COMPOSITE WELL LOG

COMPANY: ARCO LTD. / WOODSIDE (LAKES ENTRANCE) OIL CO. N.L.

WELL NO: NORTH SEASPRAY NO. 1

PETROLEUM TENEMENT: P.P.L. No. 160 | STATE: VICTORIA | 4-MILE SHEET: WARRAGUL | BASIN: GIPPSLAND | WELL STATUS: TEMPORARILY ABANDONED

LOCATION: Lat 38° 17' 38"S. Long 147° 12' 13"E.

ELEVATION: Reference Pt. K.B. 88'
Ground 77'

Date Spudded: Nov. 21, 1962
Date Drilling Stopped: Dec. 13, 1962
Date Rig Off: Dec 21, 1962

Total Depth: Driller 5000'
E Log 4999'

Hole Size	In	From	To
	12¼"	30'	512'
	8¾"	512'	5000'

Casing	In	Wt.	Gr	Depth	Cmt	Cmt'd to
	13⅜"	48 lb.	H-40	33'	20 sx	Surface
	9⅝"	36 lb	J-55	512'	210 sx.	Surface
	7"	26 lb	N-80	4535'	240 sx.	2900'

Cement Plugs	From	To	Sacks
	20'	40'	6 sx.

Baker Bridge Plug at 3700'

Well Head Fittings: Welded plate with 2' nipple and plug valve on 7" csg. above Braden head
Drilled By: Reading and Bates (Aust.) Pty. Ltd.
Logged By: Schlumberger
Mud Logging By: Oil Development Logging Unit
Operated by F. Ingram and N. Meyers
Cemented By: Halliburton and Reading & Bates
Drilling Method: Rotary
Lithology By: F. Ingram and N. Meyers

ELECTRIC LOG DATA

RUN No	1	2
Date	December 3, 1962	December 13, 1962
First Reading	4500'	4998'
Last Reading	517'	4314'
Interval Measured	3983'	684'
Casing Schlumberger	517'	517'
Casing Driller	512'	512'
Depth Reached	4501'	4999'
Bottom Driller	4500'	5000'
Mud Nature	Bentonite	Bentonite
Density / Viscosity	10·3 / 42	9·9 / 110
Mud Resistivity	2·60 @ 79° F	1·60 @ 82° F
Mud Resist. BHT	1·70 @ 108° F	1·20 @ 108° F
pH / Fluid Loss	8 / 14 cc/30 min.	9·50 / 5·8 cc/30 min.
Origin of Sample	Circulation	Circulation
Rmf	2·66 @ 68° F	2·28 @ 68° F
Rmc	3·58 @ 68° F	2·15 @ 77° F
Bit Size	8¾ to Bottom	8¾ to Bottom
Casing Size	9⅝"	9⅝"
Opr Rig Time	2 hrs ½	1 hr ½
Truck No	2520	2520
Recorded by	G. Guigues	G. Guigues
Witness	F. Ingram	F. Ingram

MICROLOG CALIPER DATA

RUN No	1	2
Date	December 3, 1962	December 13, 1962
First Reading	4500'	4998'
Last Reading	517'	4350'
Interval Measured	3983'	648'
Casing Schlumberger	517'	517'
Casing Driller	512'	512'
Depth Reached	4501'	4999'
Bottom Driller	4500'	5000'
Mud Nature	Bentonite	Bentonite
Density / Viscosity	/ 42	9·9 / 110
Mud Resistivity	@ 79° F	1·60 @ 82° F
Mud Resist. BHT	@ 108° F	1·20 @ 108° F
pH / Fluid Loss	14 cc/30 min.	9·5 / 5·8 cc/30 min.
Origin of Sample	Circulation	Circulation
Rmf	@ 68° F	2·28 @ 68° F
Rmc	@ 68° F	2·15 @ 77° F
Bit Size	to Bottom	8¾ to Bottom
Casing Size	9⅝"	9⅝"
Opr Rig Time	2 hrs ½	1 hr ½
Truck No	2520	2520
Recorded by	G. Guigues	G. Guigues
Witness	F. Ingram	F. Ingram

WELL SYMBOLS

- Core interval number and recovery
- Sidewall core
- Macro / Micro — Fossils
- Casing shoe
- Formation test interval and no

LITHOLOGIC REFERENCE

- Sandstone
- Marl
- Limestone
- Limy shale
- Claystone
- Siltstone
- Greywacke
- Dolomite
- Coal
- gl Glauconitic

