Australian Aquitaine Petroleum Pty. Ltd.

PROGRESS REPORT

E.L. 234 - WEST TENNANT

Distribution

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MG 166

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1.0 INTRODUCTION

The West Tennant EL 234 of 238 sq. kms. is situated some 35 kms west of Tennant Creek township, and extends south from the Warrego Mine.

Western Nuclear constructed an unsurveyed grid over the area and completed detailed ground magnetometry over the grid. This was followed by a series of percussion holes drilled on top of small magnetic peaks. Three holes were also drilled close to the large magnetic high, and one of these (drilled vertically to 250') intersected chlorite-magnetite rock.

2.0 RECONNAISSANCE MAGNETOMETRY

In February, 1972, reconnaissance magnetometry totalling 3 kms was completed in the area of the main anomaly. The magnetic high was precisely located and a N-S profile run through it. In addition, traverses to the south of the Geopeko leases to the east were run - these indicated that none of their anomalies extended beyond the lease boundaries.

3.0 SURVEYING AND DETAILED GROUND MAGNETOMETRY

A decision was made to survey a 900m x 900 m grid, over the anomaly and this work, (14.4 kms) was completed in one day by two survey parties.

Ground magnetometry was carried out in 6 man days as described in the Eldorado Progress Report. Much sidestepping was required as surface noise was particularly prevalent. This is probably due to the thin veneer of the Cambrian Gum Ridge formation which at West Tennant consists of a ferruginous siliceous breccia. The resulting contour plan before smoothing was found to be far smoother than the Western Nuclear plan of the same area.

4.0 PRINCIPAL PROFILE AND CORRECTION

This was selected as a N-S line through the anomaly peak. Over 500 measurements were taken as a result of surface noise, but a reasonably reliable curve could be drawn after plotting the selected and averaged readings. Only the peak values are in doubt.

The principal profile was then corrected for a regional gradient of 120g per 2100m - a figure in reasonable accordance with the aeromagnetic data.

5.0 INTERPRETATION

The method of matching with standard curves for infinite tabular bodies was used (see 'Eldorado' Progress Report). The principal profile was smoothed, and the peak reduced to coincide with a greater density of points. The curve match without this correction was poor.

The final match is moderate, but attenuation of the peak width is still indicative of a multiple source (as for TC 3 on

.../3

'Eldorado') and would have been far more so without the peak correction. Parameters derived from the thin curve match are :-

Depth	Location	Dip	Thickness	Susceptibility
85 m	1328N/1200E	72°S *	6.6m *	0.1 (assumed)

* Demagnetization corrections applied.

Only the dip is expected not to be precise (see section 10.2 'Eldorado' Progress Report).

6.0 DRILLING PROPOSAL

It is proposed that a 160m diamond drill hole be drilled at an angle of 65° to the North from location 1260N 1200E to test the magnetic anomaly (see Figure 22). This drill hole would be subject to compensation for deflection.

(N.B. The position of the Western Nuclear hole which intersected chlorite-magnetite is also plotted on Figure 22).

R. Ramdohr

R. Cambrell

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M.G. 166
Fig 19c

West Tennant (A.P. 2344 - E.L. 234)

