adenanthoides	x			
Proteacidites crassus			x	
Proteacidites granulatus	x	x		x
Proteacidites incurvatus		x		
Proteacidites obscurus		x		
Proteacidites stipplatus			x	x
Proteacidites symphyonemoides		x		
Proteacidites tenuiexinus			x	
Retitriletes austroclavatidites		x	x	
Rugulatisporites micraulaxus	x			
Tricolpites aspermarginis			x	
Tricolpites simatus		x	x	
Tricolporites paenestriatus		x		
Triletes tuberculiformis	x	x	x	x
Verrucatosporites confragosus		x		

FIGURE 4

Dinoflagellates and acritarchs recorded in Comley-1

KEY:

x = present
c = common
cf = compared with

	161.0m	468.5m	478.5m	480.0m
Chiropteridium sp.				x
Dapsilidinium pastielsii				x
Eatonicysta n.sp.				x
Hystrichokolpoma rigaudae		x	x	x
Kallosphaeridium biarmatum				x
Leiosphaeridia sp.	x	x	x	x
Lingulodinium siculum	x			
Micrhystridium sp.				x
Operculodinium bellulum		x	x	x
Operculodinium centrocarpum	x	x	x	x
Operculodinium giganteum	x			
Paucisphaeridium sp.			x	
Pentadinium taeniagerum				x
Polysphaeridium biformum				x
Pterodinium cingulatum		x		
Senoniasphaera n.sp.				x
Spiniferites bentorii	x			
Spiniferites membranaceous		x		
Spiniferites mirabilis	x		x	x
Spiniferites pachydermus	x		x	x
Spiniferites ramosus gracilis	x	x	x	x
Spiniferites ramosus granomembranaceous				x
Spiniferites ramosus multibrevis	x		x	x
Spiniferites ramosus ramosus	x	x	x	x
Spiniferites ramosus reticulatus				x
Spiniferites spp.	x	x	x	x
Tectatodinium pellitum			x	

TABLE 1

Summary of the source rock and maturity data from Comley-1

TABLE 1A

DEPTH (m)	PALYNOLOGICAL ZONE	AGE	ENVIRONMENT OF DEPOSITION	OIL POTENTIAL	MATURITY
480.0	P. tuberculatus	Early Oligocene	Marine	Poor	Immature
486.5	P. tuberculatus	Early Oligocene	Marine	? Moderate	Immature

TABLE 1B

DEPTH (m)	SAMPLE NO.	WEIGHT (g)	VOM (ml)	PRESERVATION (0-4)	% MICRO-PLANKTON	MICRO-PLANKTON DIVERSITY	SPORE-POLLEN DIVERSITY	PALYN YIELD (0-4)	CUT-ICLE (0-4)	HYL-OGEN (0-4)	MELAN-OGEN (0-4)	GRANULAR SAPROPEL (0-4)	AMORPHOUS SAPROPEL (0-4)
480.0	7	10	0.4	3	20	2	4	1	1	3	3	2	2
486.5	6	10	0.3	3	90	4	4	2	1	3	3	2	2

TABLE 1C

DEPTH (m)	VOM ml/10g	%SAPRO-PEL	%LIPTINITE	%FLUORESCENT LIPTINITES	VOL. FLUOR. LIPTINITES microlitres	OIL INDEX (0-4)	GAS INDEX (0-4)	SPORE COLOUR	UV LIPTINITE FLUORESCENCE COLOUR
480.0	0.40	60	10	8	32	1	2	Lt yell-Yell-Lt or	White - Yellow
486.5	0.30	60	10	8	24	2	2	Lt yell-Yell-Lt or	White - Yellow

APPENDIX 1
==========

Glossary of semiquantitative source rock parameters recorded using palynological techniques.

APPENDIX 2
==========

Vitrinite reflectance results on samples from Comley-1.

ENCLOSURE 1
===========

Micropalaeontological distribution chart for Comley-1.

TABLE 1
=======

Summary of the source rock and maturity data from Comley-1.

