03-4901

Tasmanian Mineral Exploration Company Report

Title: Tube number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL 10/74)
Company: PlacerDome

Plans from archive store in Zeehan

Compiled by David Green 4 June 2003.

03_4901

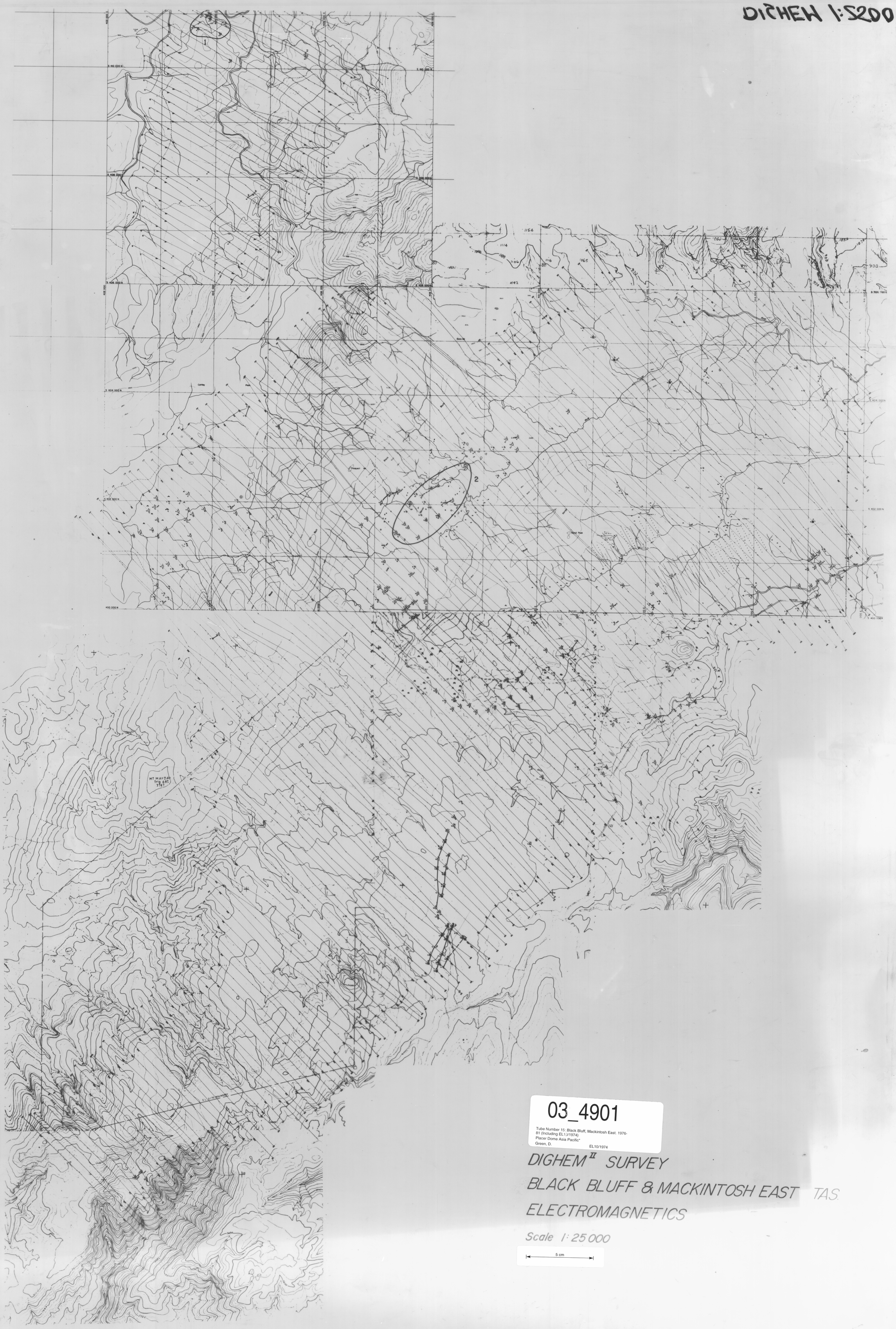
Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

Tube 15

SHEET	EL Nº	SCALE	REMARKS	DATE
BLACK BLUFF & MACKINTOSH EAST TAS.		1:25000	DIGHEM^{II} SURVEY ELECTROMAGNETICS	
"		1:25000	DIGHEM^{II} SURVEY RESISTIVITY	
"		1:25000	DIGHEM^{II} SURVEY MAGNETICS	
"		1:25000	DIGHEM^{II} SURVEY ENHANCED MAGNETICS	
MACKINTOSH EAST		1:10 000	RESISTIVITY FOR GEOPEKO LTD PLAN Nº 5583 S/B. SHT. 2.	
"		1:10000	MAGNETICS FOR GEOPEKO LTD. PLAN Nº 5581 S/B SHT.2.	
		1:10 000	ENHANCED MAGNETICS FOR GEOPEKO LTD. PLAN Nº 5582 S/B SHT 2.	
BLACK BLUFF TAS.		1:10 000	ENHANCED MAGNETICS FOR GEOPEKO LTD. PLAN Nº 5566 S/B. SHT. 4.	
"		1:10 000	MAGNETICS FOR GEOPEKO LTD. PLAN Nº 5565 S/B. SHT. 4.	
"		1:10 000	ELECTROMAGNETICS FOR GEOPEKO LTD. PLAN Nº 5564 S/B. SHT. 4.	
"		1:10 000	RESISTIVITY FOR GEOPEKO LTD. PLAN Nº 5567 S/B. SHT. 4.	
"	10/74		SUMMARY MAP OF GEOLOGY & PROSPECT LOCATIONS	
	10/74	1:10 000	GEOLOGICAL MAP	APRIL '78
"	10/74	1:10 000	(COLOURED MAP)	DEC '76
"	10/74	1:10 000	GEOLOGICAL MAP KT10/74-3	APRIL '78
"	10/74	1:10 000	DRAINAGE SAMPLE LOCATION MAP KT10/74-1	
"	10/74	1:10 000	KT10/74-3.	DEC '76
"	10/74	1:10 000	DRAINAGE SAMPLE LOCATION MAP KT10/74-3C	NOV '77
"	10/74	1:10 000	ROCK SAMPLE LOCATION MAP KT10/74-2D.	DEC '76.
"	10/74	1:10 000	ROCK SAMPLE LOCATION MAP KT10/74-3D.	NOV '77
"	10/74	1:10 000	-80 MESH STREAM SEDIMENT SAMPLE LOCATIONS KT10/74-3F	MAY '81

SHEET	EL Nº	SCALE	REMARKS	DATE
BLACK BLUFF TAS	10/74	1:10 000	-80 MESH DRAINAGE GEOCHEMISTRY Cu, Pb, Zn. TK10/743.	MAY '81
"	10/74	1:10 000	DRAINAGE SAMPLE LOCATION MAP KT10/74-3.	NOV. 77
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS Cu, Pb, Zn. KT10/74-1	
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS COPPER. KT10/74-2	NOV. '77
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS LEAD. KT10/74-2.	NOV. '77
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS ZINC. KT10/74-2.	NOV. '77
	10/74	1:10000	DRAINAGE GEOCHEMICAL RESULTS TIN. KT10/74-2.	NOV '77
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS COPPER. KT10/74-3.	NOV '77
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS ZINC. KT10/74-3.	NOV '77
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS LEAD. KT10/74-3.	NOV '77
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS TIN. KT10/74-3.	NOV. '77
"	10/74	1:10 000	DRAINAGE GEOCHEMICAL RESULTS MANGANESE KT10/74-3.	NOV '77
"		1:10000	STREAM SEDIMENT GEOCHEMISTRY Au (x/x) Sn (8.0) W x	1981
MACINTOSH EAST		1:10 000	ELECTROMAGNETICS FOR GEOPEKO LTD. SHT. 2. PLAN Nº 5580 S/B.	
BLACK BLUFF TAS.		1:10 000	ENHANCED MAGNETICS FOR GEOPEKO LIMITED. SHT. 5 PLAN Nº. 5570 S/B.	
"		1:10 000	RESISTIVITY FOR GEOPEKO LTD. SHT. 5. PLAN Nº. 5571 S/B.	
"		1:10 000	ELECTROMAGNETICS FOR GEOPEKO LTD. SHT. 5. PLAN Nº. 5568 S/B.	
"		1:10 000	MAGNETICS FOR GEOPEKO LTD. SHT. 5. PLAN Nº. 5569 S/B.	

DIGHEM 1:52000



03_4901

Tube Number 15: Black Bluff, Mackintosh East, 1976-81 (Including EL1/1974)
Placer Dome Asia Pacific*
Green, D.
EL10/1974

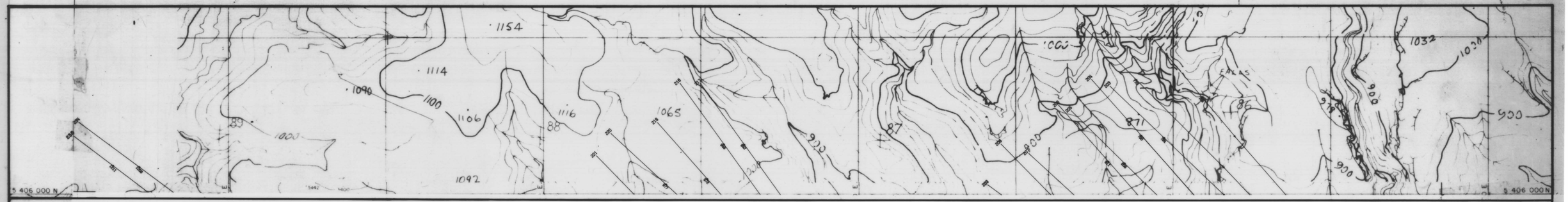
DIGHEM II SURVEY

BLACK BLUFF & MACKINTOSH EAST TAS.