BIT TYPES & REMARKS: REED 12¼ T; HTC 8¾ OSC3J; HTC 8¾ OSC3J; HTC 8¾ SF; OSC3J; HTC 8¾ SF; HTC 8¾ OSC3J

DRILLING RATE: Min / 5 Ft. (1 2 3 4 5)

LITHOLOGY % OF CUTTINGS

MUD GAS DETECTION (0 50 100)

DEPTH: 100' 200' 300' 400' 500' 600' 700' 800' 900' 1000' 1100' 1200' 1300' 1400' 1500' 1600' 1700' 1800' 1900' 2000' 2100' 2200' 2300' 2400' 2500'

DEVIATION

CASING & PLUGS: 500' ½° 9⅝"; 950' ¾° 7"; 1500' ¾°; 1950' ¾°; 2437' ¾°

CONTINUOUS DIPMETER SURVEY (For computation data see log)
Depth and degree of dip at tail of arrow, arrow in azimuth of dip
RATING A. Good B. Fair C. Possible
DIP ANGLE 0 10° 20° 30° 40° 50° 60° 70°
1-B; 2-B; 3-B; 4-B; 5-C; 6-B; 7-B; 8-B; 9-C; 10; 11; 12-C

SPONTANEOUS POTENTIAL: Millivolts (-20 +)

CORE & RECOVERY: Core No. 1 Dip very small; Core No. 2 Dip very small

DETAILED LITHOLOGY: 1954 1 1973 Rec. 7 2020 2 2038 Rec. 6

RESISTIVITY ohms - m²/m: AM 16' (0 10 50); AM 64' (0 50 500); AO 16' 8' (0 50 500)

MICROCALIPER: Hole Diameter in Inches (6 16)

MICROLOG Resistivity - ohms - m²/m: Micro Inverse 1"x1" (0 20 40); Micro Normal 2" (0 20 40)

DRILL STEM TEST

Reversed SP 1922' - 3623'

2021' - 2041', Packer failed, rec. 1000' mud

LITHOLOGIC DESCRIPTION

40' - 255', Sand, wh. to yel., f - med. gd. w/occ. crs. gr., mostly qtz. w/jasper and gry. rock frag. common, sly. mic, subang. - subrnd., and Clay, red, yel. and gray, non foss.

255' - 345', Sand, lt gry to yel f. - crs. gd, abund. shell frag., carb material common.

345' - 780', Marl, lt. gry. and lt. gry. grn., sly. arenaceous, soft, soluble, bryozoa com., trace glauc; and interbedded Limestone, cream to lt. gry. and lt. brn., f. gd., vy. foss, occ. sand gr, glauc.

780' - 1050', Limestone, lt. gry., cream and lt. brn., f. gd., friable, occ. sand gr., glauc.

1050' - 1660', Marl, med. gry., gry. grn. and gry. brn., f. gd. friable to gummy, foss. and glauc., sly. sandy in part, becoming more shaly downward; and Limestone, as above, friable to sly. hard.

1660' - 1922', Shale, grn., gry. grn., lt gry., and lt. brn. calc, soft and gummy to sly firm, glauc. throughout, to glauc. in bottom 30', occ. pyritic, forams common, and Marl, lt. gry. to gry. grn., soft, sly. silty, glauc.

1922' - 3623', Brown Coal, soft to brittle, often shaly and earthly; Sand, wh., lt. to dk. brn. and lt. to med. gry, f. - crs. gd., occ. pebbly, clean to very clayey and often very ligneous, friable to unconsolidated, predom. ang. to subang. qtz., poor to good porosity, usually poorly sorted; Siltstone, gry. to brn., friable, argill. and usually ligneous; and Claystone - Mudstone, lt gry. to lt. brn., silty, mic., very carb., floating qtz. sand grains common, irregular bedding, often with laminations of coal. Silty Dolomite (2590' - 95') lt. brn, f. gd, sucrosic, tight.

STRATIGRAPHIC COLUMN

QUAT?			
U. PLIOCENE	270'	LAKE WELLINGTON AND/OR HAUNTED HILL GRAVELS	
L. PLIOCENE	512'	JEMMY'S PT. FORMATION	
U. MIOCENE	620'	TAMBO RIVER FM?	
M I O C E N E		L I M E S T O N E	G I P P S L A N D
	1700'		
OLIGOCENE	1922'	LAKES ENTRANCE FM	
U. EOCENE - L. OLIGOCENE		COAL MEASURES	LATROBE VALLEY