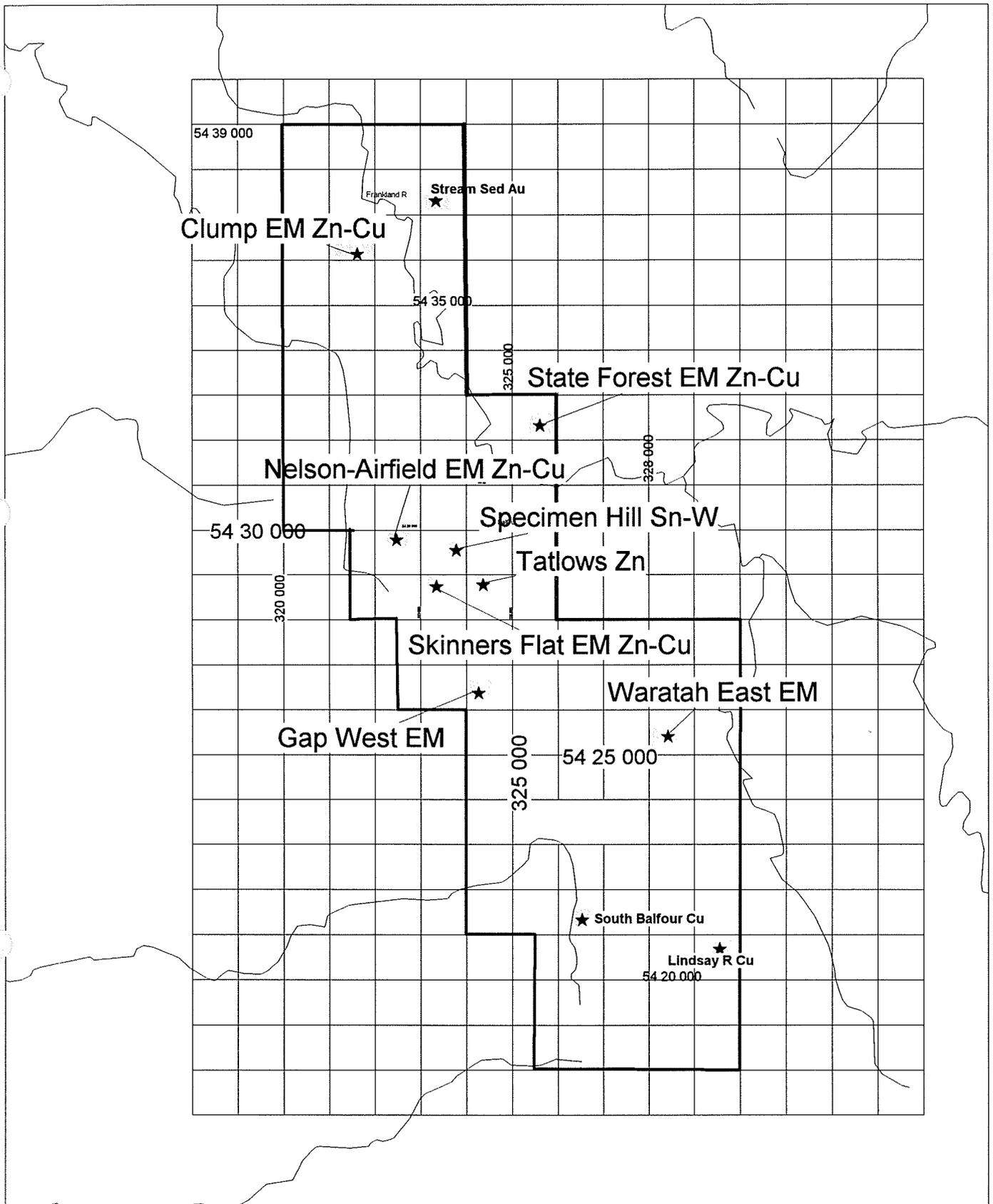
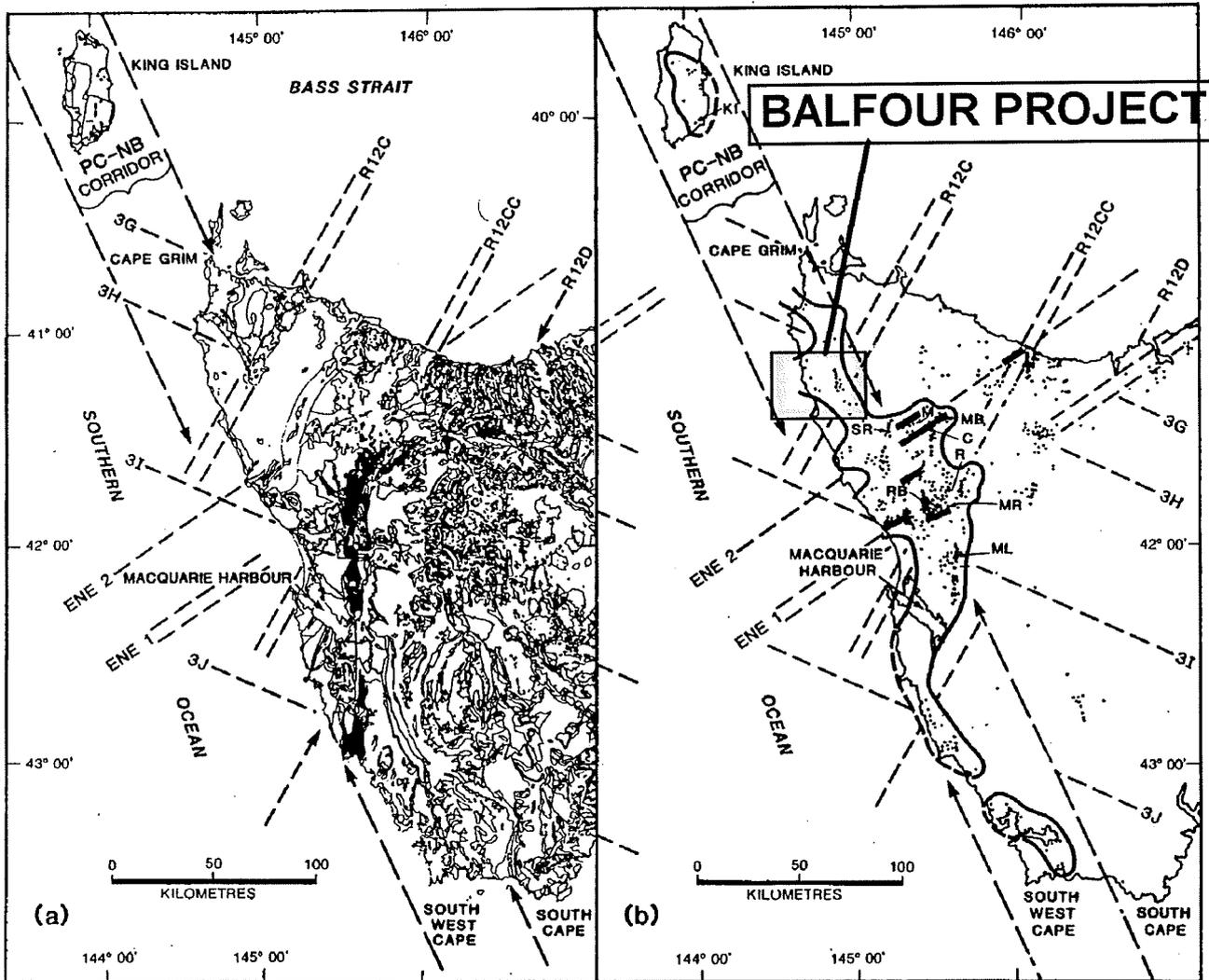


New Challenge Resources Pty Ltd
Balfour Project
Location Plan EL 4/2002 and EM survey area
FIGURE 1.1



New Challenge Resources Pty Ltd
Balfour Project
EL 4/2002
Exploration Targets
Fig 1.2



BALFOUR PROJECT

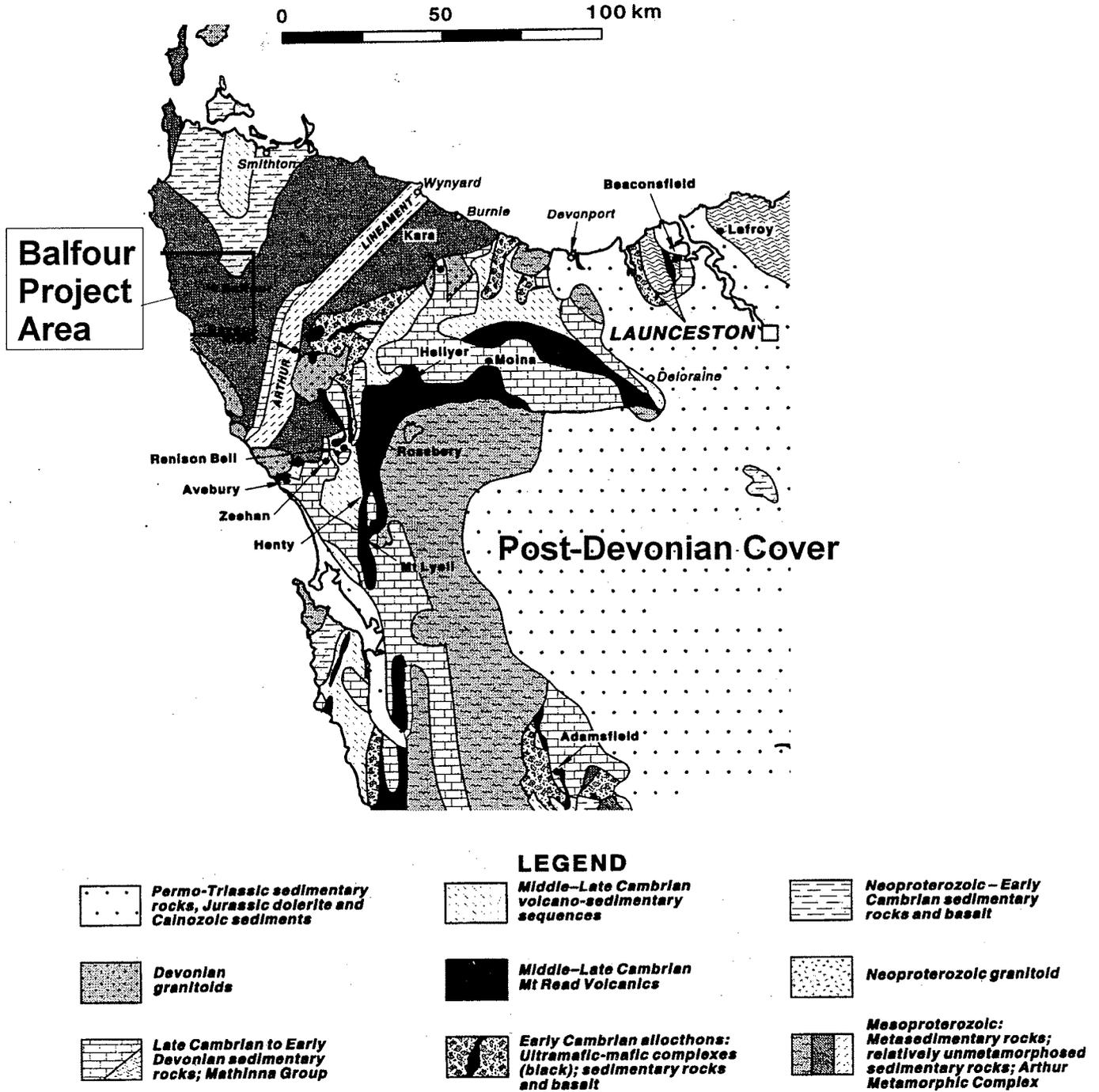
Clustering of major deposits occurs at some lineament intersections. C = Cleveland; M = Magnet; MB = Mount Bischoff; ML = Mount Lyell; MR = Mount Read; R = Rosebery; RB = Renison Bell.

New Challenge Resources Pty Ltd

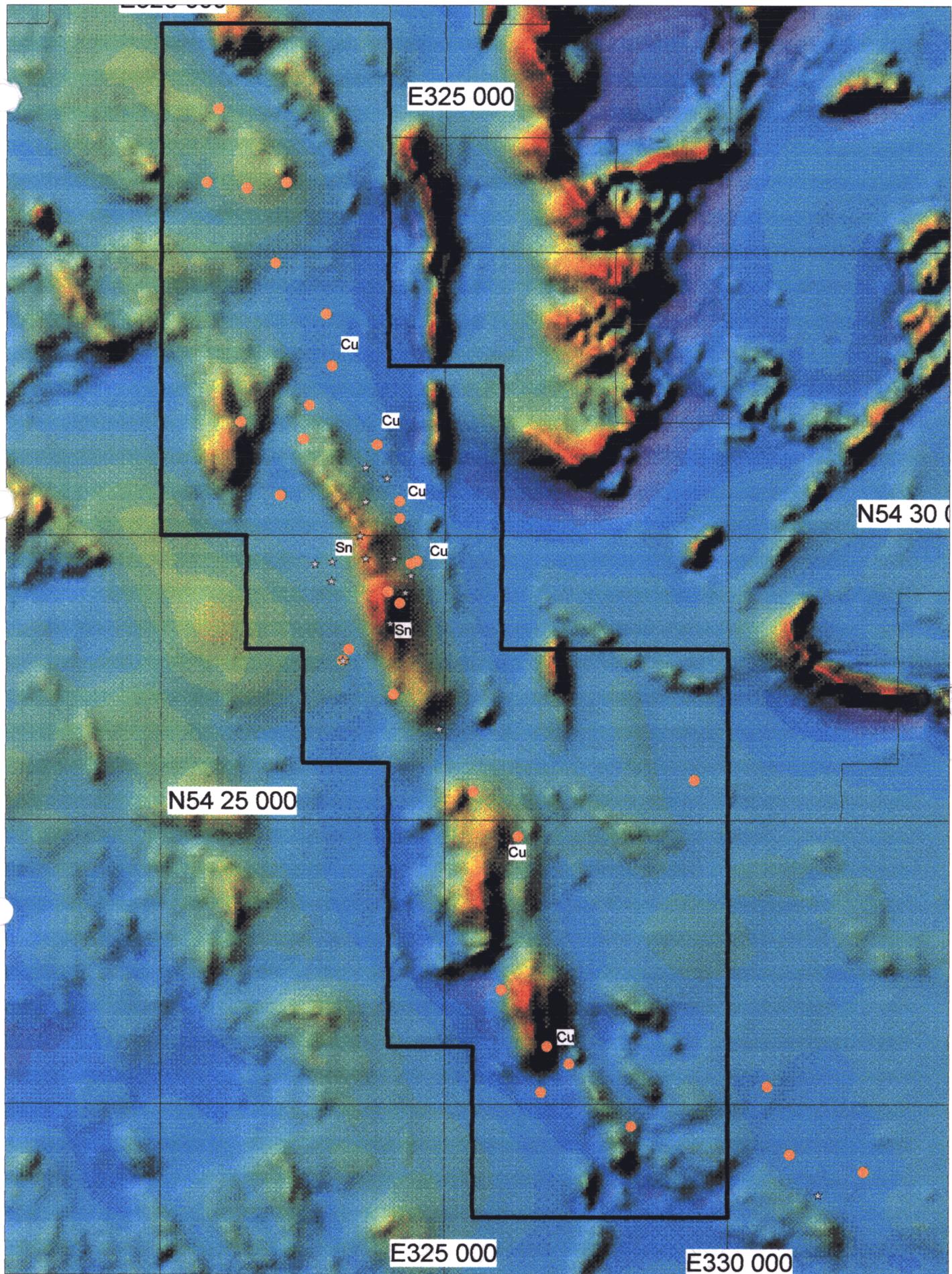
Figure 1.3

TASMANIA

GEOLOGICAL FRAMEWORK



New Challenge Resources Pty Ltd
 Balfour Project
 Geology of Tasmania
 Figure 1.4



New Challenge Resources Pty Ltd
BALFOUR PROJECT
Aeromagnetic image, EL 4/2002
FIGURE 1.6

