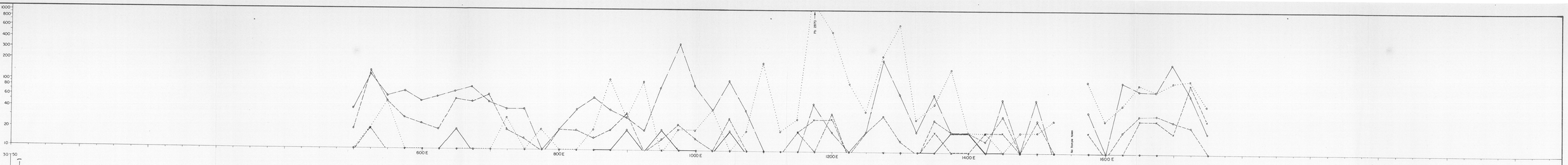
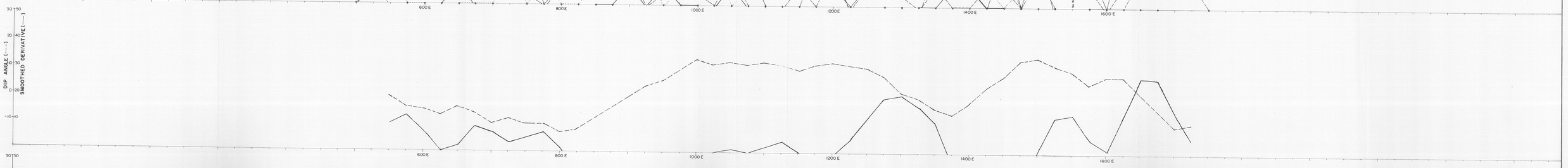
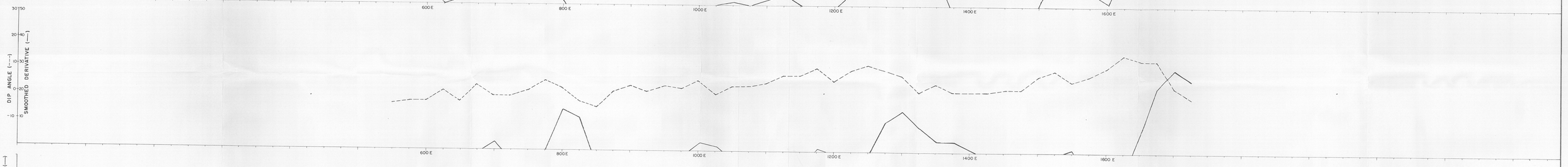
Geochemistry (P.P.M.)



V.L.F. - E.M.
Tx = Japan



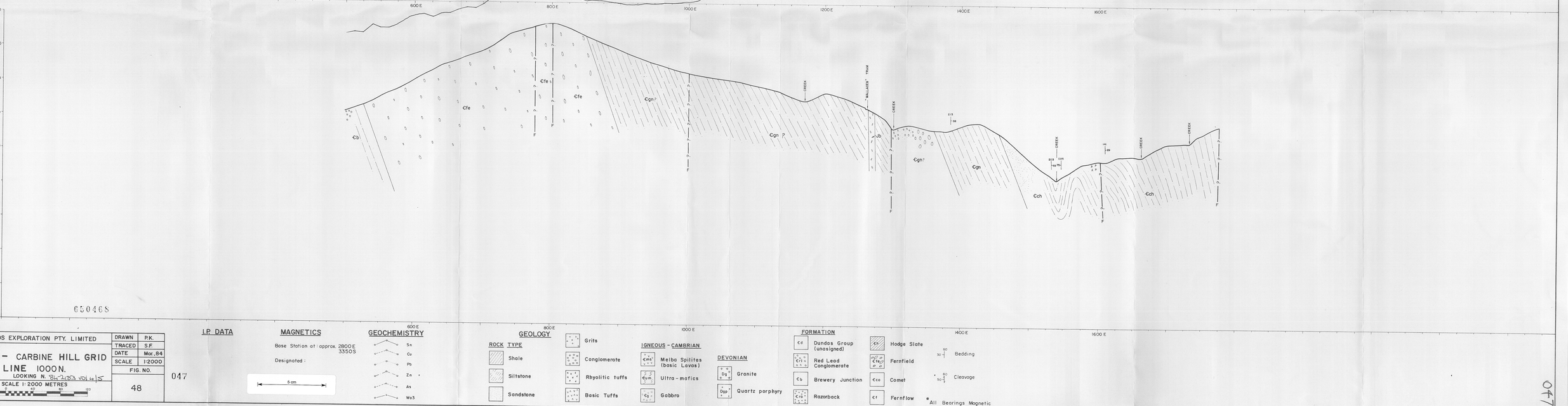
V.L.F. - E.M.
Tx = N.W. Cape



Gradient Array I.P.



Topography & Geology
HEIGHT ABOVE SEA LEVEL - (Metres)



650468

GOLD FIELDS EXPLORATION PTY. LIMITED	
E.L.42/71 – CARBINE HILL GRID	
LINE 1000N.	
LOOKING N.	
SCALE 1:2000 METRES	

DRAWN	P.K.
TRACED	S.F.
DATE	Mar.84
SCALE	1:2000
FIG. NO.	48

047

I.P. DATA

MAGNETICS

Base Station at: approx. 2800 E 3350 S

Designated:

6 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
Wo3

GEOLOGY

ROCK TYPE

- Shale
- Siltstone
- Sandstone
- Grits
- Conglomerate
- Rhyolitic tuffs
- Basic Tuffs

IGNEOUS – CAMBRIAN

- €ms Melba Spilites (basic Lavas)
- €um Ultra-mafics
- €g Gabbro

DEVONIAN

- Dg Granite
- Dqp Quartz porphyry

FORMATION

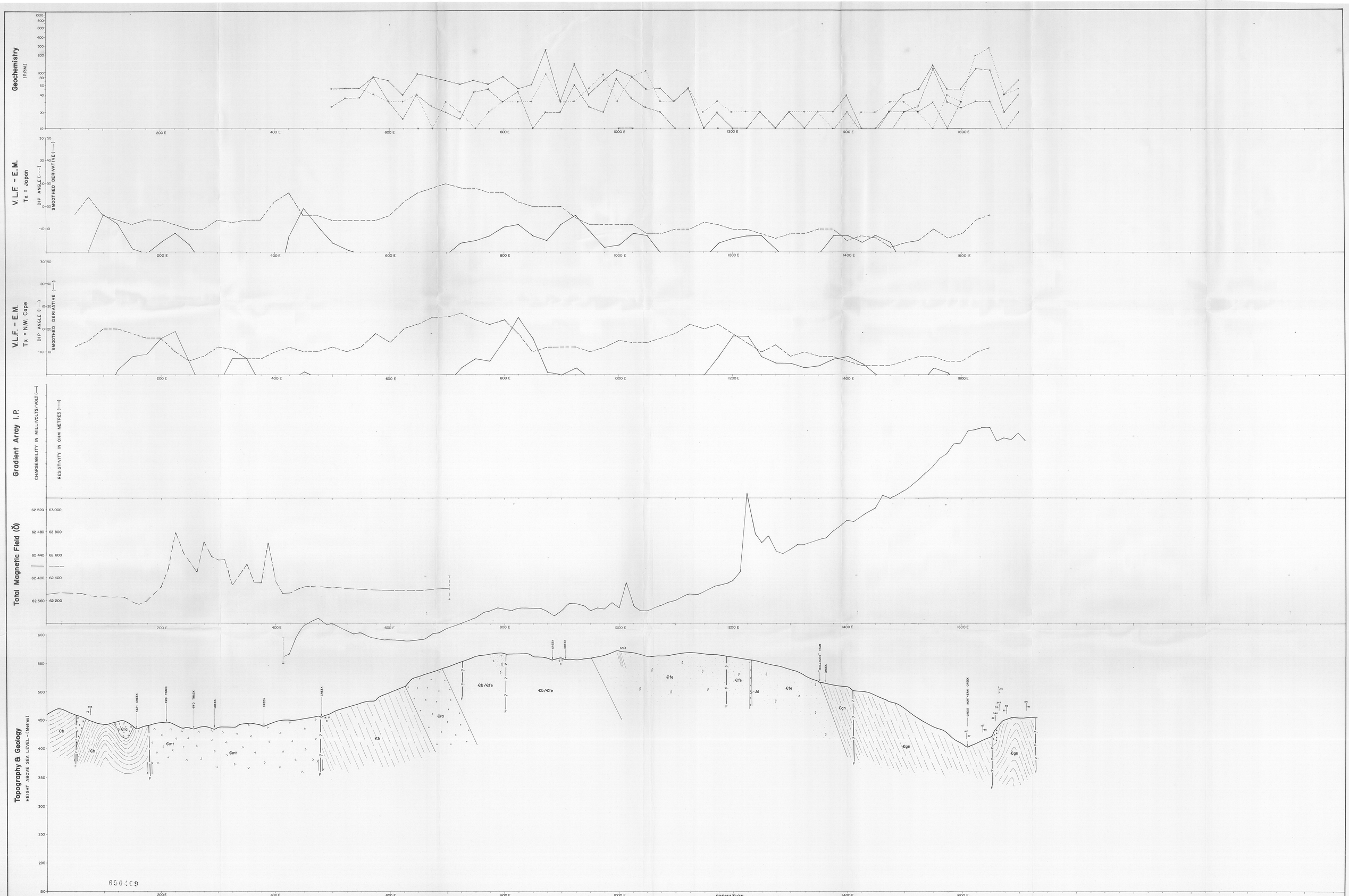
- €d Dundas Group (unasigned)
- €rl Red Lead Conglomerate
- €b Brewery Junction
- €ro Razorback
- €h Hodge Slate
- €fe Fernfield
- €co Comet
- €f Fernflow

50 / 30 Bedding

50 / 30 Cleavage

* All Bearings Magnetic

047



650409

GOLD FIELDS EXPLORATION PTY. LIMITED	DRAWN	P.K.
E.L.42/71 - CARBINE HILL GRID LINE 1200 N. LOOKING N. 84+2183 vol 4/5	TRACED	S.F.
	DATE	Mar.84
	SCALE	1:2000
	FIG. NO.	49

SCALE 1:2000 METRES

048

I.P. DATA

MAGNETICS

Base Station at: approx. 2800E 3350S

Designated:

5 cm

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, Wo3

GEOLOGY

ROCK TYPE: Shale, Siltstone, Sandstone, Grits, Conglomerate, Rhyolitic tuffs, Basic Tuffs

