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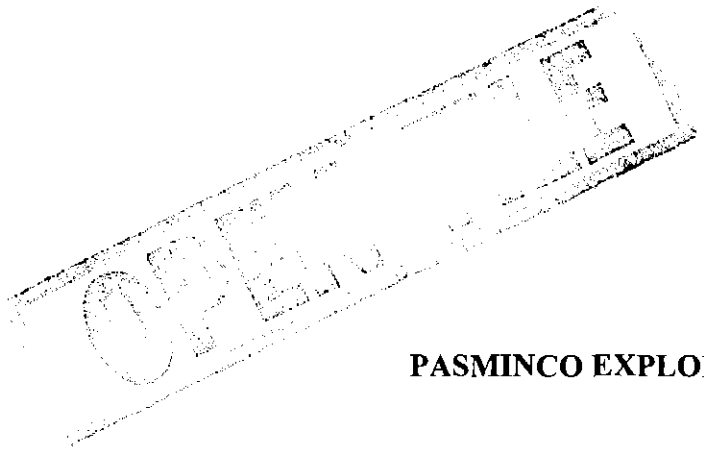
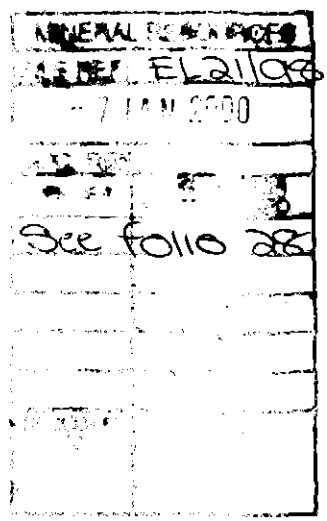
First Annual and Final Technical Report for the period November 1998-99 - EL21/98
Pasminco Exploration*
Parfrey, O.; Simpson, K.L. EL21/98



PASMINCO EXPLORATION



MT KERSHAW EL 21/98

FIRST ANNUAL AND FINAL TECHNICAL REPORT FOR THE PERIOD NOVEMBER 1998-99

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1. SUMMARY

This report details all work completed by Pasminco within EL 21/98 (Mt Kershaw) during the period November 1998 to November 1999. Principally this has consisted of a partial leach soil sampling program, an IP survey and compilation and evaluation of these and other geological data. Results obtained from these programs have not identified significant exploration targets within the license area and as a consequence it is recommended that the entire 4km^2 licence area is relinquished.

2. INTRODUCTION

This report documents work undertaken within the relinquished area of Exploration Licence 21/98, Mt Kershaw in Western Tasmania, during the period of November 1998 to November 1999.

The license covers a small area of 4km^2 located approximately 10km northwest of the Tullah township and 1.5km north west of Bastyan Dam (Figure:1). The licence area covers the middle to late Cambrian Dundas Group metasedimentary rocks which are separated from a thin sliver of Cambrian Mt Read Volcanics by the Rosebery Fault. Pasminco's rationale for acquiring the title was to enable the completion of exploration programs designed to identify potential mineralisation south of Southern Trenches Prospect and in proximity to the Rosebery Fault.

During the period covered by this report, exploration has consisted of a partial leach soil sampling program and an IP Survey. Analysis of these data have not identified significant targets worthy of follow-up and as a consequence the entire license area is to be relinquished.

3. LAND TENURE

EL 21/98, Mt Kershaw, was granted on the 14/12/98 for a period of five years (Figure:2). The exploration licence covers an area of 4km^2 along the south western perimeter of the Burns Peak Licence (EL 44/88) which is held under a joint venture agreement between Plutonic Resources Ltd and Pasminco. The current land tenure is dominated by un-allocated Crown Land designated as multiple use forest.

4. GEOLOGY

Basement in Western Tasmania is Precambrian in age, comprising predominantly greenschist facies metasediments with minor basalts and dolerites. Higher grade amphibolite and eclogite facies along with minor basalts and dolerites occur within the basement terrain and are exposed to the east of the Mt Kershaw licence area. Rifting during the Cambrian led to effusive volcanism and marine sedimentation on this Precambrian continental crust. These Cambrian volcanic and sedimentary rocks are subdivided into the Eco-Cambrian tholeiitic Crimson Creek Formation (CCF), the middle to late Cambrian Dundas Group and the predominantly calc-alkaline Mt Read Volcanic (MRV) belt.

The CCF are exposed to the west of the licence and was deposited in shallow but rapidly subsiding basins (Brown, 1986). It is composed of basaltic lavas, volcaniclastics, turbidites, carbonates, chert and minor evaporite units. During the mid Cambrian ultramafic cumulates and volcanic equivalents were thrust onto the CCF (Crawford & Berry, 1991). These rocks generate strong magnetic anomalies and outcrop within the Huskisson Syncline, to the west of the licence. Ultramafics are also interpreted at depth to the north of the licence.

The MRV form a 200km long by 20km wide north-south trending belt along the eastern margin of the Dundas Trough, adjacent to and in some areas onlapping and intruding the Precambrian basement. The volcanics include intermediate to felsic lavas, subvolcanic porphyries and granites, volcaniclastics and basement-derived sedimentary rocks. The MRV host five economically significant volcanic hosted massive sulphide deposits including the Rosebery and Hellyer orebodies.

The Dundas Group outcrops along the entire western margin of the licence area (Figure:3) and form the footwall to the Rosebery Fault. This package comprises turbiditic to shallow water sediments dominated by carbonate bearing siltstones, greywacks and polymictic conglomerates that have been recently interpreted as potential correlates of the Owen Conglomerate. Gradationally overlying this sequence are quartz muscovite sandstones and conglomerates which were largely derived from the Precambrian metasedimentry basement with minor reworked felsic volcanic and ultramafic material.

The MRV and the Dundas Group are separated by the Rosebery Fault which is thought to represent a major Cambrian thrust, reactivated in the Devonian, which was not associated with emplacement of the mafic-ultramafic complexes (Crossing & Halley 1990).

At least two phases of deformation and regional compression occurred during the Tabberabberan Orogeny (Keele, 1991). These led to the development of pervasive cleavage development, regional thrusting and N-NE trending folds in the lower Palaeozoic rocks of the region. This deformation was accompanied, or followed by, extensive intrusion of Devonian and later Carboniferous granitoids. The Merideth Granite and associated hornfels aureole outcrop to the west of the licence (Brown, 1986), and is seen as a dominant feature in the regional gravity data. The Devonian granites are associated with carbonate replacement Sn mineralisation at Renison Bell and Mount Bischoff, and Pb, Zn, Ag vein deposits in the Zeehan and possibly the Tullah Fields.

Numerous sub-economic base metal sulphide deposits occur to the north and east of the Mt. Kershaw license, in a narrow NE-SW belt of mineralised rocks. These deposits occur within the MRV and include Southern Trenches, Thomas' Tunnel, Brown's Tunnel and Leo's Find workings and the large Chester massive pyrite deposit.

5. PREVIOUS EXPLORATION

The extensive history of exploration and mining in the area surrounding the Mt Kershaw exploration licence, was summarised by Rosenhain and Mathison (1989) and is presented here as Table 1.

Table 1: Exploration and Mining History of the Mt Kershaw region.

YEAR	EXPLORATION/MINING ACTIVITY	CONDUCTED BY
1896	Discovery of Pinnacles Lodes	McGuiness Bros.
1899	Discovery of alluvial gold in Marionoak River (Strong's Alluvial Workings)	Tom Strong
1899	Discovery of Kershaw's Iron Blow	Chesterby F Kershaw & H Sanderson
1899	Brown's Tunnel driven: est. production 300t @ 2%Zn, 2g/tAu, 4 g/tAg	N/A
1899	Southern Trenches: est. production 55t @ +10%Zn, +8% Pb, +8g/tAu, 38g/t Ag	N/A
1899	Thomas' Tunnel driven (Thomas' workings): est. production 50t @4%Zn, 7%Pb, 1g/tAu, 240g/tAg	N/A
1908	Mt Lyell Mining & Railway Co Ltd secured Chester Leases	Mt Lyell Mining & Railway Co Ltd.
1908-1913	Intensive exploration & mining development at Chester - production 36 000t @ 37%S	N/A
1918-1929	Minor production from Chester - 700t @ +25%S	Cuming Smith & Co.
1947-1959	Foot & vehicle access created to Pinnacle area; 14 small diameter DDH; topography & workings surveyed; geophysical surveys	Electrolytic Zinc Company
1959-1960	Geochemical, geological &geophysical surveys over Pinnacles & Chester; "The significant feature of this coverage is that Pinnacles Mine Mineralisation is non-conducting"	N/A
1968-1972	Initial phase of griding, geochemical sampling, geophysics, mapping & 3DDH at Chester	Comstaff

Table 1: Exploration and Mining History of the Mt Kershaw region(cont.)