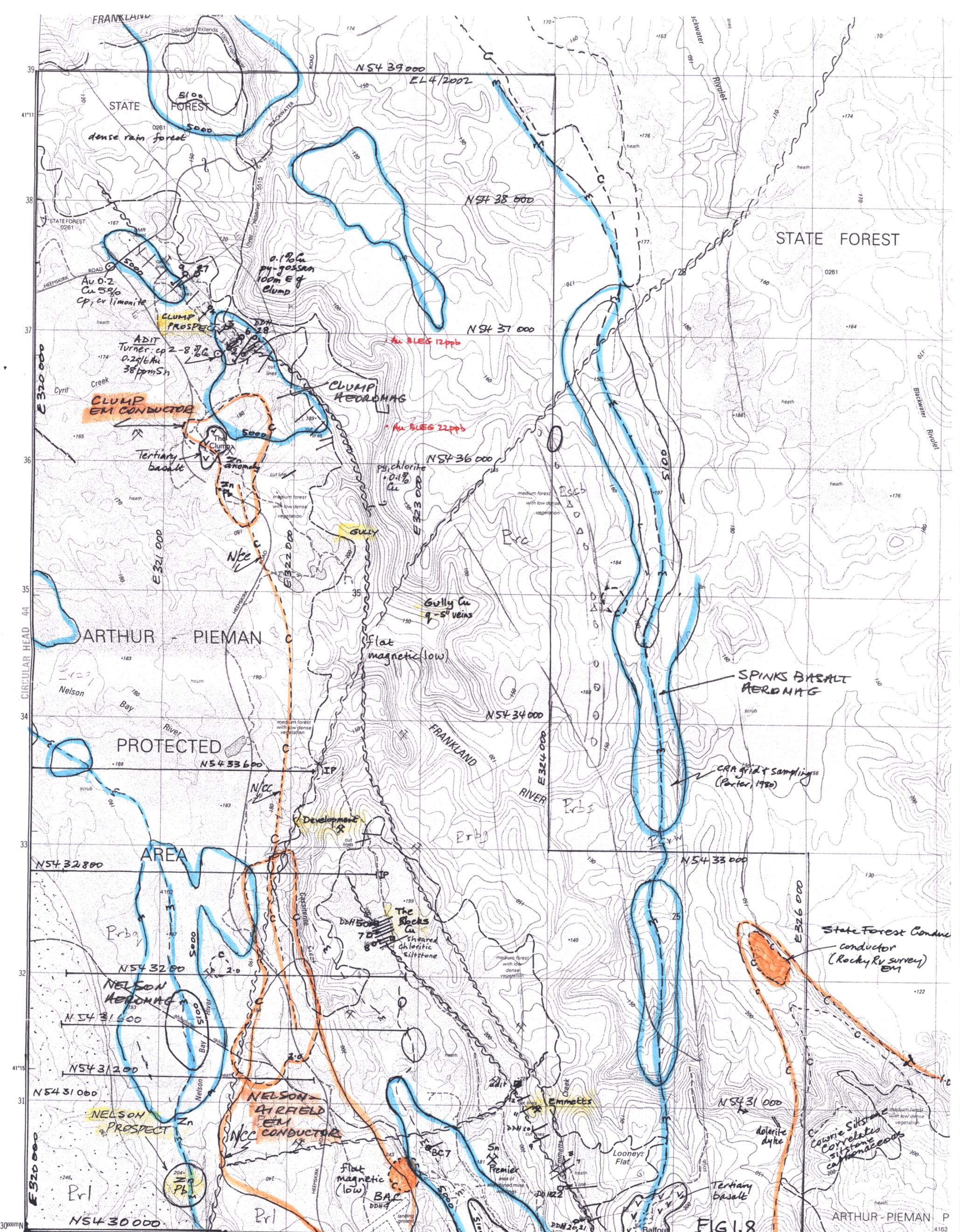


FIG 1.8

New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Compilation Plan
 North Area, Dempster 1:25,000
FIG 1.8

axis 2m
 Magnetic intensity contour
 Apparent conductivity contour
 Residential area, Commercial buildings

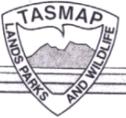
GN
 TN
 MN
 GRID CONVERGENCE 13'

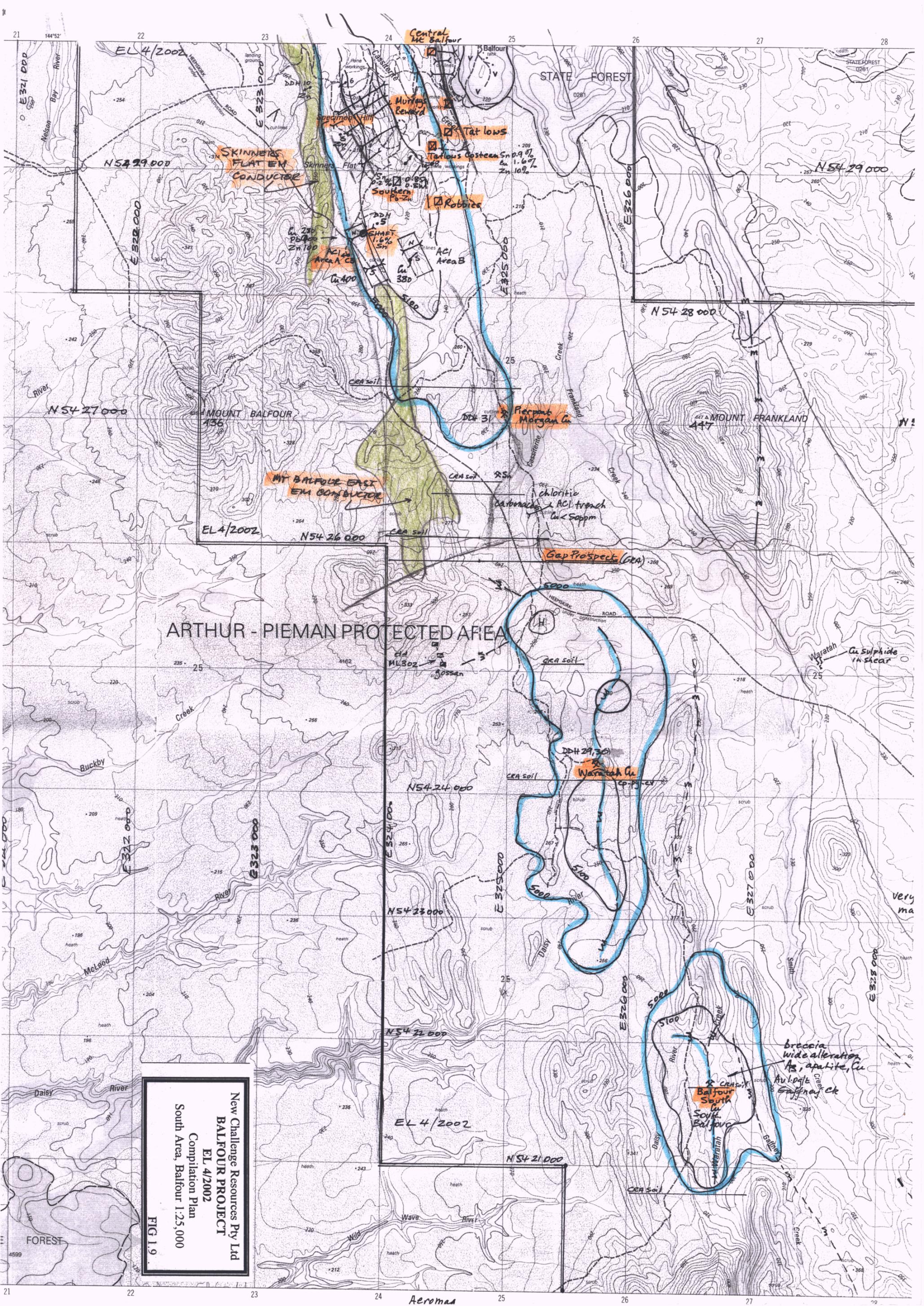
PRODUCTION: Mapping Division, Department of Lands, Parks and Wildlife, Hobo
 ACCURACY: Horizontal: Not less than 90% of points of well defined detail are within
 of their true positions at map scale.
 Vertical: Not less than 90% of elevations are within 5 metres of their true elevation
 may not be achieved in areas of dense vegetation.
 RELIABILITY: The information content of this map has been determined from aer...

sealed A6
 673
 613

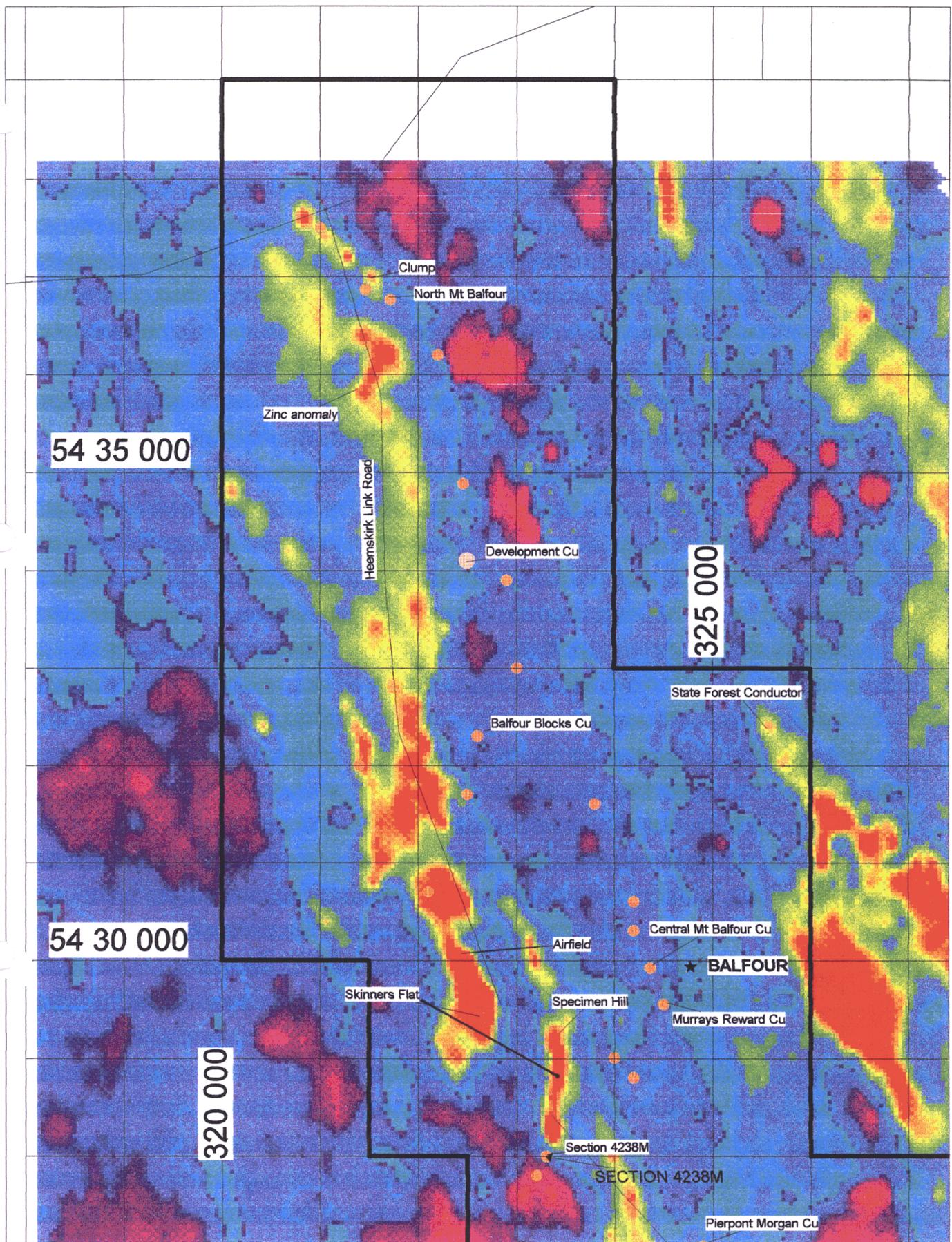
Primary road with route number
 Secondary road with route number
 Minor road with route number
 Other road
 Other roads with bridge

Roads maintained for continuous public use
 Roads of restricted use or access





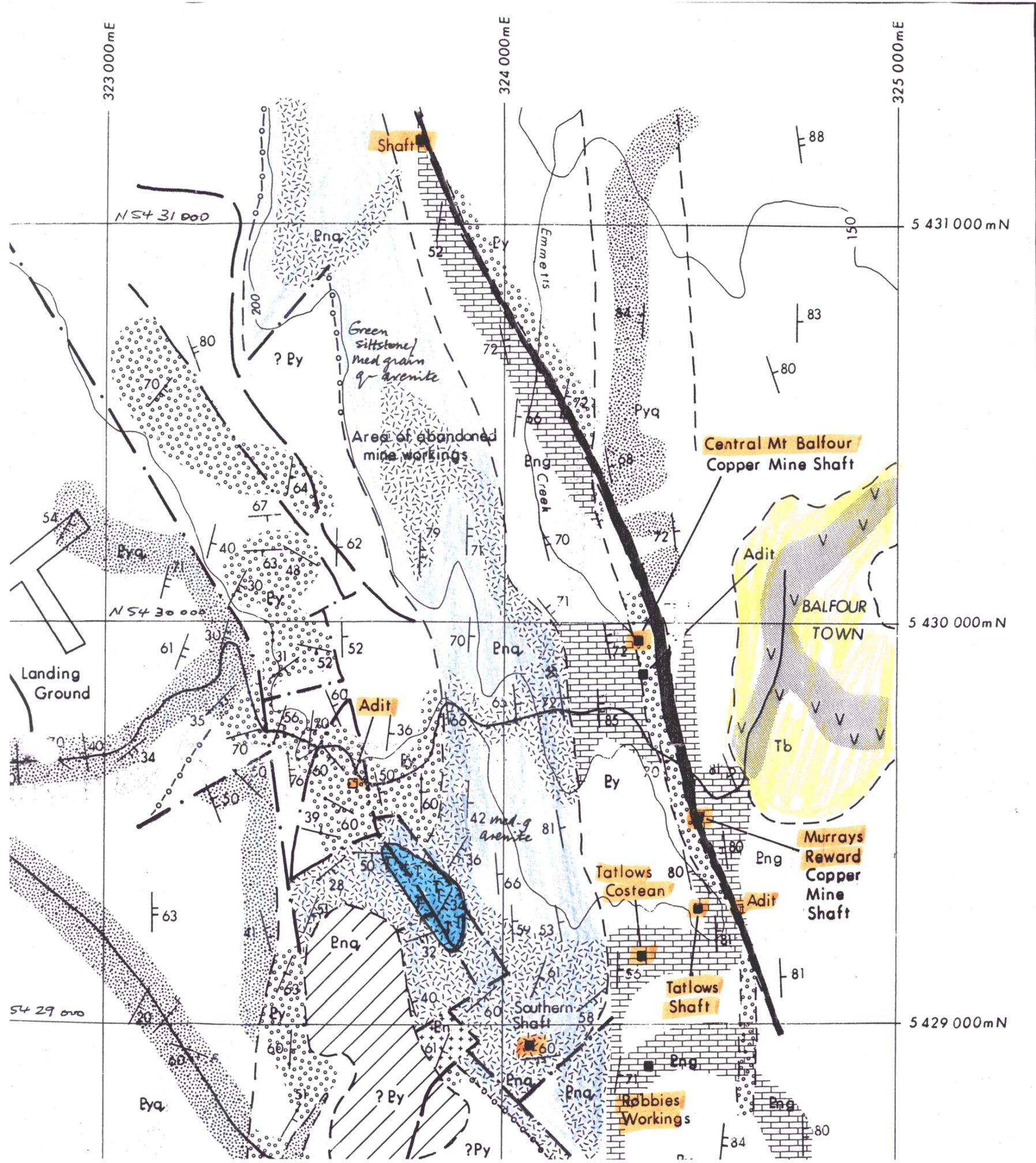
New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Compilation Plan
 South Area, Balfour 1:25,000
FIG 1.9