IGNEOUS - CAMBRIAN: Melba Spilites (basic Lavas), Ultra-mafics, Gabbro

DEVONIAN: Granite, Quartz porphyry

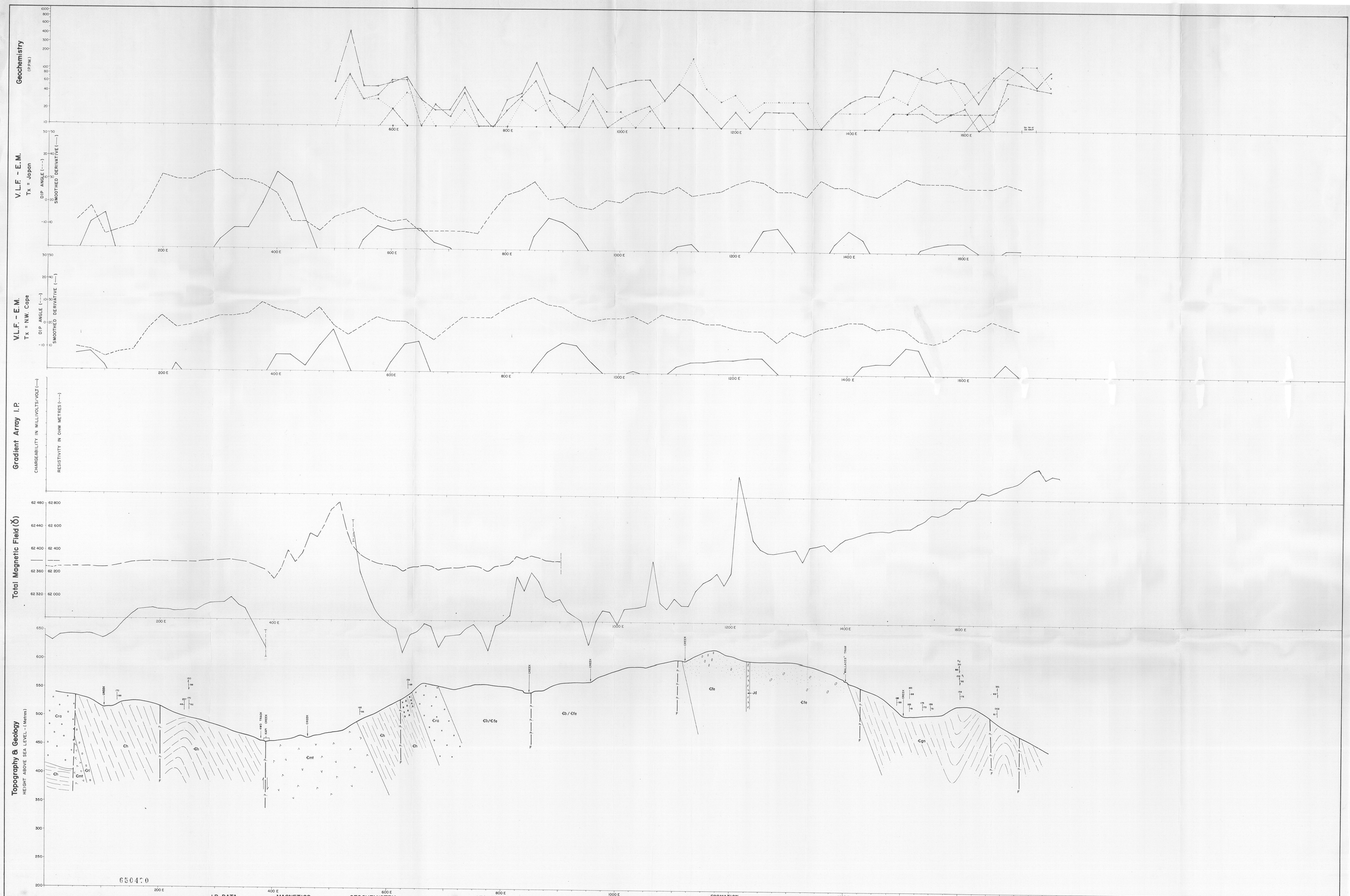
FORMATION

Dundas Group (unasigned), Red Lead Conglomerate, Brewery Junction, Razorback, Hodge Slate, Fernfield, Comet, Fernflow

Bedding, Cleavage

* All Bearings Magnetic

048



650470

GOLD FIELDS EXPLORATION PTY. LIMITED	DRAWN	P.K.
E.L.42/71 – CARBINE HILL GRID	TRACED	S.F.
LINE 1400 N.	DATE	Mar.,84
LOOKING N. 8L-2183 Vol 4/5	SCALE	1:2000
SCALE 1:2000 METRES	FIG. NO.	50

049

I.P. DATA

MAGNETICS

Base Station at approx. 2800E 3350S

Designated :

5 cm

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, Wo3

GEOLOGY

ROCK TYPE: Shale, Siltstone, Sandstone, Grits, Conglomerate, Rhyolitic tuffs, Basic Tuffs

IGNEOUS - CAMBRIAN: Melba Spilites (basic Lavas), Ultra-mafics, Gabbro

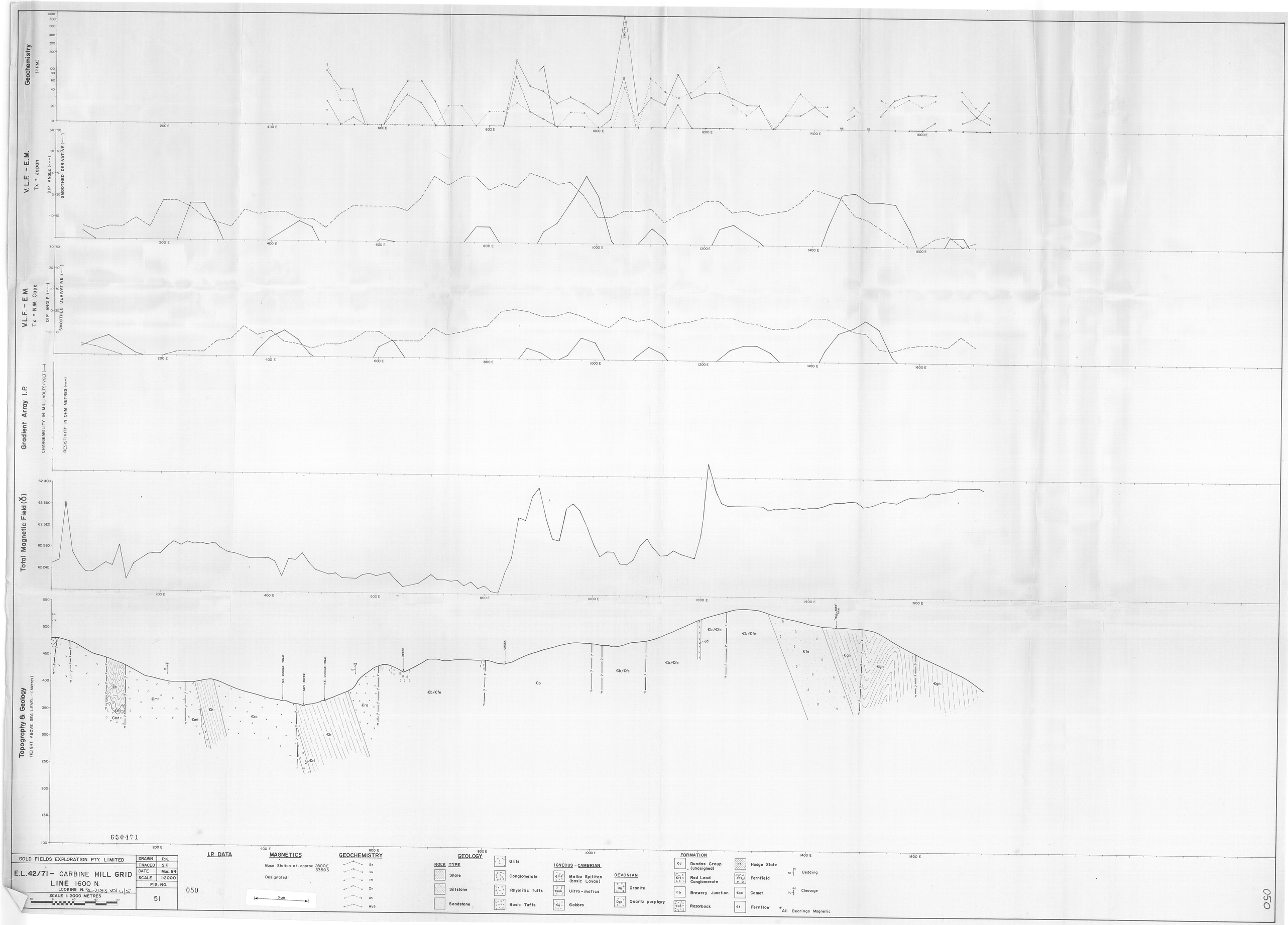
DEVONIAN: Granite, Quartz porphyry

FORMATION: Dundas Group (unasigned), Red Lead Conglomerate, Brewery Junction, Razorback, Hodge Slate, Fernfield, Comet, Fernflow

Bedding, Cleavage

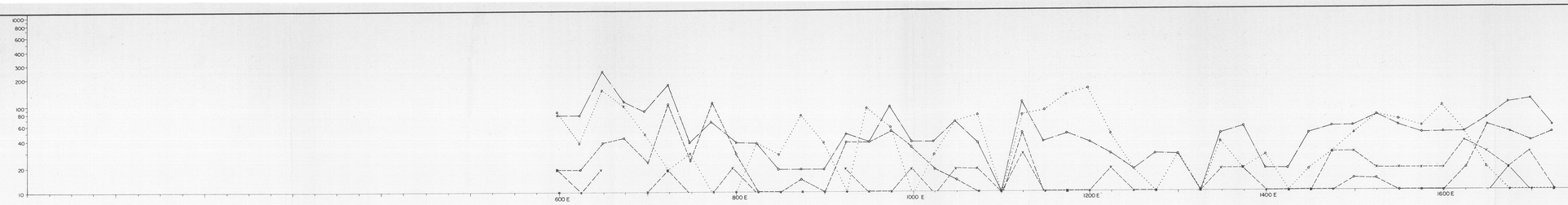
* All Bearings Magnetic

049

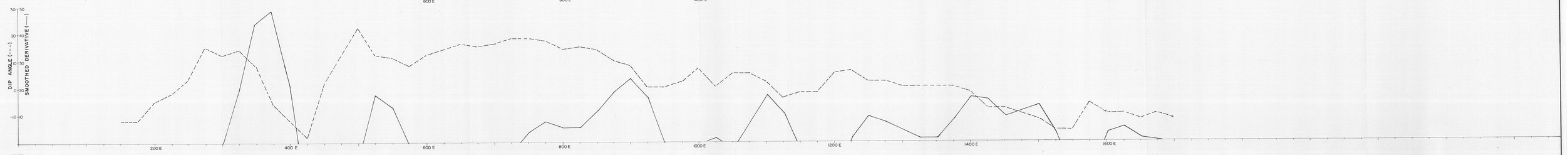


Geochemistry (P.P.M.)
V.L.F. - E.M. Tx = Japan
DIP ANGLE (---)
SMOOTHED DERIVATIVE (—)
V.L.F. - E.M. Tx = N.W. Cape
Gradient Array I.P.
CHARGEABILITY IN MILLIVOLTS/VOLT (—)
RESISTIVITY IN OHM METRES (---)
Total Magnetic Field (γ)
Topography & Geology
HEIGHT ABOVE SEA LEVEL - (Metres)
200 E
400 E
600 E
800 E
1000 E
1200 E
1400 E
1600 E
650471
GOLD FIELDS EXPLORATION PTY. LIMITED
E.L.42/71 - CARBINE HILL GRID
LINE 1600 N.
LOOKING N. 84-2183 vol 4/5
SCALE 1:2000 METRES
DRAWN P.K.
TRACED S.F.
DATE Mar.,84
SCALE 1:2000
FIG. NO.
51
050
I.P. DATA
MAGNETICS
Base Station at approx. 2800E 3350S
Designated :
5 cm
GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
Wo3
GEOLOGY
ROCK TYPE
Shale
Siltstone
Sandstone
Grits
Conglomerate
Rhyolitic tuffs
Basic Tuffs
IGNEOUS - CAMBRIAN
Melba Spilites (basic Lavas)
Ultra-mafics
Gabbro
DEVONIAN
Granite
Quartz porphyry
FORMATION
Dundas Group (unasigned)
Red Lead Conglomerate
Brewery Junction
Razorback
Hodge Slate
Fernfield
Comet
Fernflow
Bedding
Cleavage
* All Bearings Magnetic

