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Prospect 605

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CSR LIMITED
ALUMINIUM, MINERALS & CHEMICALS DIVISION
EXPLORATION GROUP

MICROFILMED

RENEWAL REPORT - 1984
EXPLORATION LICENCE NO. 31/82
MT. LINDSAY, TASMANIA

EMR 45/84

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KEYWORDS

TASMANIA

TIN

E L 31/82

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LEAD

ZINC

SKARN

CARBONATE REPLACEMENT

EXPLORATION

MINERALISATION

DRAINAGE

GEOLOGY

GEOCHEMISTRY

SAMPLING

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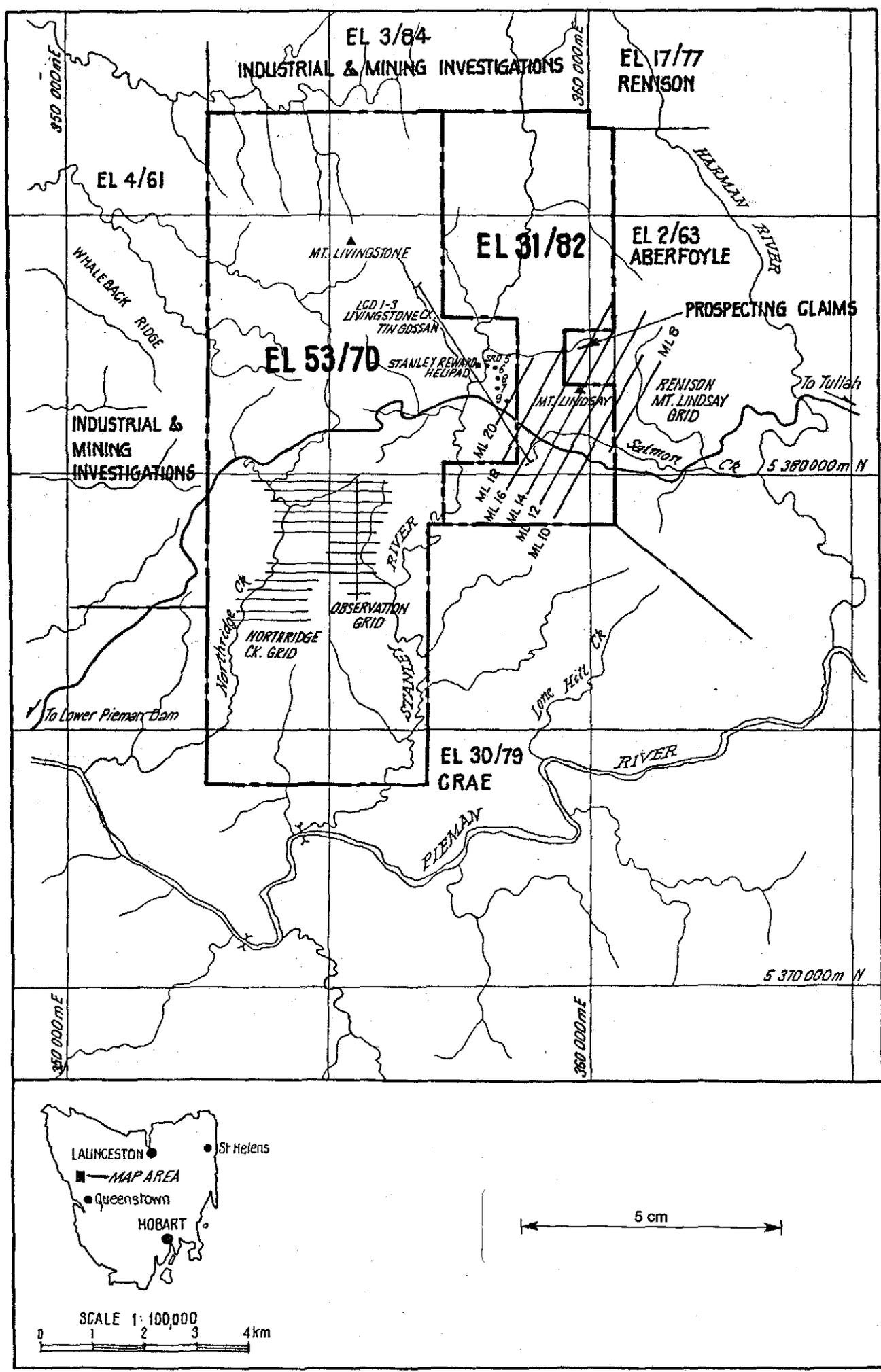


FIG. 1. LOCATION MAP EL 53/70 STANLEY RIVER & EL 31/82 MT. LINDSAY TAS.