YEAR	EXPLORATION/MINING ACTIVITY	CONDUCTED BY
1973-1976	Second phase of griding, geochem sampling etc, 10 DDH drilled at Pinnacles and 13 at Chester; new metric grid, new soil sampling, new IP; airborne EM.	Comstaff
1976-1979	Preussag entered into JV with Comstaff; detailed mapping & structural synthesis completed; C-horizon soil geochem, 2 DDH, trial PEM & IP over Leo's Find.	Preussag & Comstaff (JV)
1980-1983	Exploration of East Chester area; new grid, grid extensions, C-horizon soil geochemistry; ground magnetics, OP, DIGHEM, DDH at East Chester.	Preussag & Comstaff (JV)
1984-1985	New grid at Pinnacles mapped; C-horizon soil sampling; ground magnetics; UTEM; 19 DDH with discovery of small lenses of massive sulphide & patchy gold mineralisation; new geol interp.	Preussag & Comstaff (JV)
1986-1988	BHP entered JV; reinterpretation & compilation of exploration results; blanket UTEM & down hole SIROTEM; new geol interp; petrological studies; wacker sampling.	BHP (JV)
1988-1991	Extensive geol mapping; re-appraisal of previous data; Wacker sampling; geochem; petrology; DHEM; CSAMT; DH-SIROTEM; MALM; aeromagnetic survey; regional & local gravity surveys; drilling of 12 DDH; rehab of old tracks; costeans & workings.	-
1991-1992	3 DDH; geol mapping & re-logging drill core; gravity infill & interp; ore/pathfinder/whole rock geochem; down hole EM (3 DDH); compilation/computerisation of historic geochem data. Exploration managed by Pasminco	Hollway & Summit

Table 1: Exploration and Mining History of the Mt Kershaw region (cont.)

1992-1993	3 DDH; geol mapping & griding (Sth Kershaw-Hollway); review & compilation of previous exploration; dipole-dipole IP (Sth Kershaw-Hollway); soil geochem (Sth Kershaw); ore/pathfinder/whole rock geochem. Exploration managed by Pasminco.	South Kershaw-Hollway
1993-1994	3 DDH, griding, soil/rock geochem; DHEM; MALM; ground mag & mapping. Exploration managed by Pasminco	-
1994-1995	5 DDH & extension of CP7; DHEM; griding & geol mapping (Hollway area). Exploration managed by Pasminco	Hollway
1995-1996	2 DDH; geol mapping; ground mag; IP and DHEM (Hollway). 4DDH &re-evaluation of mineralisation (Browns Tunnel). Grid refurbishment & infill griding; soil sampling; ground mag; trenching & 7RC holes (Southern Trenches. Exploration managed by Pasminco	Hollway, Brown's Tunnel, Southern Trenches.
1996-1997	Compilation & evaluation of exploration data including soil sampling, ground mag, trench sampling mapping & RC drilling which were conducted towards the end of previous annual reporting period; thorough review of previous exploration, data entered into Pasminco GIS and Prospectivity Review conducted.	Hollway, Brown's Tunnel, Southern Trenches.

6. WORK COMPLETED NORTH KERSHAW-CHESTER AREA

Work completed by Pasminco within the area of Mt Kershaw EL 21/98 during the period of this report has consisted of an IP and partial leach soil survey and compilation and evaluation of all exploration data. Details of this work are presented below.

6.1 IP Survey

A Dipole-Dipole IP survey was completed over the southern portion of the refurbished North Kershaw grid by Geoterrex during the latter half of 1998 (Figure.4). The purpose of this survey was to infill a gap in coverage along the Rosebery Mine hanging wall and to map and identify target mineralisation against the Rosebery Fault.

A full logistics report for the survey is included as Appendix 2. Profiles and pseudo sections of this data are included as Appendices 3 to 10. The following discussion of results has been summarised from Edwards et al. (1999):

Inversions of resistivity data infer that a conductive surface exists in various parts of the grid. Theses surfaces correlate with weathering zones (clay). A conductive feature is indicated on the western side of the grid. This feature, although not consistent from line to line, appears to be related to the Rosebery Fault.

The chargeability data is dominated by a strong chargeable feature on the western edge of the survey area, correlating with the Rosebery Fault. Data from line 80300N can be interpreted to indicate that the fault is thickening (or there is a second parallel fault).

The induced polarisation data indicates the location of the Rosebery Fault, however, no isolated anomalies have been identified have been identified for the depth of investigation (ie., 150-200m).

6.2 Partial Leach Geochemistry

A program of partial leach soil sampling was carried out over the northern section of the North Kershaw grid (Figure.5). The sampling was carried out to investigate possible extensions to the Browns Tunnel/Southern Trenches mineralisation and was conducted over an area of historic stream sediment anomalism (Webber et al 1997). 35 samples were collected at 25m intervals from immediately below the matted root zone at a depth of approximately 20cm. The sample numbers were randomised prior to sampling to minimise laboratory or instrumental errors that could produce spurious anomalies in sample sets with sequential sample numbers. Samples were submitted to Amdel for multi-element analysis using their proprietary partial leach method IC8/40. Sample results are presented in Appendix 1 and sample locations are shown in figure 5.

Interpretation of these data identified several weakly anomalous responses on the Rosebery Fault, however, these were not of sufficient tenor or size to be considered worthy of follow-up.

7. REHABILITATION

Exploration activities within the relinquished area of Mt Kershaw have been low impact, involving only minor grid cutting. These activities have been completed in accordance with the guidelines set down by the Mineral Exploration Code of Practice and no rehabilitation work is required.

8. CONCLUSIONS AND RECOMMENDATIONS

Mt Kershaw EL 21/98 is located adjacent to the Burns Peak EL, which Pasminco manages and has explored for 10 years. Numerous sub-economic base metal sulphide deposits occur to the north of the Mt Kershaw exploration licence, in a narrow belt of NE-SW mineralised volcano-sedimentary rocks. These deposits occur within the MRV and include the Southern Trenches, Thomas' Tunnel, Brown's Tunnel, and Leo's Find workings and the large Chester massive pyrite workings.

Pasminco Exploration pegged the Mt Kershaw licence in order to assess the potential for similar styles of mineralisation against the Rosebery Fault. Exploration activities completed on the license have not identified any significant mineralisation or potential targets worthy of further exploration. As a consequence the licence is being relinquished.

9. EXPENDITURE

Reported expenditure on EL 21/98 during the 12 month period ending November 1999 is $216, the details of which are summarised below.

This reported expenditure is however significantly under estimated due to an accounting error during 1998. Unfortunately a proportion of expenditure for the IP and geochemical surveys completed on EL 21/98 were mistakenly attributed to the Burns Peak Tenement (EL 44/88). This expenditure amounted to approximately $3,800 and was documented in the expenditure statement in the 1998 Burns Peak Annual Report.

Personnel	115
Travel and Accommodation	2
Geological Consultants	
Geochemical Consultants & Assays	
Geophysical Surveys & Consultants	
Other Consultants	
Drilling	
Stores & Supplies	6
Vehicles Plant & Equipment	2
Land	60
Computing	1
Office	9
Administration Fee 10%	20
Total Tenement Expenditure	**$216**

10. KEYWORDS AND LOCALITY

Keywords

MT KERSHAW, VOLCANICS, ROSEBERY FAULT, ASSAYS GEOCHEMISTRY, GEOCHEMISTRY SOIL, GEOCHEMISTRY PARTIAL LEACH, GEOPHYSICS IP, MT READ VOLCANICS, DUNDAS GROUP, ORE POTENTIAL, BURNS PEAK.