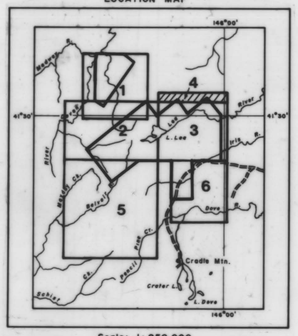
ELECTROMAGNETICS

Scale 1:25 000

5 cm



LOCATION MAP



REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

DIGHEM^{II} SURVEY

BLACK BLUFF, TASMANIA

RESISTIVITY

FOR

GEOPEKO LIMITED

5 cm

SCALE 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 4

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

Flight line

Fiducials and numbers

LEGEND

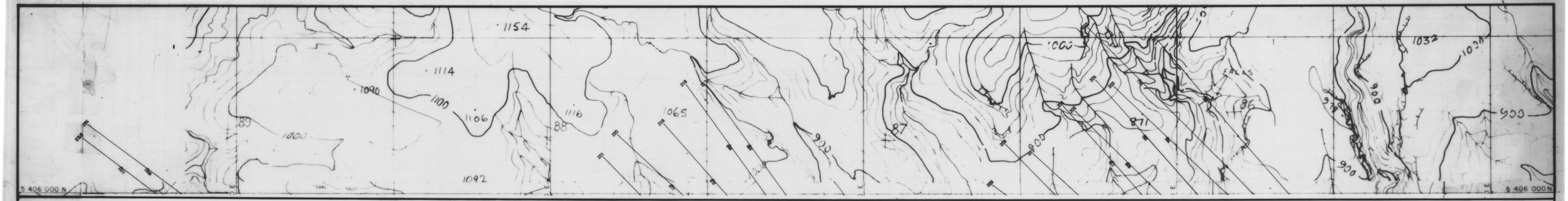
Contours in ohm - m at eight intervals per decade

100
75
56
42
31
23
17
13
10

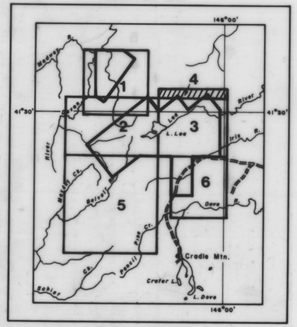
Note

The numbers face in the direction of increasing value.

Plan No. 5567 S/B



LOCATION MAP



REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

DIGHEM^{II} SURVEY

BLACK BLUFF, TASMANIA

ELECTROMAGNETICS

FOR

GEOPEKO LIMITED

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
"Placer Dome Asia Pacific"
Green, D. EL10/1974

SCALE 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

5 cm

SHEET 4

Flight line

Fiducials and numbers

ANOMALY GRADE	EM GRADE SYMBOL	MHO RANGE
6	●	≥ 100
5	◉	50 — 99
4	●	20 — 49
3	◉	10 — 19
2	○	5 — 9
1	○	≤ 4
	×	Possible conductor

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter. Most swamps yield Grade 1 anomalies but highly conducting clays can give Grade 2 anomalies. The multi - coil anomaly shapes often allow surface conductors to be recognized, and these are indicated by the letter S on this map. The remaining Grade 1 and 2 anomalies could be weak bedrock conductors. The higher grades indicate increasingly higher conductances. Examples: The ore bodies of the Magpie River camp yield Grade 4 anomalies, while Matheis and Whistle give Grade 5. Graphite and sulphides can span all grades but, in this survey area, field work may show that the different grades indicate different types of conductors.

identifier — mho value

Depths in greater than 100 feet / 150 feet / 200 feet

Conductor and Quadrature of Troubtest ratio is greater than — 1/1 / 5 ppm / 10 ppm / 15 ppm / 20 ppm

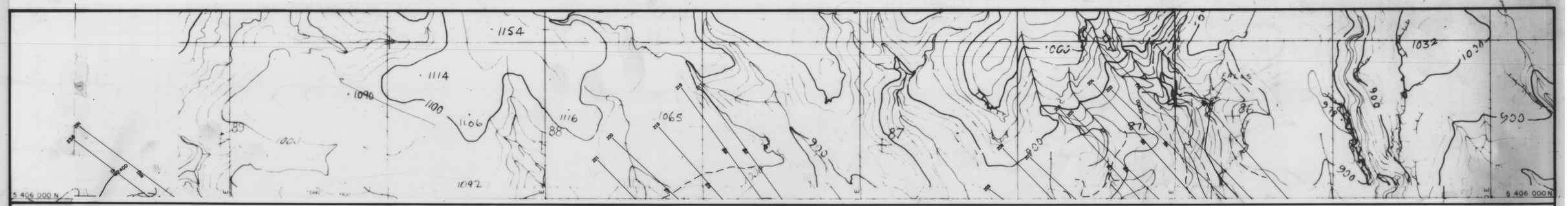
Refer to list of anomalies in survey report for the actual ppm values for all coils, and for conductor depths.

The actual mho value is plotted beside the EM grade symbol. The letter is the anomaly identifier. The horizontal rows of dots indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or conductive overburden effects.

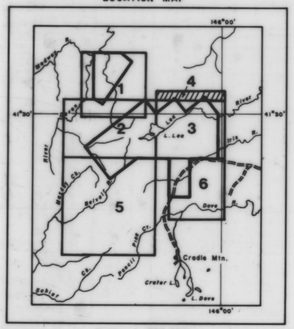
	Conductor axis
S	Probable surface response
S?	Possible surface response
L	Probable line (power, telephone, pipe, or fence)
L?	Possible line
?	Questionable anomaly
40	Apparent thickness >= 10 m
0 Dip	
100±	Direct magnetic correlation of 100 gammas

DIGHEM maps are designed to provide a correct impression of conductor quality by means of the conductance grade symbols. The symbols can stand alone with geology when planning a follow-up program. The actual mho values are plotted for those who wish quantitative data. The anomaly ppm and depth are indicated by inconspicuous dots which should not distract from the conductor patterns, while being helpful to those who wish this information. The map provides an interpretation of all conductors in terms of length, strike direction, conductance and depth. The accuracy is comparable to an interpretation from a ground EM survey having the same line spacing.

Plan No. 5564 S/B



LOCATION MAP



Scale: 1:250,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

DIGHEM^{II} SURVEY

BLACK BLUFF, TASMANIA

MAGNETICS

FOR

GEOPEKO LIMITED

03_4901

Tube Number 15: Black Bluff, Mackintosh East, 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

SCALE 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

5 cm

SHEET 4

Flight line

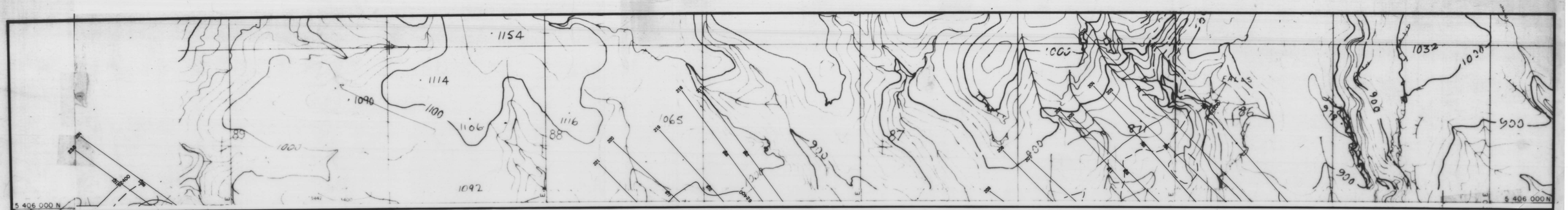
Fiducials and numbers

ISOMAGNETIC LINES
(total field)

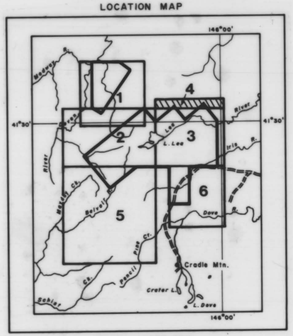
1000 ..... 1000 gammas
200 ..... 200 gammas
..... 50 gammas
..... 25 gammas
..... magnetic depression

Magnetic Inclination within the survey area: 72°

Plan No. 5565 S/B



LOCATION MAP



DIGHEM^{II} SURVEY

BLACK BLUFF, TASMANIA

ENHANCED MAGNETICS

FOR

GEOPEKO LIMITED

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1975-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

SCALE 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

5 cm

SHEET 4

Flight line

Fiducials and numbers

ISOMAGNETIC LINES

(enhanced field)

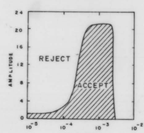
5000 ..... 5000 gammas

1000 ..... 1000 gammas

200 ..... 200 gammas

100 ..... 100 gammas

..... magnetic depression



Frequency response of magnetic operator

Plan No. 5566 S/B



03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including E_10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