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1. INTRODUCTION

Exploration Licence 31/82 (E.L. 31/82) was granted to CSR Limited on 15th June 1983. The Licence covers an area of 20 km² situated immediately east of CSR's E.L. 53/70 (Stanley River) about 18 km north of Zeehan on the west coast of Tasmania (Figure 1). The area is centred on Mt. Lindsay and extends west from the flanks of Parsons Hood to the flanks of Mt. Livingstone and south from the flanks of Tadpole Hill to about 2 km south of the HEC Lower Pieman Dam access road.

The area is thought to include Renison style carbonate replacement and/or skarn tin mineralisation potential in a continuation of the dolomitic Success Creek Group sediments known within CSR's adjacent E.L. 53/70. These sediments have been intruded by the tin-bearing Devonian Meredith Granite.

Between 1895 (when tin was discovered at the nearby Stanley Reward) and September 1982 (when E.L. 31/82 was pegged by CSR), the area was intermittently and intensely prospected by several companies and individuals as well as investigated by government researchers. CSR commenced evaluation and exploration in 1983.

This report summarises the investigations completed in the first term of the Licence until June 1984.

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2. SUMMARY

The exploration of E.L. 31/82 commenced in June 1983 when the Licence was granted to CSR.

Past exploration data was reviewed, compiled and ground checked. Regional drainage sampling and check mapping of the Licence was completed and all anomalies were resampled. Six Sn anomalies were defined for further investigations. These anomalies will be further investigated by geology, gridding followed by geochemical and geophysical surveys and drilling. Work on one anomaly is almost to drilling stage and has a high potential for a Renison style replacement tin deposit.

3. GENERAL INFORMATION

E.L. 31/82 is centred 18 km north of Zeehan and 25 km west of Tullah on the west coast of Tasmania. It is adjacent to the eastern boundary of CSR's Stanley River area, E.L. 53/70. The Licence is about 3 km from east to west and 8 km from north to south (Figure 1).

Until recently the only ground access to the area was from Renison Bell by vehicle track to the Pieman River cable car crossing (downstream of the Wilson River) and then by foot track to Mt. Lindsay.

The access from the Pieman River to Mt. Lindsay was upgraded to 4WD standard by Renison in 1975. This access route was then replaced by the HEC Lower Pieman dam-site sealed access road from Tullah in 1978-80. The Licence is 32 km by this road from the Murchison Highway. This HEC road runs east-west through the Licence about 2 km from the southern boundary.

The southern third of the Licence is underlain by mudstones, siltstones and lithic sandstones of the Precambrian Donah Formation. These rocks support easily traversed low button grass scrub with minor ti-tree/sword grass/bauera scrub in the deep gullies. The central portion is underlain by the Eo-Cambrian Success Creek Group siltstones, shales and dolomites and the Crimson Creek Formation volcanoclastic sediments. The northern half of the Licence is underlain by the Devonian Meredith Granite. These latter areas are covered by thick, almost impenetratable, horizontal scrub and rain forest.

E.L. 31/82 covers portions of two drainage basins, both of which belong to the large Pieman River drainage area. The eastern edge and central east-west strip of the Licence are drained by tributaries of the Wilson River. The remainder is drained by the Stanley River. The rivers and streams are

deeply incised resulting in a steep hilly topography ranging in elevation from 150 to 900 m.

4. PREVIOUS EXPLORATION

After tin was discovered at the Stanley Reward in 1895 many old prospectors explored the Stanley River area. Tin was discovered at Mt. Lindsay in 1901. T. Macdonald started working the Mt. Lindsay deposit in 1909 and during the 1916-21 period won 2,156 "bags" of tin concentrate containing 68-71% Sn from alluvial/eluvial deposits. The leases expired in the mid-1920's.

In the 1956-61 period Rio Tinto explored the north-west Tasmania area (SPL 302) with a useful airborne E.M. and magnetic survey covering most of the zone. No other Rio Tinto work is recorded.