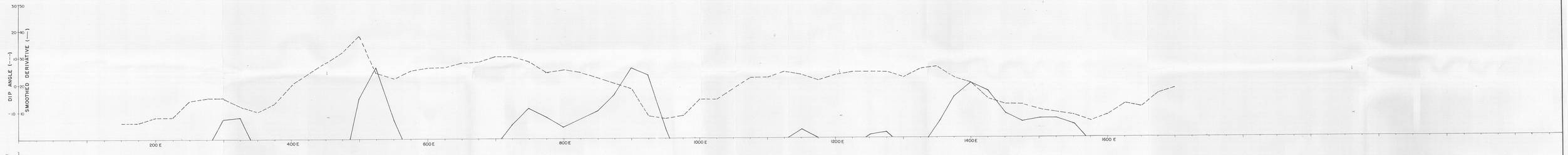
Geochemistry (P.P.M.)



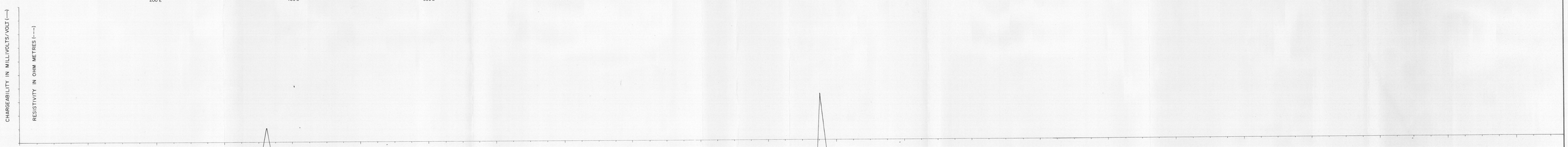
V.L.F. - E.M.
Tx = Jopon



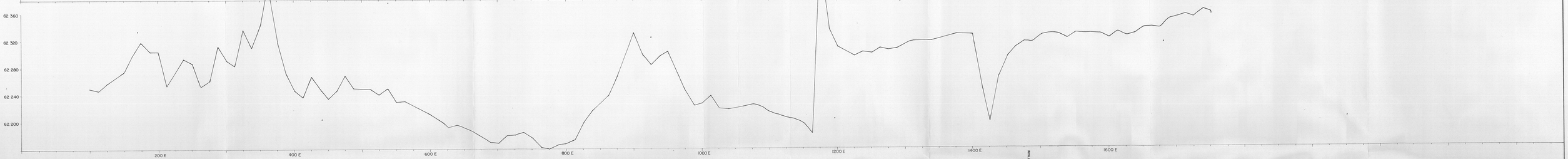
V.L.F. - E.M.
Tx = N.W. Cape



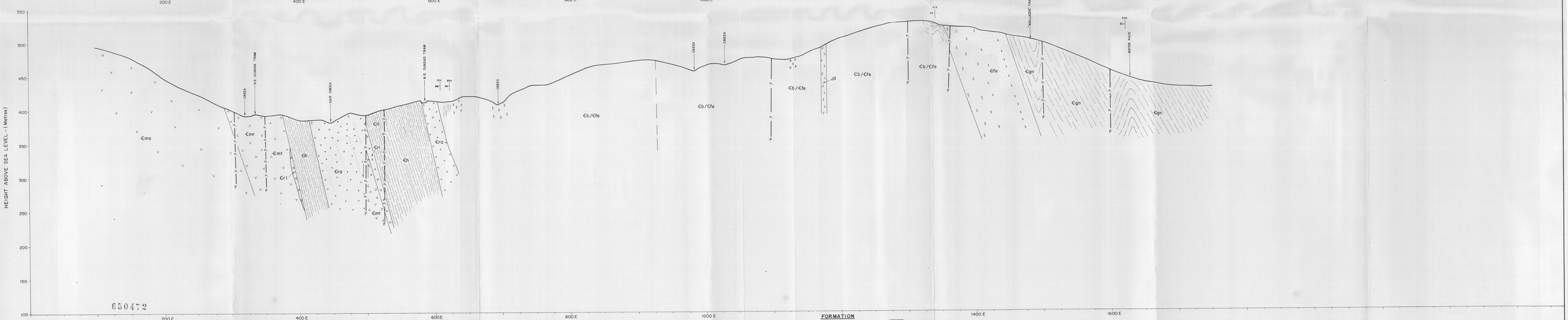
Gradient Array I.P.



Total Magnetic Field (δ)



Topography & Geology
HEIGHT ABOVE SEA LEVEL - (Metres)



650472

GOLD FIELDS EXPLORATION PTY. LIMITED	
E.L.42/71 - CARBINE HILL GRID	
LINE 1800 N.	
LOOKING N. 324-283 VOL 4/5	
SCALE 1:2000 METRES	

DRAWN	P.K.
TRACED	S.F.
DATE	Mar.,84
SCALE	1:2000
FIG. NO.	52

051

I.P. DATA

MAGNETICS

Base Station at : approx. 2800 E 3350 S

Designated :

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
Wo3

GEOLOGY

ROCK TYPE

- Shale
- Siltstone
- Sandstone
- Grits
- Conglomerate
- Rhyolitic tuffs
- Basic Tuffs

IGNEOUS - CAMBRIAN

- Cms — Melbo Spilites (basic Lavas)
- Cum — Ultra-mafics
- Cg — Gabbro

DEVONIAN

- Dg — Granite
- Dqp — Quartz porphyry

FORMATION

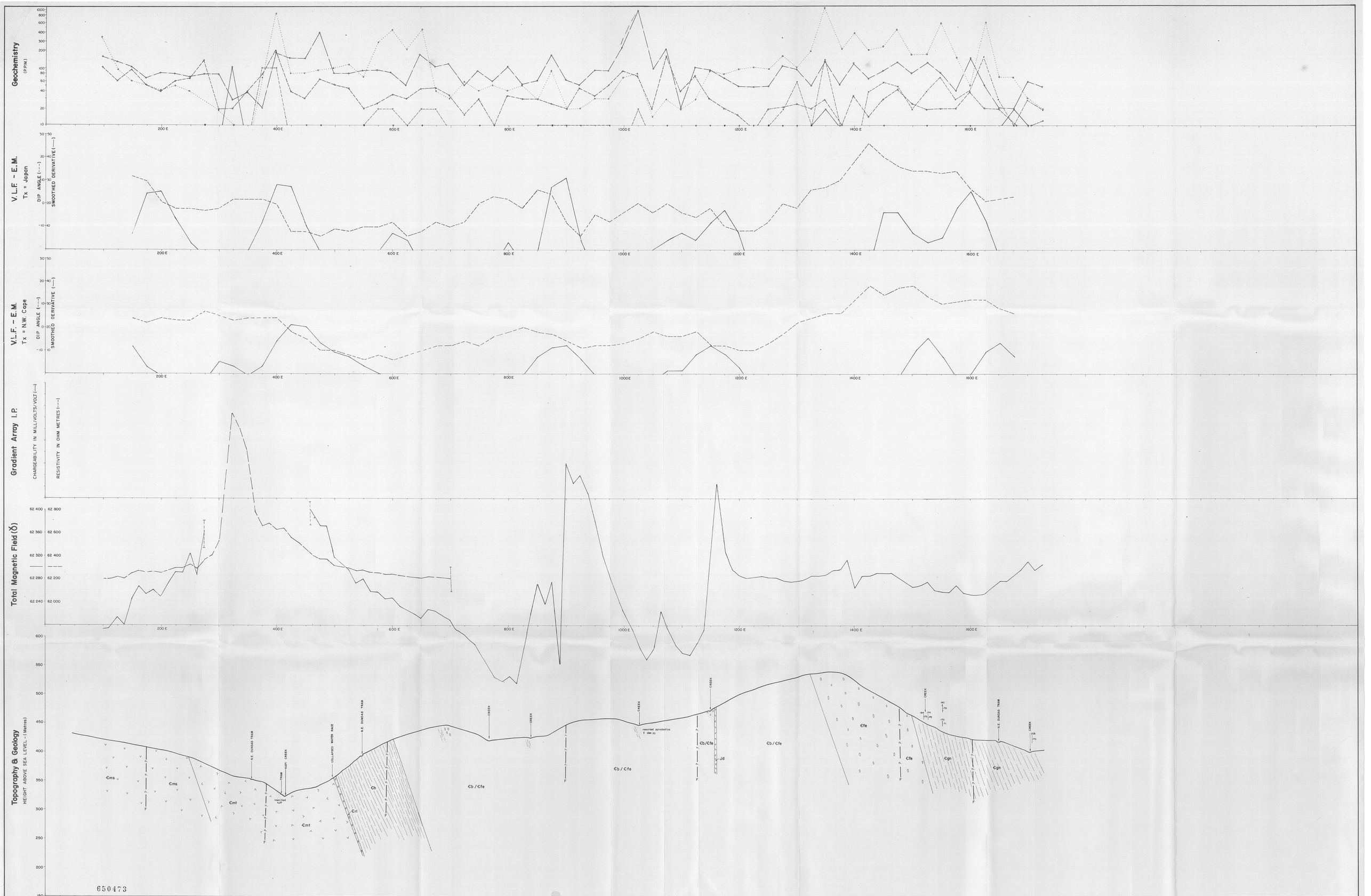
- Cd — Dundas Group (unasigned)
- Crl — Red Lead Conglomerate
- Cb — Brewery Junction
- Cra — Razorback
- Ch — Hodge Slate
- Cf — Fernfield
- Cco — Comet
- Cr — Fernflow

60/30 Bedding

80/50 Cleavage

* All Bearings Magnetic

051



GOLD FIELDS EXPLORATION PTY. LIMITED

E.L.42/71 - CARBINE HILL GRID

LINE 2000 N.