ANOMALY W.T.1

GROUND - MAGNETICS

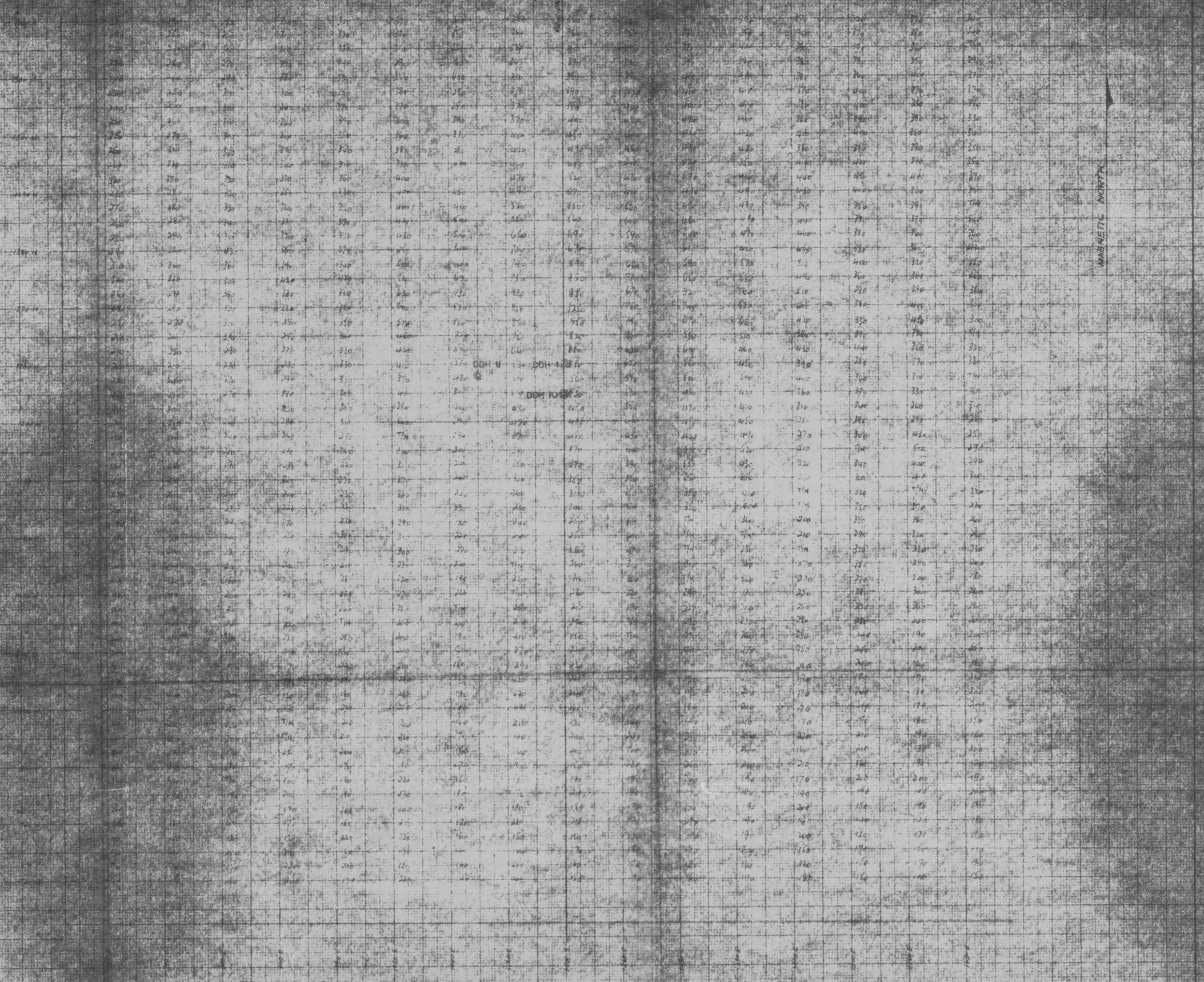
Vertical component

(Mcphar M-700 Magnetometer)

Corrected for diurnal drift

Scale 1:3000

April 1972



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M.G.162
Fig. 19b.

West Tennant A.P. 2344.