APPENDIX NO.1.

Explanation of the source rock parameters recorded using palynological techniques.

INTRODUCTION

A rapid and reliable technique for estimating the abundances of the various kerogen components and relating these back to the source rock potential of the sediments has been developed.

Samples that are to be examined for palynology and source rock potential are processed using standard techniques that include acid digestion in cold HCl, cold HF and then boiling HCl. Any remaining mineral matter is removed by flotation of the organic material in a Zn2Br solution of SG 2.10. The heavy liquid is removed by washing and the volume of organic material (VOM, see below) recovered is measured in a 10ml conical centrifuge tube after spinning at 3000 rpm for 5 minutes. A measured proportion by volume of the organic residue (kerogen) is dried on a coverslip with PVA and is then mounted on to a microscope slide with a plastic resin (Elvacite or Eukit).

Counts of the various kerogen components are made on the kerogen slide using modified point-counting procedures and the results related back to the weight of rock processed. For example, a kerogen slide may represent the residue from 1/25g (0.04g) of the sediment. It has been measured that the field of view of the 20X objective on a Nikon microscope used by ECL is 1/4000 (1/4E3) of the total area of the kerogen slide. If, on average, there are 4 palynomorphs observed in each field of view when scanning the slide, then the number of palynomorphs estimated per gram of sediment is 4x25x4E3 = 4E5/g (400,000 per gram). This would be regarded as a good yield that could provide a significant contribution to the source rock potential of the sediment.

Each of the measured kerogen components usually show a wide size range that also must be taken into consideration during the counts. In an effort to reduce the subjective element of the estimates, the same microscope objective is used to count the same parameter where this is possible. It is not feasible to directly relate the measured number of particles of a particular kerogen component or their area to an estimated volume or mass for that component. However, an empirical relationship between the abundance estimates and source rock potential has been determined based on the examination of known source rock sequences. To facilate the display of the abundance data and discussion of these results, a simplified four point scale has been developed based on comparisons with source rocks from a wide variety of locations. For example, palynomorph abundances vary from less than 1000(1E3)/g in poor source rocks to more than 1000000(1E6)/g in very good source rocks.

GLOSSARY

1. PALYNOMORPH YIELD
   The estimated number of palynomorphs per gram of sediment expressed in terms of low (=1), moderate (=2), high (=3) and very high (=4) when compared with other source rocks (1=<1E3/g; 2=1E3-<3E4/g; 3=3E4-1E6/g; 4=>1E6/g; 20X Objective).

2. PRESERVATION
   Estimate of the general preservation level of the palynomorphs, recorded in terms of poor (=1), moderate or fair (=2), good (=3) and very good (=4).

3. SPORE-POLLEN AND MICROPLANKTON DIVERSITY
   The estimated number of different species in the sample expressed in terms of low (=1), moderate (=2), high (=3) and very high (=4) when compared with other source rocks (1=1-5; 2=6-15; 3=16-25; 4=>25).

4. PERCENT MICROPLANKTON
   The estimated proportion of dinoflagellates, acritarchs and other algal cysts expressed as a percentage when compared with the total palynomorph assemblage.

5. CUTICLE ABUNDANCE
   The estimated number of cuticle fragments (large and small) per gram of sediment expressed in terms of low (=1) to very high (=4) when compared with other source rocks (1=<1E2/g; 2=1E2-<3E3/g; 3=3E3-1E5/g; 4=>1E5/g; 10X Objective).

6. PERCENTAGE OF LIPTINITES
   The proportion of the unfiltered kerogen (as observed on a kerogen slide) that comprises palynomorphs (spores, pollen and algal cysts) and cuticle fragments is

estimated and expressed as a percentage of the total organic matter. Only the larger, properly identifiable liptinites can be included in this category. Finely degraded liptinites (less than 1 micron) are regarded as part of the sapropel group of macerals except when distinguishable by UV fluorescence.

