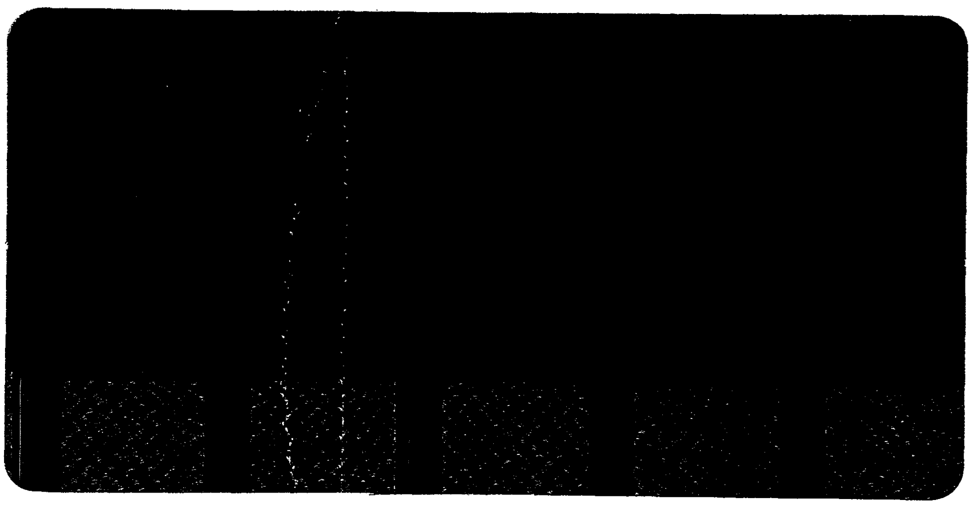
APPENDIX 6



W907

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OMEO-2 DIPMETER INTERPRETATION

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OMEO-2 DIPMETER INTERPRETATION

Comprehensive dipmeter interpretation involves reference to both scales of processing, ie:-

(a) Mean square dip MDS processing optimises for structural and larger scale sedimentary dip features. These represent the dominant dips which are vertically and laterally significant and extensive. Bedding planes and the larger scale sedimentary structures such as cross bedding and grouped laminations are examples of such features.

The interpretation analyses the grouping together of dips within genetic units or individual depositional cycles by pattern arrangement.

(b) Dual dip processing optimises for smaller scale sedimentary features as well as recognising all dips seen by MSD. The continuous side by side processing (part of DUAL DIP) allows for identification of planes (sedimentary structures) that do not cross the bore hole. This is particularly useful in smaller scaled cross bedding and flaser bedding.

Dipmeter interpretation must incorporate all available well data to calibrate the dips with genetic sequences and a geological model both structurally and environmentally wherever possible.

LOG QUALITY

Tool response throughout the dipmeter acquisition runs was optimum. Tool checks are shown on the SHDT Field Log. Data accuracy can be ascertained by comparing the repeat processing. Fast channel activity gives an indication of the resistivity contrasts within the formation and hence serves as a further check.

In areas of rugose hole, pad flotation will cause a straight line effect on the fast channels indicating a floating pad or button.

Washed out hole, provided it does not exceed the maximum caliper extension and is not rugose, can provide good data as the pad will expand into the washout.

In the Omeo-2 well, formation dip data was acquired using the stratigraphic high resolution dipmeter tool (SHDT) and two runs into the hole.

The caliper log indicates that considerable washout has occurred throughout the section causing extensive hole rugosity.

Rugose hole is particularly evident between 2250-2325m, 2450-2500m, 2620-2700m, 2852-2860m and 3300m to TD. These intervals, however, do contain short sections of in gauge and non-rugose washed out hole, allowing the dipmeter to function properly.

One significant feature of the four-arm dipmeter tool is that it requires only 3 pad contact to define a plane, thus in the event of rugose or washed out hole 3 pads may still contact the borehole defining a dip.

Partial pad contact has been lost (due to washout) at 2475m, 2455m, 2440m, 2372m, 2355m and 2345m indicated by straight-lining on the fast channels.

Excepting the above and small isolated washouts, the remaining intervals furnished reliable dip data.

MEAN SQUARE DIP INTERPRETATION

Commencing at TD the log shows well developed, depositional and post-depositional (compaction) dips ranging from 20 degrees northeast to 10 degress northeast at 2855m. This trend constitutes a mega-red pattern (increasing dip with depth) due to off-lapping or trough-filling sediments, toward a northeasterly depocentre or trough axis. (see figure 1.)