ANOMALY WT 1

SMOOTHED GROUND MAGNETICS

Vertical component

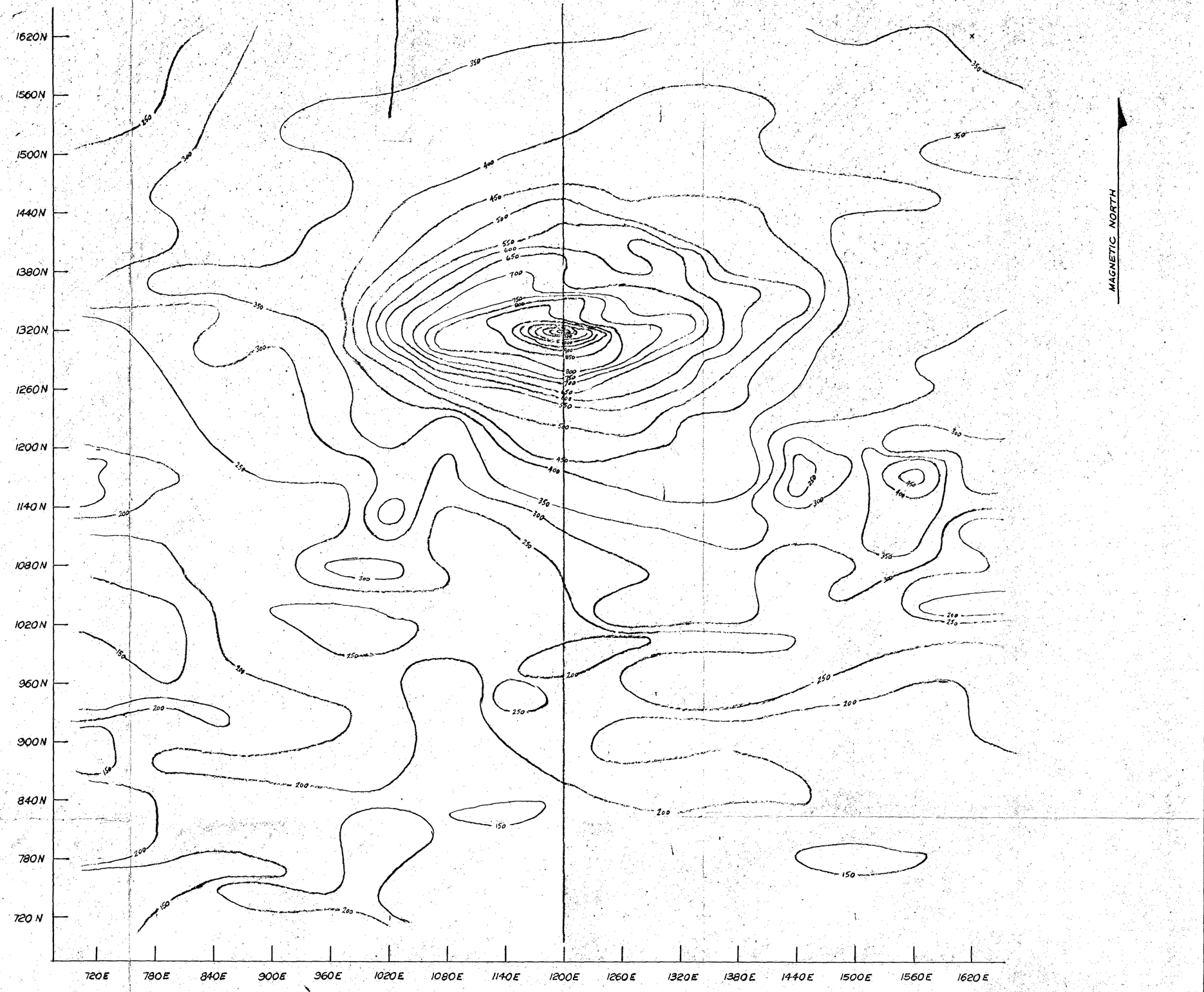
(Mcphar M-700 Magnetometer)

Corrected for diurnal drift

Contour Interval 50 γ

Scale 1:3000

April 1972.