7. PERCENTAGE OF FLUORESCENT LIPTINITES
The proportion of the unfiltered kerogen (as observed on a kerogen slide) that comprises fluorescing palynomorphs (spores, pollen and algal cysts) and fluorescing cuticle fragments is estimated and expressed as a percentage of the total organic matter. This includes the finely degraded liptinites that are regarded as Amorphous Sapropel (see below). Those liptinites that are unoxidised and able to auto-fluoresce are regarded as the most oil-prone fraction of the organic matter.

8. HYLOGEN ABUNDANCE
The estimated number of partially translucent woody or lignitic fragments per gram of sediment expressed in terms of low (=1) to very high (=4) when compared with other source rocks (1=<1E3/g; 2=1E3-<3E4/g; 3=3E4-1E6/g; 4=>1E6/g; 20X Objective). Broadly equivalent to vitrinite and previously referred to as fusain or fusinite.

9. MELANOGEN ABUNDANCE
The estimated number of opaque and angular woody fragments per gram of sediment expressed in terms of low (=1) to very high (=4) when compared with other source rocks (1=<1E3/g; 2=1E3-<3E4/g; 3=3E4-1E6/g; 4=>1E6/g; 20X Objective). Broadly equivalent to inertinite. As there is usually a gradation between melanogen and hylogen the two components can be difficult to distinguish,

10. GRANULAR SAPROPEL YIELD
The estimated number of clumps of granular sapropel per gram of sediment expressed in terms of low (=1) to very high (=4) when compared with other source rocks (1=<1E4/g; 2=1E4-<3E6/g; 3=3E6-1E7/g; 4=>1E7/g; 40X Objective). Granular sapropel is regarded as the very fine, fluffy, degraded and oxidised organic matter that shows no fluorescence and is usually a darker colour than the amorphous sapropel. The measurement of "clumps" of sapropel is highly subjective but provides a good order of magnitude estimate that is relatively consistent provided the sample processing is constant and the same objective is used.

11. AMORPHOUS SAPROPEL YIELD
The estimated number of clumps of amorphous sapropel per gram of sediment expressed in terms of low (=1) to very high (=4) when compared with other source rocks (1=<1E4/g; 2=1E4-<3E6/g; 3=3E6-1E7/g; 4=>1E7/g; 40X Objective). Amorphous sapropel is here regarded as weakly fluorescing, finely degraded liptinitic material. It appears to consist of fragments of palynomorphs eg. algae, and cuticles but may also include adsorbed hydrocarbons onto the organic debris, however, the particles are usually too small to be resolved by the microscope. The measurement of "clumps" of sapropel is highly subjective but provides a good order of magnitude estimate that is relatively consistent provided the sample processing is constant and the same objective is used.

12. PERCENTAGE OF SAPROPEL
The proportion of the unfiltered kerogen (as observed on a kerogen slide) that comprises sapropel, here regarded as very fine, (less than 1 micron) degraded organic matter is estimated and expressed as a percentage of the total organic matter. This includes both Granular and Amorphous Sapropel (see above).

13. SAPROPEL COLOUR
The overall colour of the dispersed organic matter and was the original parameter observed to estimate Thermal Alteration Index (TAI). Generally the most dominant colour is that of the granular sapropel which usually has a darker colour than the amorphous sapropel. Not usually recorded as it reflects both the environment of deposition and the maturation level.

14. SPORE COLOUR
The colour of the spore or pollen exines in transmitted white light. Variables that can affect the colour (apart from maturation) are the species type and exine thickness as well as any exposure to oxidising environments during and after deposition. The darkest colours of the least oxidised exines are taken as being the most significant. The change in colour from yellow to orange is regarded as indicating the onset of oil generation. Gas generation is suggested as becoming significant as the colours change to brown. Oil generation appears to cease as the spore

colours approach dark brown and when they become black significant gas generation also probably ceases.

