ENCLOSURE 4

359065

OR-346

BAROID ppm LOG

WELL TOOLKA
COMPANY ESSO
FIELD BASS BASIN
COUNTY STATE VIC.

INTERVAL LOGGED 770 FT TO 8907 FT
DATE LOGGED 18 JANUARY 74 TO 1 FEBRUARY 74
DEPTH MEASURED FROM K.B. ELEV. 32'

SUPERVISING ENGINEER A.B.MAGINN UNIT NO 8809
TYPE MUDS NATIVE SALT WATER TO 3300 FT
LIGNOSULFONATE TO 8907 FT

LOGGERS McDONALD SOBEY

LEGEND

5 cm

ABBREVIATIONS

NB NEW BIT
NCB NEW CORE BIT
CO CIRCULATED OUT
DST DRILL STEM TEST
LAT LOGGED AFTER TRIP
TG TRIP GAS
NR NO RETURNS
DS DIRECTIONAL SURVEY
DC DEPTH CORRECTION

MUD CHARACTERISTICS
W WEIGHT, ☒ LBS/GAL ☐ LBS/CU FT
V VISCOSITY, API, SECONDS
F FILTRATE, API, CC'S
CK FILTER CAKE
S SALINITY ☒ PPM CL⁻ ☐ GPG CL⁻
Rm MUD-RESISTIVITY, OHM-METER
Rmc MUD-CAKE RESISTIVITY, OHM-METER
Rmf MUD-FILTRATE RESISTIVITY, OHM-METER

LITHOLOGY

SAND		LIMESTONE	
SHALE		OOLITIC LIMESTONE	
CLAY		DOLOMITE	
CHERT		GYPSUM, ANHYDRITE	
SALT		COAL OR LIGNITE	■
SILTSTONE		GRANITE WASH	
CONGLOMERATE			