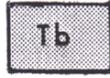
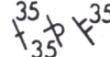
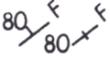


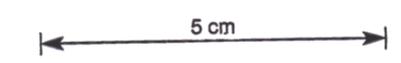
New Challenge Resources Pty Ltd
 Balfour Project
 EM cp880 co-planar low frequency
 Figure 1.10

New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 EM survey MRT, 2002

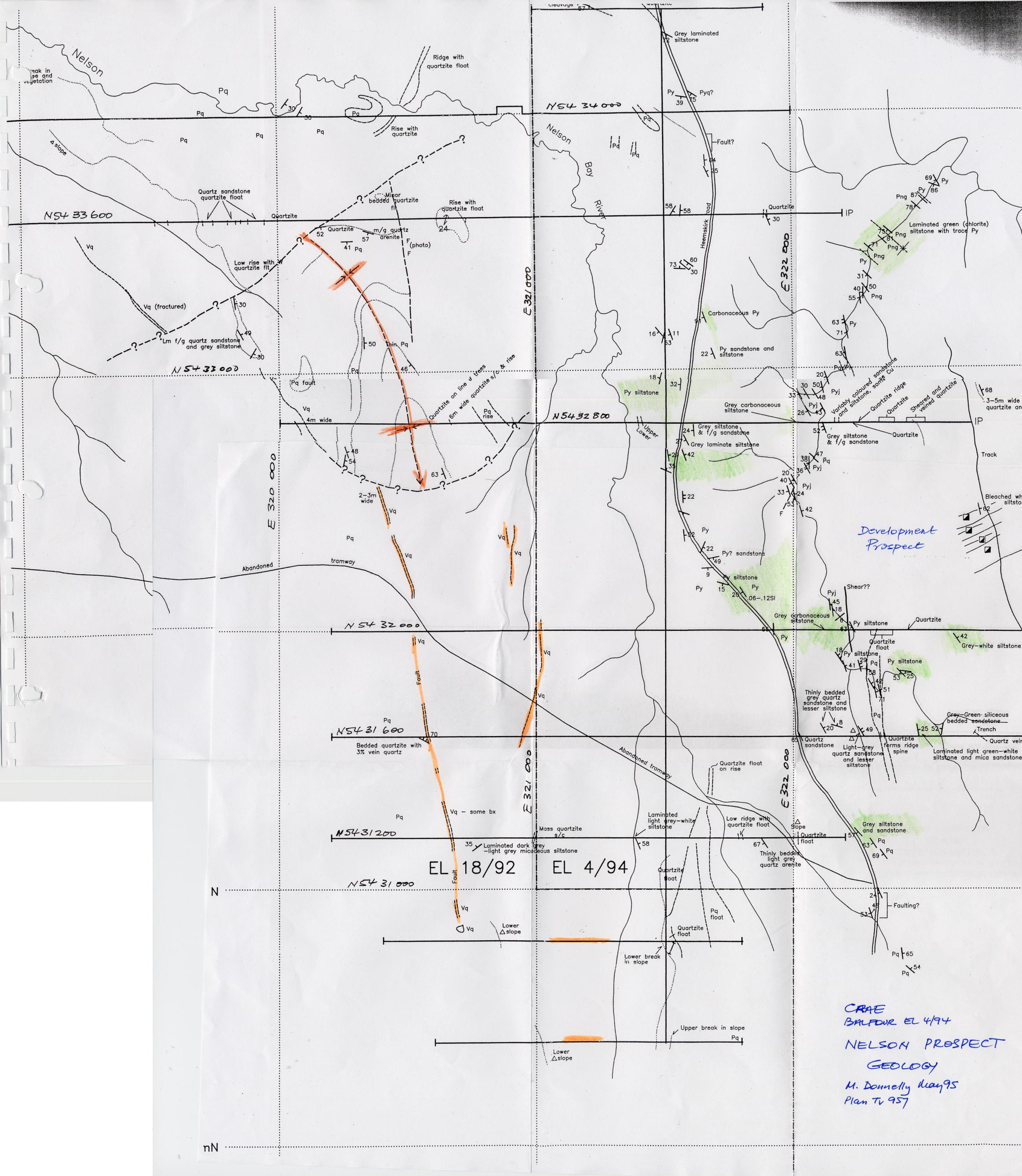
1.10
 FIG



- TERTIARY RECENT**
-  Buttongrass sedgeland obscures bedrock.
 -  Basalt and derived soil.
 -  Unconformity
- LATE PROTEROZOIC**
-  Predominantly planar banded pale- and medium- green siltstone (Png) ; thin banded green to olive siltstone with dark grey siltstone and minor mudstone (Pn), with common interbeds of medium grained quartz arenite (Pna). Banded dark grey siltstone with common thin lenticular, graded beds of fine grained sandstone (Py), with common to abundant interbeds of medium grained quartz arenite (Pya).
 -  Fracture zone containing quartz veins, carbonate and silicate rocks, pyrite/chalcopyrite/common covellite mineralisation. This assemblage has been shattered, brecciated and sheared by late movement.
 -  Tourmalinised and brecciated zone on Specimen Hill (after Heithersay and Langsford, 1981).
 -  Geological boundary - position approximate.
 -  Geological boundary - inferred
 -  Strike and dip of bedding - right way up, overturned, facing unknown.
 -  Strike and dip of observed fault, vertical.
 -  Fault - position approximate.
 -  Fault - inferred.



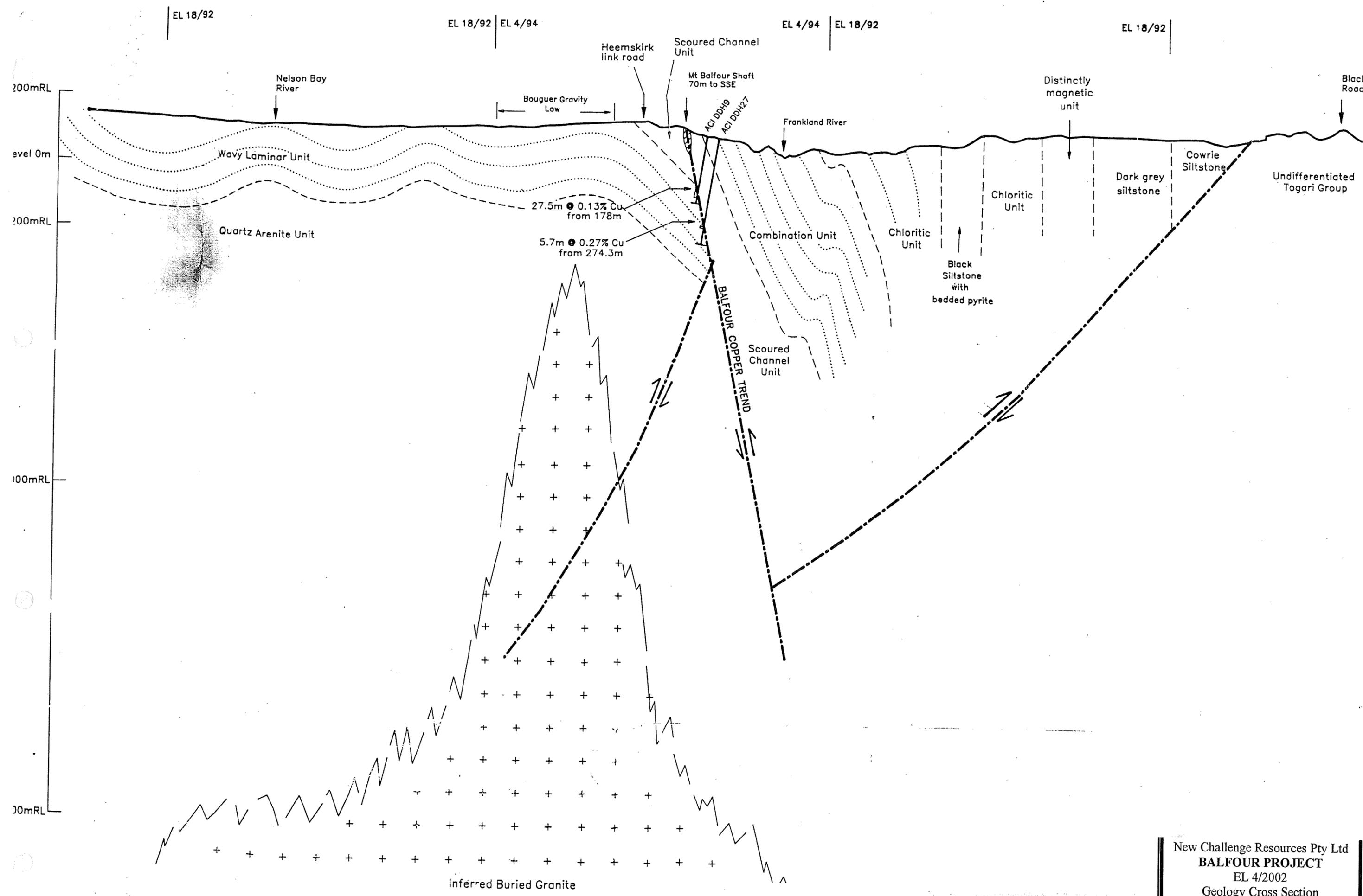
NOTE :
 This is a compilation map based on New Challenge Resources Pty Ltd Services and by Aust. Consolidated Industries Inc. It also been made to Heithersay and Langsford (1981) and Langsford (1981) and Alaska (1993). Map prepared by N. J. Turner Geological Services Pty Ltd. Specimen Hill & Murrays Reward Geology
 Fig. TASH No. 1122.
 Base map obtained by photocopying enlargement of portions of Tasmania 1:25 000 Series number EL 4/2002
BALFOUR PROJECT
 FIG 2.2.



CRAE
 BALFOUR EL 4/94
 NELSON PROSPECT
 GEOLOGY
 M. Donnelly May 95
 Plan TV 957

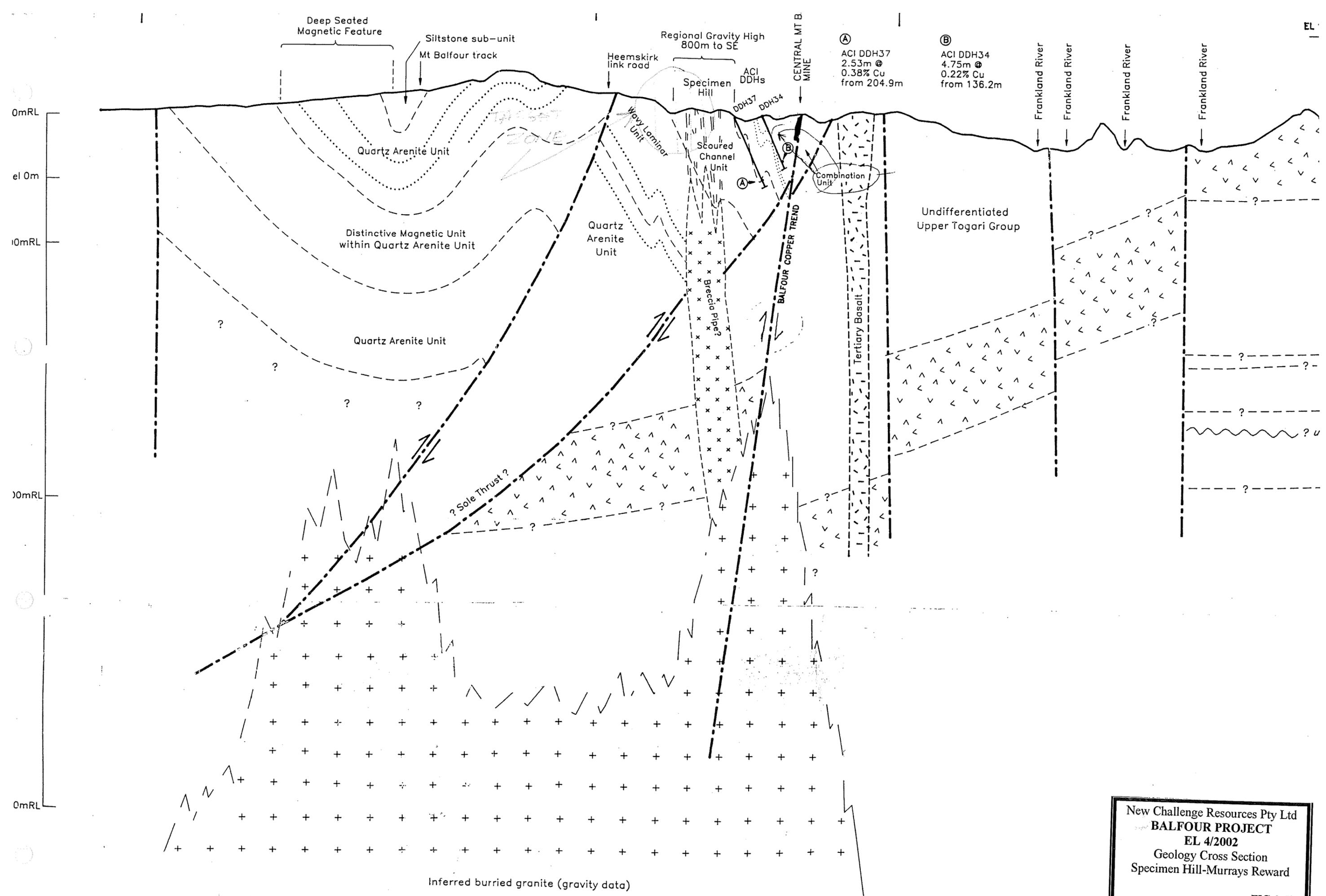
EL 18/92 EL 4/94

nN



New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Geology Cross Section
 CLUMP

FIG 2.5a



New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Geology Cross Section
 Specimen Hill-Murrays Reward
 FIG 2.5b.