15. UV LIPTINITE FLUORESCENCE COLOUR

The dominant colour of the unoxidised liptinites (exines, cuticle and some amorphous sapropel) in reflected UV light observed with a Nikon EF-D UV330-380/400DM/420K filter combination and a 20x UV-Fluor objective. Liptinites that have been oxidised prior to deposition (mostly by recycling) show reduced intensities. The fluorescent colours observed are a complex mixture not comparable to normal colours as seen with white light. The hues range from light blue to white to light yellow with increasing maturity. The colours change to yellow at the beginning of the oil window (as here interpreted) and change to gold, dull yellow, orange and dull orange to dull red at the base of the oil window. The maturation level of sediments near the base of the oil window and deposited in an oxidising environment can be difficult to interpret.

16. VOLUME OF ORGANIC MATTER (VOM)

The measured volume of organic matter (VOM) left after removal of the mineral matter in the sample (see Introduction above) provides a rapid and reliable indication of the organic richness of the samples. From experience it has been found that the values of VOM when expressed as ml/10g approximate the %TOC determinations. Generally, <0.5 ml/10g is regarded as a poor (lean) source rock, 0.5-<2.5 ml/10g is moderate, 2.5-4.5 ml/10g is good (rich) and >4.5 ml/10g is very good (very rich). However, the abundance of unoxidised liptinites in the kerogen must also be considered in assessing the oil source rock potential of the sediments.

17. VOLUME OF FLUORESCENT LIPTINITES

The total amount of potential oil generating liptinites is calculated by multiplying the Volume of Organic Matter (VOM/10g) with the percentage of fluorescent liptinites observed in the sample (see above). The results are expressed as microlitres per gram. On an empiric basis, values greater than 200 are regarded as good source rocks.

18. OIL INDEX

An estimate of the overall abundance of liptinitic material in the kerogen expressed on a scale of 1-4 (being equivalent to poor, moderate, good and very good). This provides a broad indication of the potential of the sample to generate oil or condensate. The OIL INDEX is calculated by averaging the values for Palynomorph Abundance, Cuticle Abundance and Amorphous Sapropel Abundance (see above) and rounding the result to one digit.

19 GAS INDEX

An estimate of the overall abundance of that part of the organic matter in the kerogen that is regarded as being capable of generating gas if a high enough maturation level is reached. The estimate is expressed on a scale of 1-4 (being equivalent to poor, moderate, good and very good). The GAS INDEX is calculated by averaging the values for Palynomorph Abundance, Cuticle Abundance, Amorphous Sapropel Abundance, Granular Sapropel Abundance and Hylogen Abundance (see above) and rounding the result to one digit.

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APPENDIX NO.2

COMLEY NO. 1

K.K. No.	Depth (m)	$\bar{R}_V max$	Range	N	Exinite Fluorescence (Remarks)
x2968	480 SWC	0.24	0.19-0.32	12	Rare sporinite and liptodetrinite, yellow. (Sandstone>>siltstone. Dom rare, V>I>or=E. All three maceral groups rare. Diffuse humic matter rare. ?Marcasite present. Pyrite abundant.)
x2969	486.5 SWC	0.27	0.19-0.34	27	Sparse liptodetrinite, yellow to orange, rare sporinite, yellow. (Claystone>>sandstone. Dom sparse, V>E>I. Vitrinite and exinite sparse, inertinite rare. Iron oxides rare. Pyrite common.)

PE900762

This is an enclosure indicator page.
The enclosure PE900762 is enclosed within the container PE902392 at this location in this document.

The enclosure PE900762 has the following characteristics:

ITEM_BARCODE =	PE900762
CONTAINER_BARCODE =	PE902392
NAME =	Micropalaeontological Chart
BASIN =	GIPPSLAND
PERMIT =	PEP98
TYPE =	WELL
SUBTYPE =	DIAGRAM
DESCRIPTION =	Micropalaeontological Distribution Chart for Comley-1
REMARKS =	
DATE_CREATED =	30/09/1985
DATE_RECEIVED =	
W_NO =	W909
WELL_NAME =	COMLEY-1
CONTRACTOR =	ECL AUSTRALIA
CLIENT_OP_CO =	AMPOL EXPLORATION

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX 9.