Locality

MT KERSHAW, BURNS PEAK, BURNIE SK5503

11. REFERENCES

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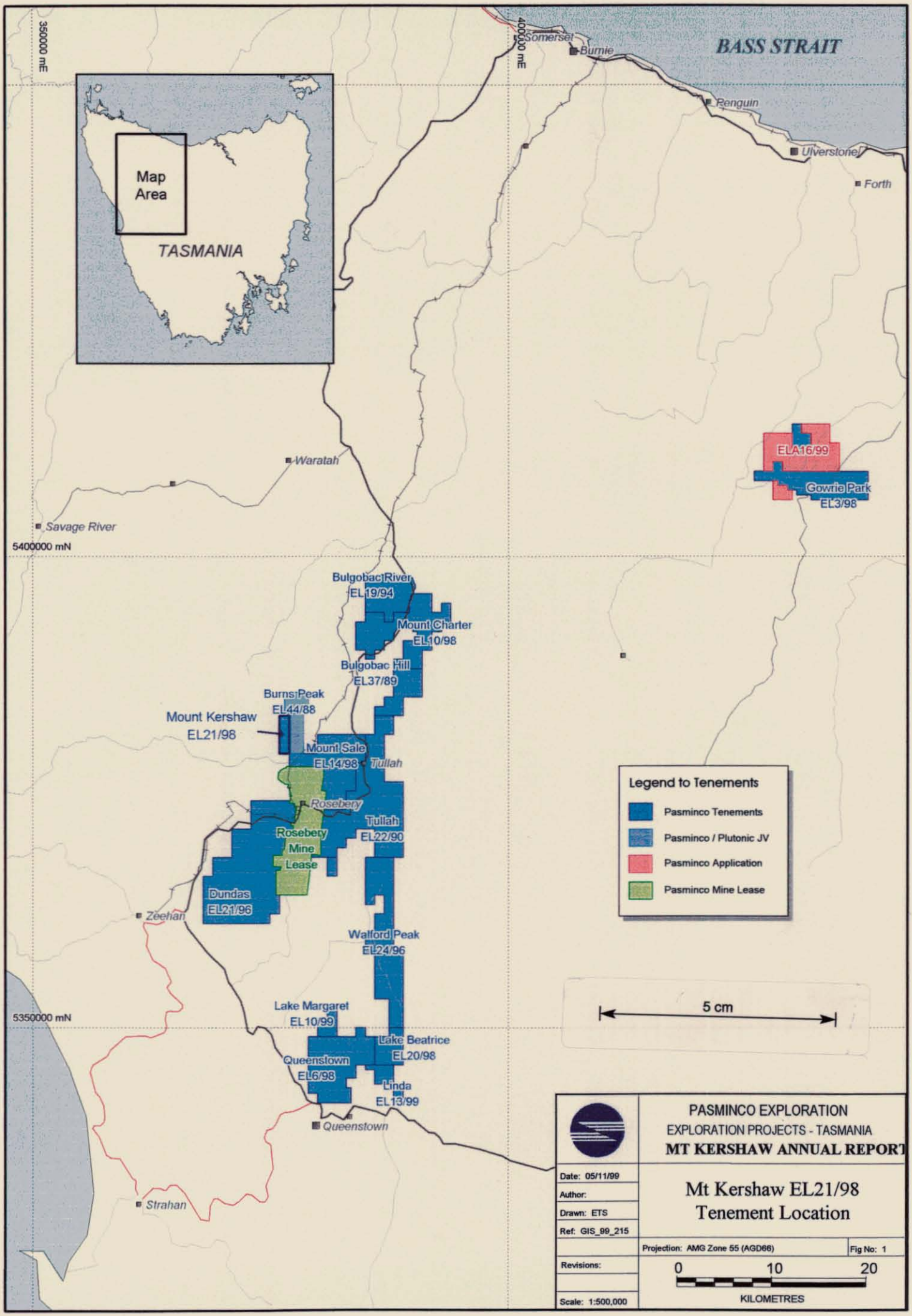
Keele, R.A., 1991. The Zeehan - Red Hills - Lake Selina Traverse - A Domain Approach to the Analysis of Structural Data. CODES/AMIRA Project P291 - Structure and Mineralisation in Western Tasmania. November 1991



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MT KERSHAW ANNUAL REPORT

Date: 05/11/99
Author:
Drawn: ETS
Ref: GIS_99_215

Mt Kershaw EL21/98 Tenement Location

Projection: AMG Zone 55 (AGD66)
Fig No: 1

Revisions:

Scale: 1:500,000

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KILOMETRES

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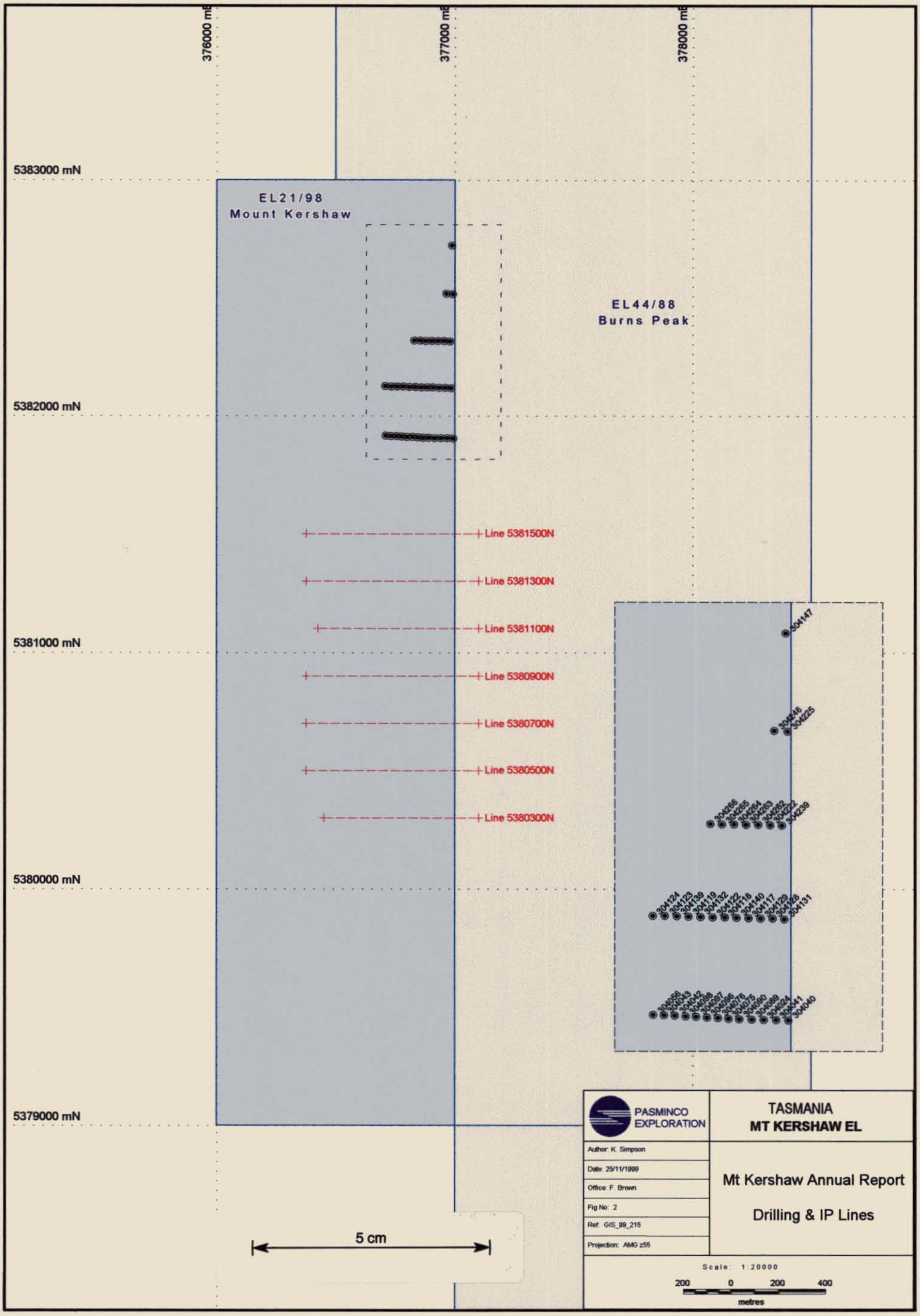
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377000 mE
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5379000 mN
EL21/98
Mount Kershaw
EL44/88
Burns Peak
Line 5381500N
Line 5381300N
Line 5381100N
Line 5380900N
Line 5380700N
Line 5380500N
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304147
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5 cm
PASMINCO EXPLORATION
TASMANIA
MT KERSHAW EL
Author: K. Simpson
Date: 25/11/1999
Office: F. Brown
Fig No: 2
Ref: GIS_99_215
Projection: AMG z55
Mt Kershaw Annual Report
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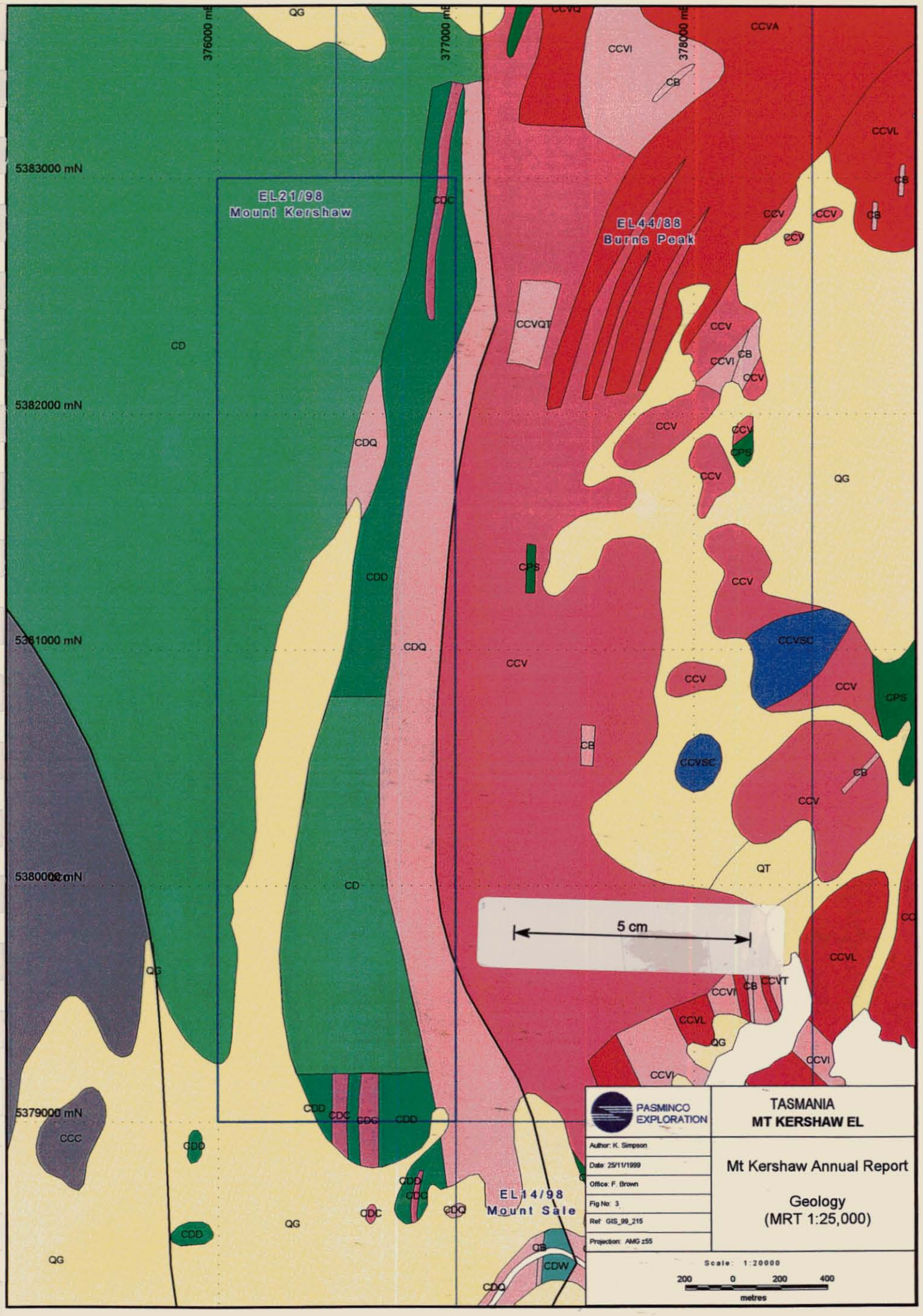
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Burns Peak
EL14/98
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QG
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CDC
CDD
CDQ
CCV
CCVA
CCVI
CCVL
CCVQT
CCVSC
CB
CPS
QT
CCC
CDW
5 cm
PASMINCO EXPLORATION
TASMANIA
MT KERSHAW EL
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Office: F. Brown
Fig No: 3
Ref: GIS_99_215
Projection: AMG z55
Mt Kershaw Annual Report
Geology
(MRT 1:25,000)
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metres