EL18/92

EL18/92

ACI Waratah Prospect
lies 700m to the Sth

Possible continuation
of Doherty's Pimple line
of copper workings

South end of
Mt Frankland

Linear Bouguer Gravity Low

Heemskirk
link road

Forest
Conglomerate

Undifferentiated
Togari Group

Lindsay River

Leigh River

Wavy Laminar Unit

Wavy Laminar Unit

Wavy
Laminar Unit

? Cowrie
siltstone

? Basalt

Undifferentiated
Togari Group

? Basalt
Magnetic Unit

Undifferentiated
Togari Group

Smithton
Basalts

200m

Sea Level 0m

-200m

Quartz Arenite Unit

alteration unit
Footwall chlorite

? Cowrie
Siltstone

Sheared zone with
intersecting faults

BALFOUR COPPER TREND

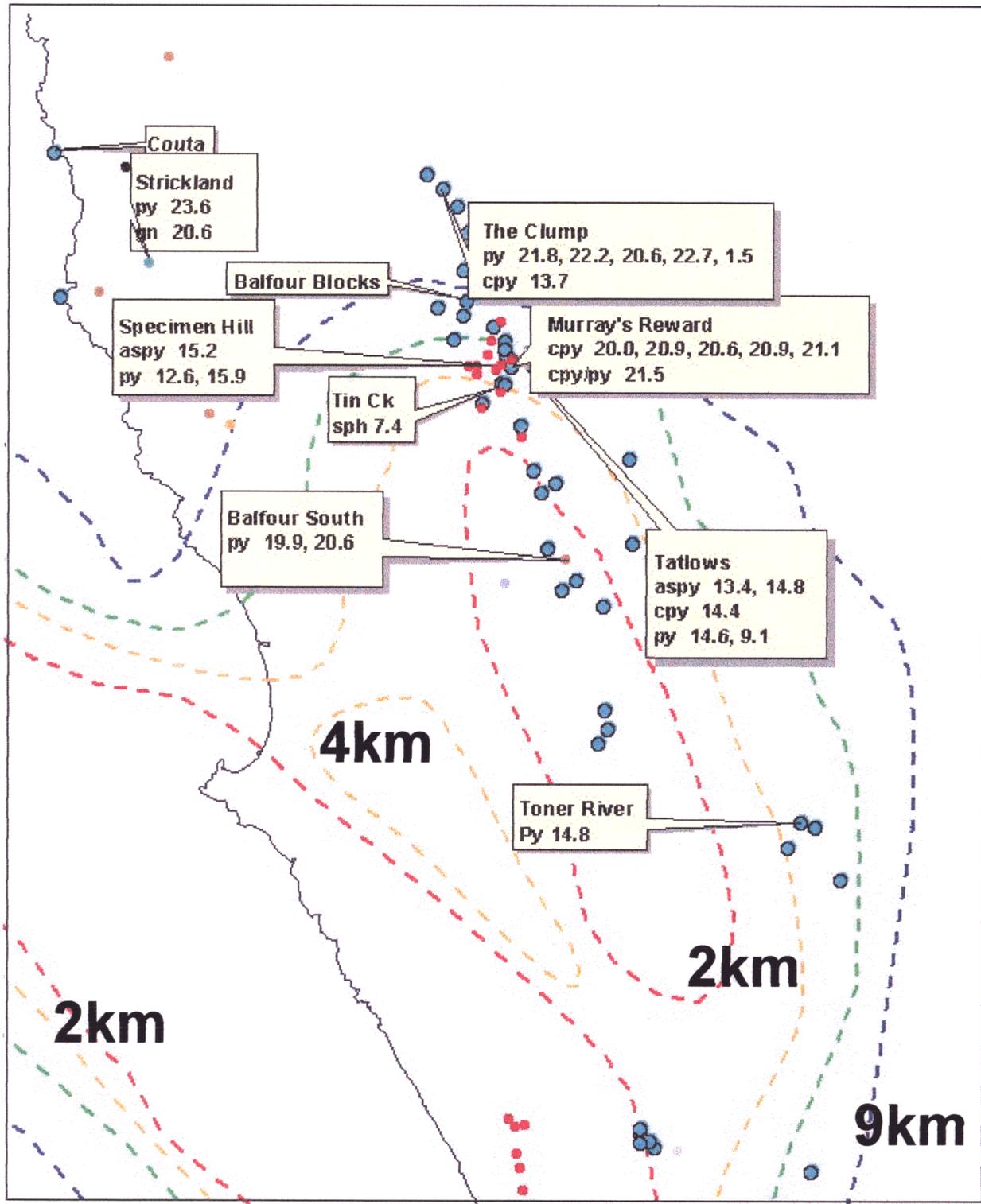
Footwall chlorite
alteration unit

-1000mRL

Inferred Buried Granite

New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Geology Cross-Section
 WARATAH PROSPECT

FIG 2.5c.



- Tin - Tungsten
- Copper
- Iron - lead - zinc
- Unknown
- Gold
- Silver
- Iron- copper

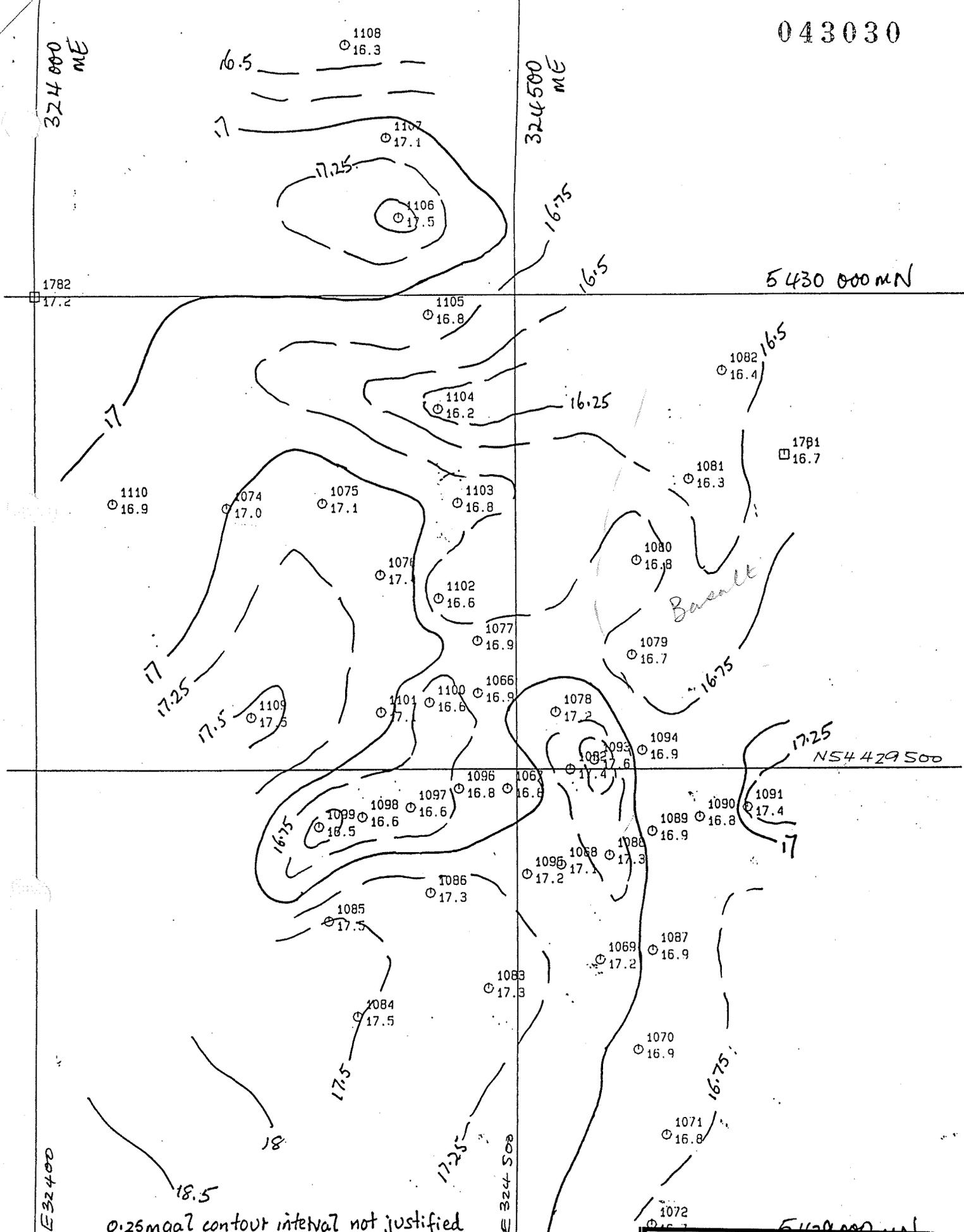


4 0 4 8 Kilometers



New Challenge Resources Pty Ltd
 BALFOUR PROJECT, Tas
 Granite depth and S-isotope

FIG 2.6



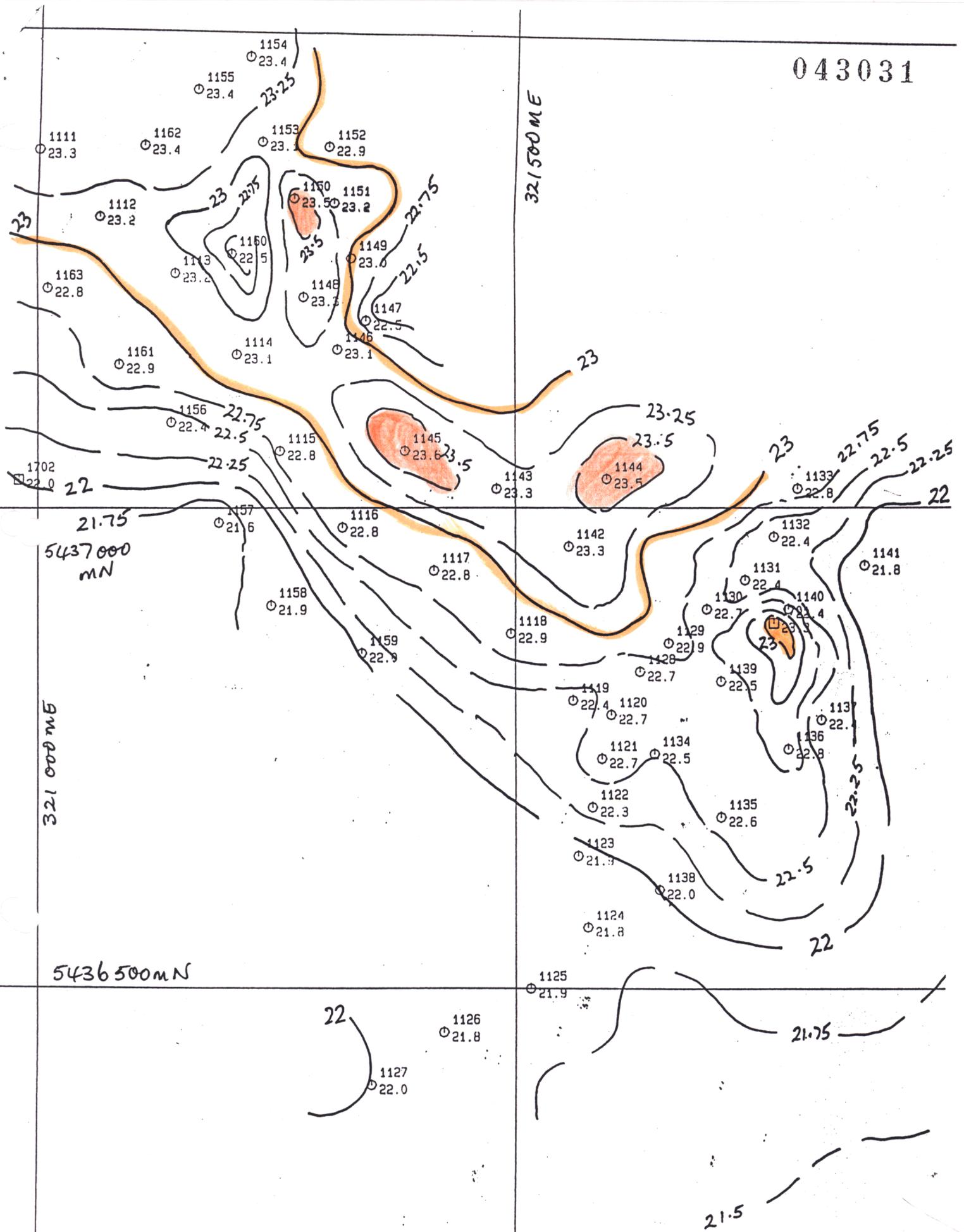
0.25mgal contour interval not justified
(indicatory only)

BOUQUER ANOMALY ($2.67 \frac{t}{m^3}$)
BALFOUR - MURRAY'S REWARD AREA
EL53/88

New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
Gravity: Murrays Reward

FIGURE
FIG 3.3

043031



0.25 mgal contour interval not justified
(indicatory only)

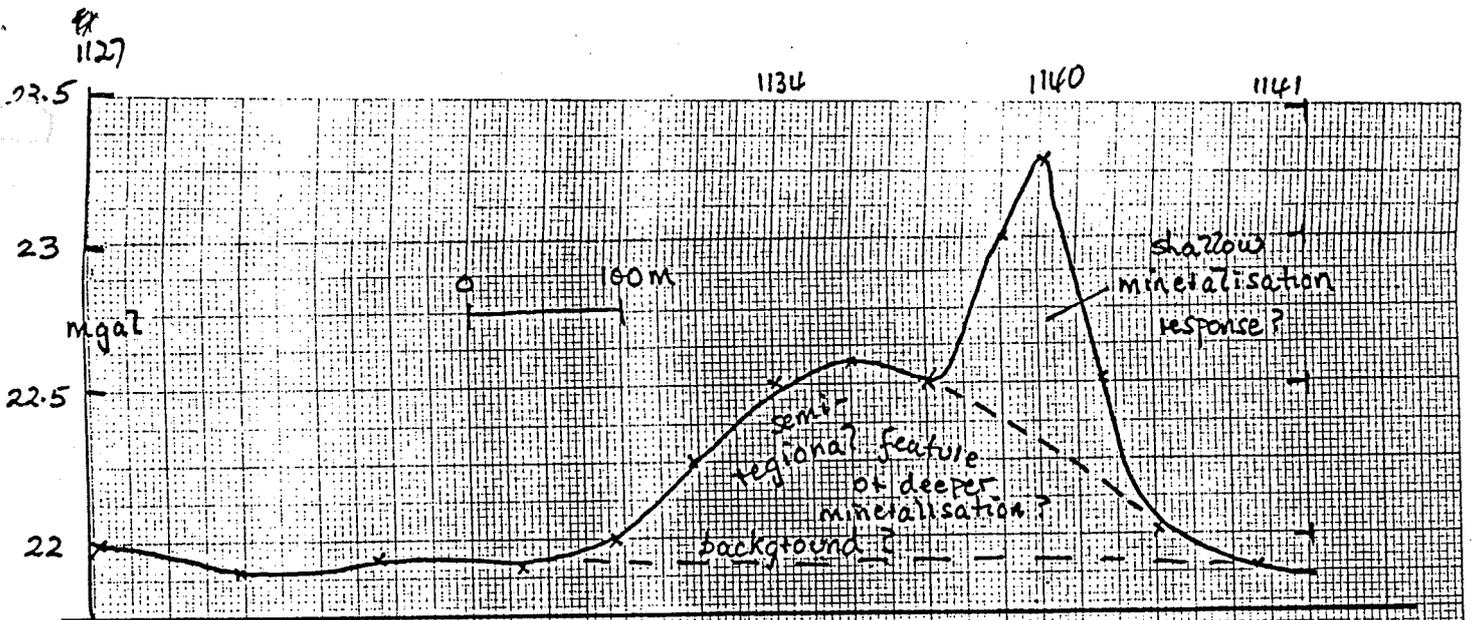
BOUGUER ANOMALY (2.67 t/m^3)
THE CLUMP AREA

New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Gravity Survey, CLUMP
 FIG 3.4a