LOOKING N. 84-2183 vol 4/5

SCALE 1:2000 METRES

DRAWN	P.K.
TRACED	S.F.
DATE	Mar. 84
SCALE	1:2000
FIG. NO.	53

052

I.P. DATA

MAGNETICS

Base Station at: approx. 2800E 3350S

Designated:

5 cm

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, Wo3

GEOLOGY

ROCK TYPE

Shale, Siltstone, Sandstone, Grits, Conglomerate, Rhyolitic tuffs, Basic Tuffs

IGNEOUS - CAMBRIAN

Ꞓms Melba Spilites (basic Lavas), Ꞓum Ultra-mafics, Ꞓg Gabbro

DEVONIAN

Dg Granite, Dgp Quartz porphyry

FORMATION

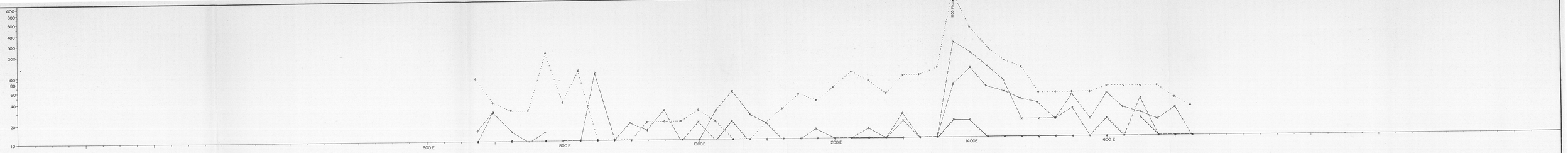
Ꞓd Dundas Group (unasigned), Ꞓrl Red Lead Conglomerate, Ꞓb Brewery Junction, Ꞓro Razorback, Ꞓh Hodge Slate, Ꞓfe Fernfield, Ꞓco Comet, Ꞓf Fernflow

Bedding, Cleavage

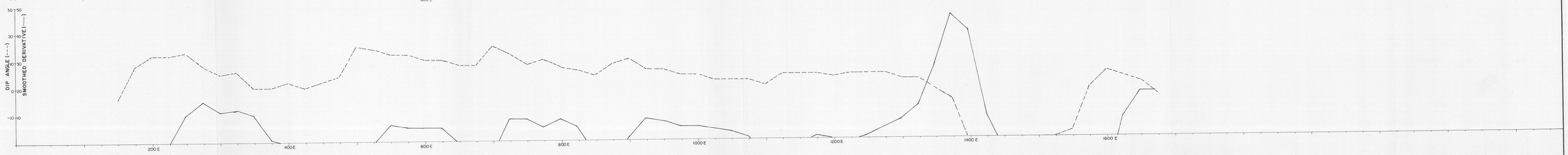
*All Bearings Magnetic

052

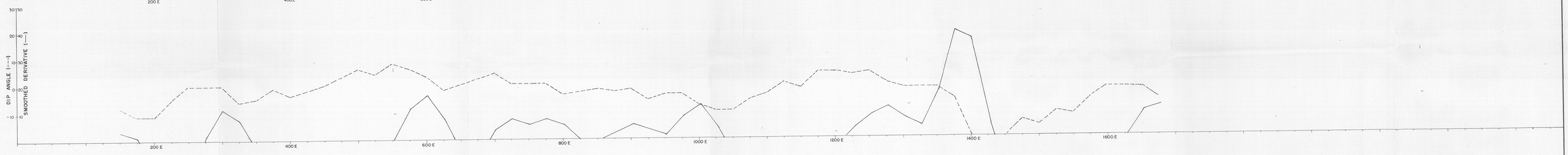
Geochemistry (P.P.M.)



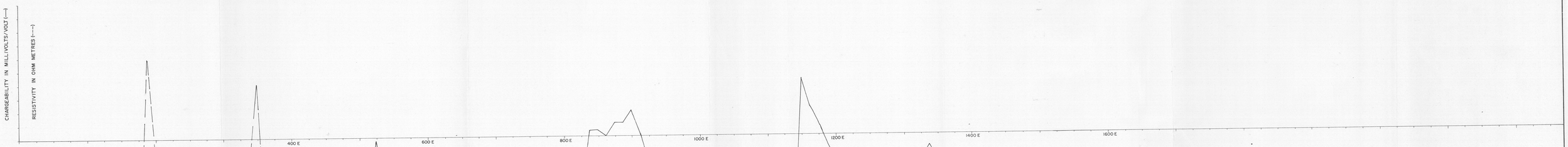
V.L.F. – E.M.
Tx = Jopon



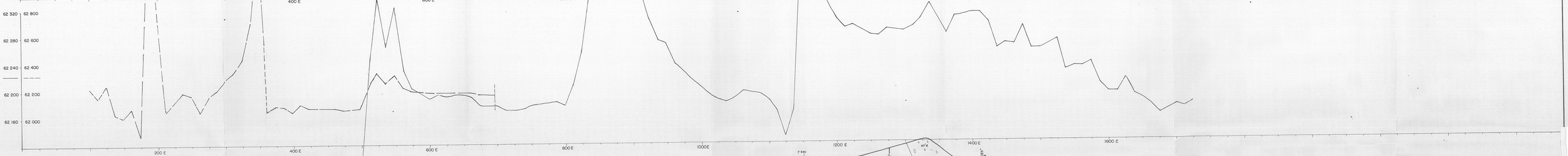
V.L.F. – E.M.
Tx = N.W. Cape



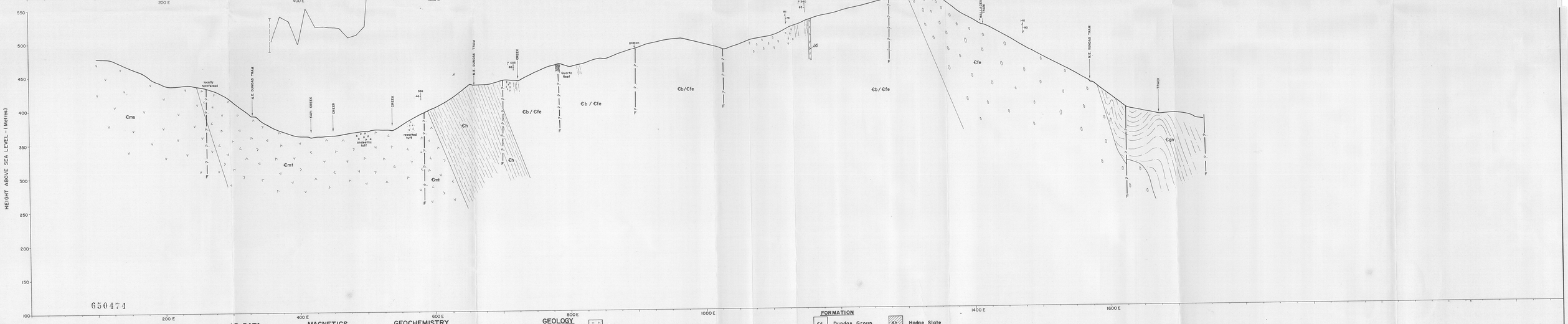
Gradient Array I.P.



Total Magnetic Field (Ø)



Topography & Geology
HEIGHT ABOVE SEA LEVEL – (Metres)



650474

GOLD FIELDS EXPLORATION PTY. LIMITED	DRAWN	P.K.
	TRACED	S.F.
E.L.42/71 – CARBINE HILL GRID	DATE	Mar.84
LINE 2200 N	SCALE	1:2000
LOOKING N.W.	FIG. NO.	54
SCALE 1: 2000 METRES		

I.P. DATA

MAGNETICS
Base Station at : approx. 2800 E 3350 S
Designated :

5 cm

GEOCHEMISTRY.
Sn
Cu
Pb
Zn
As
Wo3

GEOLOGY

ROCK TYPE
- Shale
- Siltstone
- Sandstone
- Grits
- Conglomerate
- Rhyolitic tuffs
- Basic Tuffs

IGNEOUS – CAMBRIAN
- Melba Spilites (basic Lavas)
- Ultra – mafics
- Gabbro

DEVONIAN
- Granite
- Quartz porphyry

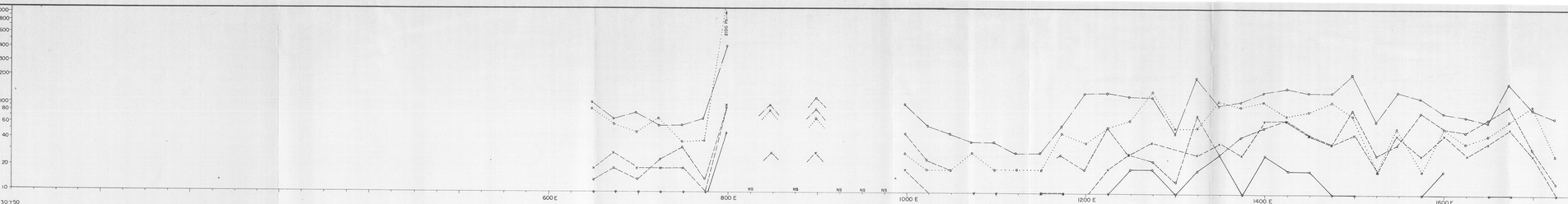
FORMATION
- Cd Dundas Group (unasigned)
- Red Lead Conglomerate
- Cb Brewery Junction
- Razorback
- Hodge Slate
- Fernfield
- Cco Comet
- Cf Fernflow

30/60 Bedding
50/50 Cleavage

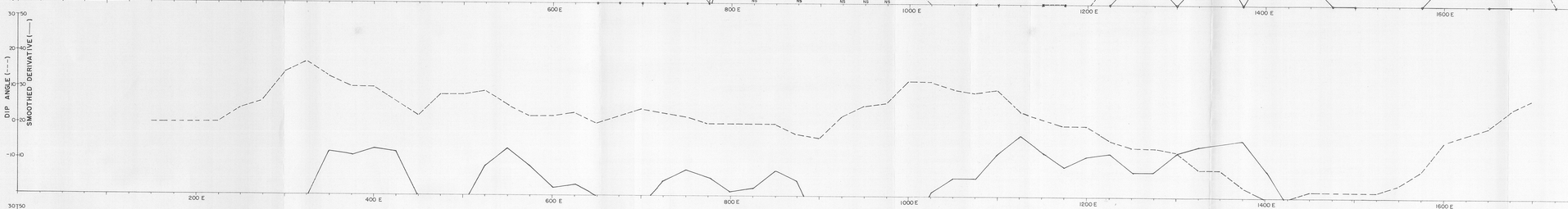
*All Bearings Magnetic

053

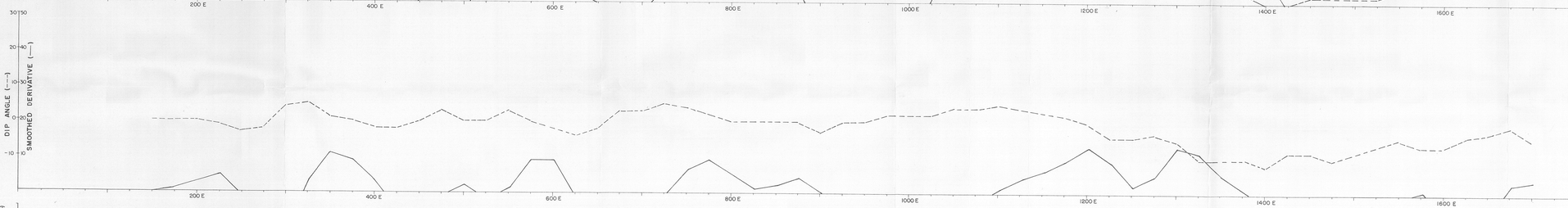
Geochemistry (P.P.M.)