HEADSPACE GAS ANALYSIS FROM DITCH CUTTINGS

AMPOL
COMLEY NO. 1

	350-366 M	366-381 M	381-396 M	396-411 M	411-426 M	426-441 M	441-459 M	459-477 M	477-528 M
Methane	23 (ppm)	82 (ppm)	1 (ppm)	116 (ppm)	238 (ppm)	145 (ppm)	251 (ppm)	480 (ppm)	114 (ppm)
Ethane	3	6	3	2	9	5	4	5	6
Propane	1	2	1	1	2	2	1	2	5
Iso-Butane	-	-	-	-	-	-	-	-	1
N-Butane	1	2	-	1	2	2	3	4	3
Iso-Pentane	-	-	-	-	-	-	-	-	<1
N-Pentane	<1	4	-	1	3	1	1	<1	1

APPENDIX 10.

HORNER TEMPERATURE PLOT

APPENDIX 10

HORNER TEMPERATURE PLOT

The following data was used to estimate the geothermal gradient in Comley #1.

Log Run	Depth	Temp.	Time after last circulation
LDT-CNL-GR	528m	36. ^{o}C	5 hrs 30 mins
BHC-GR	526m	36.6^{o}C	8 hrs
NGT	527m	38.8^{o}C	10 hrs 15 mins
DLL-MSFL	528m	38.8^{o}C	14 hrs

This data gives an extrapolated BHT of 44.8^{o}C @ 527m, a geothermal gradient of 0.0570$^{o}C/m$.

A surface temperature of 15^{o}C was assumed.