Sediment transport directions, given by blue (dip decreasing with depth) pattern support the northeasterly transport direction. The azimuths of the dips (reflecting larger scaled sedimentary structures and bed boundaries) have the same orientation as the off structure direction. This parallelism is exactly as expected given the case shown in figure 1.

Although palaeocurrent direction cannot be determined prior to structural dip removal, if the azimuths are parallel then a net decrease in dip magnitude without azimuth rotation is the only effect.

The structural component of dip is estimated to range from 5 to 15 degrees NE from dips within shales assumed to have been laid down flat. The shales, however, show poor preservation of dip, supporting continuing depocentre subsidence and a palaeoslope resulting in the destruction of sedimentary structures.

An unconformity is postulated at 2862 metres indicated by a change from NE to E in dip azimuth and a decrease in dip magnitude above this depth. The presence of volcanics between 2862 and 2855m supports the unconformity.

A second (sand on sand) unconformity is postulated at 2718m, within an overall arenaceous sequence.

Evidence for an unconformity is:

1) the presence of a blue pattern having a dip magnitude range from 8 degrees to 37 degrees over 3 metres at 2720-23m

2) the pattern occurs with the middle of a sand sequence rather than at the base where the highest energy structures are expected.

3) the sand sequence shows a distinct Gamma Ray break at 2718m associated with a sharp washout.

4) the character of the fast channels changes below 2718m from highly active and regular to active and irregular indicating differing sandstones.

Sediment transport continues to be northeasterly directed reflecting ongoing basin subsidence. The unconformities are postulated to represent periods of non-subsidence or minor fault rebound.

On faulting, no major fault crosses the borehole, although at TD a small red pattern may represent drag in the down thrown block of a normal, northeasterly dipping fault, whose strike is northwest-southeast (figure 1).

The postulated fault supports the contention of continued subsidence outlined above. Alternatively continued fault growth (uplift of the upthrown block) may give rise to the same sedimentary dips (structures). Movement is late rather than early, hence drag, not rollover is expected.

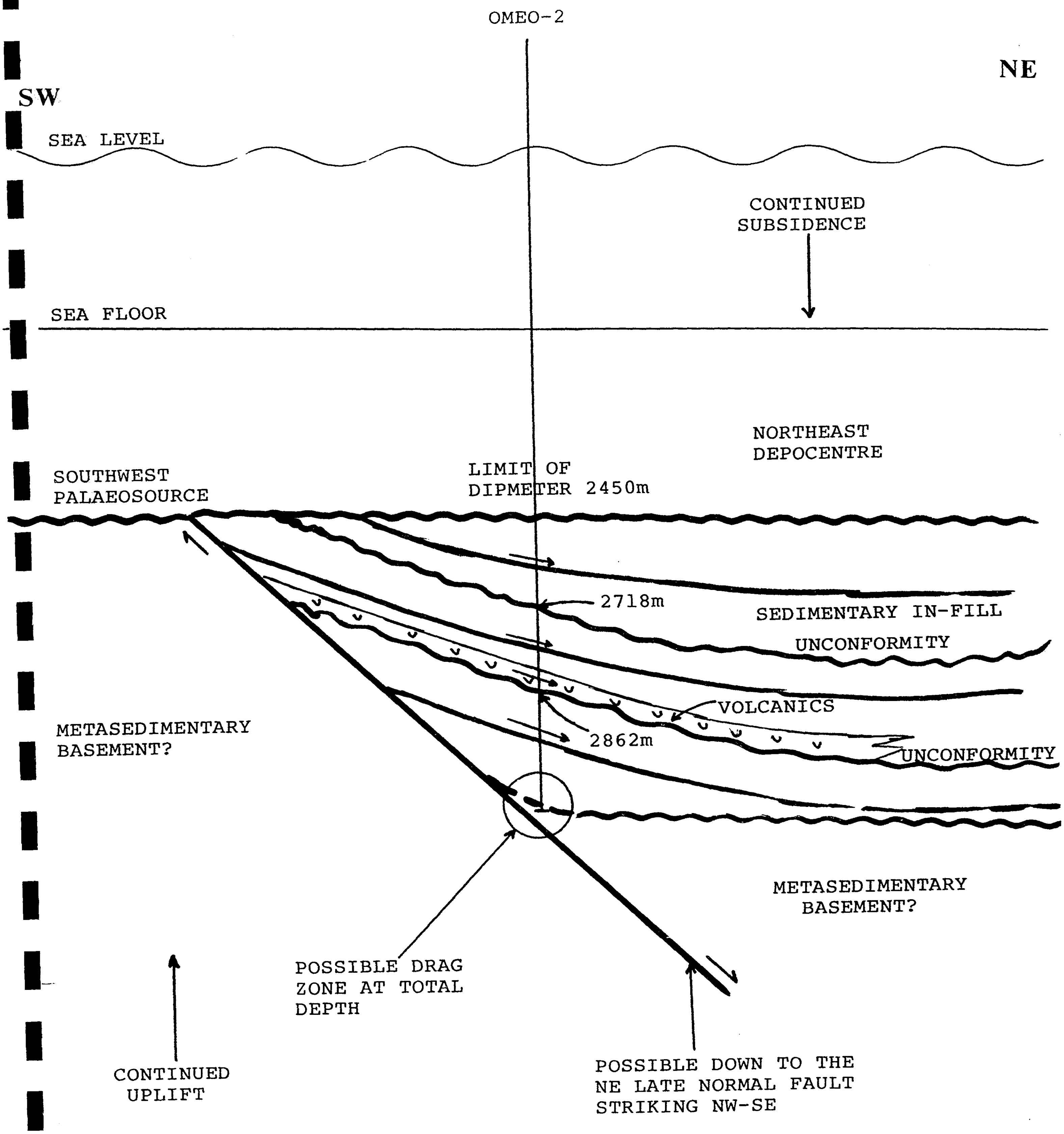
For a more detailed environmental analysis it is necessary to subtract the dip component due to structuring (continued movement) and to use curve shape and strata contrast analysis in conjunction with the dipmeter.