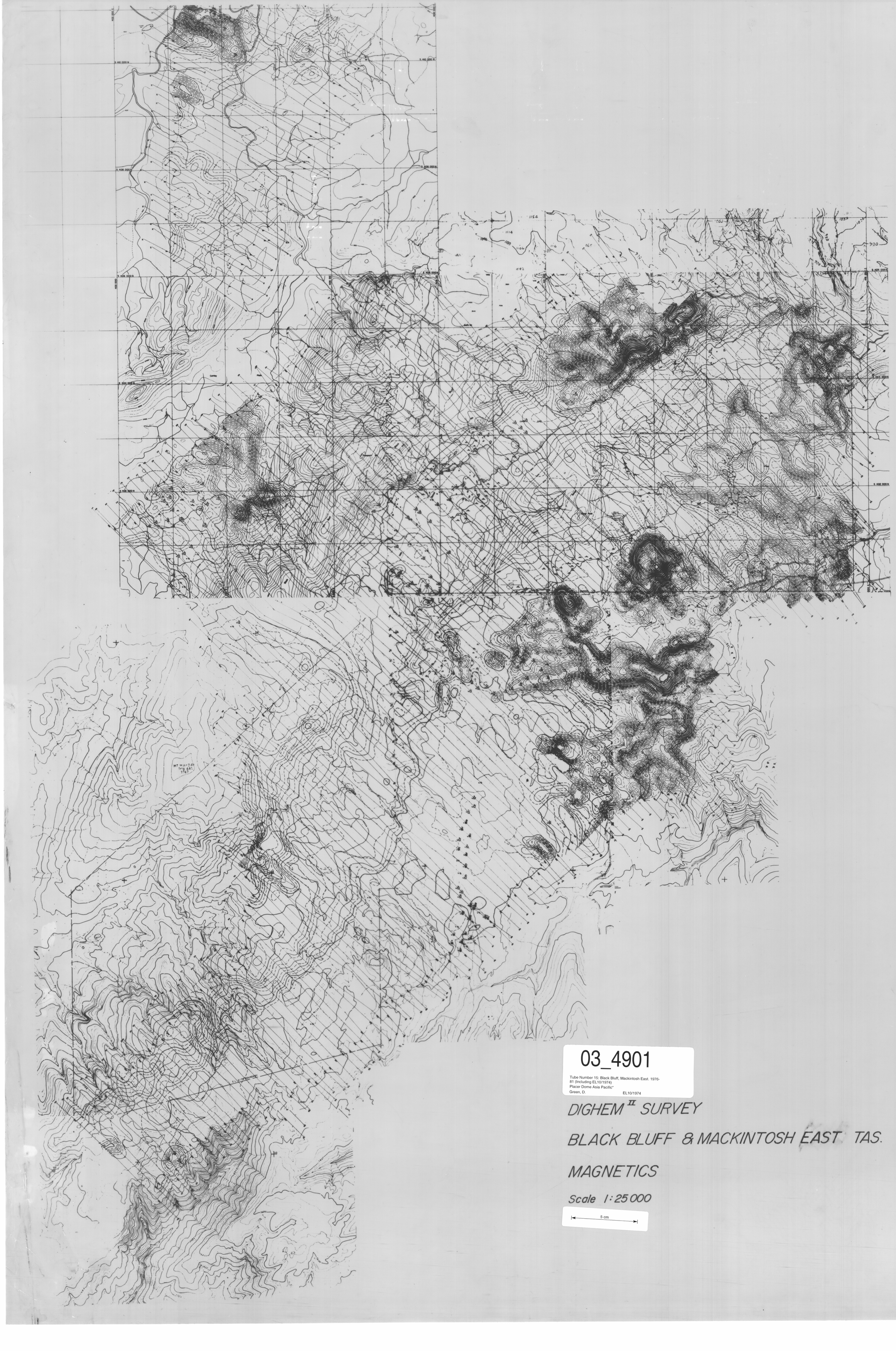
DIGHEM^{II} SURVEY

BLACK BLUFF & MACKINTOSH EAST. TAS.

RESISTIVITY

Scale 1:25 000

5 cm



03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

DIGHEM II SURVEY

BLACK BLUFF & MACKINTOSH EAST TAS.

MAGNETICS

Scale 1:25 000

5 cm



03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

DIGHEM^{II} SURVEY

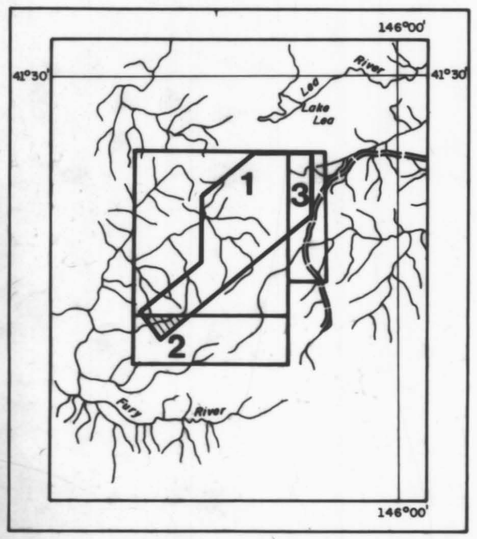
BLACK BLUFF & MACKINTOSH EAST TAS.

ENHANCED MAGNETICS

Scale 1:25 000

5 cm

LOCATION MAP



Scale 1 : 250,000

DIGHEM^{II} SURVEY

MACKINTOSH EAST, TASMANIA

RESISTIVITY

FOR

GEOPEKO LIMITED

SCALE 1 : 10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

5 cm

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

SHEET 2

Flight line

Fiducials and numbers

LEGEND

Contours in ohm - m
at eight intervals per decade.

100
75
56
42
31
23
17
13
10

Note

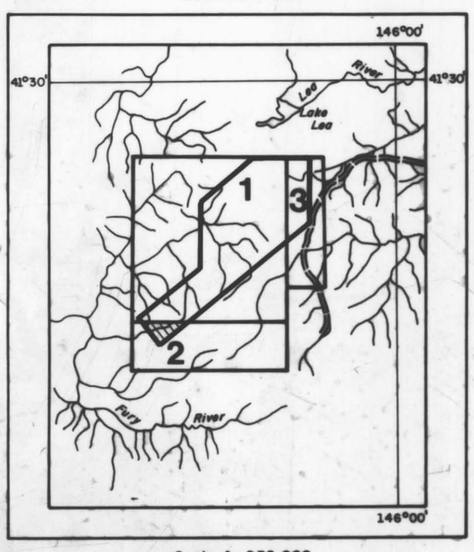
The numbers face in the direction of increasing value.

Plan No. 5583 S/B

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

LOCATION MAP



Scale 1 : 250,000

DIGHEM^{II} SURVEY

MACKINTOSH EAST, TASMANIA

MAGNETICS

FOR

GEOPEKO LIMITED

SCALE 1 : 10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

5 cm

SHEET 2

Flight line

Fiducials and numbers

ISOMAGNETIC LINES

(total field)

1000 ..... 1000 gammas

200 ..... 200 gammas

..... 50 gammas

..... 25 gammas

..... magnetic depression

Magnetic Inclination within the survey area : 72°

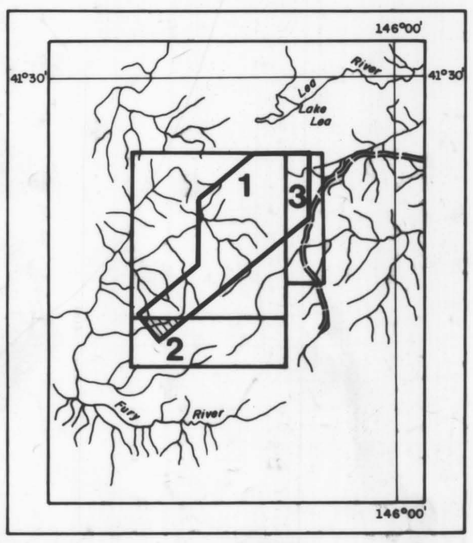
REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Plan No. 5581 S/B

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

LOCATION MAP



Scale 1 : 250,000

DIGHEM^{II} SURVEY

MACKINTOSH EAST, TASMANIA

ENHANCED MAGNETICS

FOR

GEOPEKO LIMITED

SCALE 1 : 10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

5 cm

SHEET 2

Flight line

Fiducials and numbers

ISOMAGNETIC LINES

(enhanced field)