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APPENDIX 1

PARTIAL LEACH SAMPLE ASSAY RESULTS

DataSet	SampleID	UTM_East	UTM_North	PL_Ag_ppm	PL_As_ppm	PL_Au_ppm	PL_Ba_ppm	PL_Bi_ppm	PL_Cd_ppm	PL_Co_ppm	PL_Cu_ppm	PL_Mo_ppm	PL_Ni_ppm	PL_Pb_ppm	PL_Pd_ppm	PL_Pt_ppm	PL_Sb_ppm	PL_Tl_ppm	PL_Zn_ppm
Burnspeak	304024	376942.1	5381905	0.0005	0.339	0.00077	1.1	-0.0001	0.009	0.005	0.616	0.022	0.147	1.4	0.00208	0.00001	0.017	0.001	0.972
Burnspeak	304040	376993.8	5381904	0.0019	0.032	0.00053	0.54	0.0024	0.001	0.002	0.094	0.005	0.001	0.469	0.00136	0.00007	0.001	0.001	0.135
Burnspeak	304041	376968	5381905	0.011	5.9	0.00060	0.986	0.021	0.012	0.007	0.306	0.093	0.024	12	0.00785	0.00035	0.087	0.001	0.842
Burnspeak	304042	376754.8	5381914	0.0055	0.358	0.00017	2.8	0.02	0.013	0.546	1.4	0.016	0.783	2.4	0.00093	0.00014	0.011	0.002	4
Burnspeak	304043	376732.2	5381915	0.0049	0.262	0.00011	2.8	0.018	0.007	0.127	0.909	0.026	0.418	1.9	0.00077	0.00014	0.022	0.001	1.3
Burnspeak	304056	376709.6	5381916	0.002	0.279	0.00018	3	0.021	0.015	1.7	0.621	0.016	0.441	2.1	0.00069	0.00001	0.013	0.001	1.3
Burnspeak	304075	376867.7	5381908	0.0062	0.241	-0.00001	1.5	-0.0001	0.005	0.018	0.27	0.018	0.019	0.399	0.00085	0.00029	0.015	0.001	0.537
Burnspeak	304076	376845.1	5381909	0.02	1.4	0.00006	1.2	0.023	0.007	0.036	0.727	0.181	0.081	0.785	0.00318	0.0007	0.122	0.001	0.771
Burnspeak	304089	376916.2	5381906	0.0057	1.7	0.00004	1.7	0.024	0.009	0.007	0.484	0.105	0.001	0.869	0.0019	0.00019	0.156	0.001	1
Burnspeak	304090	376890.3	5381907	0.018	2.4	0.00031	3.3	0.016	0.013	0.103	0.542	0.113	0.099	2.2	0.00327	0.00019	0.103	0.004	2.1
Burnspeak	304096	376822.5	5381910	0.012	2.8	0.00076	1.9	0.014	0.005	0.021	0.516	0.087	0.022	0.836	0.00335	0.00023	0.109	0.002	1.6
Burnspeak	304097	376799.9	5381911	0.0069	1.1	0.00004	4.8	0.016	0.01	0.281	1.1	0.028	0.408	1.7	0.00143	0.00001	0.055	0.002	3.1
Burnspeak	304098	376777.4	5381912	0.0073	0.578	0.00013	5.2	0.022	0.007	0.663	1	0.025	0.75	3.5	0.00059	0.00010	0.028	0.001	1.6
Burnspeak	304117	376910	5382120	0.0061	0.953	-0.00001	2.4	0.015	0.011	0.222	0.195	0.062	0.147	3.5	0.00401	0.00042	0.041	0.003	1.6
Burnspeak	304118	376859.6	5382121	0.0049	1	0.00004	3	0.016	0.011	0.085	0.136	0.041	0.288	3.3	0.00183	0.00038	0.037	0.002	0.541
Burnspeak	304119	376784.1	5382123	0.0014	0.318	-0.00001	3.8	0.013	0.007	0.172	0.594	0.018	0.257	1.6	0.00067	0.00017	0.011	0.001	0.903
Burnspeak	304122	376834.4	5382122	0.0055	1.3	-0.00001	2.3	0.013	0.029	0.231	0.856	0.043	0.477	1.5	0.00221	0.0004	0.063	0.003	2.5
Burnspeak	304123	376733.7	5382125	0.0012	0.288	-0.00001	2.8	0.017	0.011	0.314	0.7	0.012	0.382	2.5	0.00094	0.00016	0.01	0.002	1.5
Burnspeak	304124	376708.5	5382125	0.0023	0.356	0.00017	6.3	0.011	0.014	1.9	1.5	0.02	0.93	2.6	0.0026	0.00031	0.02	0.003	6.3
Burnspeak	304128	376960.4	5382119	0.0029	0.045	-0.00001	0.579	0.0013	0.004	0.004	0.32	0.006	0.001	1	0.00046	0.00042	0.002	0.001	1.5
Burnspeak	304129	376935.2	5382119	0.0041	0.23	0.00016	0.599	0.006	0.004	0.004	0.247	0.031	0.001	3.1	0.00128	0.00044	0.008	0.001	0.257
Burnspeak	304131	376985.6	5382118	0.0018	0.039	-0.00001	0.676	0.0022	0.004	0.002	0.184	0.01	0.001	0.741	0.00079	0.00022	0.003	0.001	1.9
Burnspeak	304132	376809.3	5382123	0.0023	0.826	-0.00001	2.3	0.014	0.004	0.042	0.393	0.026	0.092	1.2	0.0014	0.0002	0.025	0.001	0.881
Burnspeak	304139	376758.9	5382124	0.0022	0.184	-0.00001	1.6	0.0072	0.006	0.066	0.618	0.009	0.131	0.607	0.00126	0.00027	0.007	0.001	0.81
Burnspeak	304140	376884.8	5382121	0.0016	1.4	-0.00001	3.5	0.012	0.005	0.262	0.092	0.017	0.261	2.8	0.00345	0.00028	0.042	0.004	1
Burnspeak	304147	376988.1	5382722	-0.00005	0.549	0.00015	2.4	0.052	0.007	0.028	0.004	0.029	0.113	2.2	0.00104	0.00002	0.012	0.001	0.336
Burnspeak	304222	376955.2	5382316	0.0005	1.4	-0.00001	3.8	0.019	0.001	0.044	0.001	0.028	0.05	2	0.00046	0.00002	0.037	0.001	0.001
Burnspeak	304225	376991.5	5382515	0.0014	0.203	-0.00001	2.2	0.0075	0.009	0.092	0.52	0.003	0.181	0.761	0.00016	-0.00001	0.007	0.001	0.794
Burnspeak	304239	376980.5	5382316	0.0013	0.041	-0.00001	0.765	0.0005	0.006	0.006	0.269	0.001	0.077	1	-0.00001	0.00010	0.001	0.001	0.801
Burnspeak	304246	376964.3	5382516	0.00015	0.376	0.00006	3.6	0.015	0.008	0.324	0.001	0.009	0.144	3.2	0.0003	0.00009	0.012	0.003	0.239
Burnspeak	304262	376930	5382317	-0.00005	0.471	-0.00001	2	0.0083	0.003	0.015	0.001	0.018	0.088	1.6	0.00129	-0.00001	0.017	0.001	0.132
Burnspeak	304263	376904.7	5382317	0.0004	0.248	0.00027	1.8	0.0042	0.007	1.1	0.019	0.01	1.2	1.2	0.00052	-0.00001	0.005	0.001	2.5
Burnspeak	304264	376879.5	5382318	-0.00005	0.218	0.00028	10	0.011	0.01	0.717	0.017	0.006	1.1	4.4	0.00036	-0.00001	0.006	0.001	0.414
Burnspeak	304265	376854.3	5382318	0.0008	0.273	-0.00001	7.2	0.01	0.036	2	2.3	0.006	1.4	5	0.00034	-0.00001	0.011	0.001	0.876
Burnspeak	304266	376829	5382319	0.001	0.208	-0.00001	7.1	0.0085	0.036	4	5.4	0.004	3	5.7	0.00075	-0.00001	0.014	0.001	3.2