1699
20.1

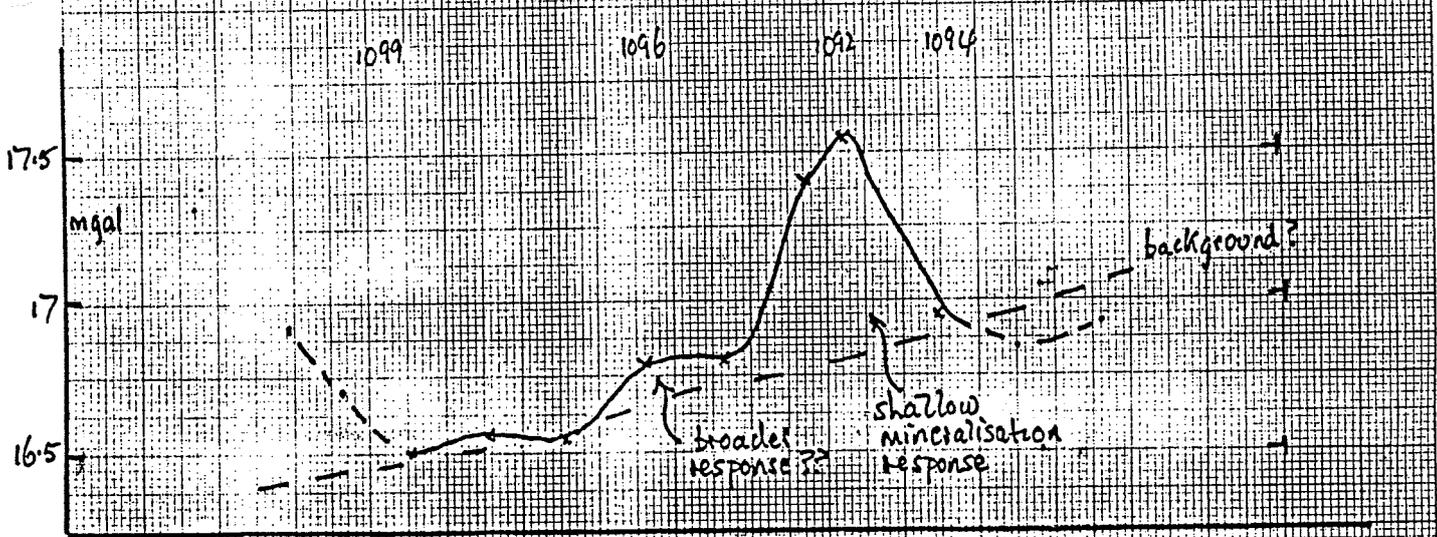
1071
16.8

EL 4/2002 Figure 2



profile 1127-1141

THE CLUMP



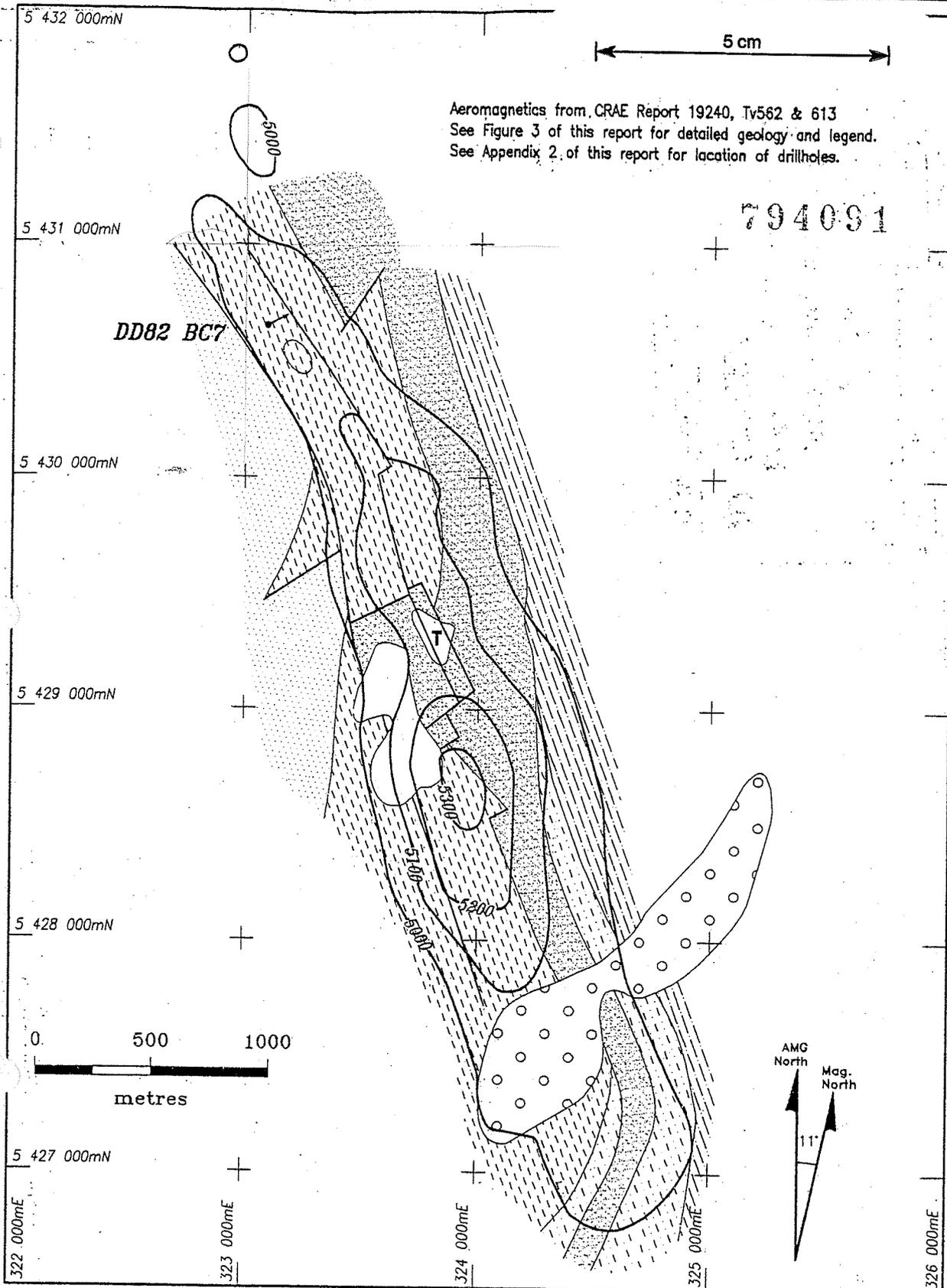
profile 1099-1094

S. BALFOUR

EL 53/88 MT FRANKLAND
 GRAVITY SURVEYS
 Nov 92

New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Gravity Survey, CLUMP

FIG 3.4b.



Aeromagnetics from CRAE Report 19240, Tv562 & 613
 See Figure 3 of this report for detailed geology and legend.
 See Appendix 2 of this report for location of drillholes.

794091

DD82 BC7

* NOTE * This is Map 6 from N.J. Turner's Sept. 1994 report.

- No Outcrop
- Tg Quartzose gravel, sand and minor lignite
- T Tourmalinised breccia on Specimen Hill
- Png Predominantly planar banded pale and medium green siltstone.
- Pn Thin banded green to olive siltstone with dark grey siltstone and minor mudstone.
- Pnq As for Pn with common interbeds of medium grained quartz arenite.
- Py Banded dark grey siltstone with common thin lenticular graded beds of fine grained sandstone.
- Pyq As for Py with common to abundant interbeds of medium grained quartz arenite.

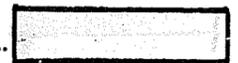
| | |
|--|--|
| CRA EXPLORATION PTY. LIMITED | |
| BALFOUR EL 4/94 and MT FRANKLAND EL 18/92 | |
| Specimen Aeromagnet | |
| Ref.: SK 55-03 | |
| Scale: 1 : 25,000 | |
| Author: N.J. Turner | |
| Drawn: R. Traverso | |

| | |
|--|----------------------------|
| New Challenge Resources Pty Ltd | |
| BALFOUR PROJECT | |
| EL 4/2002 | |
| File: | Specimen Hill |
| C: | Aeromag and Geology |
| Report No.: | FIG 3.5 |

LEGEND

LINES SURVEYED WITH I.P.

I.P. ANOMALY - DEFINITE



10-30
(Approx. depth range if shallow or depth to top if deep, in metres)

- PROBABLE



- POSSIBLE



- POSSIBLE EXTENSION



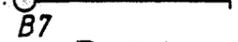
GROUND MAGNETIC ANOMALY OUTLINE
(APPROX 300mT ABOVE BACKGROUND)



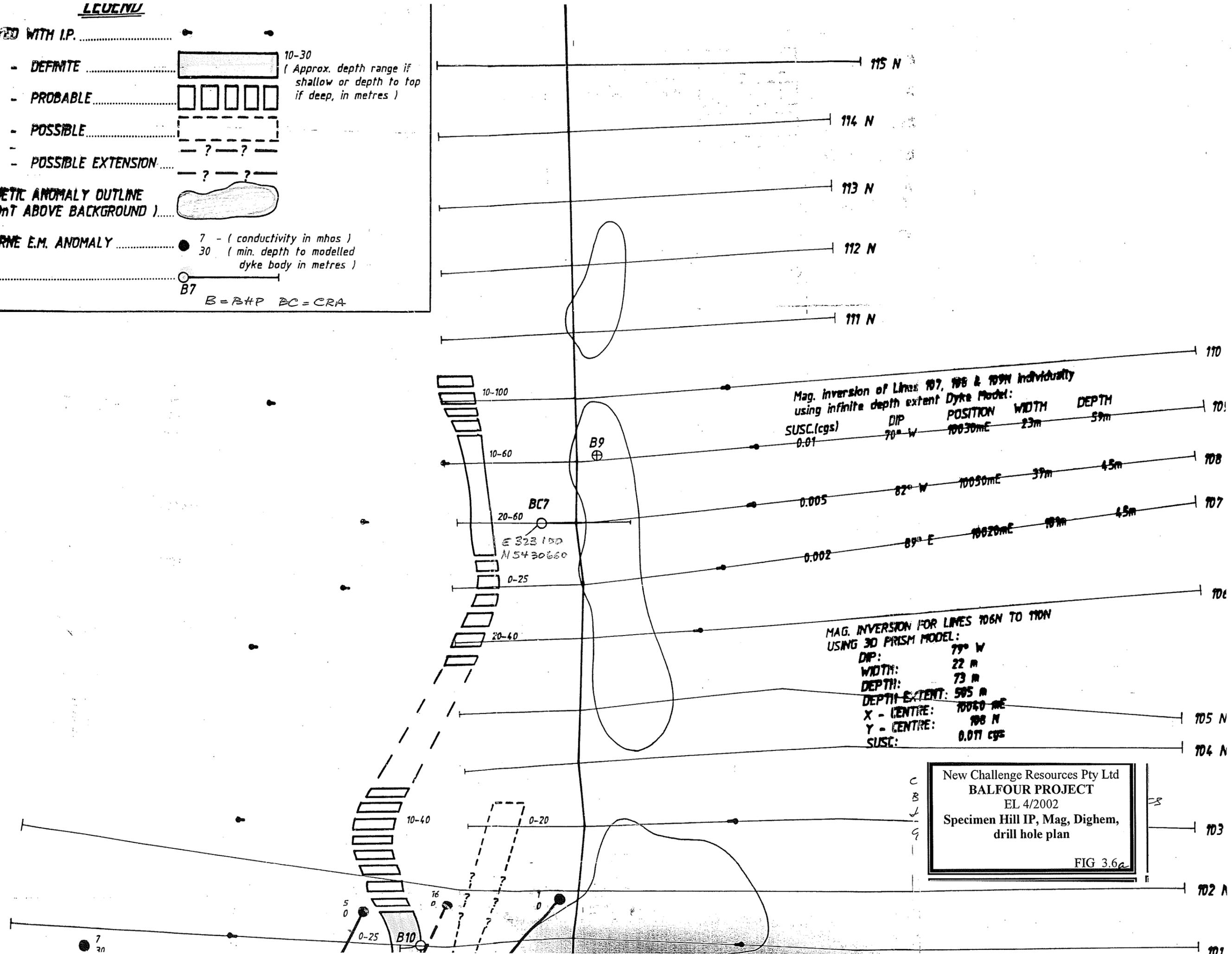
DIGHEM AIRBORNE E.M. ANOMALY

7 - (conductivity in mhos)
30 (min. depth to modelled dyke body in metres)

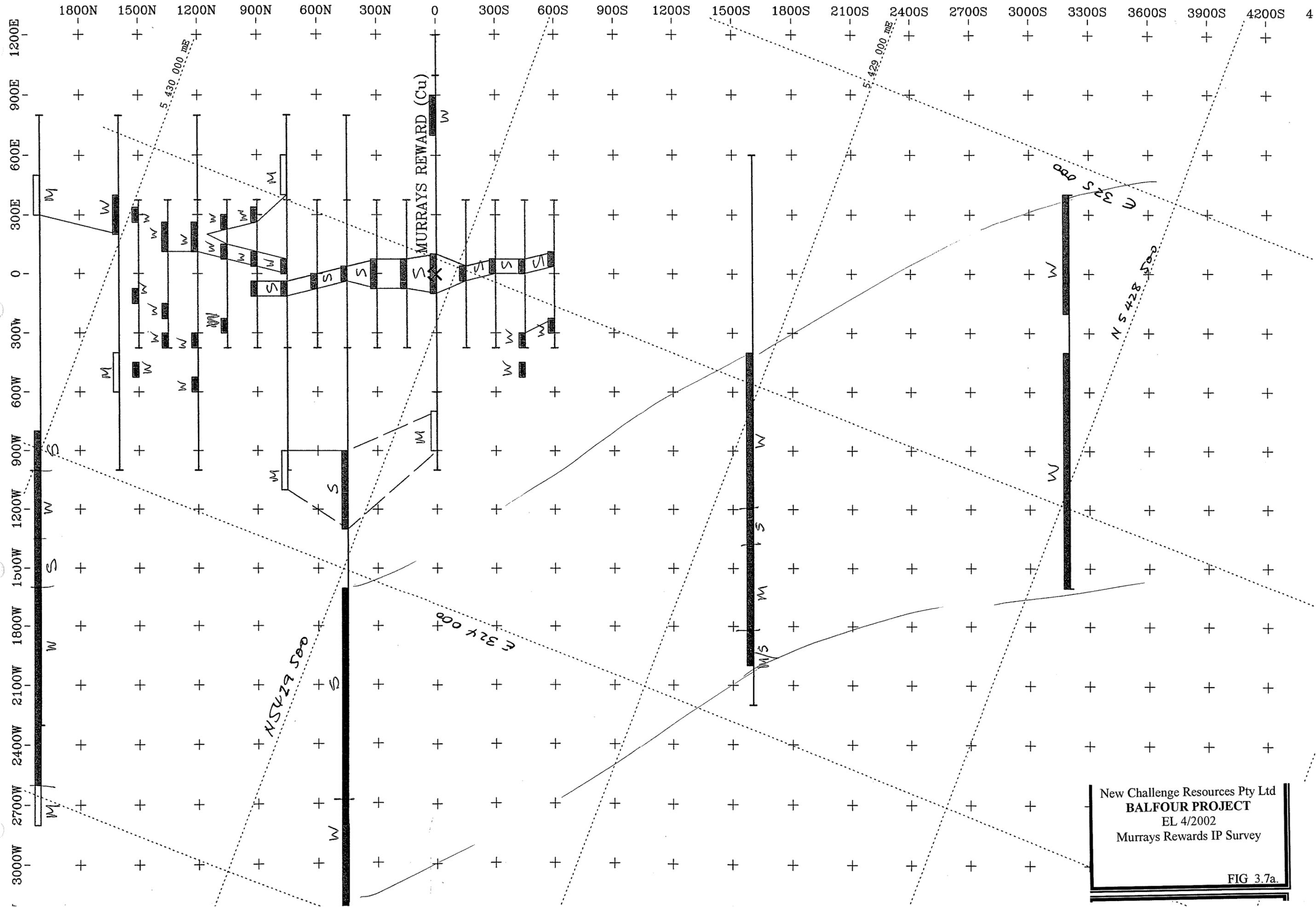
DRILL HOLE



B7
B = BHP BC = CRA

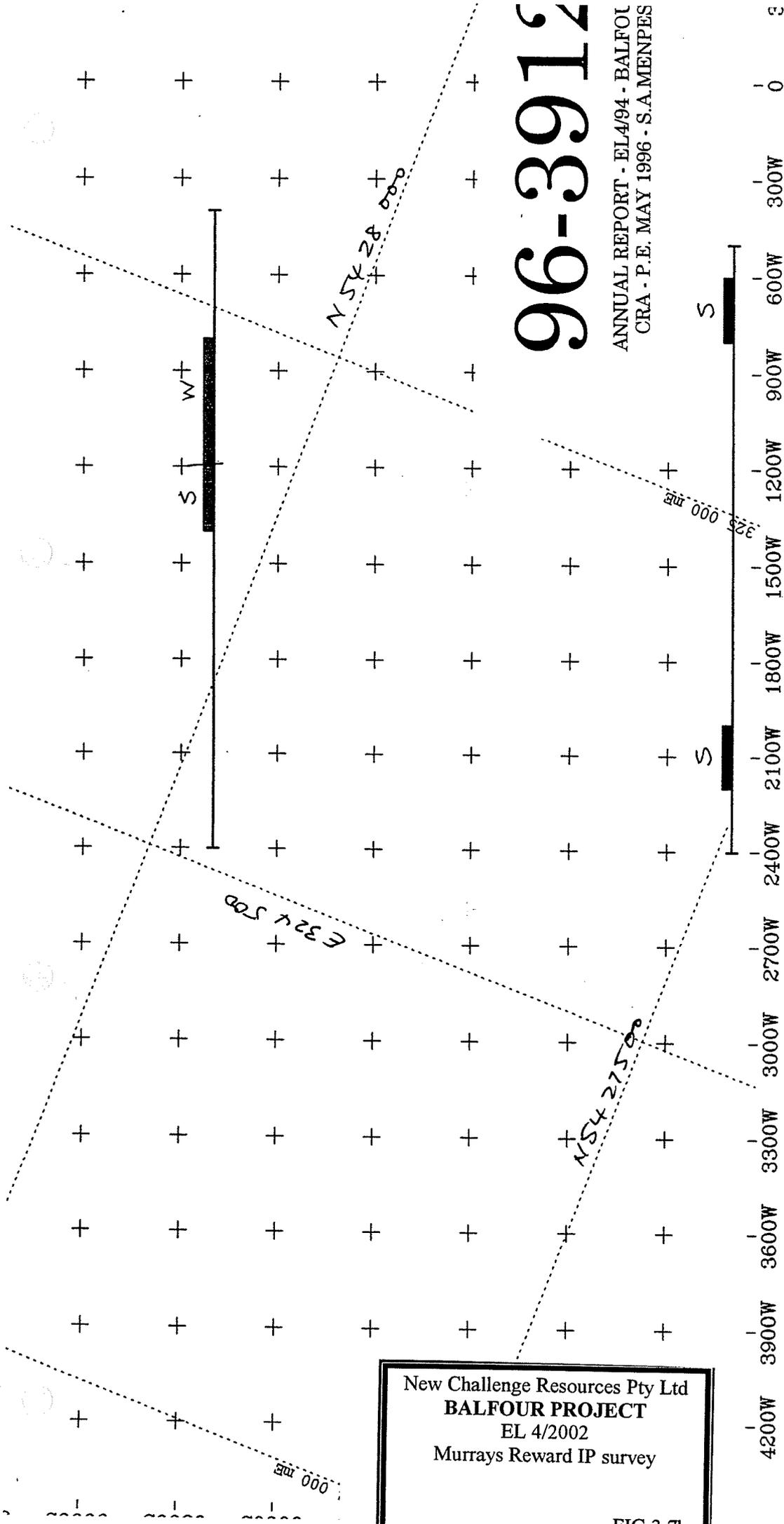


New Challenge Resources Pty Ltd
BALFOUR PROJECT
EL 4/2002
Specimen Hill IP, Mag, Dighem,
drill hole plan
FIG 3.6a



New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Murrays Rewards IP Survey

FIG 3.7a.