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WEST TENNANT

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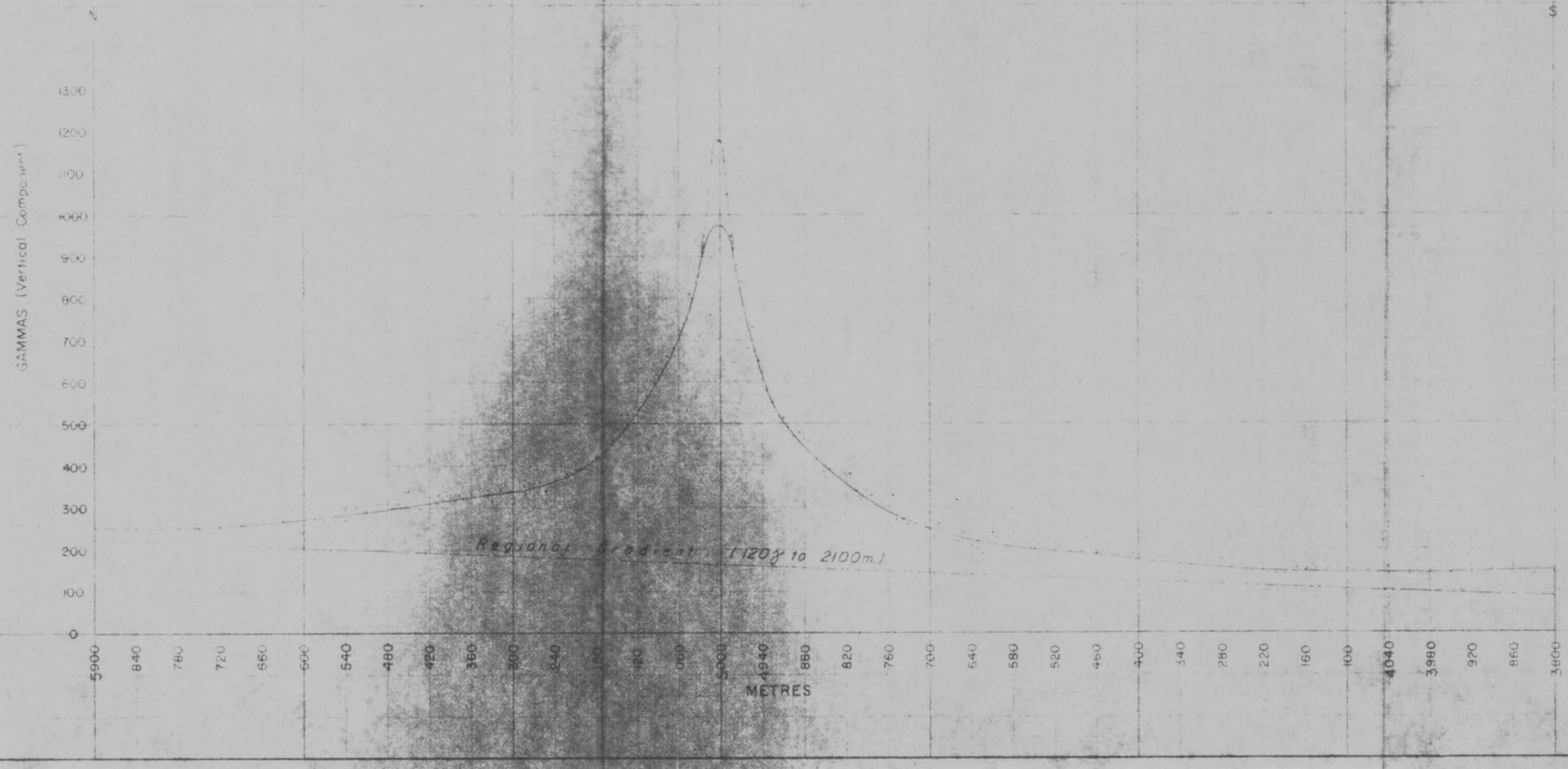
WT I PRINCIPAL PROFILE

Scale 1cm.=60m.
(1:6,000)