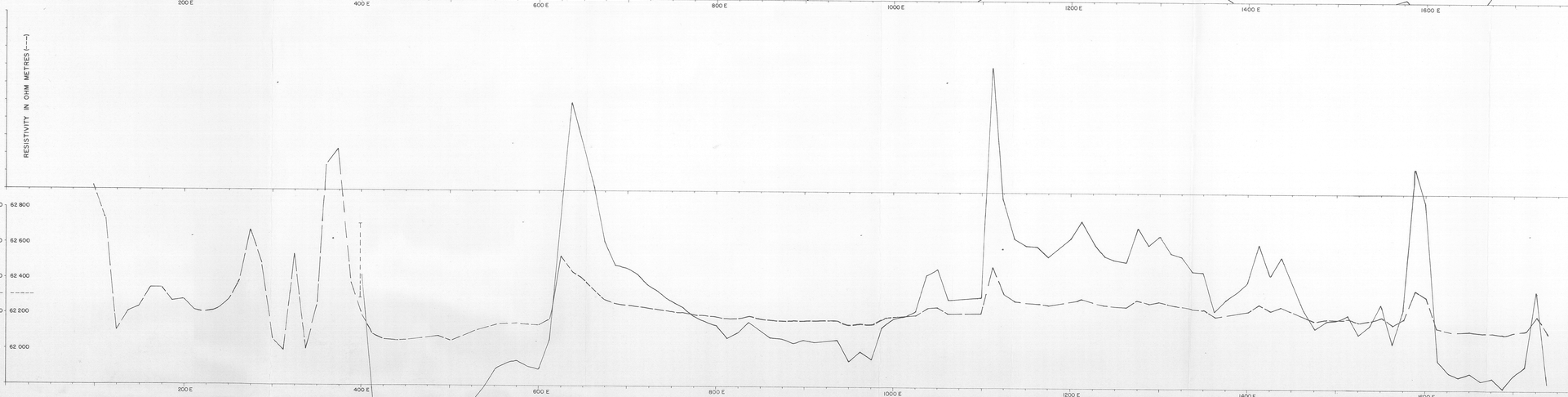
V.L.F. - E.M.
Tx = Japan



V.L.F. - E.M.
Tx = N.W. Cape



Gradient Array I.P.



Total Magnetic Field (δ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (Metres)

650475

GOLD FIELDS EXPLORATION PTY. LIMITED	DRAWN P.K.
	TRACED S.F.
E.L.42/71 - CARBINE HILL GRID	DATE Mar.84
LINE 2400 N.	SCALE 1:2000
LOOKING N. 84-2183 vol 4 f5	FIG. NO. 054
SCALE 1:2000 METRES	55

I.P. DATA

MAGNETICS
Base Station at : approx. 2800 E 3350 S
Designated :

5 cm

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
Wo3

GEOLOGY

ROCK TYPE
- Shale
- Siltstone
- Sandstone
- Grits
- Conglomerate
- Rhyolitic tuffs
- Basic Tuffs

IGNEOUS - CAMBRIAN
- Cms — Melba Spilites (basic Lavas)
- Cum — Ultra-mafics
- Cg — Gabbro

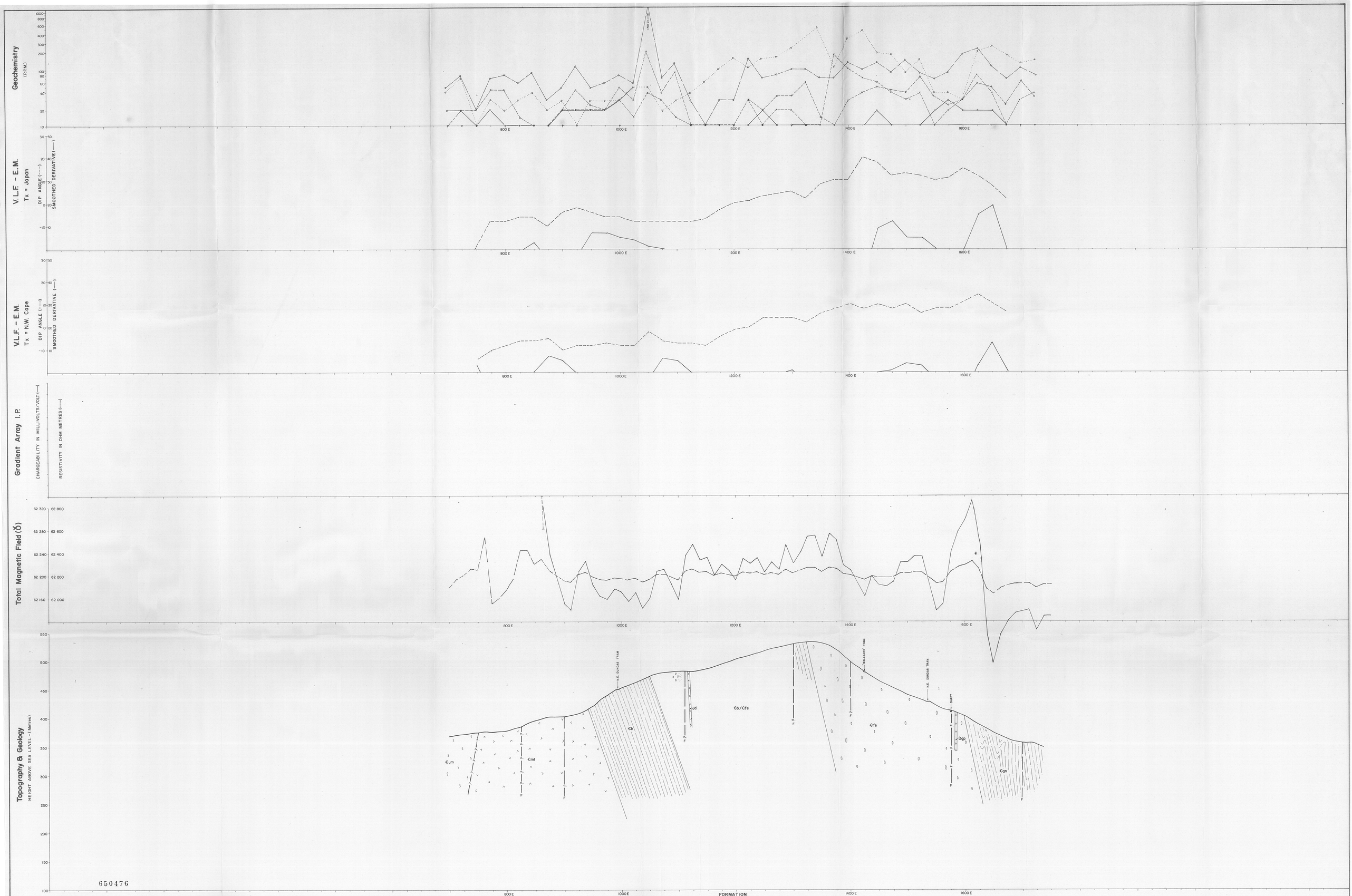
DEVONIAN
- Dg — Granite
- Dqp — Quartz porphyry

FORMATION
- Cd — Dundas Group (unasigned)
- Cfl — Red Lead Conglomerate
- Cb — Brewery Junction
- Cra — Razorback
- Hodge Slate
- Fernfield
- Cco — Comet
- Cf — Fernflow

30/60 Bedding
50/60 Cleavage

* All Bearings Magnetic

054



GOLD FIELDS EXPLORATION PTY. LIMITED

E.L.42/71 - CARBINE HILL GRID

LINE 2600 N

LOOKING N. 8L-2183 vol 5/5

SCALE 1:2000 METRES

DRAWN	P.K.
TRACED	S.F.
DATE	Mar.,84
SCALE	1:2000
FIG. NO.	56

055

I.P. DATA

MAGNETICS

Base Station at: approx. 2800E 3350S

Designated:

5 cm

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, Wo3

GEOLOGY

ROCK TYPE

Shale, Siltstone, Sandstone, Grits, Conglomerate, Rhyolitic tuffs, Basic Tuffs

IGNEOUS - CAMBRIAN

Melba Spilites (basic Lavas), Ultra-mafics, Gabbro

DEVONIAN

Granite, Quartz porphyry

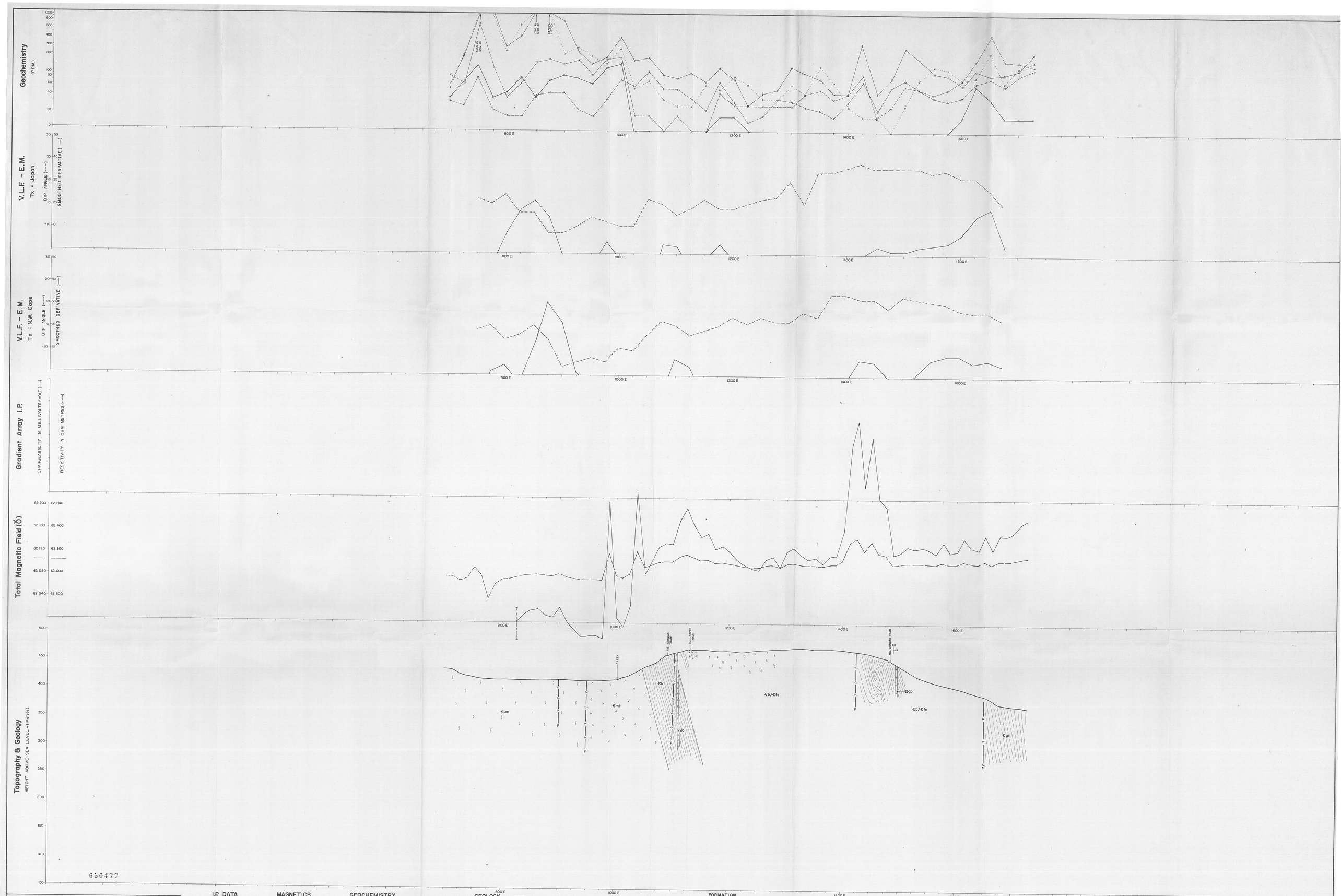
FORMATION

Dundas Group (unasigned), Red Lead Conglomerate, Brewery Junction, Razorback, Hodge Slate, Fernfield, Comet, Fernflow