Aberfoyle obtained two leases over the Mt. Lindsay workings in 1961-62. These were included in Aberfoyle's E.L. 2/63 which covered the area from Stanley Reward to the Huskisson River. Between 1962 and 1967 most work within E.L. 2/63 was confined to the Mt. Lindsay workings. This included minor mapping and 23 drill holes. In the 1967-69 period two prospects (Mt. Lindsay and Camp 30) were investigated by air magnetics and drilling. Semi-regional mapping of the Mt. Lindsay-Stanley River area occurred in the 1970-71 period and resulted in minor SP surveys along existing grids in 1972. Most of this Aberfoyle exploration was in areas outside CSR's E.L. 31/82.

E.L. 2/63 was joint ventured to Renison/Goldfields in 1973. However the joint venture excluded the E.L. 31/82 area as this had been relinquished by Aberfoyle in 1972 and included as part of E.L. 18/70 (Valley Exploration). Renison obtained the E.L. 31/82 area as E.L. 18/73 in 1973. After an initial airborne E.M. (Turair) magnetic survey and a photogeological interpretation (Sheet K553-50) all of the Renison exploration was confined to the Mt. Lindsay anomalies and the Misty Valley grid (along the Success Creek sediments). These areas were traversed with ground mapping, I.P., magnetic and soil

geochemistry (Sn, W, Cu, Pb, Zn, As) surveys. Six holes were drilled, generally with poor results. Renison relinquished the area in early September 1982 although the adjacent ground (E.L. 2/63) was retained in joint venture.

CSR pegged the ground on 14th September 1982 but a 1 km² area over Mt. Lindsay was excluded due to a prior claim on 1st September 1982 by T. Brampton.