APPENDIX 2

DATA REPORT - IP SURVEY

169024

MEMORANDUM

1 November 1998

PASMINCO
EXPLORATION

TO Barry Murphy

COPY

FROM Paul Basford - Exploration Technical Services

SUBJECT DATA REPORT - IP Survey - North Kershaw Grid - Burns Peak EL 44/88

SURVEY SUMMARY

Burns Peak EL 44/88 - North Kershaw Grid - Induced Polarization Survey
Data collected between 30/9/98 - 15/10/98
Grid to be digitised in MapInfo - have several GPS control points
Previous geophysical work is restricted to IP collected over Chester in the 1970's

SURVEY DETAILS/SPECIFICATIONS

Objective of survey - test a poorly explored area of CVC geology along the eastern edge of the Rosebery Fault, along strike from the Southern Trenches mineralisation; in-fill a gap in the IP coverage and trace the location of the Rosebery Fault, testing along its edge.

Geoterrex were contracted to undertake the survey.

Time Domain - 50m dipole-dipole, data collected to pseudo-depth n=4

Receiver: ELREC 6 Transmitter: Huntec Lopo M-4
Receiver Time gates - Arithmetic over 2000 mscc - 10 gates, each 160 msec
Transmitter Frequency 0.125Hz - equates to 2 sec on: 2 sec off bipolar pulse

Seven lines recorded, each 200m apart. Line 80300N to 81500N. Approximate line length 2km. Total line kilometres collected - 13km

Contractors Report has been received and will be attached to interpretation report.

DATA SUMMARY

Pseudo-section plots of each line have been generated and are attached.

For Direct Response: Telephone: 61 (0)3 9288 0333 Facsimile: 61 (0)3 9288 0211
Pasminco Exploration A Division of Pasminco Australia Limited ACN 004 074 962 • Level 7 380 St Kilda Road Melbourne 3004 Australia
GPO Box 1291K Melbourne 3001 • Telephone (03) 9288 0333 • Facsimile (03) 9288 0211

DISCUSSION/RECOMMENDATIONS

The Rosebery Fault has been clearly detected along the western end of the survey lines. There appears to be elevated chargeability values proximal to the Chester Pyrite zone - this needs to be confirmed. There is an elevated chargeability zone down the centre of the grid area - this needs to be confirmed.

Data will be inverted - taking topography into consideration (using 50m HEC data - interpolated to 10m) using the Zonge software.

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Pasminco Exploration A Division of Pasminco Australia Limited ACN 004 074 962 • Level 7 380 St Kilda Road Melbourne 3004 Australia
GPO Box 1291K Melbourne 3001 • Telephone (03) 9288 0333 • Facsimile (03) 9288 0211

APPENDIX 3

INTERPRETATION REPORT - IP SURVEY

169027

MEMORANDUM

1 November 1998

PASMINCO
EXPLORATION

TO	Barry Murphy
COPY	
FROM	Paul Basford - Exploration Technical Services
SUBJECT	INTERPRETATION REPORT - IP Survey - North Kershaw Grid - Burns Peak EL 44/88

DATA PROCESSING

All seven lines of IP data were inverted using the Zonge inversion program RS2DIP, which inverts the data using known topography. The topographic data was extracted from the 50m HEC data set.

The inversion process has inverted the data to a greater depth than what is thought to be realistic and as such the inversion has been restricted to a depth of 200m below the topographic surface.

DATA INTERPRETATION

The resistivity inversions infer that a conductive surface exists in various parts of the grid, which may correlate with clay weathering products. It should be noted that the resistivity inversion controls to some degree the chargeability inversions, as the resistivity is more of a large scale geological effect.

There is a conductive feature indicated on the western side of the grid, however, it is not consistent from line to line. There is also a weak conductive feature proximal to the Chester pyrite mine.

The chargeability data is dominated by a strong chargeable feature on the western edge of the survey area, correlating with the Rosebery Fault. This chargeability feature does not correlate well with the conductive feature observed in the resistivity inversion. The inversion is a smooth layer process and as such makes the Fault response appear as an isolated source. This is an artefact. The chargeability anomalies are either open at depth or closed. This is an indication of the depth of investigation of the inversion process as geological evidence indicates the fault is a penetrative structure, thus the closure of an chargeability anomalies infers the depth of confident investigation. For the overall survey, the depth of confident investigation varies from 150m to 200m. This is as expected for a generally resistive earth.

There is also a minor chargeability high associated with Chester, coincident with the resistivity low.