Bedding, Cleavage

* All Bearings Magnetic

055



GOLD FIELDS EXPLORATION PTY. LIMITED

E.L.42/71 - CARBINE HILL GRID
LINE 2800 N.
LOOKING N. 84-2183 V015/5
SCALE 1:2000 METRES

DRAWN	P.K.
TRACED	S.F.
DATE	Mar.,84
SCALE	1:2000
FIG. NO.	57

056

I.P. DATA

MAGNETICS

Base Station at: approx. 2800E 3350S

Designated:

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
Wo3

GEOLOGY

ROCK TYPE

Shale
Siltstone
Sandstone
Grits
Conglomerate
Rhyolitic tuffs
Basic Tuffs

IGNEOUS - CAMBRIAN

Ꞓms Melba Spilites (basic Lavas)
Ꞓum Ultra-mafics
Ꞓg Gabbro

DEVONIAN

Dg Granite
Dgp Quartz porphyry

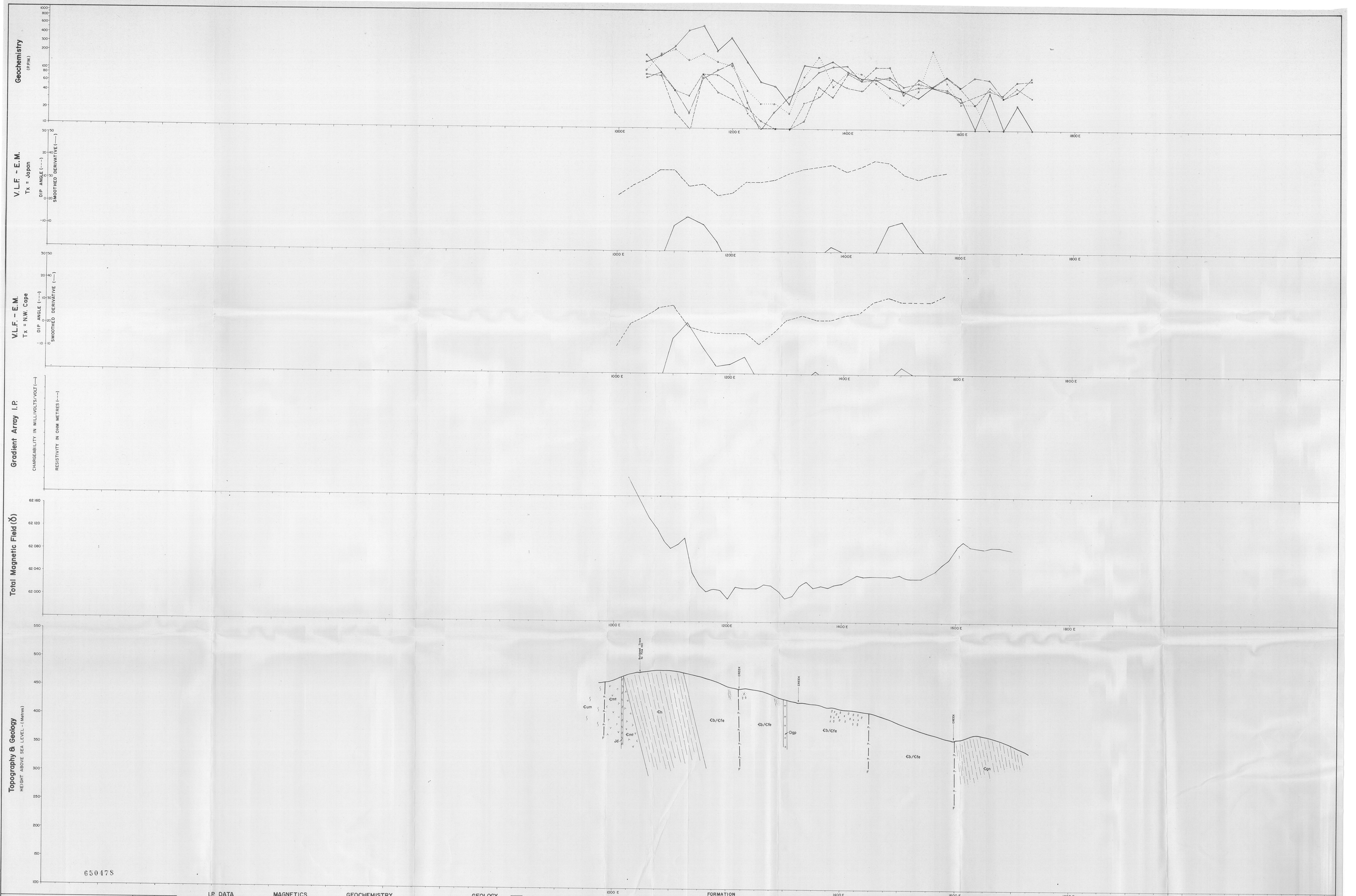
FORMATION

Ꞓd Dundas Group (unasigned)
Ꞓrl Red Lead Conglomerate
Ꞓb Brewery Junction
Ꞓro Razorback
Ꞓh Hodge Slate
Ꞓfe Fernfield
Ꞓco Comet
Ꞓf Fernflow

Bedding
Cleavage

* All Bearings Magnetic

056



650478

GOLD FIELDS EXPLORATION PTY. LIMITED	DRAWN	P.K.
E.L.42/71 - CARBINE HILL GRID	TRACED	S.F.
LINE 3000N.	DATE	Mar.,84
LOOKING N. 86-2183 Vol 5/5	SCALE	1:2000
SCALE 1:2000 METRES	FIG. NO.	58

057

I.P. DATA

5 cm

MAGNETICS

Base Station at: approx. 2800E 3350S

Designated:

GEOCHEMISTRY

Sn, Cu, Pb, Zn, As, Wo3

GEOLOGY

ROCK TYPE: Shale, Siltstone, Sandstone, Grits, Conglomerate, Rhyolitic tuffs, Basic Tuffs

IGNEOUS - CAMBRIAN: Ꞓms Melba Spilites (basic Lavas), Ꞓum Ultra-mafics, Ꞓg Gabbro

DEVONIAN: Dg Granite, Dgp Quartz porphyry

FORMATION: Ꞓd Dundas Group (unasigned), Ꞓrl Red Lead Conglomerate, Ꞓb Brewery Junction, Ꞓro Razorback, Ꞓh Hodge Slate, Ꞓfe Fernfield, Ꞓco Comet, Ꞓf Fernflow

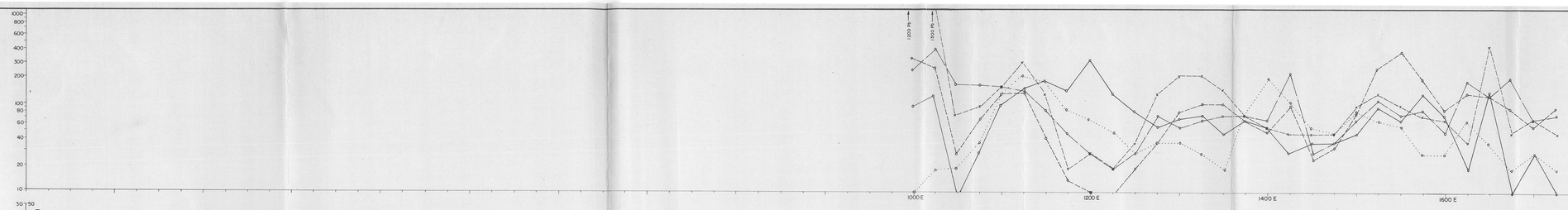
30 60 Bedding

50 80 Cleavage

* All Bearings Magnetic

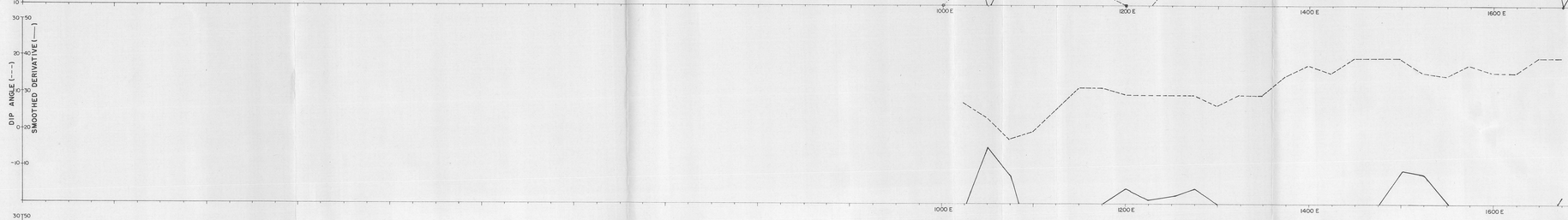
057

Geochemistry (P.P.M.)



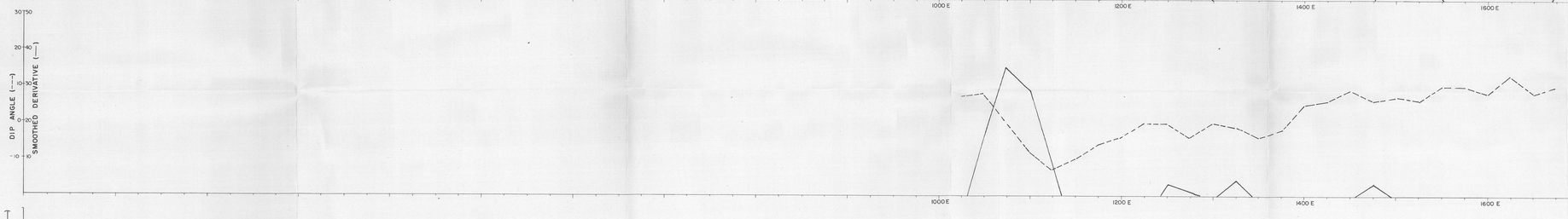
V.L.F. - E.M.