AMPOL EXPLORATION LIMITED

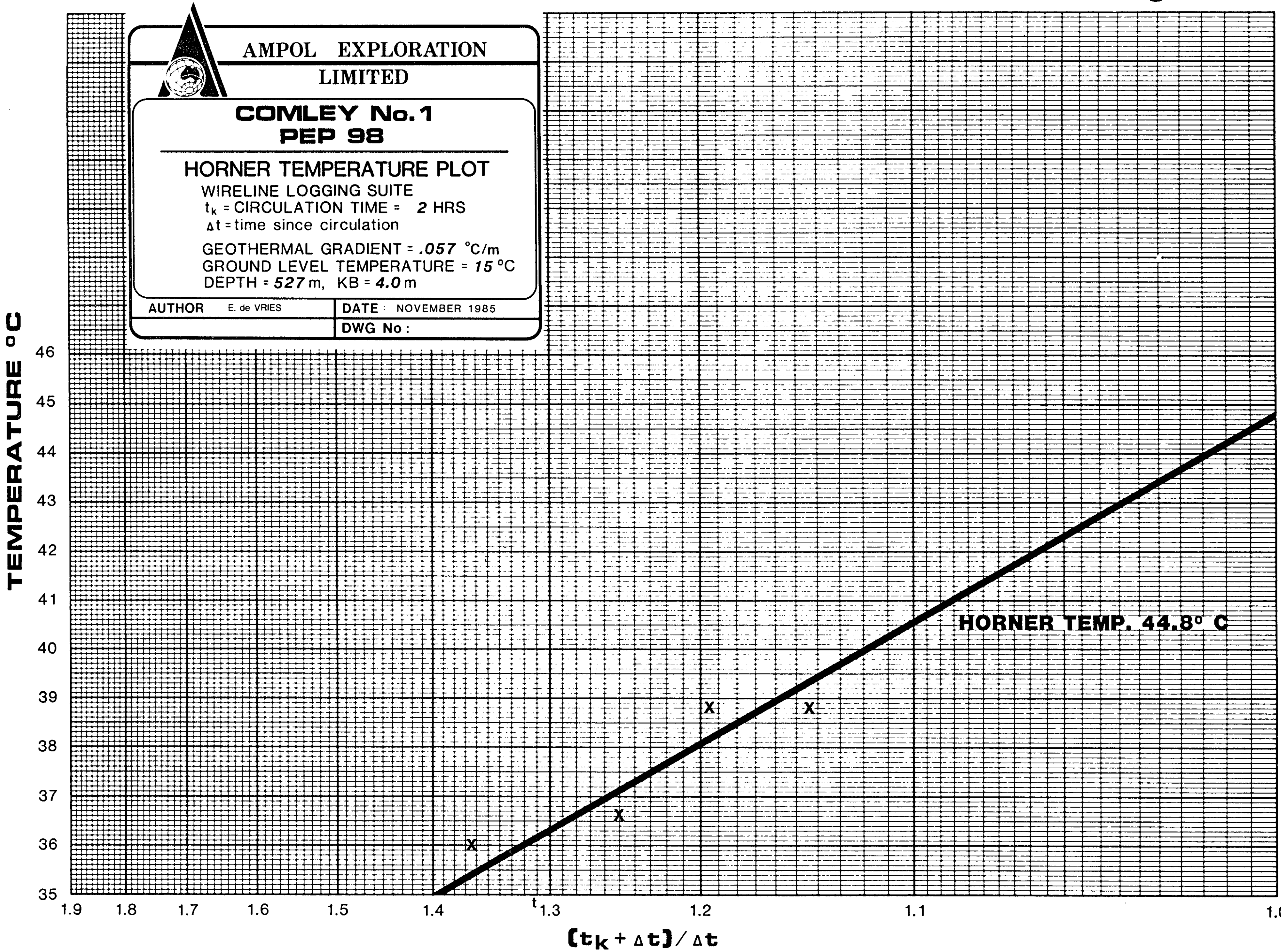
COMLEY No. 1
PEP 98

HORNER TEMPERATURE PLOT

WIRELINE LOGGING SUITE
t_k = CIRCULATION TIME = *2* HRS
Δt = time since circulation

GEOTHERMAL GRADIENT = *.057* °C/m
GROUND LEVEL TEMPERATURE = *15* °C
DEPTH = *527* m, KB = *4.0* m

AUTHOR: E. de VRIES	DATE: NOVEMBER 1985
	DWG No:



APPENDIX 11.

VELOCITY SURVEY

APPENDIX 12.

SURVEYORS REPORT

COMLEY-1
****

PEP-98, Gippsland Basin, Victoria.
S.P. 206.5, GM83A-18

K.B.= 52.0 m. A.S.L.
G.L.= 48.0 m. A.S.L.
Gun Depth = -1.5 m. (Rel. to G.L.)
Gun Offset = 56.0 Azimuth = 30 Deg. from N.
Seismic Datum = 0.0 m. A.S.L.
Surface Velocity - m/s

Datum-Gun Depth = -46.5 m. Source - Airgun
Datum-Gun Time = -45.5 msec. Contractor-Schlumberger

x2 = TWT

Shot No.	Depth (K.B.)	Subsea Depth	Subdatum Depth	Subgun Depth	Observed Time	Vertical Time	Corrected Time	Average Velocity	Depth Interval	Time Interval	Interval Velocity
4	439.0	-387.0	-387.0	-433.5	262.4	260.2	214.7	1802	-	-	-
3	455.0	-403.0	-403.0	-449.5	268.5	266.4	220.9	1824	16.0	6.2	2580
2	479.0	-427.0	-427.0	-473.5	277.2	275.3	229.8	1858	24.0	8.8	2715
1	482.0	-430.0	-430.0	-476.5	278.9	277.0	231.5	1858	3.0	1.7	1752

Comments: Only four shots were fired before the gun firing mechanism failed.
No datum shots were recorded so the datum-gun time is an estimate from the seismic statics.

Crowther & Sadler Pty. Ltd.
LICENSED SURVEYORS
P.O. BOX 722, BAIRNSDALE, 3875
TELEPHONE (051) 52 5011

Our Ref. 4710

Your Ref.