96-3912

ANNUAL REPORT - EL4/94 - BALFOUR
 CRA - P.E. MAY 1996 - S.A.MENPES

New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Murrays Reward IP survey

CRA E
ACI IP Interp
1967, 1970 Freq. domain
96-3912, 1.2-96

END

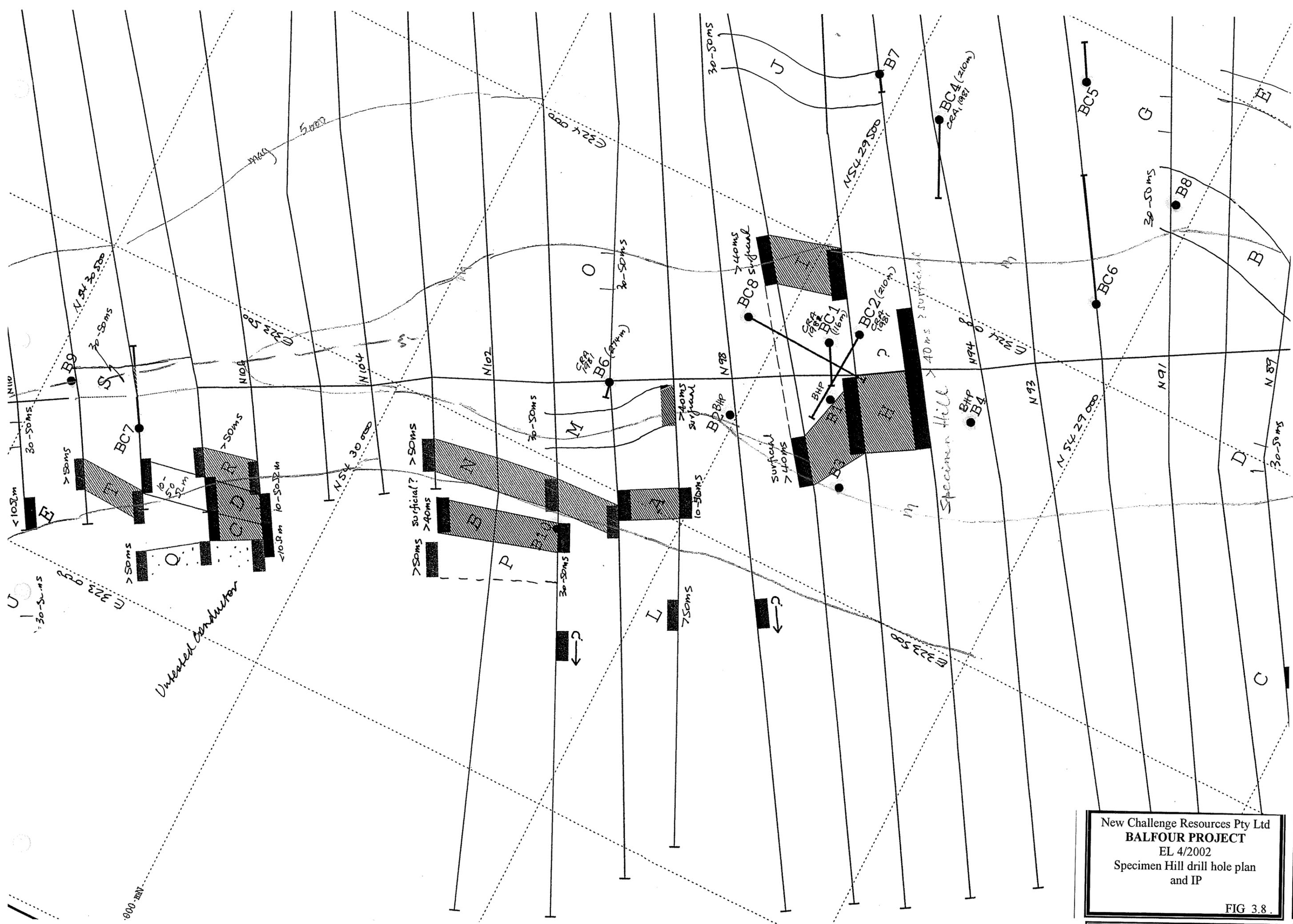
- a spacing = 75'
- a spacing = 200'

- | Strong IP feature PFE > 10% S
- | Moderate IP feature PFE 5-10% M
- | Moderate IP feature PFE 5-10% (only partially defined) P
- | Weak IP feature PFE 2-5% W



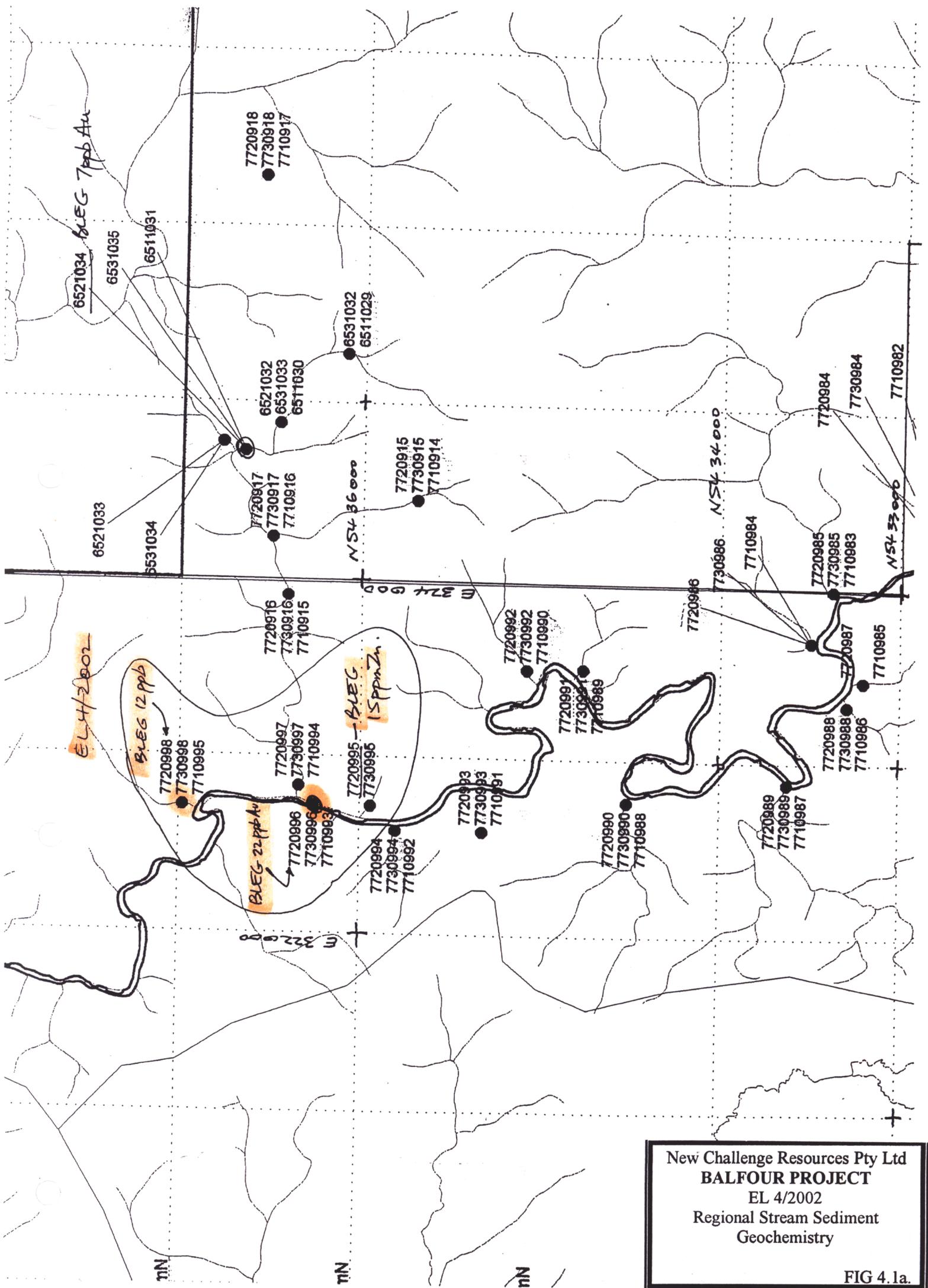
SCALE 1:5000

FIG 3.7b.

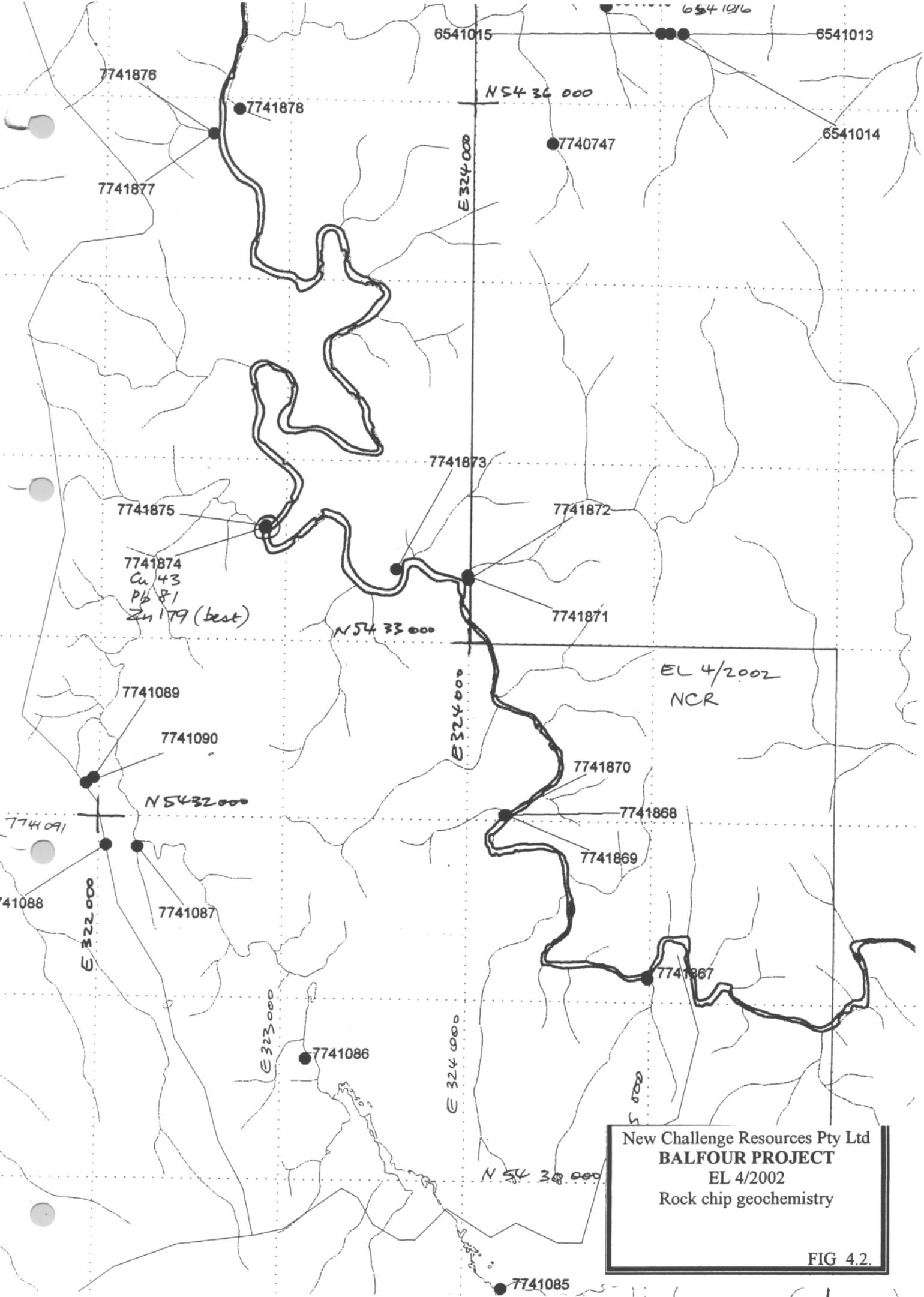


New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Specimen Hill drill hole plan
 and IP

FIG 3.8.



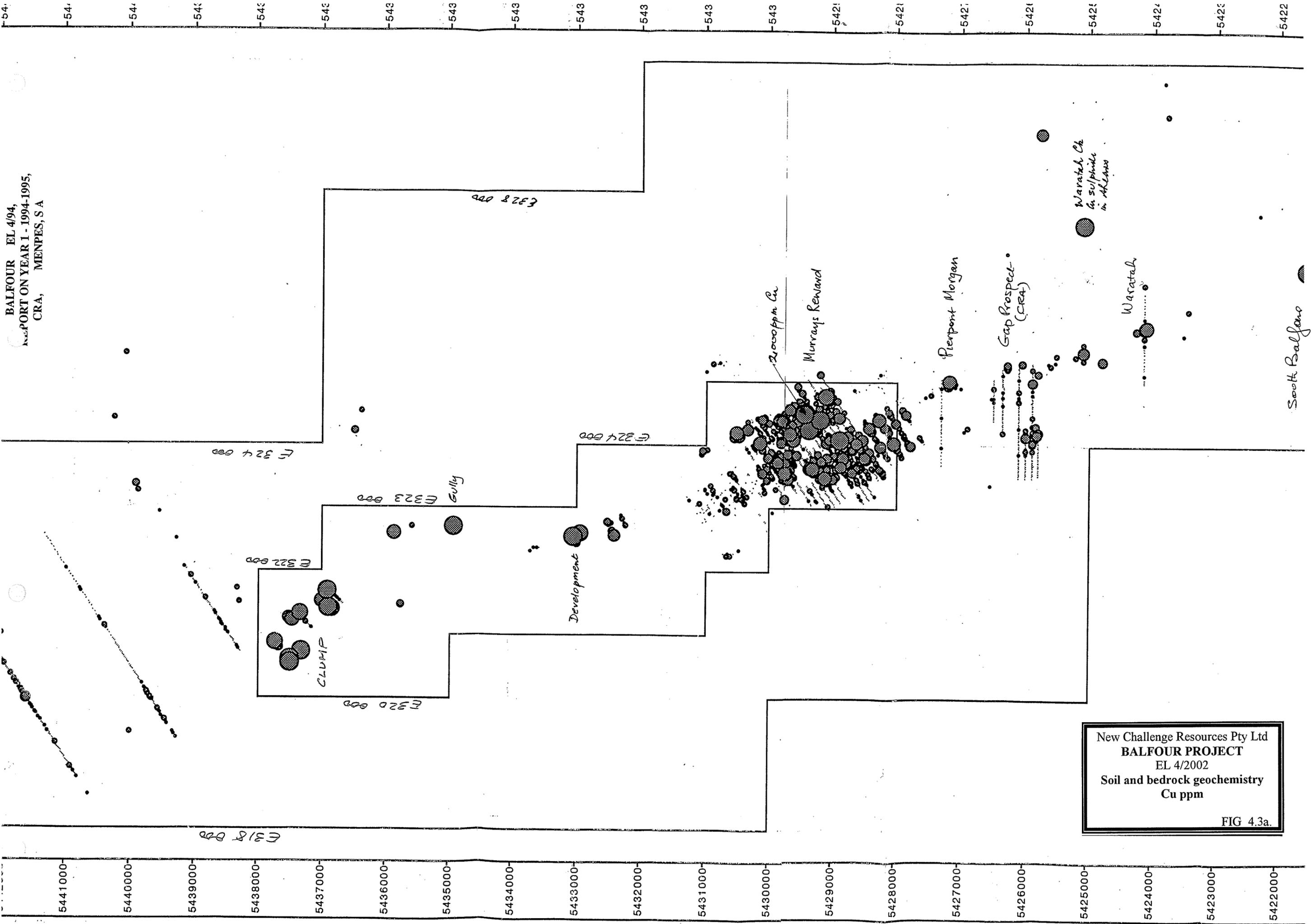
New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Regional Stream Sediment
 Geochemistry
 FIG 4.1a.