Tx = Japan

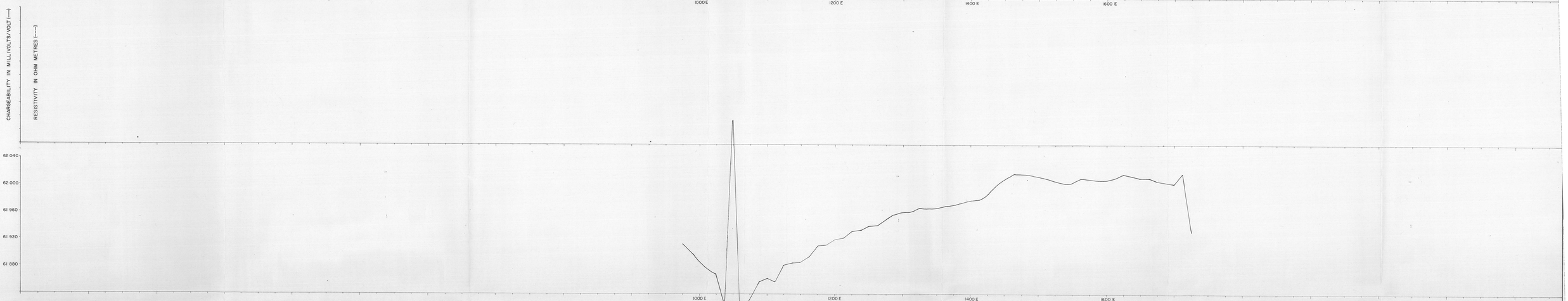


V.L.F. - E.M.

Tx = N.W. Cape



Gradient Array I.P.



Topography & Geology

HEIGHT ABOVE SEA LEVEL - (Metres)

650479

GOLD FIELDS EXPLORATION PTY. LIMITED

E.L.42/71 - CARBINE HILL GRID

LINE 3200 N.

LOOKING N. 34-263 VOLTS/V

SCALE 1:2000 METRES

DRAWN	P.K.
TRACED	S.F.
DATE	Mar. 64
SCALE	1:2000
FIG. NO.	59

058

I.P DATA

MAGNETICS

Base Station at approx. 2800E 3350S

Designated :

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
We3

GEOLOGY

ROCK TYPE

- Shale
- Siltstone
- Sandstone
- Grits
- Conglomerate
- Rhyolitic tuffs
- Basic Tuffs

IGNEOUS - CAMBRIAN

- €ms — Melba Spilites (basic Lavas)
- €um — Ultra-mafics
- €g — Gabbro

DEVONIAN

- Dg — Granite
- Dqp — Quartz porphyry

FORMATION

- €d — Dundas Group (unasigned)
- €fl s — Red Lead Conglomerate
- €b — Brewery Junction
- €ro — Razorback
- €h — Hodge Slate
- €fe — Fernfield
- €co — Comet
- €f — Fernflow

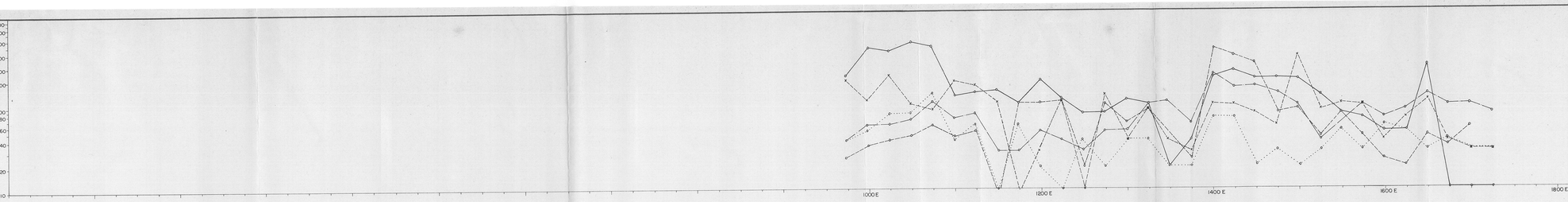
30/60 Bedding

50/80 Cleavage

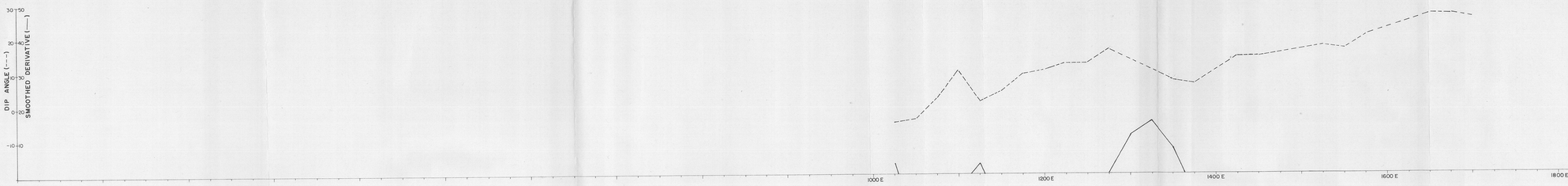
* All Bearings Magnetic

058

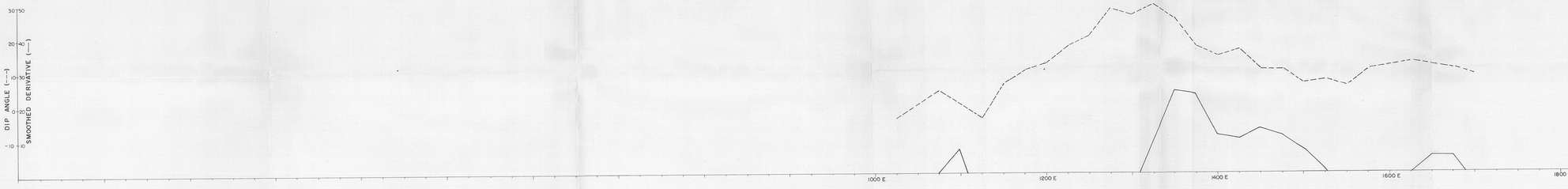
Geochemistry (P.P.M.)



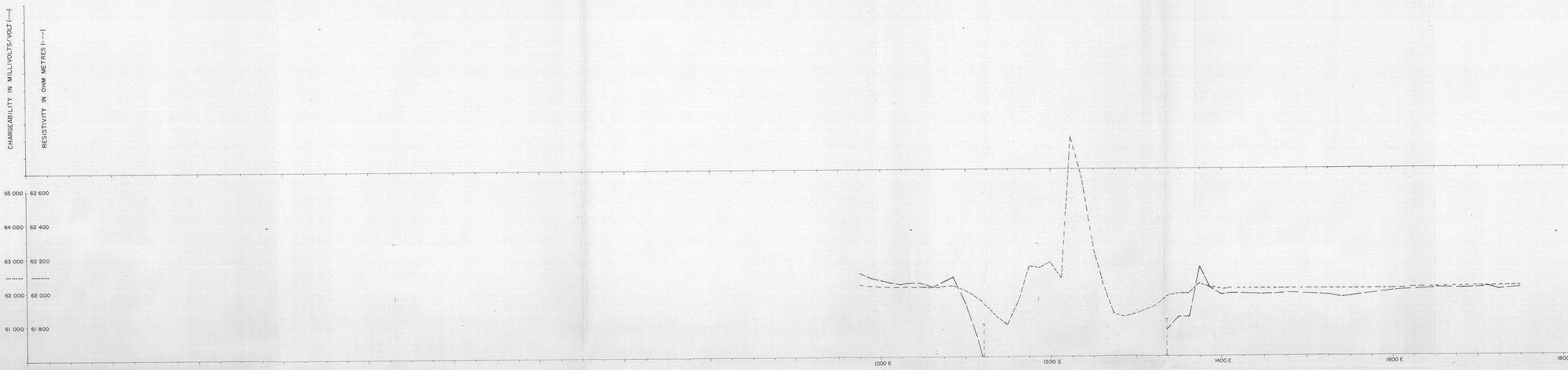
V.L.F. - E.M.
Tx = Japan



V.L.F. - E.M.
Tx = N.W. Cape



Gradient Array I.P



Total Magnetic Field (δ)

Topography & Geology
HEIGHT ABOVE SEA LEVEL - (Metres)

650480

GOLD FIELDS EXPLORATION PTY. LIMITED	
E.L.42/71 – CARBINE HILL GRID	
LINE 3400 N	
LOOKING N.E. (-2.5° VOLTS)	
SCALE 1:2000 METRES	

DRAWN	P.K.
TRACED	S.F.
DATE	Mar.84
SCALE	1:2000
FIG. NO.	60

059

I.P. DATA

MAGNETICS
Base Station at : approx. 2800E 3350S
Designated :
5 cm

GEOCHEMISTRY
Sn
Cu
Pb
Zn
As
Wo3

GEOLOGY

ROCK TYPE
- Shale
- Siltstone
- Sandstone
- Grits
- Conglomerate
- Rhyolitic tuffs
- Basic Tuffs

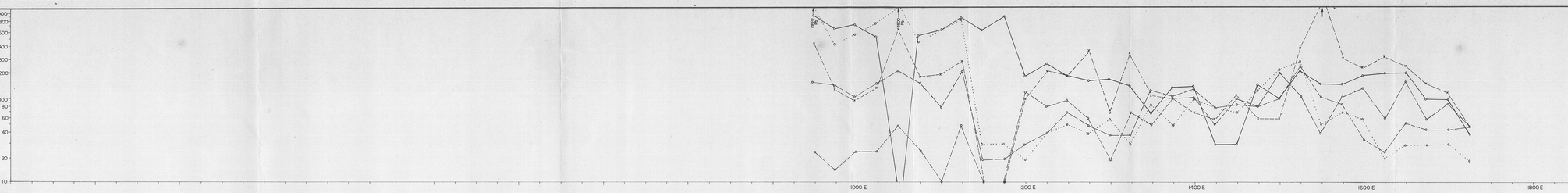
IGNEOUS - CAMBRIAN
- Melba Spilites (basic Lavas)
- Ultra-mafics
- Gabbro

DEVONIAN
- Granite
- Quartz porphyry

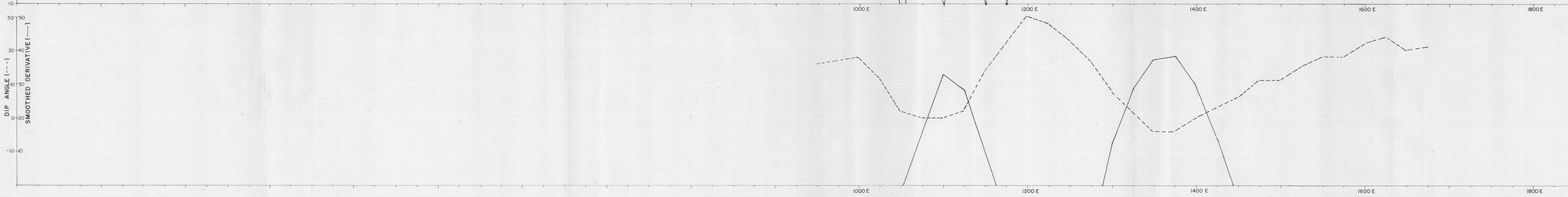
FORMATION
- Dundas Group (unasigned)
- Red Lead Conglomerate
- Brewery Junction
- Razorback
- Hodge Slate
- Fernfield
- Comet
- Fernflow
- Bedding
- Cleavage
- *All Bearings Magnetic

650

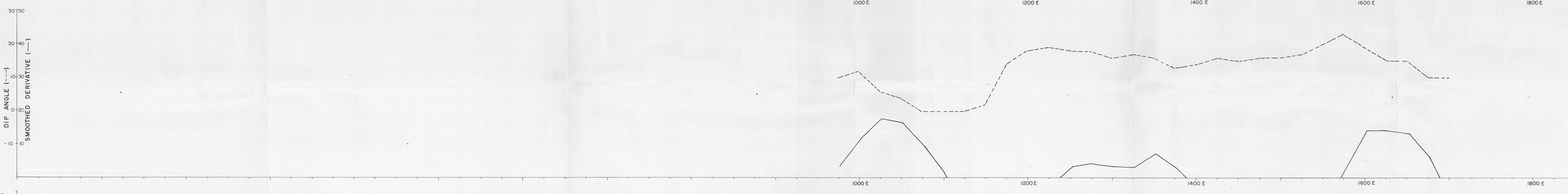
Geochemistry (P.P.M.)