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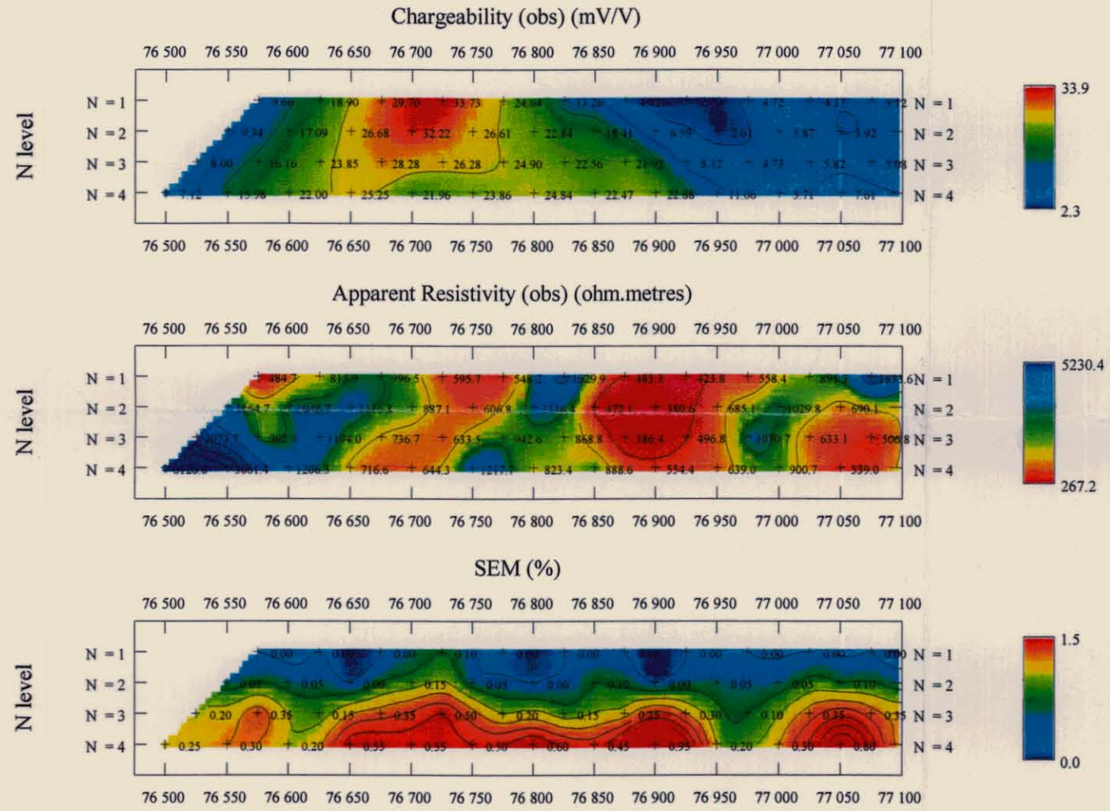
GPO Box 1291K Melbourne 3001 • Telephone (03) 9288 0333 • Facsimile (03) 9288 0211

DISCUSSION/RECOMMENDATIONS

There appears to be elevated chargeability values proximal to the Chester Pyrite zone - this needs to be confirmed. There is an elevated chargeability zone down the centre of the grid area - this needs to be confirmed. There do not appear to be any significant anomalies associated with the Rosebery Fault.

For Direct Response: Telephone: 61 (0)3 9288 0333 Facsimile: 61 (0)3 9288 0211
Pasminco Exploration A Division of Pasminco Australia Limited ACN 004 074 962 • Level 7 380 St Kilda Road Melbourne 3004 Australia
GPO Box 1291K Melbourne 3001 • Telephone (03) 9288 0333 • Facsimile (03) 9288 0211



Scale 1: 5 000

0 100 200 300 400

metres

PASMINCO EXPLORATION	
BURNS PEAK EL 44/88 Mt Kershaw EL - Line 80300N	
50m Dipole-Dipole IP Contractor: Geoterrex Receiver: ELREC 6 Transmitter: Huntec Lopo M4 Transmitter Frequency 0.125Hz (2 sec on: 2 sec off)	
Author :PWB	Ref : **APPENDIX 4**
Drawn :	
Date : 18-Nov-1999	Report No :
Scale 1: 5 000	Plan No :

5 cm

00_4414

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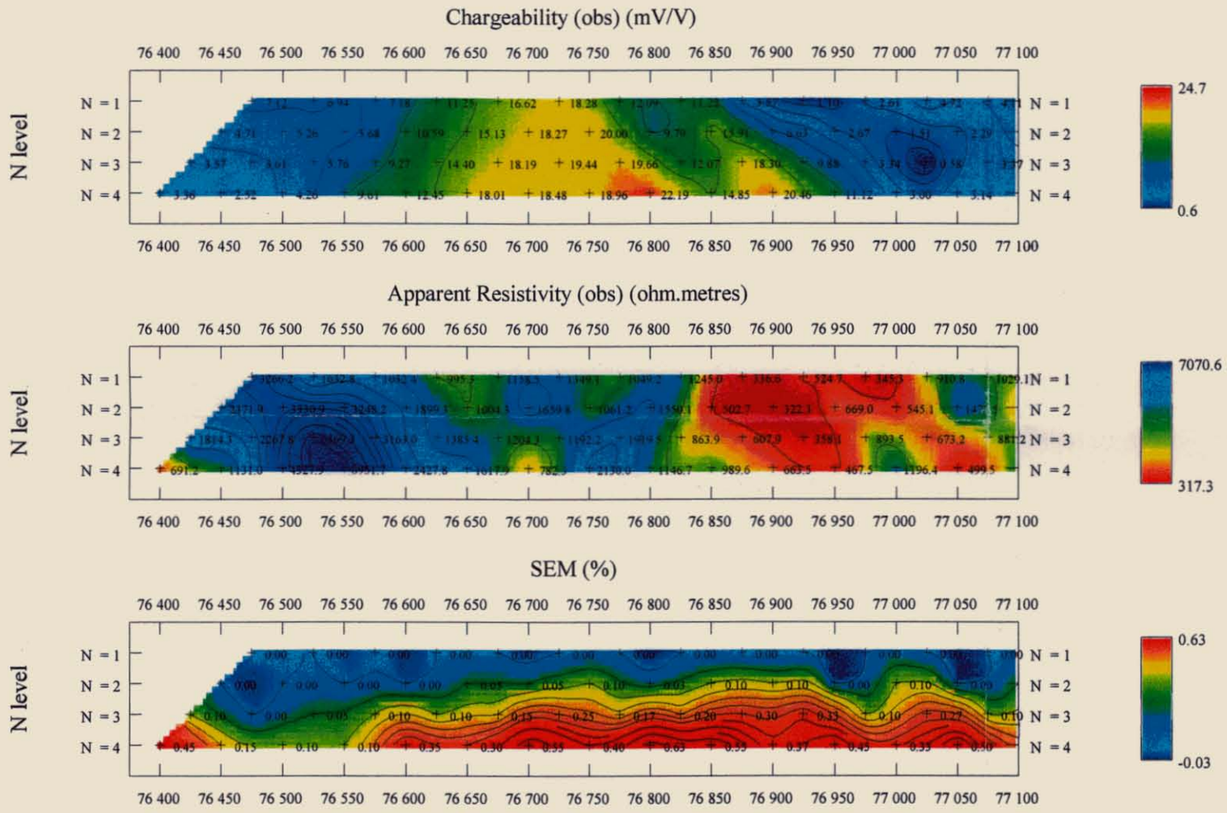
November 1998-99 - EL21/98
Pasminco Exploration*
Parfrey, O.; Simpson, K.L. EL21/98

169029



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metres

PASMINCO EXPLORATION	
BURNS PEAK EL 44/88 Mt Kershaw EL - Line 80500N	
50m Dipole-Dipole IP Contractor: Geoterrex Receiver: ELREC 6 Transmitter: Huntec Lopo M4 Transmitter Frequency 0.125Hz (2 sec on: 2 sec off)	
Author :PWB	Ref : **APPENDIX 5**
Drawn :	
Date : 18-Nov-1999	Report No :
Scale 1: 5 000	Plan No :