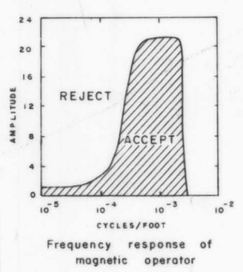
5000 ..... 5000 gammas

1000 ..... 1000 gammas

..... 200 gammas

..... 100 gammas

..... magnetic depression



Frequency response of magnetic operator

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

03_4901

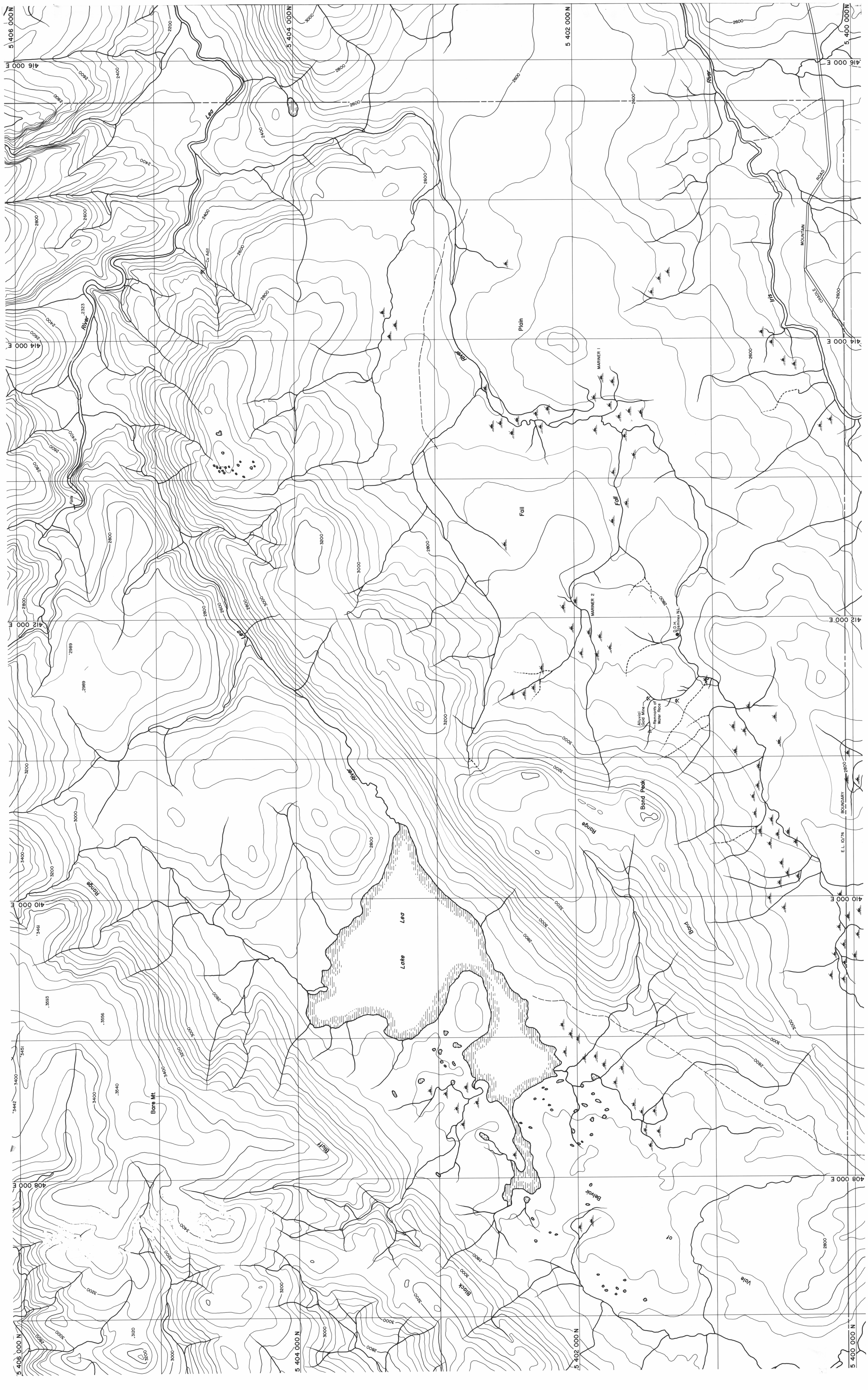
Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

Plan No. 5582 S/B

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

5 cm



MAP 1

5 406 000 N

5 404 000 N

5 402 000 N

5 400 000 N

408 000 E

410 000 E

412 000 E

414 000 E

416 000 E

Bare Mt

Bluff

Lake Lea

Black

Belvoir

Bond

Vale of

Range

Lea River

Fall River

Fall

Fall Creek

Mountain

Alluvial Tin mines

Tb

Mariner 1.

1. Previous work by Union Oil located an I.P and geochemical anomaly.
2. 10·6 km gridding.
3. C-horizon geochemistry at 25m centres.
4. Mapped at 1:5000.
5. Ground magnetics, S.P, gradient array, I.P. and V.L.F.
6. Geochemical anomaly - peak values: 440 ppm Cu, <10 000 ppm Pb, 1400 ppm Zn, 240 ppm Sn, 15 ppm Ag and 0·1% As.
7. S.P. anomaly (-50mV) coincident with gradient array and V.L.F.

Mariner 2.

1. Previous work by Tasminex and Union Oil. Old Au workings.
2. 6·4 km gridding.
3. C-horizon geochemistry at 25 m centres.
4. Mapped at 1:5000.
5. No encouragement from the above work.

Mariner 3.

1. Extension to N.E. of Mariner 1. following Geochemical anomaly.
2. 7 km gridding.
3. Mapped at 1:5000.
4. S.P. anomaly (-180mV) coincident with I.P. and V.L.F.
5. Several Cu-Zn anomalies.
6. 2 costeans and 1 drill hole of 137·5m.
7. Results indicated zones of veinlets with pyrite - chalcopyrite and quartz.

Mariner 4.

1. Thermal metamorphism, old workings and anomalous stream sediment geochemistry.
2. 3·2 km gridding.
3. C-horizon geochemical samples at 25m intervals.
4. Mapped at 1:2500.
5. Discouraging results, therefore no further work.

Mariner 5.

1. Extension to Mariner 1 and 3.
2. 20·6 km gridding.
3. C-horizon geochemistry over inliers in basalt and panned concentrate geochemistry.
4. 2 short percussion holes did not penetrate basalt.
5. Ground magnetics and S.P.
6. Gravity survey located granite / porphyry contact.

Mariner 6.

1. Dighem II magnetic anomaly and old workings.
2. Grid of 4km.
3. C-horizon geochemistry at 12·5m intervals.
4. Mapped at 1:1000.
5. Magnetics, S.P. and I.P.
6. Contourable Au anomaly coincident with resistivity low and old workings.
7. Drill hole targetted and drilled to 96·75m without success.

Mariner 7.

1. Dighem II anomaly and Pb anomaly in stream sediment.
2. Grid 8·7 km.
3. C-horizon geochemistry at 25m intervals.
4. Pole-dipole I.P. survey.
5. No anomalous results from geophysics but 2 spot Pb values of 1500ppm and 805ppm.
6. No further work although Dighem II anomaly not explained.

E.L. 10/74 BOUNDARY

Structure:

- Fault
- Geological contact
- Anticline
- Syncline

Geology

- Holocene - Alluvium, glacial debris, swamp soil.
- Tb Tertiary - Basalts and sediments.
- Ordovician - Conglomerates, sandstone and limestone.
- Cambrian - Upper lithic, vitric tuffs and sediments.
- lower quartz feldspar biotite porphyry.

5 cm

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.

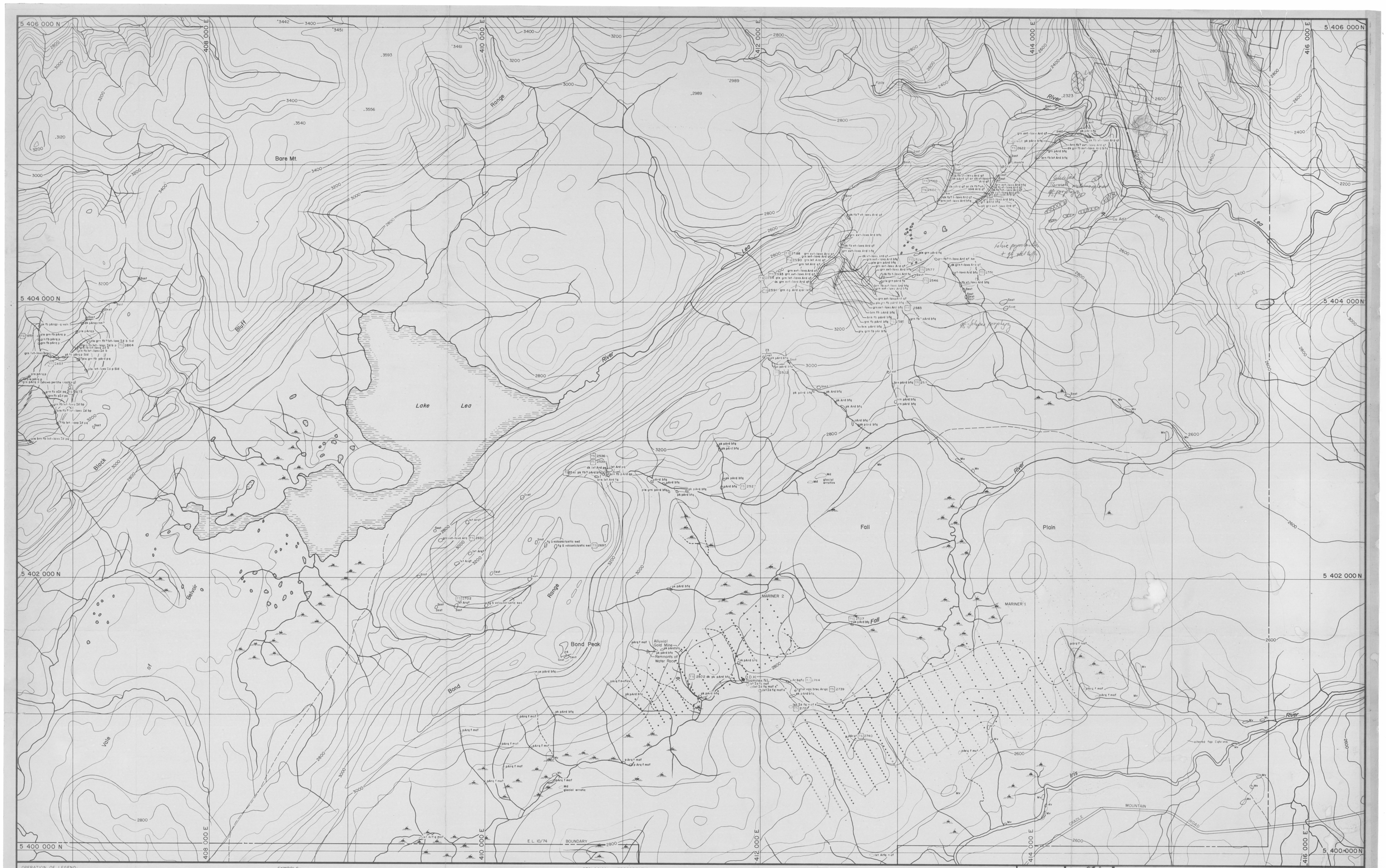
Scale 1:
25 0 25 50 75 100 125 150 175 200 225 250
metres