1st November, 1985

Ampol Exploration Limited,
P.O. Box 907,
NORTH SYDNEY, 2060

Dear Sir,

Please find listed below co-ordinates as requested for the drill sites situated to the south of Bairnsdale.

The co-ordinates are as follows:-

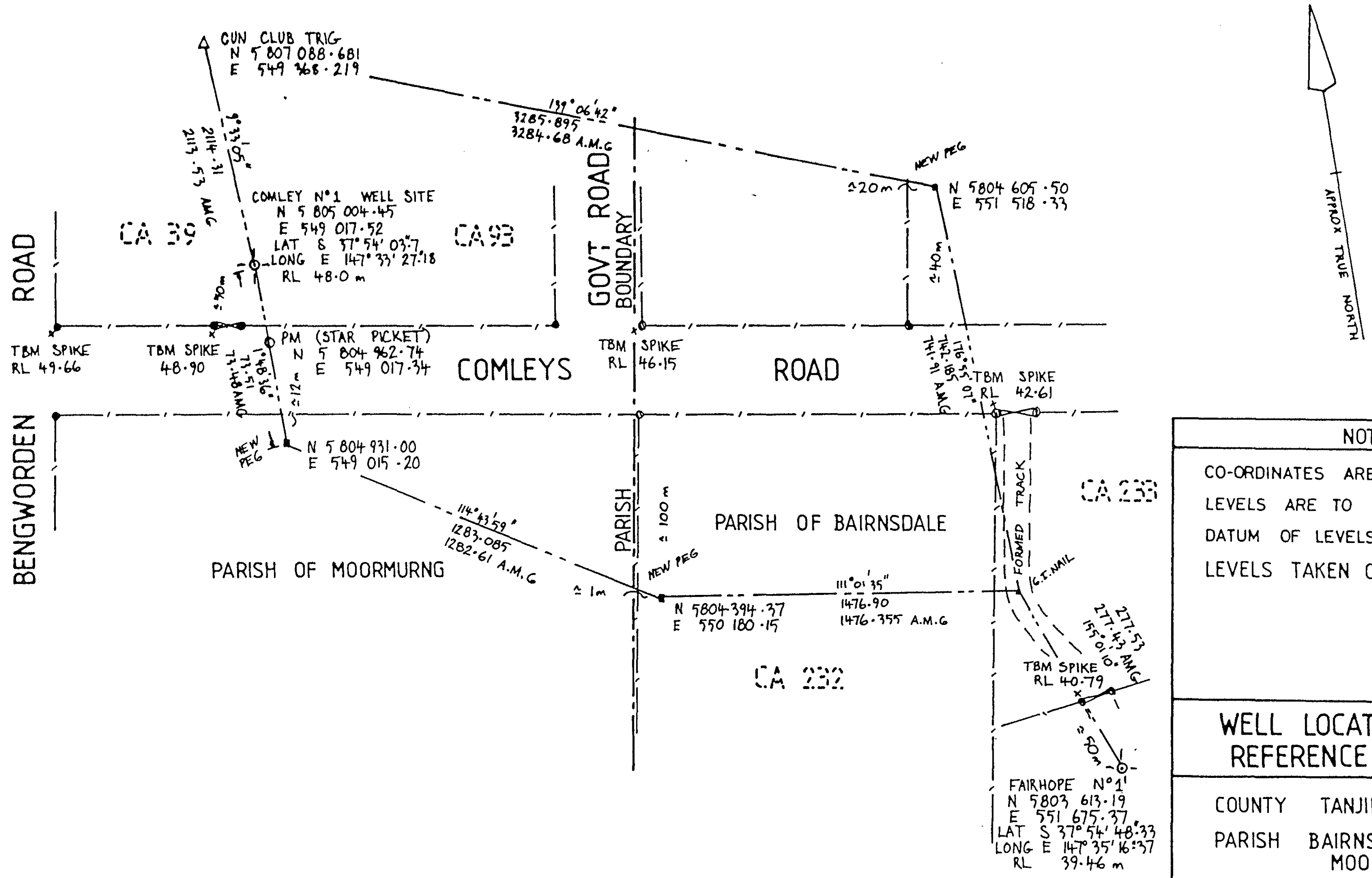
Comley No. 1	A.M.G. Zone 55	E 549 017·52
		N 5 805 004·45
	Latitude	S 37°54'03".717
	Longitude	E 147°33'27".181
Fairhope No. 1	A.M.G. Zone 55	E 551 675·366
		N 5 803 613·188
	Latitude	S 37°54'48".327
	Longitude	E 147°35'16".37
Paynesville No. 1	A.M.G. Zone 55	E 559 117·6
		N 5 803 391·00
	Latitude	S 37°54'53"
	Longitude	E 147°40'21".2