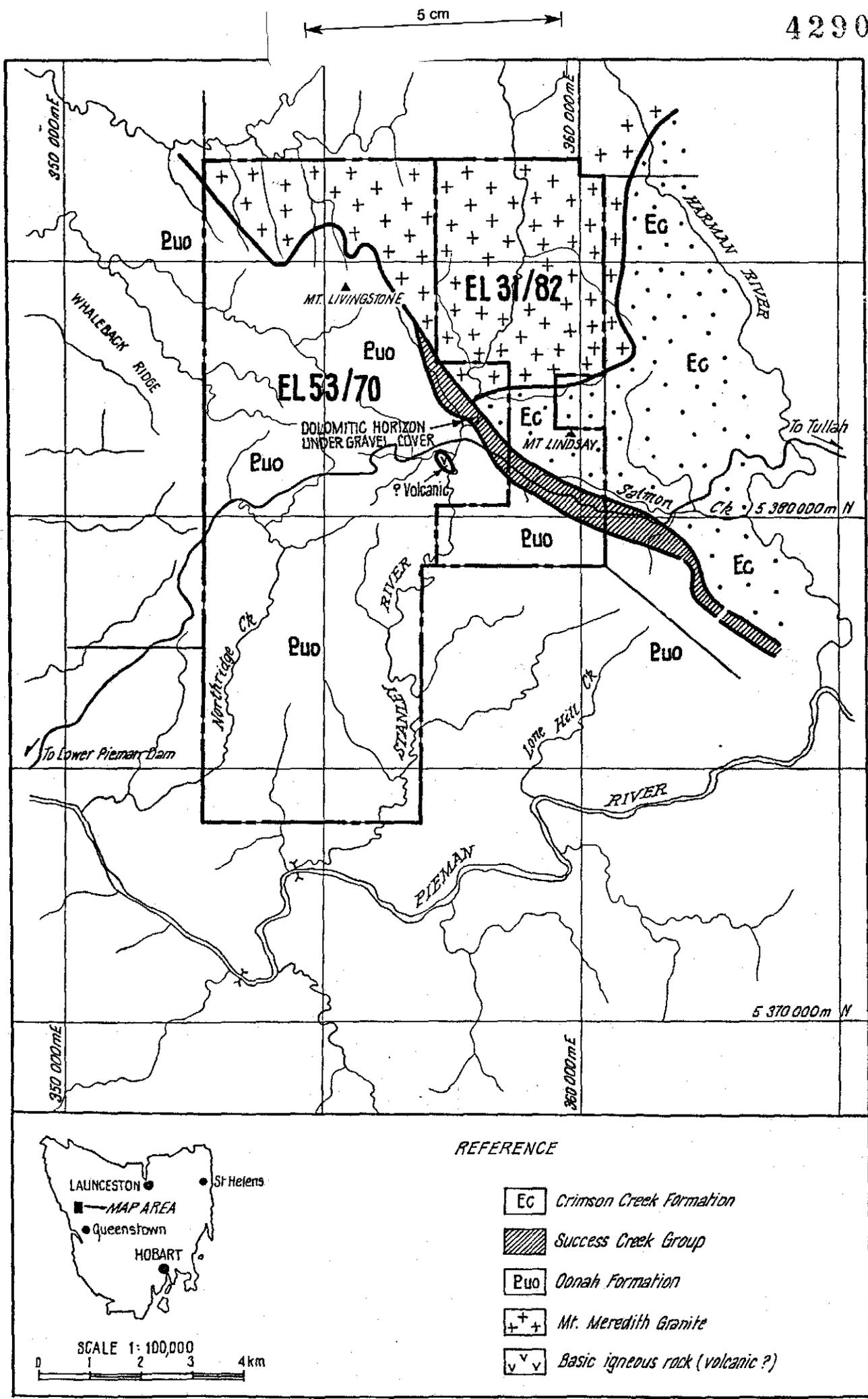


FIG.2. GEOLOGICAL SUMMARY, STANLEY RIVER & MT. LINDSAY, TASMANIA

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5. GEOLOGY

5.1 Regional

The oldest rocks in the area (Figure 2) are the relatively unmetamorphosed Precambrian rocks of the Donah Formation. These interbedded fine-grained lithic and siliceous sandstones with laminated phyllitic mudstones, siltstones and coarse lithic sandstones cover the southern and southwestern third of the Licence.

Unconformably overlying the Donah sediments and possibly with a faulted contact, are the Success Group sediments which underlie the swampy Salmon Creek area. These consist of thinly-bedded siliceous siltstones and dolomitic siltstones (Renison Bell Shale equivalents) from the upper part of the Success Creek Group (Brown, 1980).

Volcaniclastic lithic wackes with interbedded siltstones, tuffs, mudstones, minor cherts and carbonates of the Crimson Creek Formation disconformably overlie the Success Creek sediments in the central portion of the Licence. The cherts and carbonates occur about 2,000 m stratigraphically above the base of the Crimson Creek Formation and are correlated with the Cleveland Mine sequence. At Mt. Lindsay these carbonates host some tin/tungsten mineralisation.

These sediments have been intruded by the Devonian-Lower Carboniferous Meredith Granite which outcrops in the northern half of the Licence. Fluids associated with this multiphase adamellite intrusion are believed to be responsible for mineralisation at Mt. Bischoff, Cleveland, Mt. Lindsay, Mt. Razorback, Stanley Reward, Livingstone Creek, Renison Bell and Queen Hill.

Minor recent glacial and fluvio glacial sediments cap older rocks. These occur as ridge caps or

valley flow alluvial type deposits and contain anomalous tin and gold concentrations.

5.2 Structural Geology

The Onah Formation sediments form a series of anticlinoriums to the west of E.L. 31/82 with the Success Creek Group sediments being deposited and preserved in the intervening synclinorium (pers. comm. A.V. Brown).

Locally the Onah Formation sediments contain highly refolded isoclinal folds. The refolded folds have then been subjected to large scale regional deformation which produced the anticlinorial structures (Brown, 1980). A further phase of deformation in the Devonian produced open folds in the Success Creek Group sediments. This was followed by regional block faulting and granite emplacement.

The dominant regional structure within E.L. 31/82 is the Huskisson Syncline which is reflected by the steeply dipping Onah and Success Creek successions. It has been suggested that the Success Creek sediments have east facings within the Licence (Brown 1980, Sheet K553-51).

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6. EXPLORATION CONCEPTS

6.1 Alluvial Cassiterite

Alluvial workings occur in Tertiary gravel deposits along the Stanley River. The main deposits were at the confluence of the Stanley River and Livingstone Creek.

The gravels are not considered commercially viable. However, they may be significant if economic/subeconomic lode tin/copper deposits are located in the region.

6.2 Lode Tin

Three primary cassiterite deposits are known from the Mt. Lindsay-Stanley River area, viz. Mt. Lindsay skarn and the Stanley Reward and Livingstone Creek gossanous deposits. These were worked by adits and/or shafts, reputedly to 150 m deep.