New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Rock chip geochemistry

FIG 4.2.

BALFOUR EL 4/94,
REPORT ON YEAR 1 - 1994-1995,
CRA, MENPES, S A



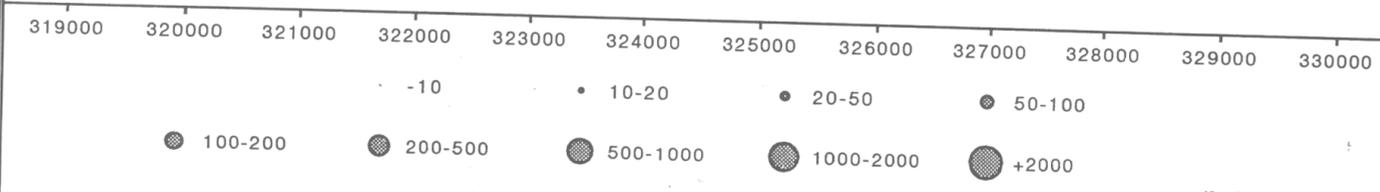
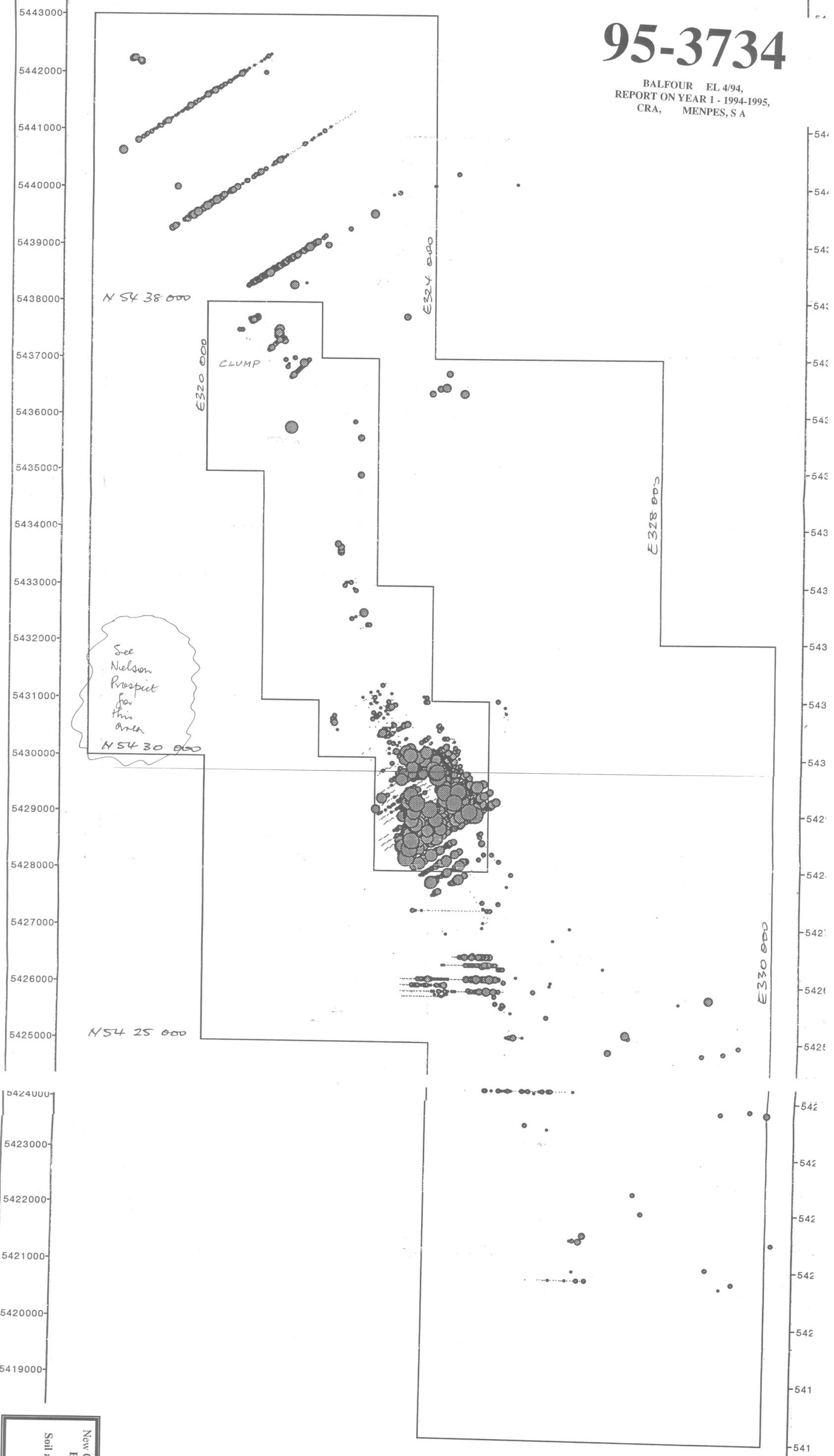
New Challenge Resources Pty Ltd
BALFOUR PROJECT
EL 4/2002
Soil and bedrock geochemistry
Cu ppm

FIG 4.3a.

318000 319000 320000 321000 322000 323000 324000 325000 326000 327000 328000 329000 330000

95-3734

BALFOUR EL 4/94,
REPORT ON YEAR 1 - 1994-1995,
CRA, MENPES, S A



New Challenge Resources Pty Ltd
BALFOUR PROJECT
EL 4/2002
Soil and bedrock geochemistry
Zn ppm
FIG 4.3b

794025
CRA Exploration Pty Limited
BALFOUR Cu PROJECT - EL18/92 & EL4
SOIL & ROCK GEOCHEM - Zn ppm
Geol: RGP Scale: 1:50000 Report: 2087
Drawn: RGP Date: 26/9/1994 Plan: Tv 858

All Samples
jmap
1000m
5cm

N 54 33 000

E 321 000

E 322 000

N 54 31 000

N 54 32 000

95-3734

BALFOUR EL 4/94,
REPORT ON YEAR 1 - 1994-1995,
CRA, MENPES, S A

NELSON PROSPECT
SOIL & WACKER SAMPLES
Zn ppm
Menpes 1995
794081

New Challenge Resources Pty Ltd
BALFOUR PROJECT
EL 4/2002
Nelson Prospect
Soil and Bedrock Geochemistry
Zn ppm
FIG 4.4a

321000

322000

323000

5 cm

- 10-25
- 25-50
- 50-100
- 500-750
- 750-1000
- +1000

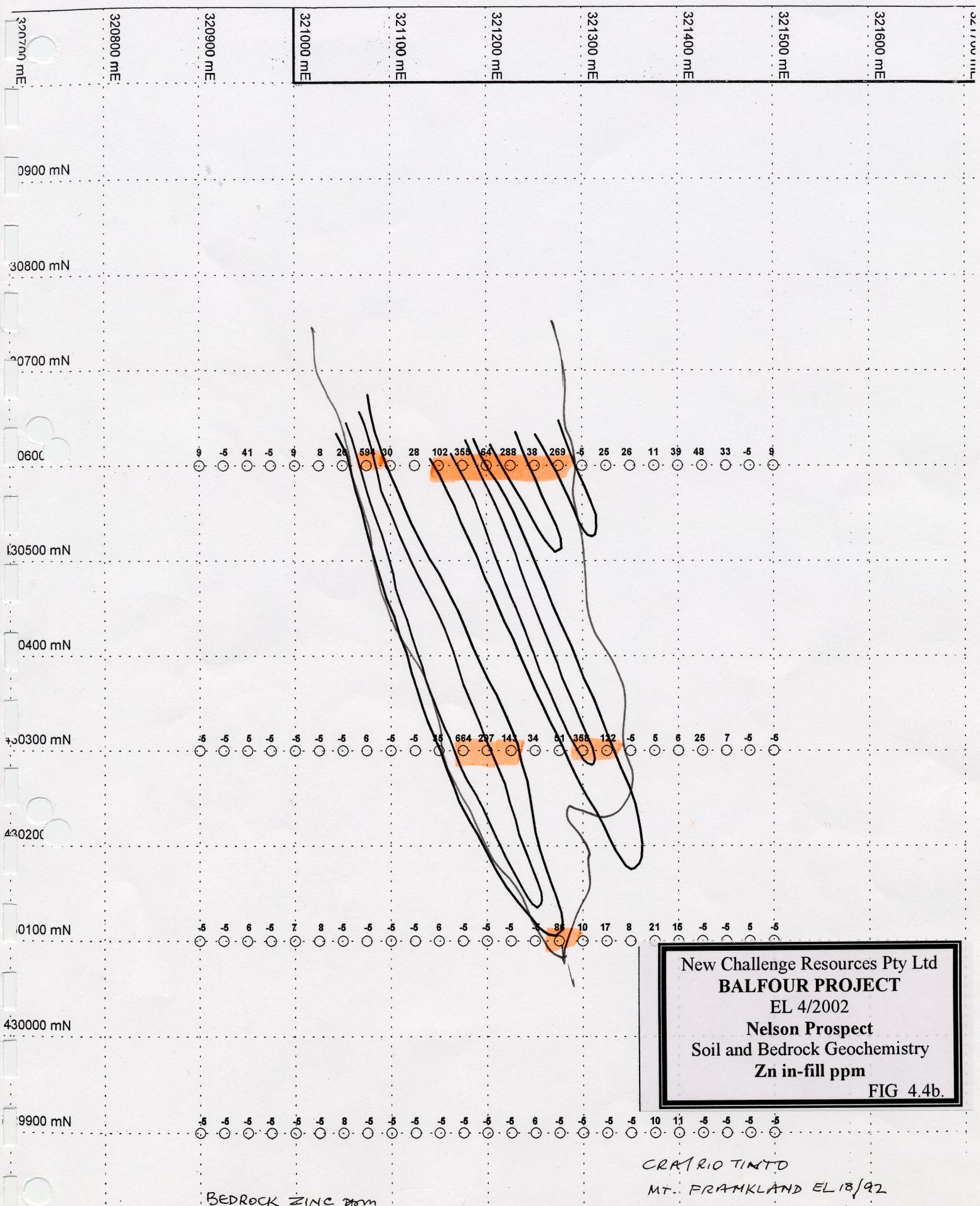
CRA EXPLORATION PTY. LIMITED
MT FRANKLAND EL 18/92 &

5433000

5432000

5431000

5430000



New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
Nelson Prospect
 Soil and Bedrock Geochemistry
Zn in-fill ppm
 FIG 4.4b.

BEDROCK ZINC ppm

CRATERIO TINTO
 MT. FRANKLAND EL 18/92

NELSON PROSPECT
 WACKER SAMPLING
 S. Russell March 98
 TV 175-Low 98-4121

245024

N 54 23 000

N 321 000

N 322 000

N 54 32 000

N 54 31 000

N 54 30 000

321000

322000

32

95-3734

BALFOUR EL 4/94,
REPORT ON YEAR 1 - 1994-1995,
CRA, MENPES, SA

New Challenge Resources Pty Ltd
BALFOUR PROJECT
EL 4/2002
Nelson Prospect
Soil and Bedrock Geochemistry
Pb ppm

FIG 4.4c.

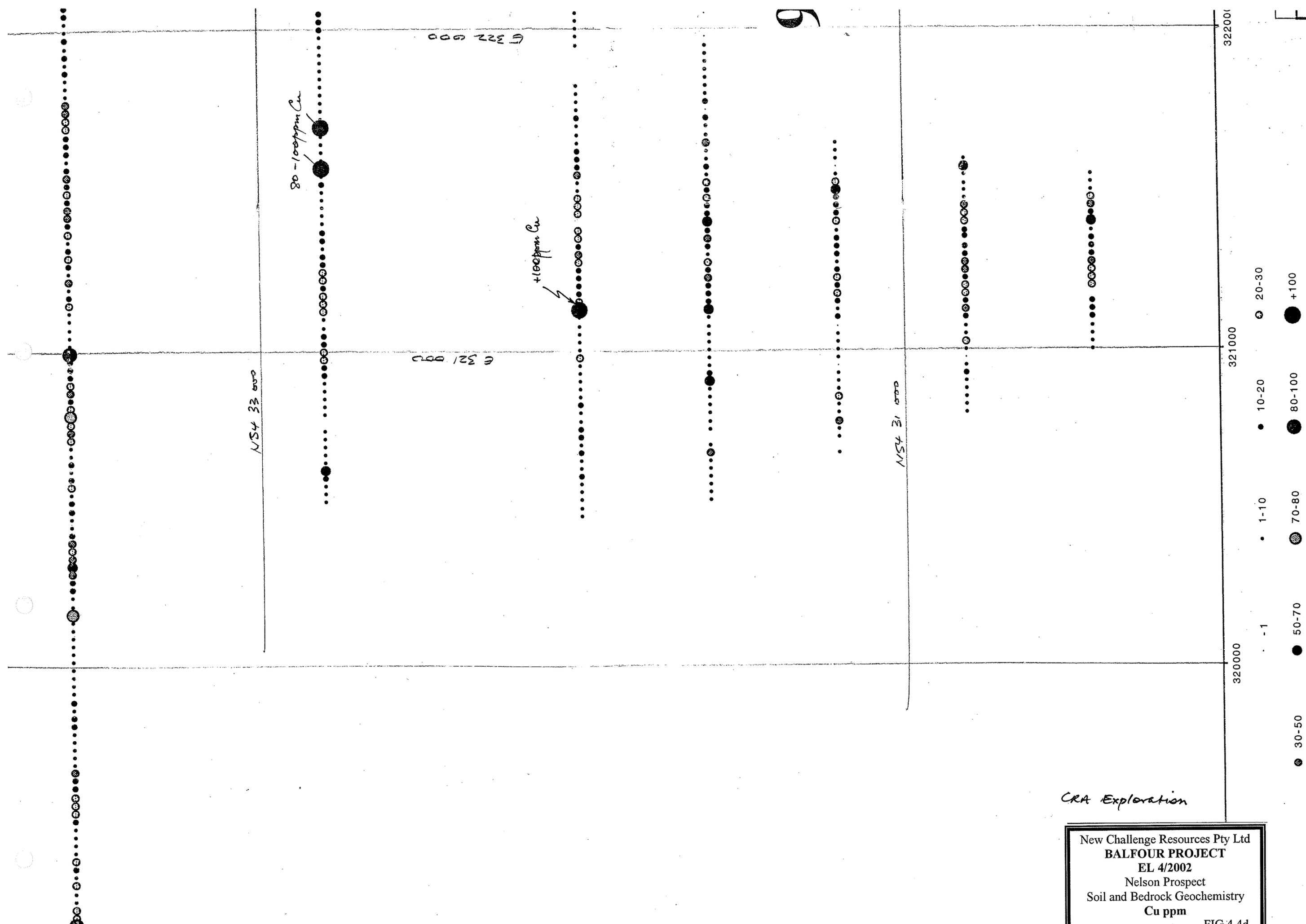
CRA EXPLORATION
MT FRANKLAND EC 18/92
BALFOUR 4/94

NELSON PROSPECT
Soil & Bedrock Geochem
Pb ppm

794080

5 cm

- 10
- 100-300
- 300-500
- 500-1000
- 20-30
- 30-50
- +1000 ppm



320000 321000 322000

NS4 33 000

E 321 000

E 322 000

NS4 31 000

80-100ppm Cu

+100ppm Cu

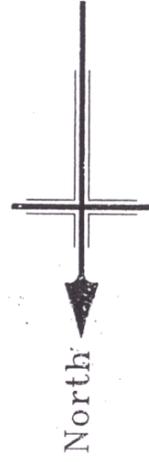
9

CRA Exploration

New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Nelson Prospect
 Soil and Bedrock Geochemistry
 Cu ppm
 FIG 4.4d

- 30-50
- 50-70
- 70-80
- 80-100
- 10-20
- 20-30
- +100

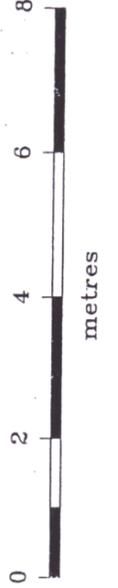
324 500mE



68° 68' Strike & dip of bedding—right way up, facing unknown.
 82° 82' Strike & dip of penetrative cleavage, vertical.
 45° 45' Strike & dip of observed fault.
 80° 80' Strike & dip of scaly, anastomosing shear cleavage.
 • Mark beginning & end of sampling interval.
 Eng Py Lithological symbols: Refer (Tv 897).