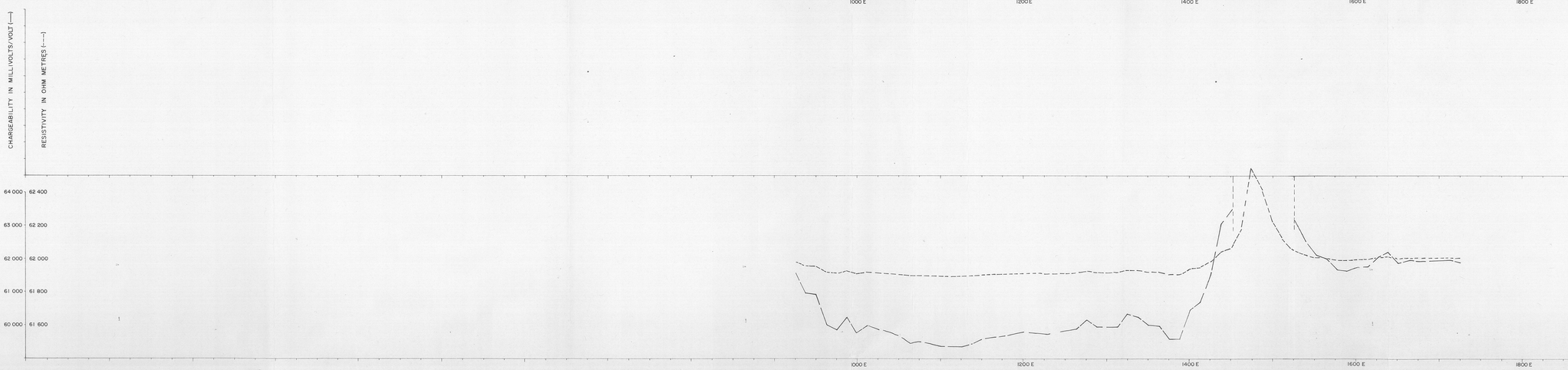
V.L.F. - E.M.
Tx = Japan



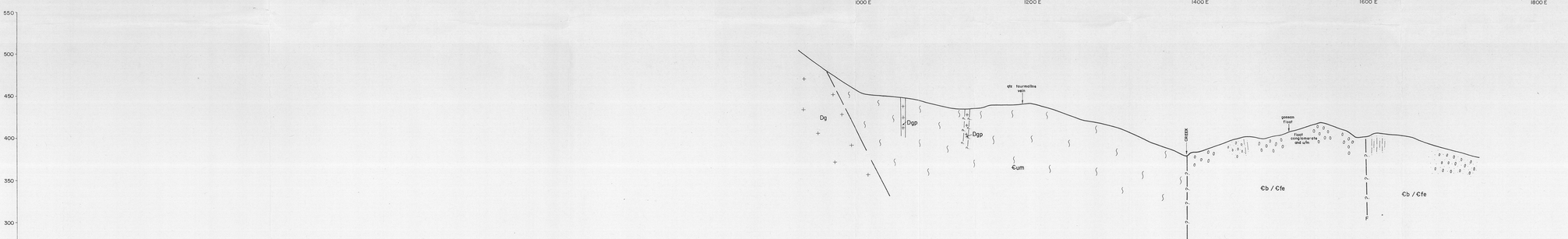
V.L.F. - E.M.
Tx = N.W. Cape



Gradient Array I.P.



Total Magnetic Field (γ)



Topography & Geology
HEIGHT ABOVE SEA LEVEL - (Metres)

650481

GOLD FIELDS EXPLORATION PTY. LIMITED

E.L.42/71 – CARBINE HILL GRID

LINE 3600 N

LOOKING N. RL=2453 VOLTS

SCALE 1:2000 METRES

40 0 40 80 120

DRAWN	P.K.
TRACED	S.F.
DATE	Mar.,84
SCALE	1:2000
FIG. NO.	61

060

I.P. DATA

MAGNETICS

Base Station at : approx. 2800E 3350S

Designated :

5 cm

GEOCHEMISTRY

Sn
Cu
Pb
Zn
As
Wo3

GEOLOGY

ROCK TYPE

- Shale
- Siltstone
- Sandstone
- Grits
- Conglomerate
- Rhyolitic tuffs
- Basic Tuffs

IGNEOUS - CAMBRIAN

- Melba Spilites (basic Lavas)
- Ultra-mafics
- Gabbro

DEVONIAN

- Granite
- Quartz porphyry

FORMATION

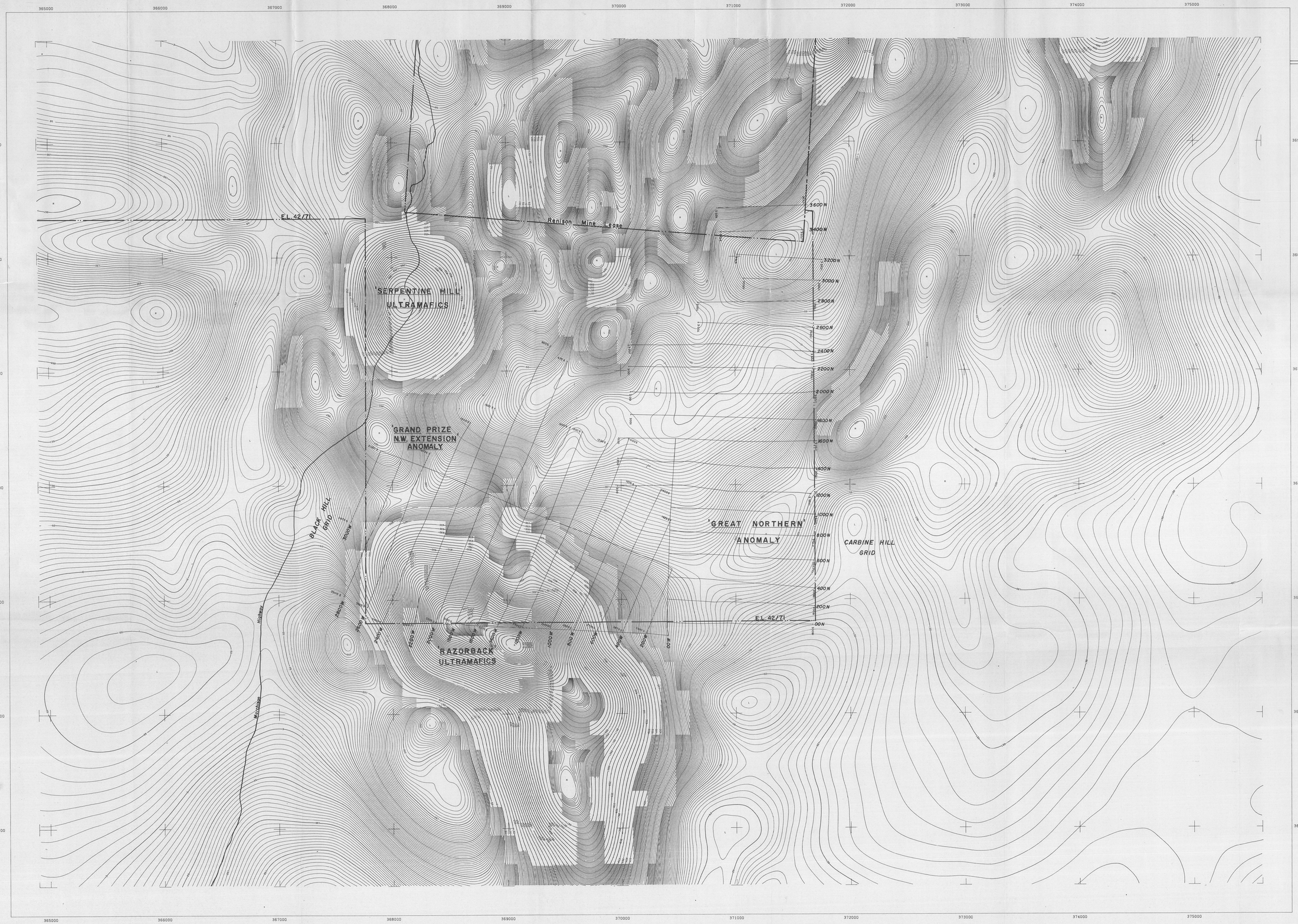
- Cd Dundas Group (unasigned)
- Cfl Red Lead Conglomerate
- Cb Brewery Junction
- Cfo Razorback
- Ch Hodge Slate
- Cfe Fernfield
- Cco Comet
- Cf Fernflow

60/30 Bedding

50/50 Cleavage

* All Bearings Magnetic

060



Airborne Geophysical Survey and Compilation by

GEOEX PTY. LTD.

WEST COAST AREA

TASMANIA

EQUIPMENT SPECIFICATIONS

Cessna A185E Aircraft
SONOTEK IGSS1 SYSTEM
0·1nT MAGNETOMETER
256 CHANNEL SPECTROMETER
24 Litre NaI (Tl) DETECTOR
KING KRAIO RADAR ALTIMETER
16 mm Ground Tracking Camera
Industry Standard Strack 32 HP mm Magnetic Tape
8 Channel Analogue Recorder
3 Channel Analogue Recorder for Magnetometer

The nominal flight line separation was 500m and the nominal tie-line bearing was 0 degrees. The observed mean sample interval in the flight direction was 41m, achieved with a nominal aircraft speed of 100 knots and a reading interval of 0·8 second. The mean sensor height was 135m using a towed bird configuration. The magnetometer accuracy is 1·0nT, and the resolution is 0·1nT.

The data presented is the residual magnetic intensity after subtracting the International Geomagnetic Reference Field from the observed Total Magnetic Intensity.
The data was corrected for diurnal drift using a base station monitor at QUEENSTOWN Airfield,
Latitude 42·077°S
Longitude 145·529°E
Altitude 259m.
The sensor height was 3m. The adopted value for this location was 62664nT.
Final detailed levelling of this data was performed using tie-line crossover analysis. A simple 3 point filter was applied to the data, which was then gridded and contoured using a 125 by 125 mesh cell.
The CONTOUR INTERVAL is 5nT.

CONTOURS OF RESIDUAL TOTAL MAGNETIC INTENSITY

ZEEHAN B4 061

1:10,000

Ref.: G.F.L. / M.G. 84/03

FIG. 62

650482 84-2183 vol 5/5

SHEET B4

B1	B2
B3	B4

SHEET INDEX

5 cm

SCALE

0 100 200 400 600 800 1000

METRES

1 : 10000

Surveyed for Department of Mines, Tasmania, May, 1981. Project No. 81544

190