Tin grades within the outcrops (up to 10 m wide) of these lodes tended to be sporadic with values up to 3.15% Sn. Geophysics and drilling suggest the lodes extend beyond the surface outcrops.

The Stanley Reward and Livingstone Creek gossans are probably related to skarn-type mineralisation associated with the contact of the Meredith Granite with the dolomitic units of the Success Creek sediments. The Mt. Lindsay lode is similarly a skarn type mineralisation associated with the alteration of the Crimson Creek dolomitic units. These deposits are all close to the granite margins.

More distal replacement-type tin deposits (similar to the Renison Lode) are more probable in the dolomitic horizons of the Success Creek Group within E.L.

31/82. These rocks (Renison Mine Sequence) extend for 2-3 km across the licence and are between 1 and 4 km from known granitic rocks. Faults (channelways) for mineralising fluid movement are common in the area.

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7. CURRENT EXPLORATION

7.1 Techniques

E.L. 31/82 was acquired to cover the continuation of the Success Creek dolomitic sequence extending southeast from the Stanley Reward area (E.L. 53/70). When the ground had been pegged all previous exploration data was reviewed. It was found that only Renison had examined the extension of the Success Creek sediments.

Renison mapping and drainage anomalies were checked during a regional drainage and mapping programme. Stream sediment samples were taken from all drainages within the Licence (Sheet K553-52).

The anomalous areas located from the Sn, W, As, Fe, Mn, Cr, Cu, Pb, Zn, Ni, Co, Bi, Ag, Au analyses were resampled. Six repeatable anomalies (Sn, W, As) were located from Sn, W, As, Cu, Pb, Zn, Ni, Co, Bi, Ag analyses of repeat samples. These anomalous drainages are being resampled at 50 m (stream sediment) and 250 m (panned concentrate) intervals in an attempt to locate the anomaly source.

7.2 Results

The review of previous exploration data (Ellis, 1983) showed that most of the work was outside of the E.L. 31/82 area. The only work within CSR's area was that carried out by Renison on the 200 m spaced grid over the Success Creek Group sediments. This was covered by Turair E.M., ground magnetics, I.P. and Sn, W, As, Pb, Zn, Cu soil geochemistry. Three of the six drill holes were in the area of E.L. 31/82.

With only minor checking the Renison data (anomalies) will provide 2-3 immediate drill targets.

Initial drainage sampling (Appendix I) indicated several anomalies in all rock units. In the Oonah Formation (southwest of the Licence) samples A161370 and A161371 showed anomalous Sn values (to 230 ppm) while the Meredith Granite anomalies (northern half of the Licence) at samples A161408, A161412, A161340, A161341 and A161342 were Sn or Sn/W anomalous (to 3950 ppm Sn and 85 ppm W). Anomalies in these two rock types had no other metal anomalies. The contact of the Meredith Granite and Crimson Creek Formation (Mt. Lindsay deposit area) was anomalous in Sn (to 240 ppm), Cu (to 50 ppm), Zn (to 150 ppm), Ni (to 80 ppm) and Co (to 55 ppm) as shown by samples A161330, A161334 and A161337. Most of the samples taken from the drainages north of the HEC road and draining the Success Creek Group sediments showed anomalous values for one or more of Sn (to 410 ppm), W (85 ppm), As (to 55 ppm) and Zn (to 110 ppm).

Most of the anomalous samples were confirmed by resampling (Appendix II). Exceptions were samples A161412, A161340 and A161342 from the Meredith Granite area which returned background Sn values.

The repeatable anomalies in the Oonah Formation may relate to high level fluvioglacial gravel caps similar to those found in E.L. 53/70. This can be checked by several geological traverses around the anomalies.

Of the anomalies in the Meredith Granite one (northern) is fairly weak and in a small stream and may relate to small quartz-tourmaline-cassiterite veins. The second much stronger anomaly (up to 3950 ppm Sn and 105 ppm W) drains from near the granite contact and may result from a greisen/skarn zone. Further detailed investigations are required.

The News Creek anomaly (contact of the Meredith Granite and Crimson Creek Formation) is related to the Mt.

Lindsay skarn deposit excluded from E.L. 31/82. No further work is required in this area which is held by other parties and was examined thoroughly by Renison and Aberfoyle.