DRAWING NO. 1.
SHEET NO. KT 10/74-3-A6

Interpreted By:	J.P.
Drawn By:	R.Tong
Date:	July
Approved By:	
Revision By:	Date:
Revision By:	Date:
Revision By:	Date:

E.L. 10/74
BLACK BLUFF, TASMANIA

Summary Map of Geology and Prospect Locations



OPERATION OF LEGEND:

1. Capital letter – indicates primary classification eg. S – sedimentary rock, A – acid rock, M – basic rock
2. Lower case letters – indicate the following:
   (i) Colours – e.g. pk/grn A = pink fragments in an acid igneous rock with a green matrix.
   (ii) Textural or structural features – e.g. xtA = crystal tuff of acid composition, e.g. pA = porphyric acid rock, eg. oxA = oxidised acid rock

   b. As suffixes in progressive order,
   (i) Categorised – e.g. pAr = rhyolite, eg Za = intermediate rock of andesitic composition
   (ii) Mineralogy – e.g. pArf = porphyritic (rhyolite) with feldspar phenocrysts, eg. ixt f/b = lithic crystal tuff with feldspar (phenocryst component) and biotite (prominent matrix component), eg. ixt fq = lithic crystal tuff with (major) feldspar crystals and (minor) quartz crystals, e.g. fb ixt-lava Ia b = flow banded lithic vitric tuff - lava of intermediate dacitic composition with a biotite rich groundmass.

NOTE:
This map has been compiled from enlargements of the Tasmanian Lands Departments 1:15 840 scale topographic machine plots.

SYMBOLS:

IGNEOUS:

A	acid igneous unclassified
Ar	rhyolite
Ard	rhyodacite
I	intermediate igneous unclassified
Ia	andesite
Id	dacite
M	basic igneous unclassified
Mv	basalt
Md	dolerite

SEDIMENTARY:

Sst	Sandstone
Scongl	conglomerate
S	volcaniclastic sediment
Sqtz	quartzite

STRUCTURAL and TEXTURAL:

T	tuff unclassified
lt	lithic tuff
xt	crystal tuff
vt	vitric tuff
fb	flow banding
p	porphyritic
vns	veins
ox	oxidised
sld	silicified
argd	argillitised

STRUCTURAL:

⊃	outcrop limit
⊂⊃	rubble boundary
——	approximate contact
——	bedding
——	joint

GRAIN SIZE:

fg	fine grained (< 1mm)
mg	medium grained (5mm - 1mm)
cg	coarse grained (5mm - 5cm)

COLOURS:

pk	pink
grn	green
brn	brown
ple	pale
dk	dark

SILICATE MINERALOGY:

q	quartz
f	K feldspar
p	plagioclase
b	biotite
c	chlorite
s	sericite
mof	mafics
e	epidote
hb	hornblende

SULPHIDE MINERALOGY:

s"	sulphides
py	pyrite
hm	hematite

MISCELLANEOUS:
TS 2502 Thin Section and rock No.

GEOLOGICAL INTERPRETATION:

Pencil No.					
19-43	HOLOCENE	Alluvium, glacial debris (Md), swamp soils	19-28	☐	Lithic vitric tuff - lava (fb ixt-lava Ia b), intercalated with pArdpq)
19-47	TERT.	Olivine basalt (flows, Mv)	19-21	☐	Porphyritic plagioclase - quartz rhyolite (fb pAr qp)
19-38	L. ORDO.	Limestone (Gordon type)	19-3	☐	Fine grained quartzose volcaniclastic sediment (fg S volcaniclastic sed qs")
19-71	U ☾ ?	Talus - sandstone, conglomerate	19-57	☐	Lithic quartz crystal vitric tuff (ixt Arqt)
19-70	U ☾ ?	Sandstone, conglomerate (Owen type, Sst, Scongl)	19-55	☐	Lithic quartz crystal tuff (ixtZq qf mof s")
19-22	☾	Undifferentiated cambrian	19-23	☐	Quartz crystal vitric tuff - lava (xvt-lava Arq)
19-63	☾	Crystal lithic tuff (xit Ar qf, gradational to tuff - lava)	19-19	☐	Biotite feldspar quartz porphyritic lava (pArd bfq, pAr bfq)

MINING LEASE

GN MN
11.7°

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

DATE: APRIL '78
GEOLOGIST: R.B.
DRAWN: L.G. B.J.M.
CHECKED: M.C.R.

GEOPEKO LIMITED
KING ISLAND GROUP

SCALE: 1:10,000

No. KT10/74-3A

E.L. 10/74
BLACK BLUFF, TASMANIA
GEOLOGICAL MAP

KT10/74-1
KT10/74-2 | KT10/74-3

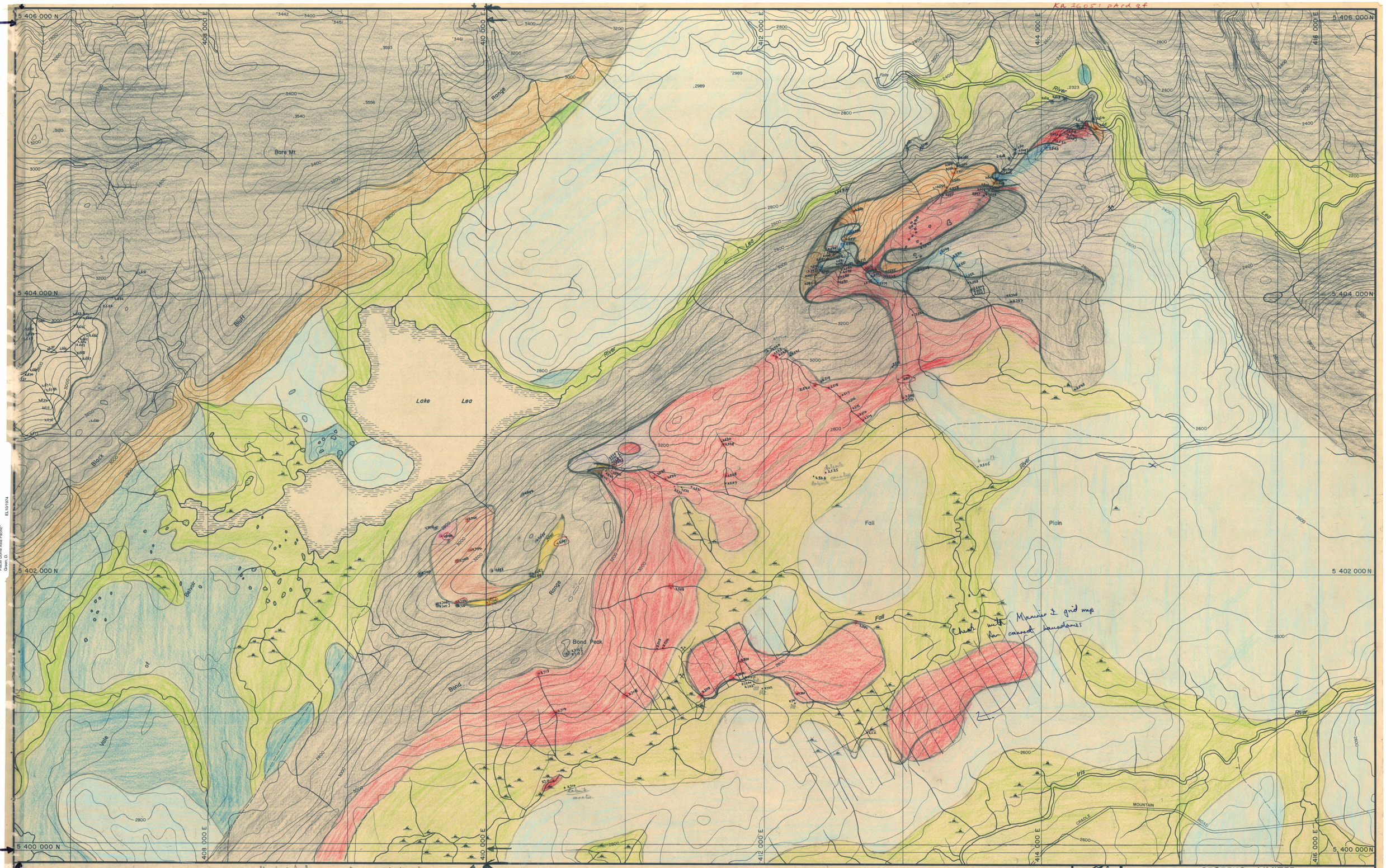
5 cm

03_4901

MAP 2

Tube Number 15: Black Bluff, Mackintosh East, 1976-81 (Including EL10/1974)
Piper Dome Asia Pacific
Green, D.