Sample Numbers:
 7886 - 7900 : Prefix 375
 2201 - 2206 : Prefix 399
 2211 - 2238 : Prefix 399

Continuous-chip—sample intervals across the southern end of the open pit at Murrays Reward Copper Mine, Balfour.
 * NB * Numbers 7888,2213,2217 & 2218 are spot samples.



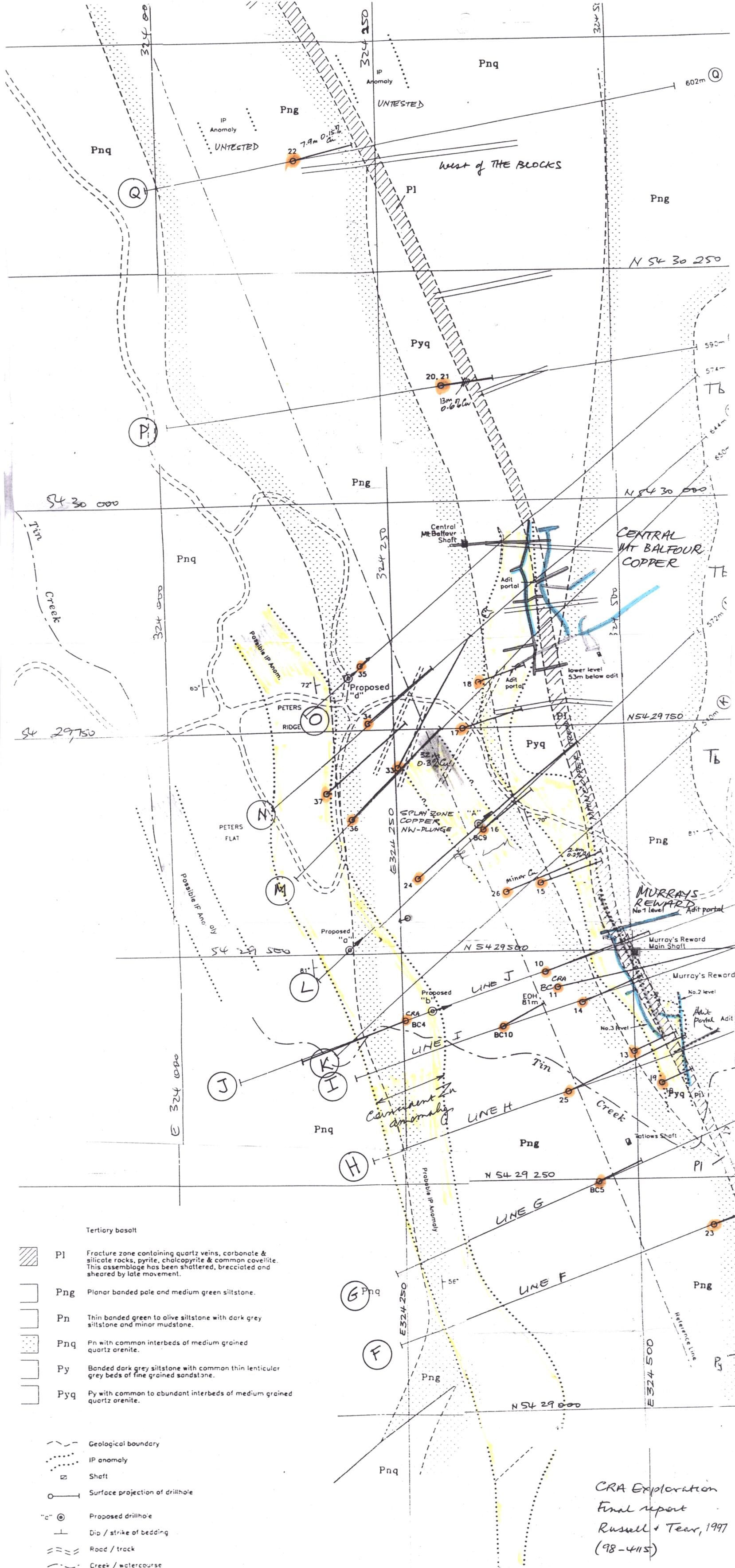
794089

-3734

New Challenge Resources Pty Ltd
BALFOUR PROJECT
EL 4/2002
Rock samples S-end Murrays
Reward, Cu, Sn, As ppm

FIG 4.5

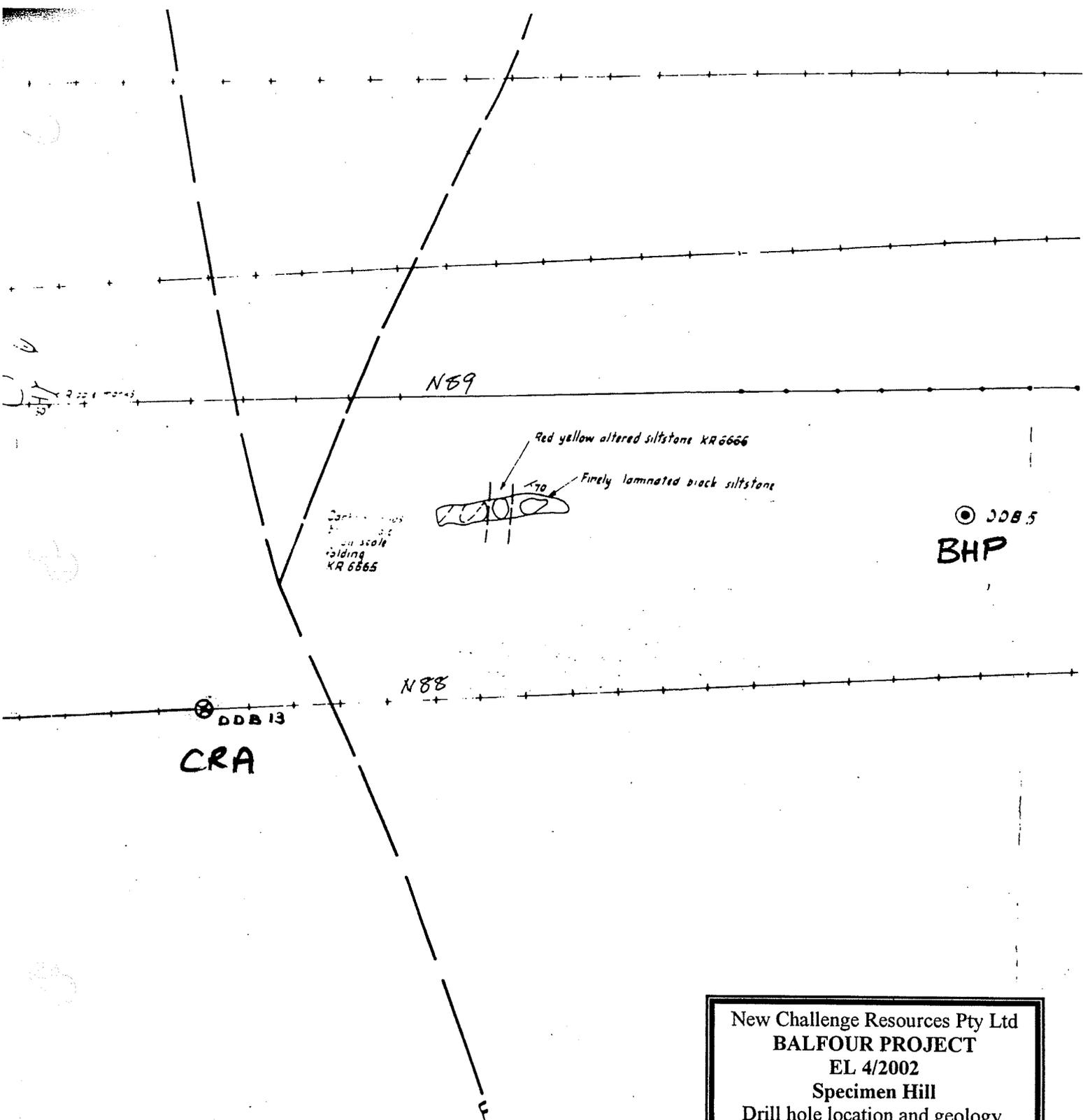
| | |
|--|---------------------|
| CRA EXPLORATION PTY. LIMITED | |
| BALFOUR EL 4/94 | |
| Chip Sampling at the Southern end of the Open Pit at Murrays Reward Copper Mine, Balfour | |
| Ref.: SK 55 - 03 | File: Tv898r |
| Scale: 1 : 100 | Date: February 1995 |
| Author: N.J. Turner | Report No.: |
| Drawn: R. Traviero | Plan No.: Tv 898 |



- P1 Fracture zone containing quartz veins, carbonate & silicate rocks, pyrite, chalcopyrite & common covellite. This assemblage has been shattered, brecciated and sheared by late movement.
- Png Planar banded pale and medium green siltstone.
- Pn Thin banded green to olive siltstone with dark grey siltstone and minor mudstone.
- Pnq Pn with common interbeds of medium grained quartz arenite.
- Py Banded dark grey siltstone with common thin lenticular grey beds of fine grained sandstone.
- Pyq Py with common to abundant interbeds of medium grained quartz arenite.

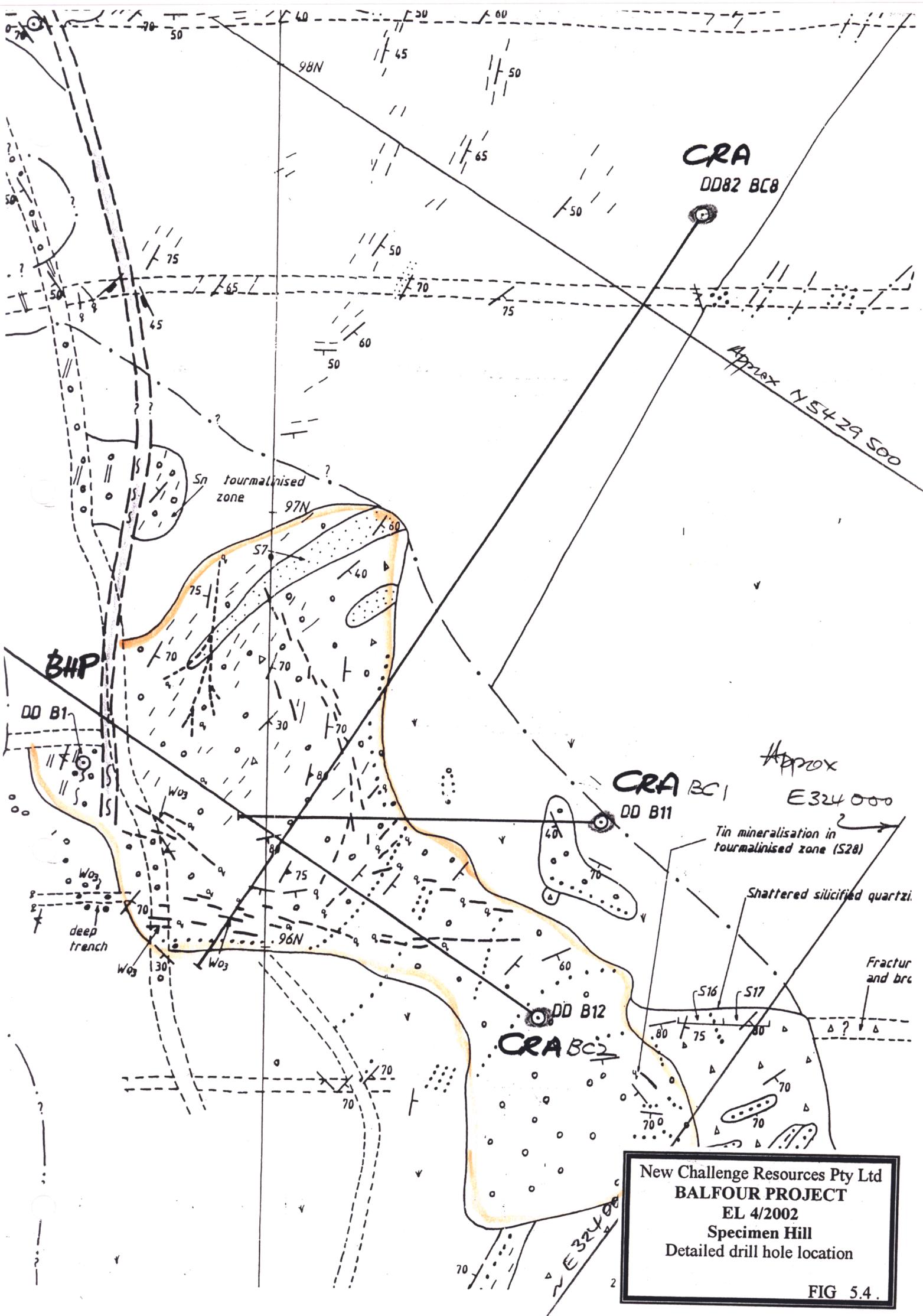
- Geological boundary
- IP anomaly
- Shaft
- Surface projection of drillhole
- Proposed drillhole
- Dip / strike of bedding
- Road / track
- Creek / watercourse

CRA Exploration
 Final report
 Russell + Tear, 1997
 (98-4115)



New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Specimen Hill
 Drill hole location and geology,
 with tourmaline breccia
 FIG 5.3c.

- 
 SOIL GEOCHEM SAMPLES (0-100g)
- 
 ROCK CHIP CHANNEL SAMPLES
 (No material for samples)
- 
 ROCK CHIP SAMPLES
- 
 BHP DIAMOND DRILL HOLES
- 
 GEOPEKO JACRO DIAMOND DRILL HOLES
- 
 CRAE/GEOPEKO DIAMOND DRILL HOLES



New Challenge Resources Pty Ltd
BALFOUR PROJECT
 EL 4/2002
 Specimen Hill
 Detailed drill hole location

FIG 5.4.