00_4414

5 cm

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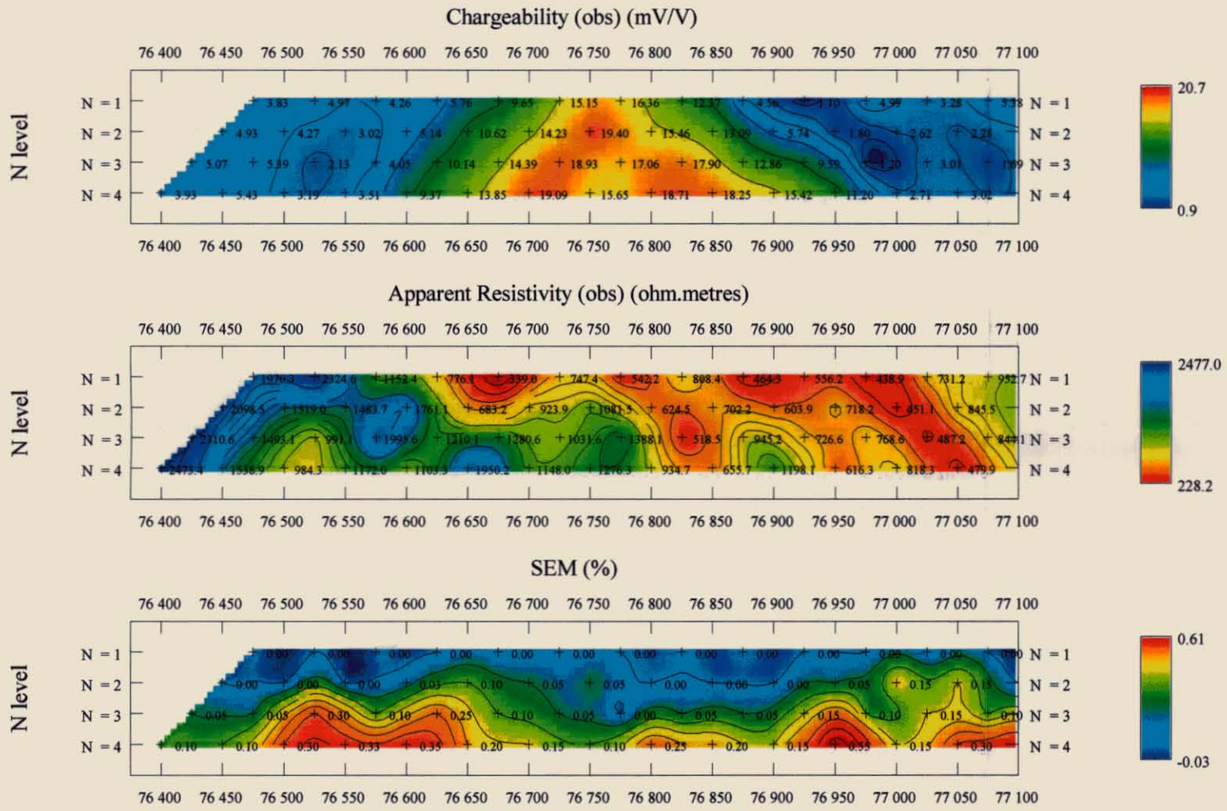
November 1998-99 - EL21/98
Pasminco Exploration*
Parfrey, O.; Simpson, K.L. EL21/98

169030



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metres

PASMINCO EXPLORATION	
BURNS PEAK EL 44/88 Mt Kershaw EL - Line 80700N	
50m Dipole-Dipole IP Contractor: Geoterrex Receiver: ELREC 6 Transmitter: Huntec Lopo M4 Transmitter Frequency 0.125Hz (2 sec on: 2 sec off)	
Author :PWB	Ref : **APPENDIX 6**
Drawn :	
Date : 18-Nov-1999	Report No :
Scale 1: 5 000	Plan No :

00_4414

5 cm

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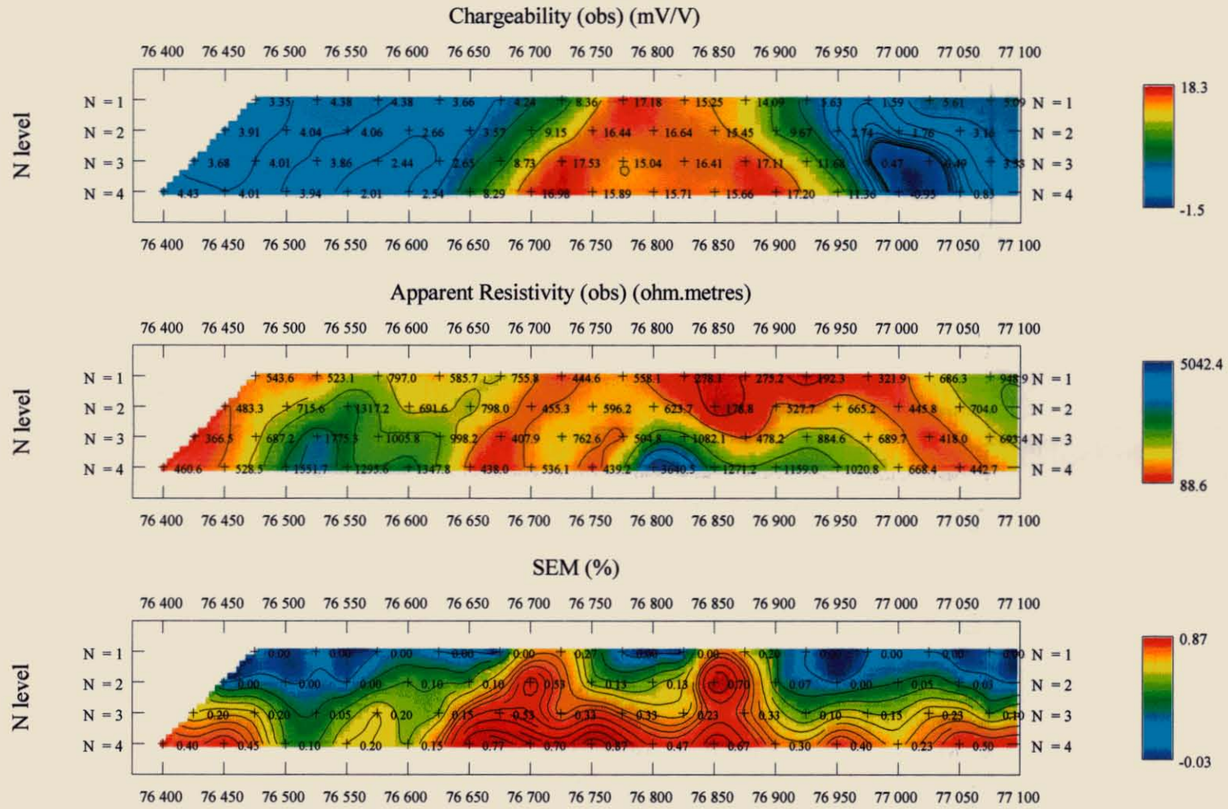
169031



Scale 1: 5 000

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metres

PASMINCO EXPLORATION	
BURNS PEAK EL 44/88 Mt Kershaw EL - Line 80900N	
50m Dipole-Dipole IP Contractor: Geoterrex Receiver: ELREC 6 Transmitter: Huntec Lopo M4 Transmitter Frequency 0.125Hz (2 sec on: 2 sec off)	
Author :PWB	Ref : **APPENDIX 7**
Drawn :	
Date : 18-Nov-1999	Report No :
Scale 1: 5 000	Plan No :

00_4414

5 cm

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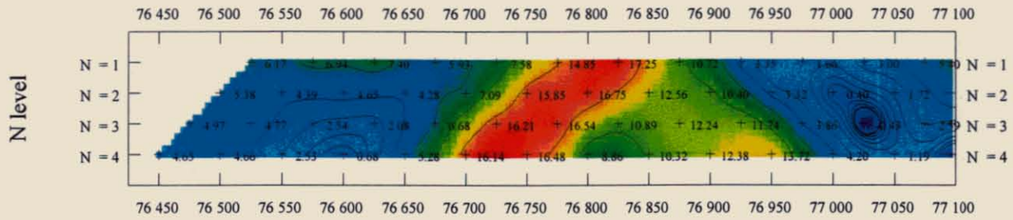
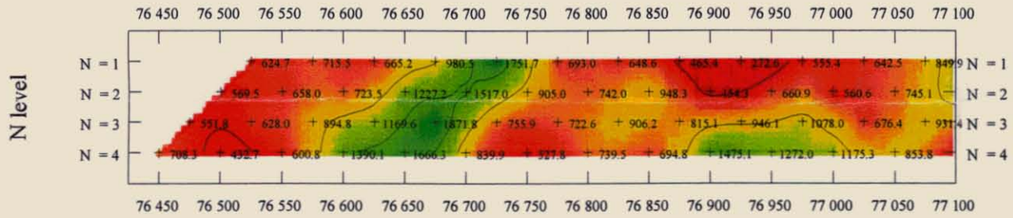
November 1998-99 - EL21/98
Pasminco Exploration*
Parfrey, O.; Simpson, K.L. EL21/98

169032

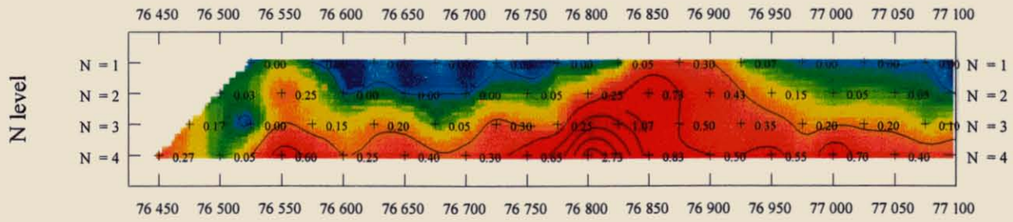
Chargeability (obs) (mV/V)