EL10/1974



xvt- lava Arq
Owen Series Sst + Sgl.
fg. S volcaniclastic Sed. q o
txt Arqf.
pk pArd bfq.
fk p.Ard bfq.
dk. txt Ard pq → fg. volcaniclastic sds
dk. fb. t- lava Ard bfq.
tuff lavas
Alluvium and Colluvium, Glacial deposits, swamps, soils
Gordon Limestone
Tertiary. Olivine Basalt.

This end to be reduced and enlarged

Talus (Sst + Sgl) ROCK SAMPLE POSITIONS

pumpk - not mapped. undifferentiated Cambrian

NB

Sheet 6.

GEOPEKO LIMITED
KING ISLAND GROUP

SCALE: 1:10,000

No. KT10/74-3

DATE: December 1976
GEOLOGIST:
DRAWN: L.G.
CHECKED: M.C.R.

E.L. 10/74
BLACK BLUFF, TASMANIA

KT10/74-1
KT10/74-2
KT10/74-3

03_4901

Tube Number 15: Black Bluff, Mackintosh East: 1979-
Rpt (including EL10/1974):
Pasminco Australia Pacific
Green, D. EL10/1974

Photo Linear R.S.

5 cm

5 406 000 N
5 404 000 N
5 402 000 N
5 400 000 N
408 000 E
410 000 E
412 000 E
414 000 E
416 000 E

Bare Mt.
Range
Bluff
Lake Lea
River
Black
Belvoir
Vale
Bond
Bond Peak
Kauri Fault
Fall
Plain
Alluvial Gold Mine (abandoned)
Remnants of Water Race
MARINER 2
MARINER 1
Cu Adit
Iris
MOUNTAIN
CRADLE
ROAD
E.L. 10/74 BOUNDARY

OPERATION OF LEGEND:

1. Capitol letter – indicates primary classification eg. S - sedimentary rock, A - acid rock, M - basic rock
2. Lower case letters – indicate the following:
   (i) Colours - e.g. pk/grn A = pink fragments in an acid igneous rock with a green matrix.
   (ii) Textural or structural features - e.g. xtA = crystal tuff of acid composition, e.g. pA = porphyric acid rock, ox A = oxidised acid rock
   b. As suffixes in progressive order,
   (i) Categorised - e.g. pAr = rhyolite, e.g. Zcr intermediate rock of andesitic composition
   (ii) Mineralogy - e.g. pAr f = porphyritic (rhyolite) with feldspar phenocrysts, e.g. ist f/S = lithic crystal tuff with feldspar (phenocryst component) and silicite (prominent matrix component), e.g. ist f q = lithic crystal tuff with (major) feldspar crystals and (minor) quartz crystals, e.g. tb ist - lava Zdb = flow banded lithic vitric tuff - lava of intermediate dacitic composition with a biotite rich groundmass.

NOTE:
This map has been compiled from enlargements of the Tasmanian Lands Departments 1:15840 scale topographic machine plots.

SYMBOLS:

IGNEOUS:
A acid igneous unclassified
Ar rhyolite
Ard rhyodacite
I intermediate igneous unclassified
Zd andesite
Id dacite
M basic igneous unclassified
Mv basalt
Md dolerite

SEDIMENTARY:
Sst Sandstone
Scongl conglomerate
S volcaniclastic sediment
Sqtz quartzite

STRUCTURAL and TEXTURAL:
t tuff unclassified
lt lithic tuff
vt crystal tuff
vlt vitric tuff
f porphyritic
v vein
ox oxidised
sild silicified
orgd organ ised

STRUCTURAL:
outcrop limit
rubble boundary
approximate contact
bedding
joint

GRAIN SIZE:
Fine grained (< 1mm)
mg medium grained (1mm - 1mm)
cg coarse grained (5mm - 5cm)

COLOURS:
pnk pk
grn grn
brn brown
ple pale
dk dark

SILICATE MINERALOGY
q quartz
f feldspar
p plagioclase
b biotite
c chlorite
s sericite
maf mafics
a epidote
hb hornblende

SULPHIDE MINERALOGY
sulphides
py pyrite
hm hematite

MISCELLANEOUS:
TS 2502 Thin Section and Rock No.

GEOLOGICAL INTERPRETATION:

Pencil No.

19-63 Cz Crystal lithic tuff (ist Ar qf, gradational to tuff - lava)
19-47 TERT. Olivine basalt (flows, Mv)
19-38 L. ORDO. Limestone (Gordon type)
19-71 U Cz ? Talus - sandstone, conglomerate
19-70 U Cz ? Sandstone, conglomerate (Owen type, Sast, Scongl)
19-22 Cz Undifferentiated cambrian
19-43 HOLOCENE Alluvium, glacial debris (Md), swamp soils
19-28 Cz Lithic vitric tuff - lava (tb ivt - lava Zdb, intercalated with pArdpq)
19-2i Cz Porphyritic plagioclase - quartz rhyolite (tb pAr qp)
19-3 Cz Fine grained quartzose volcaniclastic sediment (fg S volcaniclastic sed, qs')
19-57 Cz Lithic quartz crystal vitric tuff (ist Arqf)
19-55 Cz Lithic quartz crystal tuff (istZo qf maf s')
19-23 Cz Quartz crystal vitric tuff - lava (xvt - lava Arq)
19-19 Cz Biotite feldspar quartz porphyritic lava (pArd bfq, pAr bfq)

Check to photolineaments
see Rough boards
go Nov and
if so Tertiary and
significance in
mineralisation
closed lows in
Devon ??
is yes.

GN MN 11·7°

DATE: APRIL '78
GEOLOGIST: R.B.
DRAWN: L.G. & J.M.
CHECKED: M.C.R.