The major area of anomalies over the Success Creek Group sediments (north of the HEC road) may be caused by Renison-style replacement mineralisation and should be the major area of further work.

7.3 Quality Control

(a) Duplicates

Three samples (A161549, A161550 and A161562) were duplicated (A161587, A161588 and A161589 respectively), and showed very good agreement :-

<u>Dupl.No.</u>	<u>Samples</u>	<u>Sn</u>	<u>W</u>	<u>As</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ni</u>	<u>Co</u>	<u>Bi</u>	<u>Ag</u>
1	A161549	930	90	<2	8	14	6	8	<4	<4	<1
	A161587	1000	70	<2	10	12	4	10	<4	<4	<1
2	A161550	230	65	<2	8	<4	4	10	<4	<4	<1
	A161588	200	100	<2	8	<4	<2	10	<4	<4	<1
3	A161562	90	65	14	14	14	26	16	10	<4	<1
	A161589	70	60	14	14	10	22	16	10	<4	<1

(b) Standards

Five standards were analysed with very good agreement.

<u>Standard</u>	<u>Samples</u>	<u>Sn</u>	<u>W</u>	<u>As</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ni</u>	<u>Co</u>	<u>Bi</u>	<u>Ag</u>
5	Quoted			14	107	13	112			28	
	A161613	14	50	12	110	16	100	50	6	14	1
9	Quoted	21.4									
	A161616	28	65	<2	12	<4	6	<4	<4	<4	<1
11	Quoted	138									
	A161619	145	45	<2	16	<4	6	<4	<4	<4	<1

<u>Standard</u>	<u>Samples</u>	<u>Sn</u>	<u>W</u>	<u>As</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ni</u>	<u>Co</u>	<u>Bi</u>	<u>Ag</u>
12	Quoted	68									
	A161622	75	35	2	12	4	6	<4	<4	<4	<1
13	Quoted	505									
	A616125	530	65	<2	10	<4	<2	<4	<4	<4	<1

All samples were analysed for Sn, W, As by XRF-1, Cu, Pb, Zn, Bi, Co, Ni by AAS-1 and Ag by AAS-3.

7.4 Proposed Exploration

Renison Lines ML17 and ML12 should be re-opened and traversed with magnetics and soil geochemistry for Cu, Pb, Zn, Sn, W, As and possibly Li and F to check the Renison data. The results of this work and a re-evaluation of the past geophysics (Turair E.M., ground magnetics and I.P.) and geochemistry will enable 2-3 Renison style replacement tin deposit drill targets to be defined. As access is no problem these holes should then be redrilled.

The geochemical anomalies in the Oonah Formation and the northern Meredith Granite Anomaly should be further checked by geological traverses. The major anomaly (Sample A161341) should be further investigated by extension of sampling and geology and then gridded, if warranted.

8. REFERENCES

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Tas. Dept. of Mines Report No. 1980/42 (unpubl).

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Historical Review, Mt. Lindsay, E.L. 31/82, Western
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APPENDIX 1

REGIONAL DRAINAGE SAMPLING, E.L. 31/82

FIELD SAMPLE DESPATCH SHEET

13047

State TASMANIA Project MT LINDSAY Prospect No. 605 Locality REGIONAL
 CSR Order No. 30697 Date Sampled JAN/FEB 83 Sampler P.D.E. / S.J. / P.K. / M.H.
 Date Despatched 1 MARCH 1983 Despatcher P.D.E. Despatched per T.P.P.
 Type of Sample STREAM SEDIMENT
 Lab. Name COMLABS