If you require any additional information please do not hesitate to contact me.

Yours faithfully,

L. Walton

CROWTHER & SADLER PTY. LTD.



NOTATIONS

CO-ORDINATES ARE A.M.G ZONE 55

LEVELS ARE TO A.H.D

DATUM OF LEVELS PM 37 50·893m

LEVELS TAKEN ON TOP OF CASING

WELL LOCATION DIAGRAM
REFERENCE MARK PLAN

COUNTY TANJIL

PARISH BAIRNSDALE AND MOORMURNG

COMLEY N°1
FAIRHOPE N°1

CROWTHER AND SADLER PTY LTD
2/66 McCULLOCH STREET, PO BOX 722
BAIRNSDALE 3875
(051) 525011

4710

ENCLOSURES

ENCLOSURES

PE601145

This is an enclosure indicator page.
The enclosure PE601145 is enclosed within the container PE902392 at this location in this document.

The enclosure PE601145 has the following characteristics:

ITEM_BARCODE =	PE601145
CONTAINER_BARCODE =	PE902392
NAME =	Composite Well Log
BASIN =	GIPPSLAND
PERMIT =	
TYPE =	WELL
SUBTYPE =	COMPOSITE_LOG
DESCRIPTION =	Composite Well Log for Comely-1
REMARKS =	
DATE_CREATED =	23/06/1985
DATE_RECEIVED =	12/12/1985
W_NO =	W909
WELL_NAME =	Comley-1
CONTRACTOR =	Ampol Exploration Ltd
CLIENT_OP_CO =	Ampol Exploration Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE601146

This is an enclosure indicator page.
The enclosure PE601146 is enclosed within the container PE902392 at this location in this document.

The enclosure PE601146 has the following characteristics:

ITEM_BARCODE =	PE601146
CONTAINER_BARCODE =	PE902392
NAME =	Merged Playback Composite Log
BASIN =	GIPPSLAND
PERMIT =	
TYPE =	WELL
SUBTYPE =	COMPOSITE_LOG
DESCRIPTION =	Merged Playback Composite Log for Comely-1
REMARKS =	
DATE_CREATED =	20/07/1985
DATE_RECEIVED =	12/12/1985
W_NO =	W909
WELL_NAME =	Comley-1
CONTRACTOR =	Sclumberger
CLIENT_OP_CO =	Ampol Exploration Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE601147

This is an enclosure indicator page.
The enclosure PE601147 is enclosed within the container PE902392 at this location in this document.

The enclosure PE601147 has the following characteristics:

ITEM_BARCODE = PE601147
CONTAINER_BARCODE = PE902392
NAME = Mud Log - Masterlog Evaluation
BASIN = GIPPSLAND
PERMIT =
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Mud Log - Masterlog Evaluation for Comely-1
REMARKS =
DATE_CREATED = 22/06/1985
DATE_RECEIVED = 12/12/1985
W_NO = W909
WELL_NAME = Comley-1
CONTRACTOR = Geoservices
CLIENT_OP_CO = Ampol Exploration Ltd

(Inserted by DNRE - Vic Govt Mines Dept)