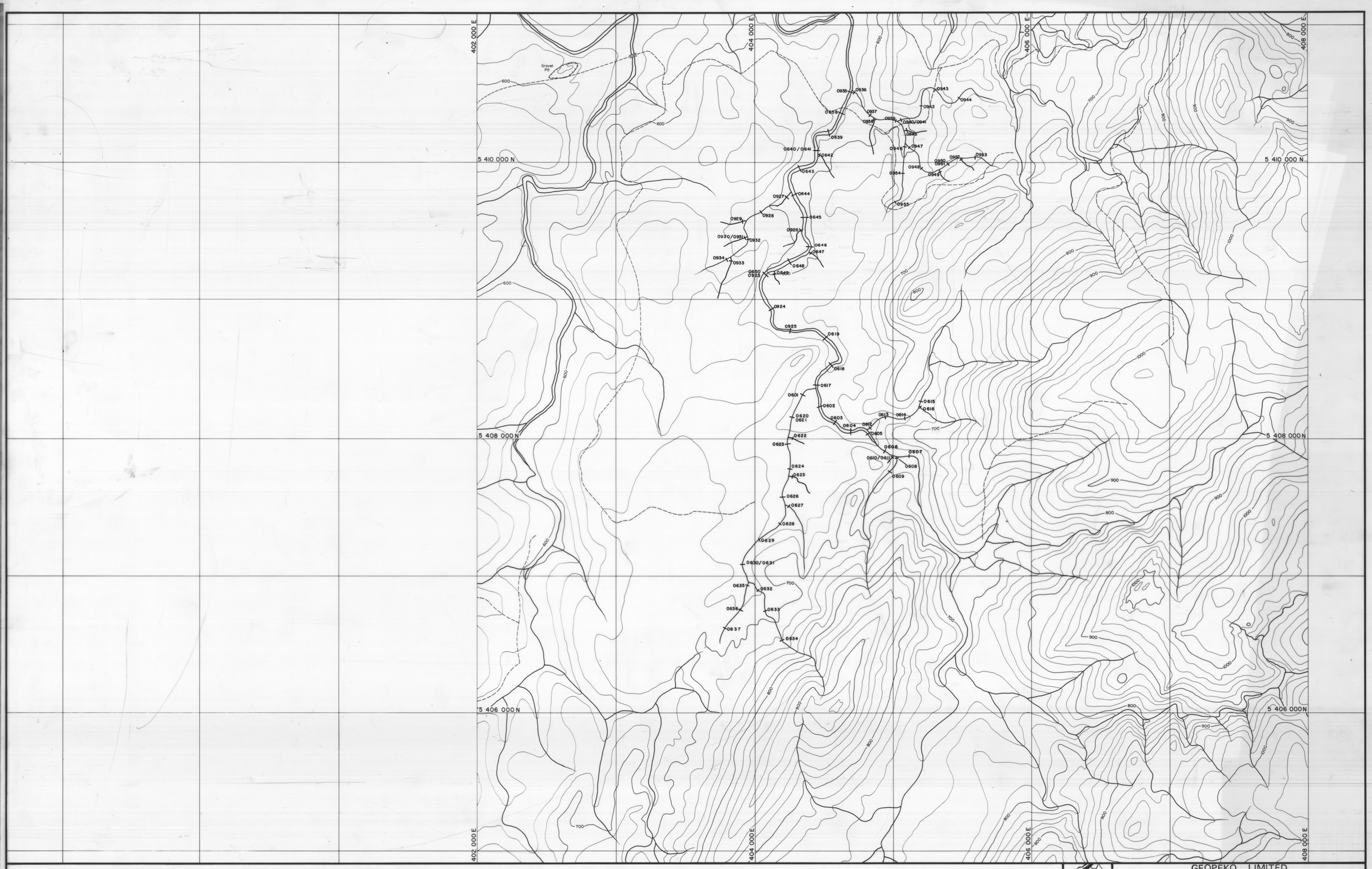
GEOPEKO LIMITED
KING ISLAND GROUP

SCALE: 1 : 10,000

No. KT10/74-3A

E.L. 10/74
BLACK BLUFF, TASMANIA
GEOLOGICAL MAP

KT10/74-1 | KT10/74-2 | KT10/74-3



5 cm

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

GEOPEKO LIMITED
KING ISLAND GROUP

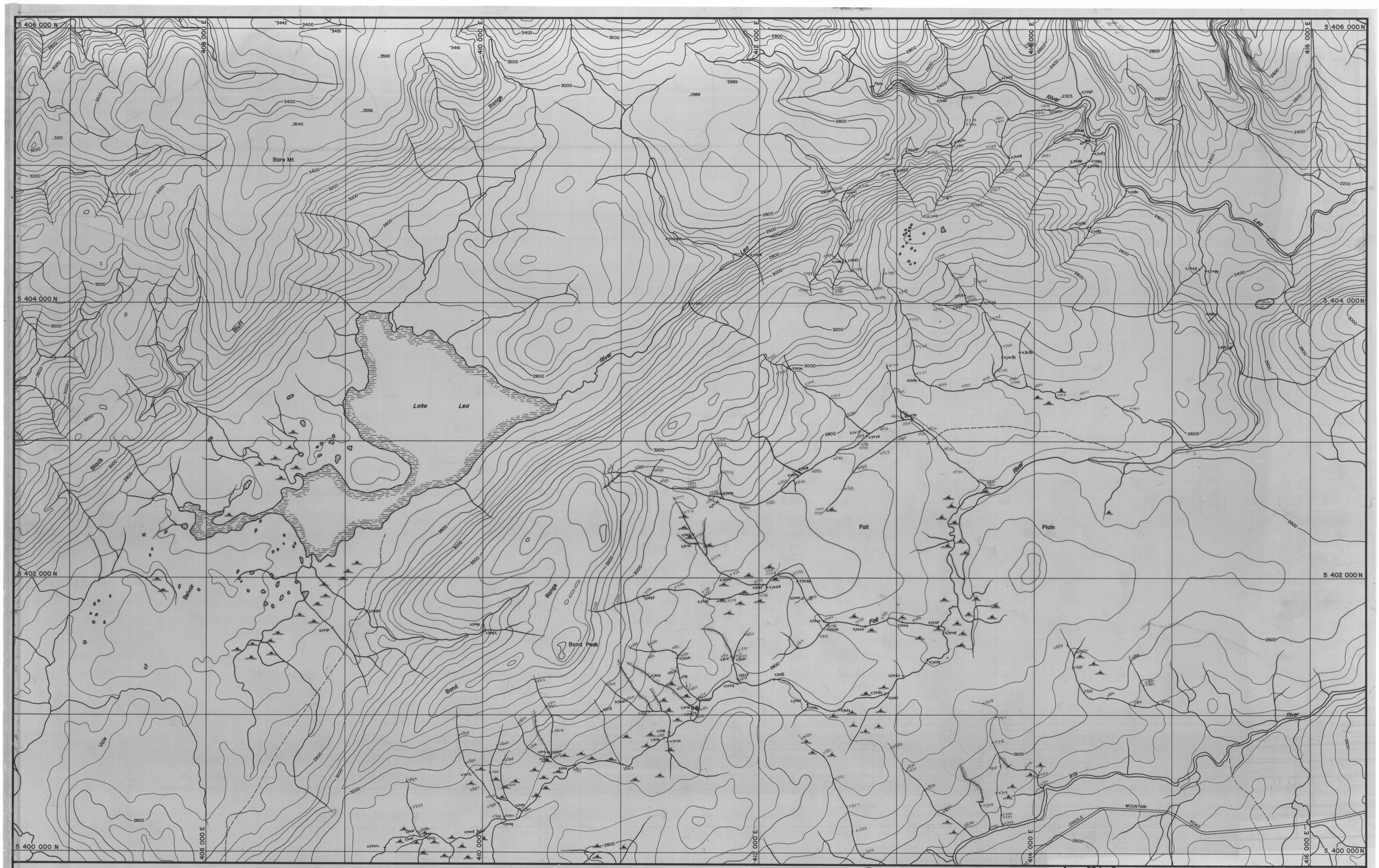
SCALE: 1:10,000

No. KT10/74-1

DATE:
GEOLOGIST: G.B./J.P.
DRAWN: J.P.M.
CHECKED:

E.L. 10/74
BLACK BLUFF, TASMANIA
DRAINAGE SAMPLE LOCATION MAP

KT10/74-1
KT10/74-2
KT10/74-3



sheet 1

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

0651 — HS DRAINAGE SAMPLES.

~~270.31 — U.N. DRAINAGE SAMPLES.~~

STREAM SEDIMENT SAMPLING

COMPLETE

KD position map

ink v.o. pencil geop.

GEOPEKO LIMITED
KING ISLAND GROUP

SCALE: 1:10,000

No. KT10/74-3

DATE: December 1976
GEOLOGIST:
DRAWN: L.G.
CHECKED: M.C.R.

E.L. 10/74
BLACK BLUFF, TASMANIA

5 cm

KT10/74-1
KT10/74-2
KT10/74-3

KT10/74-3C
DRAINAGE SAMPLE
LOCATION MAP
1:10,000



LEGEND:
0812 Drainage sample No. KD 0812

NOTE:
This map has been compiled from enlargements of the Tasmanian Lands Department's 1:15840 scale topographic machine plots.

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

DATE: November 1977
GEOLOGIST: R.B.
DRAWN: L.G. & J.M.
CHECKED: M.C.R.

GEOPEKO LIMITED
KING ISLAND GROUP

SCALE: 1:10,000

No. KT10/74-3C

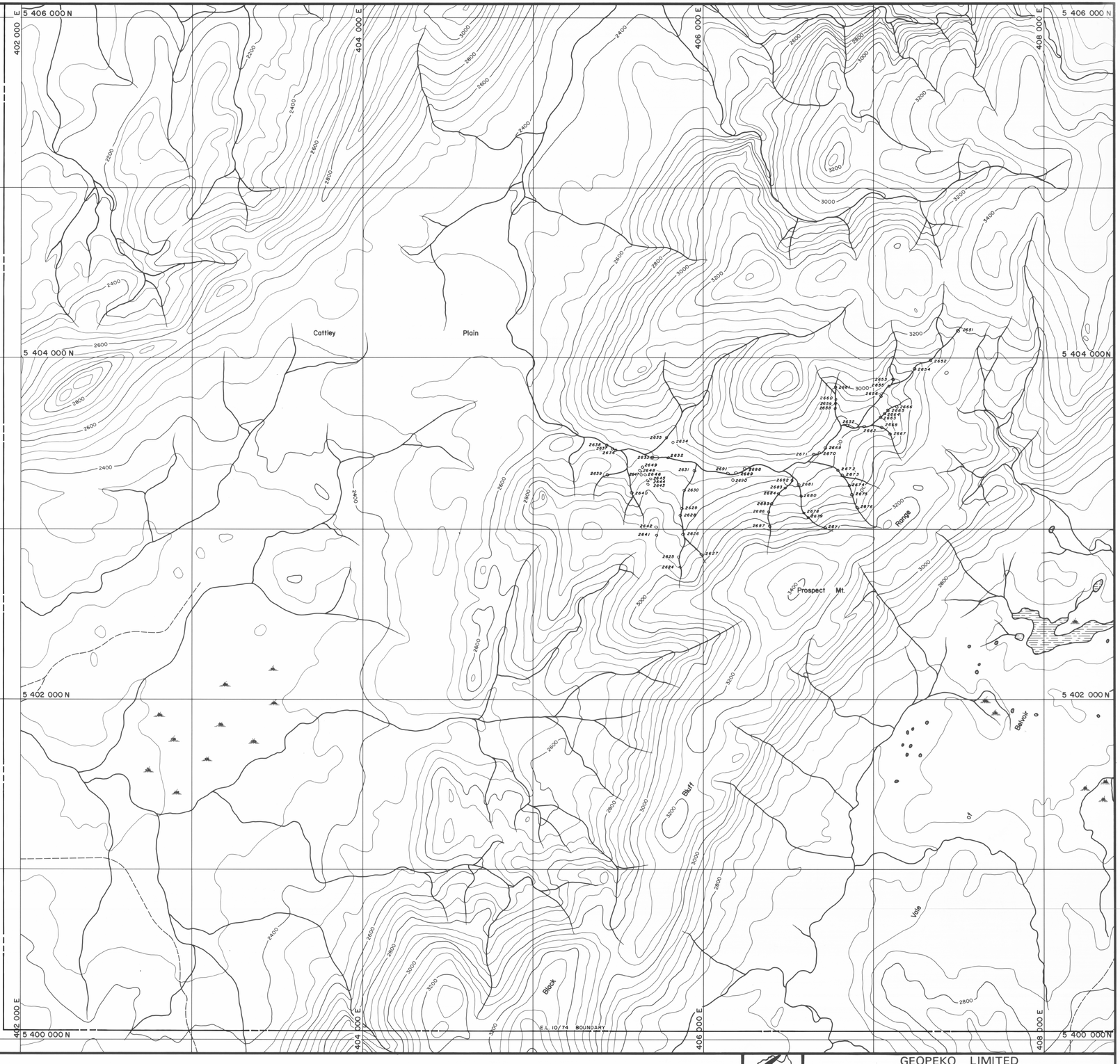
E.L. 10/74
BLACK BLUFF, TASMANIA

DRAINAGE SAMPLE LOCATION MAP

KT10/74-1
KT10/74-2
KT10/74-3

5 cm

KT 10/74-2D
ROCK SAMPLE
LOCATION MAP
1 : 10 000



LEGEND:
o 2624 Outcrop sample No. KR 2624

NOTE:
This map has been compiled from enlargements of the Tasmanian Lands Department's 1:15840 scale topographic machine plots.