DRILLING RATE
☒ FT. PER HR.
☐ MIN. PER FT.
3000 2000 1000 0
LITHOLOGY
POROSITY
DEPTH
ppm HYDROCARBONS IN MUD M=1000
C1 C2 C3 C4 C5+
0 1M 5M 10M 25 50 75
0 1M 25 100
0 1M 25
0 M
0 M
CUTTINGS ANALYSIS
TOTAL GAS
METHANE
LIQUID HYDROCARBONS
LOGGING FROM 00.30 HRS, 18 JANUARY 1974
WATER DEPTH 258'
DRILLED 26" HOLE TO 769'
DRILLED 16 1/2" HOLE WITH SEAWATER
HOT WIRE; 30 UNITS=1% TOTAL GAS IN AIR
PPM C1 — PPM C2 — PPM C3 — PPM C4 — PPM C5 —
HOT WIRE - - - CO2 - - - H2S - - -
20" CSG. 704'
NB-2, OSC3 5.9 HRS
NB-2, 15" BIT WITH 16 1/2" U/REAMER
LIMESTONE: WH-TAN, SHELL FRAGS, FOSS.
RRB 2
WASHOUT IN U-REAMER
NO GAS
LIMESTONE: BUFF, UNCONSOL, FOSS, CALCITE, & MICRITE
SCALE CHANGE
DEPTH LINE BROKEN DRILL RATE AVG. OVER 30' SINGLE
LIMESTONE: A/A, FOSS. & CALCAR.
NO GAS
LIMESTONE: FOSS, CALCARENITE, GRY MOD. HARD, GLAUC.
MARL: MED GRY, SOFT -MOD. FIRM
LIMESTONE: A/A
MARL: MED GRY, SOFT-MED GRY, DK GRN.
MARL: LESS CALC.
MARL: MED GRY-DK GRN, BCM. FISS.
SHALE: GRN, MOD. FM MOD. FISS, SLTY CALC.
SHALE: GRN, MOD FM DISPLACED TO THICK GEL/WATER MUD
MARL: GRN, MOD FIRM
CALCARENITE: MOD FM DK. INCLUS. GLAUC.
MUD DEFLOCULATING
13 3/8" 2790'
SCALE CHANGE 3000 2000 1000
NB-3, XDG TG-90, 5.0 HRS
RUN 13-3/8" CSG. AT 2840'
DRILL CMT. W/SEAWATER THEN DISPLACE TO GEL/SALTWATER MUD
19/22-1-74
SEAL ASSEMBLY WILL NOT SEAT. PULL LEAKING B.O.P's
DRILL 9-7/8" HOLE
MARL: LT GRY, V.SOFT GUMMY.
CONVERT TO LIGNOSULFONATE MUD SYSTEM
MARL: LT.GRY, SOFT GUMMY.
H.W.=165u
C1=20,000
SANDSTONE: CRSE, RND. DOL, HARD
MARL: MED. GRY, SOFT, GUMMY.
NB-4, XD7, 21 HRS
23-1-74
TG-220u
SILTSTONE: DK. BRN, CARB, SOFT, CALC.
NB-5, XDG, 7.2 HRS
SCALE CHANGE 450 300 150
TG-60u
WT 9.9
VIS 42
PH 8.8
F 11.6
Cl 12,000
TEMP 105°F
PULL BIT-5, 3 CONES LEFT IN HOLE
SILTST: DK. BRN, CARB CALC. SOFT.
C.O.
C.O.
SANDSTONE: DK. BRN, FINE, DOL. CMT, HD.
C.O.
24-1-74
NB-6, XDG, 4.7 HRS
TG-165u
SILTST: DK. BRN, CARB, SOFT
SANDSTONE: WH, F-M GRN, UNCONSOL W/ DOL. CMT. IP
WT 9.9
VIS 45
PH 9.8
F 5.6
Cl 8700
TEMP 118°F
SILTST: DK. BRN, CARB, SOFT.
ABNT. PYRITE
C.O.
C.O.
COAL: BLK, SHINY.
SANDSTONE: V.CRSE -CRSE, FRIABLE, SA-SR, WELL SORTED, NO SHOW.
COAL: BLK, SHINY.
C.O.
CB-1 C-20 2.75 HRS
NB-7, XDG, 8.1 HRS
T.G-24
T.G-30
WT 9.9
VIS 45
PH 10.0
F 5.6
Cl 7600
TEMP 120°
NO3 112
CORE NO.1 5089-5119 CUT & REC 30'
SANDSTONE: VF, BUFF, INTERBEDDED W/ SILTST: DK. BRN, CARB. AND CLAYSTONE DK. GRY, CARB, BANDS OF DOLOMITE
C.O.
SANDSTONE: WH-CLEAR, QTZ, S/A-R, COARSE, LOOSE.
COAL: WEAK FLUOR, WEAK CUT.
SILTST: LT.BRN., CARB, SOFT.
125U
COAL: BLACK, BLEEDING GAS.
C.O.
NB-8, J22, 38.0 HRS
TG-75
WT 9.9
VIS 44
PH 9.8
F 5.4
Cl 6600
NO3 125
TEMP 125°F
SANDSTONE: VF GR, CALC., CONSOL, CARB.
SILTST: LT.BRN.-BUFF, CARB, MICA.
C.O.
230U, 23.0 M.
165U, 18.0 M.
SANDSTONE: V.FINE-COARSE, LOOSE.
150U, 18.0 M.
130U, 15.0 M
125U, 16.0 M.
SILTST: MED BRN, CARB., LAMINATED.
WT 9.9
VIS 41
PH 9.8
F 5.2
Cl 6500
TEMP 120°F
SCALE CHANGE 300 200 100
300U, 26.0 M.
150U, 16.0 M.
150U, 16.0 M.
COAL: BLK, BRIGHT.
26-1-74
SILTSTONE: BUFF, CARB.
300U, 18.0 M.
CLAYSTONE: BRN, FIRM, MOD FISS.
SANDSTONE: F. GR, WHITE, WELL ROUNDED & SORTED, OOZE.
125U.
WT 9.9
VIS 46
PH 9.8
F 5.0
Cl 6300
NO3 137
TEMP 120°F
CLAYSTONE: BUFF-LT OLIVE BRN, PYR.
150U, 18.0 M.
COAL: BLK, BRIGHT.
WT 9.9
VIS 47
PH 9.8
F 5.0
Cl 6200
TEMP 125°F
150U, 21.0 M.
SILTST: BRN, CARB, MICA.
27-1-74
CLAYSTONE: LT OLIVE BRN. PYR, SUB-FISS, MICA.
175U, 21.0 M.
SILTST: DK-MED BR, CARB. TR INTER LAM. SS V.F., LT GRY, CARB
C.O. NB.9, J.33 37.3 HRS.
TG-125
28-1-74
COAL: BLACK & DULL
C.O.
WT 9.9
VIS 43
PH 10.0
F 5.0
Cl 5100
TEMP 120
NO3 112
STUCK PIPE PULLING OUT OF HOLE.
SILTSTONE: DK BRN, MICA, CARB.
165U, 19.0 M.
SANDSTONE: BR, VF S/A, FAIRLY STD, FAINT FLUOR, FAIR CUT, SHOW, BLEEDING GAS.
235U, 23.0 M.
COAL: DULL, BLEEDING GAS.
WT 9.9
VIS 44
PH 9.8
F 4.8
Cl 5100
TEMP 122°F.
CLAYSTONE: BRN, PYR.
28-1-74
SCALE CHANGE 150 100 50
SILTSTONE: MED-DK GRY, CARB, MICA.
WT 9.9
VIS 46
PH 9.8
F 4.8
Cl 4800
NO3 125
TEMP 126°F
CLAYST: BRN, MICA, PYR, CARB.
C.O.
NB-10, XDG, 2.2 HRS
30-1-74
NB-11, J22, 46.6 HRS
TG 60
TG 75
SILTST: TAN-DK.GRY, PYR, MICA, CARB.
METAMORPHIC: LT. GRY, F. GRN, HARD, DK. SPOTS, SILICIOUS.
IGNEOUS: AMPHIBOLITE, WH-GRN., MOTTLED, F'SPAR, PYR.
31-1-74
AMPHIBOLITE: A/A, TR. BR. MUDSTONE.
700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200