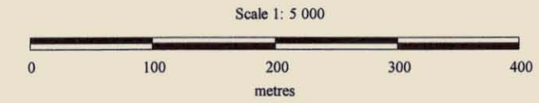


Apparent Resistivity (obs) (ohm.metres)



SEM (%)





PASMINCO EXPLORATION	
BURNS PEAK EL 44/88 Mt Kershaw EL - Line 81100N	
50m Dipole-Dipole IP Contractor: Geoterrex Receiver: ELREC 6 Transmitter: Huntec Lopo M4 Transmitter Frequency 0.125Hz (2 sec on: 2 sec off)	
Author :PWB	Ref : **APPENDIX 8**
Drawn :	
Date : 18-Nov-1999	Report No :
Scale 1: 5 000	Plan No :

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5 cm

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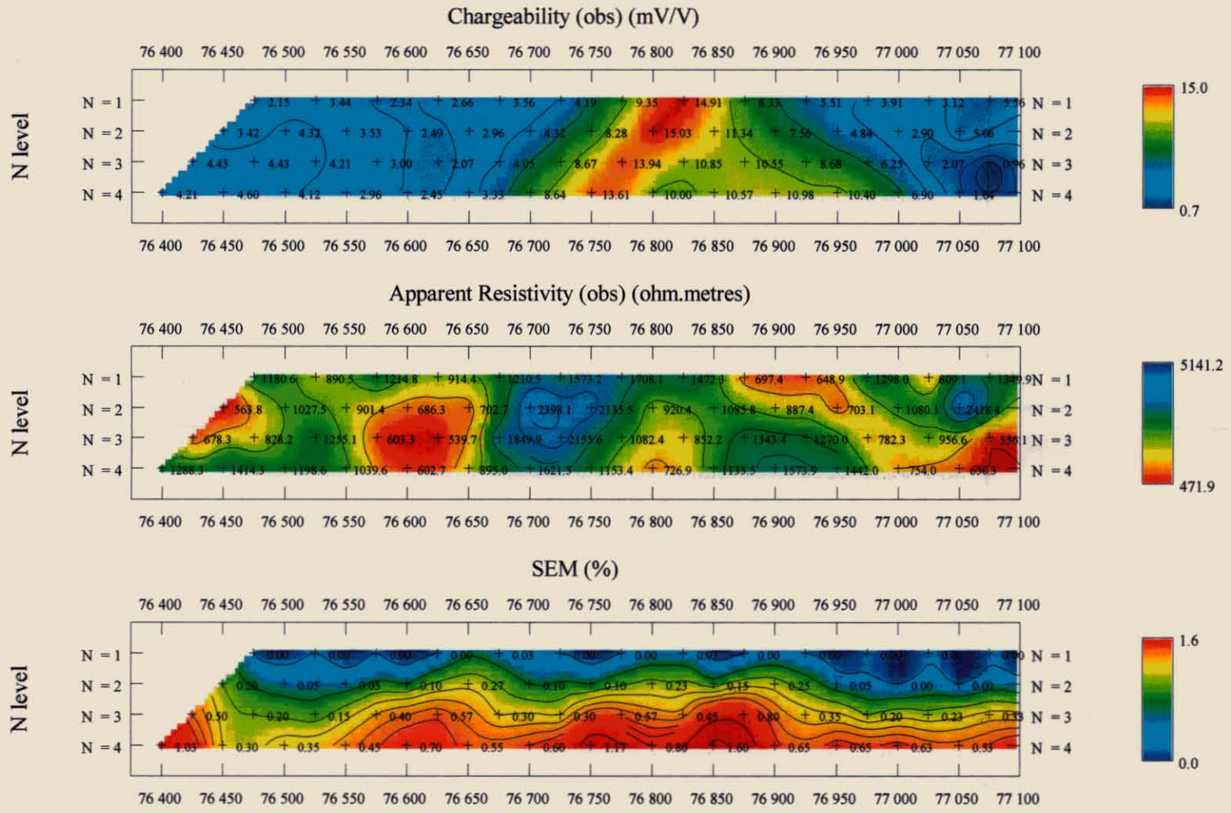
169033



Scale 1: 5 000

0 100 200 300 400

metres

PASMINCO EXPLORATION

BURNS PEAK EL 44/88

Mt Kershaw EL - Line 81300N

50m Dipole-Dipole IP
Contractor: Geoterrex
Receiver: ELREC 6
Transmitter: Huntec Lopo M4
Transmitter Frequency 0.125Hz (2 sec on: 2 sec off)

Author :PWB	Ref : **APPENDIX 9**
Drawn :	
Date : 18-Nov-1999	Report No :
Scale 1: 5 000	Plan No :

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5 cm

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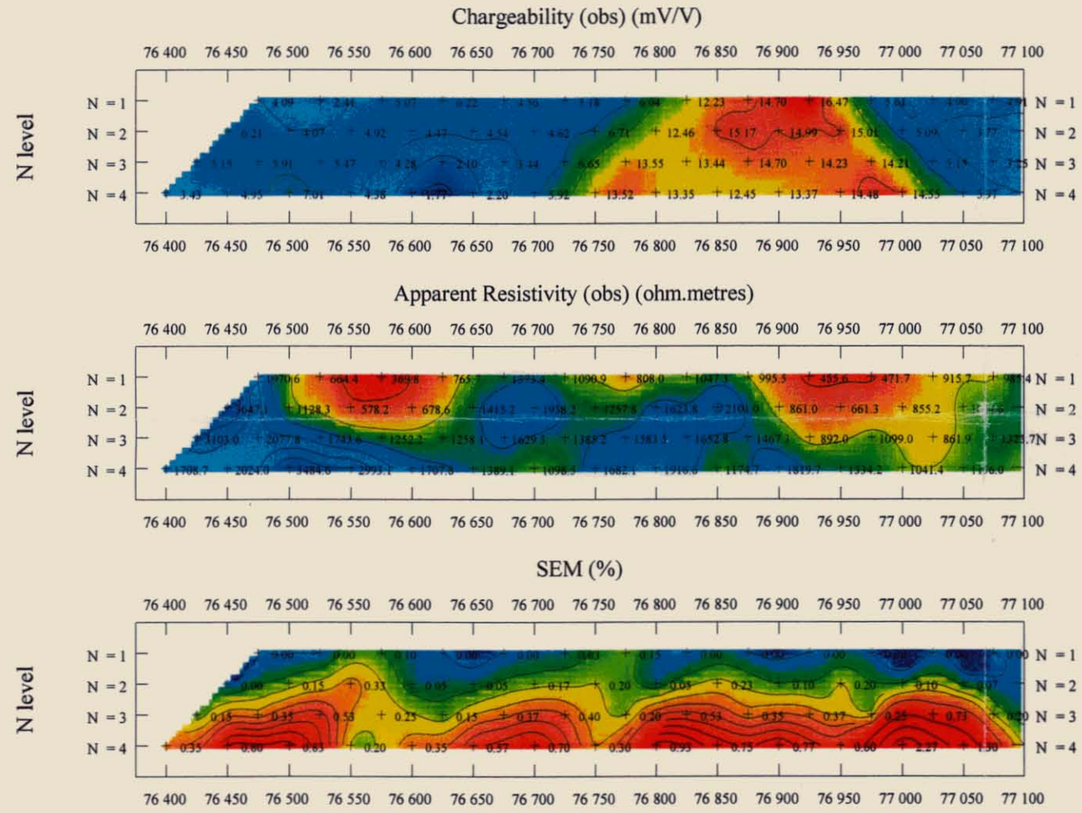
November 1998-99 - EL21/98
Pasminco Exploration*
Parfrey, O.; Simpson, K.L. EL21/98



Scale 1: 5 000

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metres

PASMINCO EXPLORATION	
BURNS PEAK EL 44/88 Mt Kershaw EL - Line 81500N	
50m Dipole-Dipole IP Contractor: Geoterrex Receiver: ELREC 6 Transmitter: Huntec Lopo M4 Transmitter Frequency 0.125Hz (2 sec on: 2 sec off)	
Author :PWB	Ref : APPENDIX 10
Drawn :	
Date : 18-Nov-1999	Report No :
Scale 1: 5 000	Plan No :

00_4414

5 cm

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November 1998-99 - EL21/98
Pasminco Exploration*
Parfrey, O.; Simpson, K.L. EL21/98

169035