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific"
Green, D. EL10/1974

DATE: December 1976
GEOLOGIST: R.B.
DRAWN: J.P.M.
CHECKED: M.C.R.

GEOPEKO LIMITED
KING ISLAND GROUP

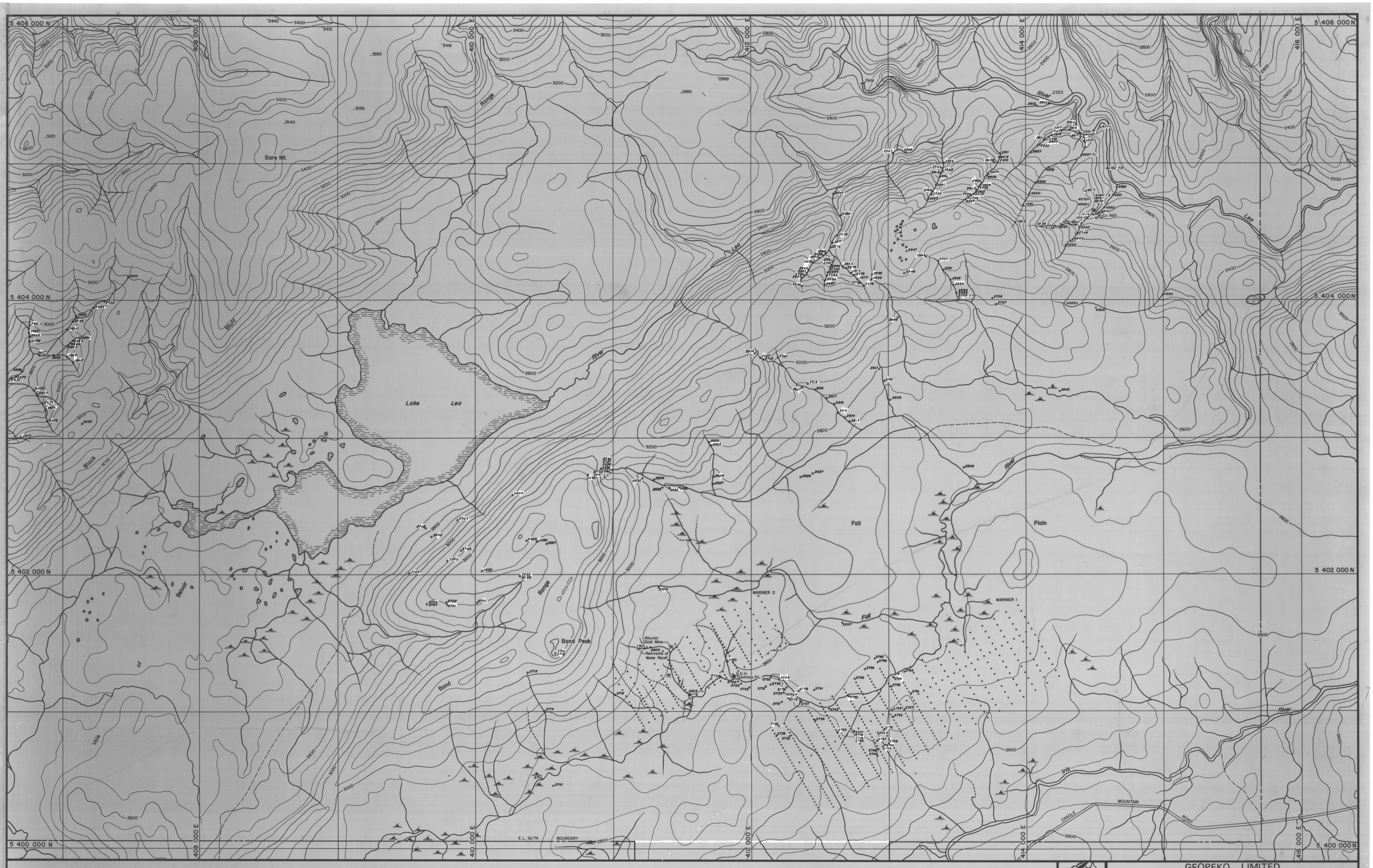
SCALE: 1 : 10,000

No. KT10/74-2D

E.L. 10/74
BLACK BLUFF, TASMANIA
ROCK SAMPLE LOCATION MAP

5 cm

KT10/74-1
KT10/74-2 KT10/74-3



LEGEND:

- o 2710 Outcrop Sample No. KR 2710
- o 4560 Float Sample No. KR 4560

NOTE:
This map has been compiled from enlargements of the Tasmanian Lands Department's 1:15840 scale topographic machine plots.

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

DATE: November 1977
GEOLOGIST: R.B.
DRAWN: L.G. & J.M.
CHECKED: M.C.R.

GEOPEKO LIMITED
KING ISLAND GROUP

SCALE: 1:10,000

No. KT10/74-3D

E.L. 10/74
BLACK BLUFF, TASMANIA

ROCK SAMPLE LOCATION MAP

KT10/74-1
KT10/74-2
KT10/74-3

5 cm



5 cm

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

DATE: MAY 81
GEOLOGIST: J.P.
DRAWN: J.P.M.
CHECKED:

GEOPEKO
A DIVISION OF PEKO - WALLSEND OPERATIONS LTD

SCALE: 1:10,000

No. KT10/74-3 F

E.L. 10/74
BLACK BLUFF, TASMANIA

-80 mesh Stream Sediment Sample Locations

KT10/74-1	
KT10/74-2	KT10/74-3

FIGURE 3

SAMPLE NUMBER	ROCK SAMPLE GEOCHEMICAL RESULTS							
	Cu ppm	Pb ppm	Zn ppm	Au ppm	Sn ppm	W ppm	Bi ppm	As ppm
KR 9702	80	10	130	0·017	3	x		
9703	5	10	15	0·035	5	x		
9704	5	5	15	0·008	x	x		
9705	185	15	150	x	5	x		
9706	135	15	215	x	x	x		
9708	95	10	195	x	6	x		
9709	35	15	130	0·035	x	x		
9710	1050	675	440	19·110	45	280		
9712	170	225	240	22·110	75	400		
9729	115	30	15	0·224	x	x	27	71
9730	120	140	20	0·040	110	480	220	43
9731	220	85	75	4·000	15	15	570	22
9732	30	10	10	0·072	8	20	125	13
AQ1	20	25	10	68·0	5	610	80	
AQ2	10	30	5	30·8	<5	610	40	
AQ3	10	20	30	1·5	<5	610	55	

LEGEND:

10 ppm Copper
370 ppm Lead
115 ppm Zinc

5 cm

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

DATE: MAY 1981
GEOLOGIST: J. P.
DRAWN: J. P. M.
CHECKED:

GEOPEKO
A DIVISION OF PEKO – WALLSEND OPERATIONS LTD

SCALE: 1: 10,000

No. TS10/74-3 E

E.L. 10/74
BLACK BLUFF, TASMANIA
-80 mesh Drainage Geochemistry
Cu, Pb, Zn

KTIO/74-1 | KTIO/74-2 | KTIO/74-3

FIGURE 4



GEOPEKO LIMITED
KING ISLAND GROUP

SCALE: 1:10,000

No. KT10/74-3

DATE: December 1976
GEOLOGIST:
DRAWN: L.G.
CHECKED: M.C.R.

E.L. 10/74
BLACK BLUFF, TASMANIA
- 80 mesh STREAM SEDIMENT GEOCHEMISTRY
Au
Sn
W

5 cm

KT10/74-1
KT10/74-2
KT10/74-3

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (Including EL10/1974)
Placer Dome Asia Pacific"
Green, D. EL10/1974

MARINER 5
Cu Pb Zn
Ag Ba
W Au Sn

KT 10/74-2C
DRAINAGE SAMPLE
LOCATION MAP
1 : 10 000

402 000 E | 404 000 E | 406 000 E | 408 000 E

5 406 000 N | 5 404 000 N | 5 402 000 N | 5 400 000 N

Cattley Plain

Prospect Mt.

Range

Bluff

Black

Belvoir

Vale

E.L. 10/74 BOUNDARY

LEGEND:

0820 Drainage sample No. KD 0820

NOTE:
This map has been compiled from enlargements of the Tasmanian Lands Department's 1 : 15 840 scale topographic machine plots.

5 cm

03_4901

Tube Number 15: Black Bluff, Mackintosh East. 1976-81 (including EL10/1974)
Placer Dome Asia Pacific*
Green, D. EL10/1974

GEOPEKO LIMITED
KING ISLAND GROUP

SCALE: 1 : 10,000

No. KT10/74-2C

DATE: November 1977
GEOLOGIST: R.B.
DRAWN: L.G. & J.M.
CHECKED: M.C.R.

E.L. 10/74
BLACK BLUFF, TASMANIA

DRAINAGE SAMPLE LOCATION MAP

KT10/74-1 | KT10/74-2 | KT10/74-3