Fig. 20



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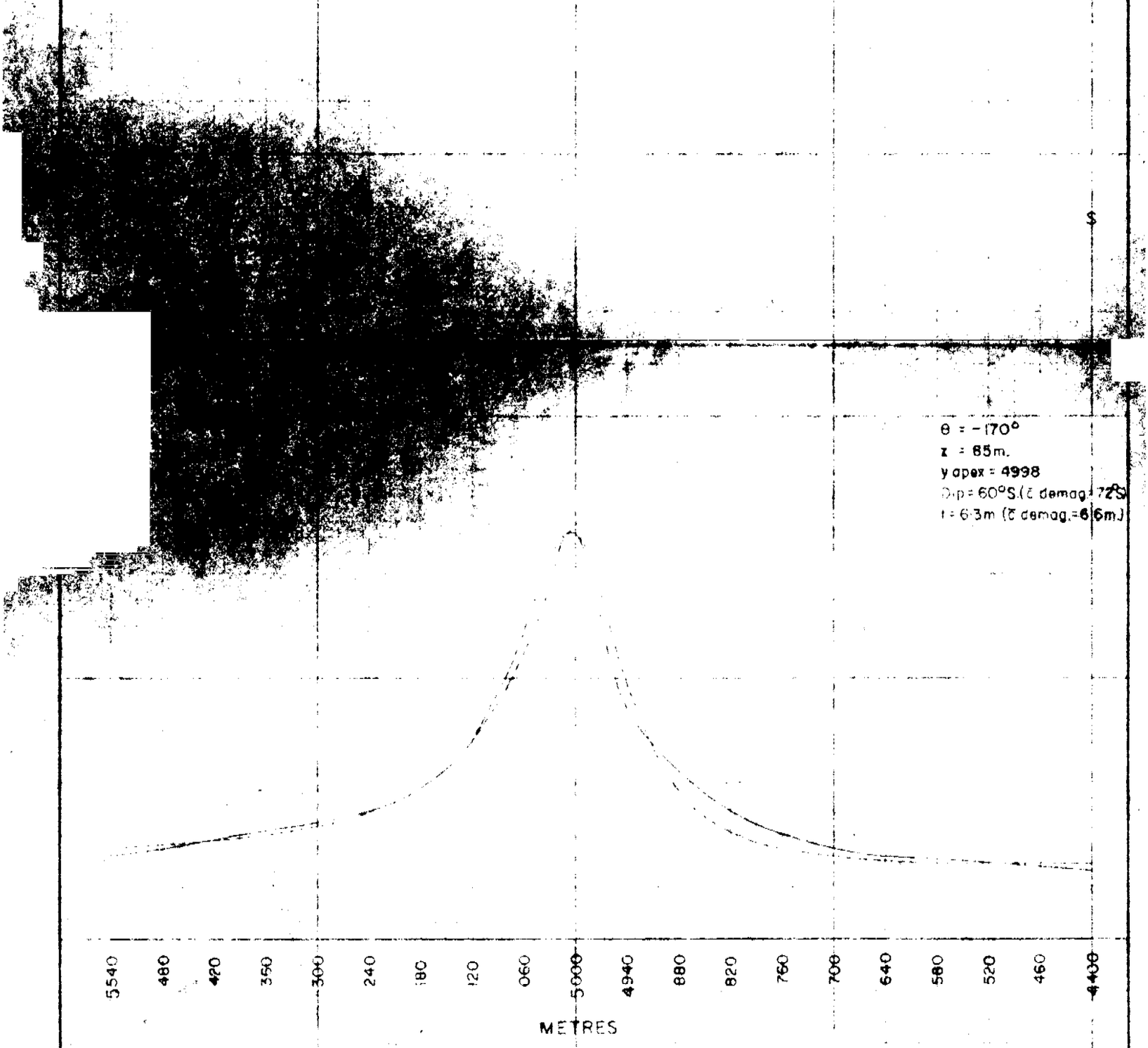
WTI CURVE MATCH

Fig. 21

Scale 1cm.=60m.
(1:6,000)



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WEST TENNANT
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Fig. 22

WT 1 DRILL PROPOSAL

Scale 1cm. = 10m.
(1:1,000)