As the well is dry, due to a structural rather than environmental problem no further analysis is recommended for the immediate post drill evaluation.

Should the distribution of reservoir rocks within structure according to environment of deposition become necessary a larger scale processing after structural removal is envisaged.

This interpretation is necessarily brief and represents the minimum usage of the dipmeter, however does reflect the more important, geologically significant features in the well.

FIGURE 1


OMEO-2
SW
NE
SEA LEVEL
CONTINUED SUBSIDENCE
SEA FLOOR
NORTHEAST DEPOCENTRE
SOUTHWEST PALAEOSOURCE
LIMIT OF DIPMETER 2450m
2718m
SEDIMENTARY IN-FILL
UNCONFORMITY
VOLCANICS
2862m
UNCONFORMITY
METASEDIMENTARY BASEMENT?
METASEDIMENTARY BASEMENT?
POSSIBLE DRAG ZONE AT TOTAL DEPTH
CONTINUED UPLIFT
POSSIBLE DOWN TO THE NE LATE NORMAL FAULT STRIKING NW-SE

PE603564

This is an enclosure indicator page.
The enclosure PE603564 is enclosed within the container PE906225 at this location in this document.

The enclosure PE603564 has the following characteristics:

ITEM_BARCODE = PE603564
CONTAINER_BARCODE = PE906225
NAME = Mean Square Dip Log Run 1
BASIN = GIPPSLAND
PERMIT = VIC/P17
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Mean Square Dip Log (Run 1) for Omeo-2A
REMARKS =
DATE_CREATED = 6/07/85
DATE_RECEIVED = 12/12/85
W_NO = W907
WELL_NAME = OMEO-2A
CONTRACTOR = SCHLUMBERGER
CLIENT_OP_CO = AUSTRALIAN AQUITAINE PETROLEUM

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PE603565

This is an enclosure indicator page.
The enclosure PE603565 is enclosed within the container PE906225 at this location in this document.

The enclosure PE603565 has the following characteristics:

ITEM_BARCODE = PE603565
CONTAINER_BARCODE = PE906225
NAME = Mean Square Dip Log Run 2
BASIN = GIPPSLAND
PERMIT = VIC/P17
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Mean Square Dip Log (Run 2) for Omeo-2A
REMARKS =
DATE_CREATED = 8/07/85
DATE_RECEIVED = 12/12/85
W_NO = W907
WELL_NAME = OMEO-2A
CONTRACTOR = SCHLUMBERGER
CLIENT_OP_CO = AUSTRALIAN AQUITAINE PETROLEUM

(Inserted by DNRE - Vic Govt Mines Dept)