Sample Number Co-ordinates	From	To	Chemical Analyses (ppm and)					Remarks						
	E/W	N/S	Sn	W	As	% Fe	Mn	Cu	Pb	Zn	Ni	Co	Bi	
161329	358700	5382290	22	10	8	0.81	44	320	20	20	44	18	6	<4
161330	358785	5382165	240	<10	<2	0.53	48	350	10	18	16	12	6	<4
161331	358795	5382305	12	<10	4	0.67	40	260	12	16	38	16	6	<4
161332	359360	5382350	18	10	6	5.20	500	185	50	44	150	80	55	10
161333	359315	5382370	8	10	6	0.62	42	210	20	10	34	22	8	<4
161334	359450	5382360	175	15	6	0.64	55	330	6	24	22	10	44	<4
161335	359615	5382345	34	10	6	0.56	36	145	8	6	26	10	44	<4
161336	359440	5382330	12	10	9	0.72	50	260	12	4	34	14	4	<4
161337	359585	5382395	170	<10	8	0.65	55	240	10	6	28	14	4	<4
161338	358690	5384345	6	10	<2	0.28	16	300	4	44	10	12	<4	<4
161339	358660	5384250	16	10	2	0.23	14	210	2	10	12	4	<4	<4
* 161340	358630	5383855	48	20	<2	0.28	26	240	8	12	22	16	<4	<4
x 161341	358510	5383570	3950	85	<2	0.20	26	180	2	24	10	8	<4	<4
x 161342	358445	5383640	60	15	<2	0.20	26	145	2	10	12	12	<4	<4
161343	358350	5383575	10	<10	<2	0.17	14	160	2	<4	8	6	<4	<4
161344	357820	5383065	20	10	2	0.23	32	145	4	44	12	6	<4	<4
161345	357840	5382875	22	20	<2	0.21	22	180	4	44	10	10	24	<4
161346	359495	5380535	<4	<10	5	1.55	370	135	4	8	12	12	<4	<4
161347	360590	5380480	6	<10	<2	0.58	46	170	6	4	18	14	24	<4
161348	360670	5380480	4	<10	40	5.70	1550	65	75	38	110	75	44	6
161349	360670	5380460	6	<10	10	2.15	460	90	18	14	38	22	12	<4
161350	358890	5380525	24	<10	<2	0.18	14	145	4	44	8	4	<4	<4
161351	358880	5380530	4	<10	<2	0.29	16	190	4	30	14	8	<4	<4
161352	359180	5380000	10	<10	8	0.56	24	80	4	<4	12	4	<4	<4
161353	359195	5380000	6	<10	<2	0.56	38	180	<2	<4	10	6	<4	<4
161354	359290	5379850	6	<10	<2	0.36	22	105	2	44	8	4	<4	<4
161355	359300	5379860	6	<10	<2	0.43	28	80	2	44	12	44	<4	<4
161356	359565	5379770	6	10	3	0.63	60	340	4	44	24	8	<4	<4
161357	359570	5379790	4	10	<2	0.47	44	140	2	<4	12	4	<4	<4
161358	359950	5379445	<4	10	<2	0.42	80	135	4	44	8	8	<4	<4
161359	360005	5379400	<4	<10	2	0.34	10	220	4	44	10	4	<4	<4
161360	360020	5379430	<4	<10	<2	0.35	32	180	4	6	8	8	<4	<4
161361	359730	5379610	4	<10	<2	0.32	36	140	42	44	10	44	<4	4
161362	359715	5379610	4	<10	2	0.23	10	105	2	44	10	4	<4	<4
161363	357605	5381005	16	<10	2	0.45	16	220	6	44	16	10	<4	<4
161364	357580	5380515	<4	<10	4	0.37	38	80	4	12	12	8	<4	<4
161365	357585	5380465	4	<10	2	0.23	22	125	6	10	8	8	<4	<4
161366	357692	5380275	28	<10	<2	0.28	16	170	4	44	10	4	<4	<4
161367	357908	5380235	<4	<10	2	0.22	14	130	4	44	12	4	<4	<4
161368	357660	5380170	6	10	2	0.31	18	185	2	44	16	24	<4	<4

Instructions to Analyst: ANALYSE FOR -20+80# for Sn, W, AS by XRF-1.

ANALYSE -80# for Cu, Pb, Zn, Bi, Co, Ni by AAS-1

RESULTS and -20+80 and -80# Reactions to CSR 6 WILLIAM ST WEST HOBART, TAS, 7000
RESULTS and INVOICE to CSR, MINERALS DIVISION, GPO BOX 483, SYDNEY, NSW, 2001

Results to:

FIELD SAMPLE DESPATCH SHEET

13048

State Tasmania Project Mt Lindsay Prospect No. 605 Locality Regional
 CSR Order No. 30697 Date Sampled Jan/Feb '83 Sampler PDE/SS/PR/NH
 Date Despatched 1 March 83 Despatcher PDE Despatched per TAA
 Type of Sample Stream Sediment
 Lab. Name Comlabs

Sample Number Co-ordinates	From To		Chemical Analyses (ppm and)					Remarks						
	E/W	N/S	Sn	W	As	% Fe	Mn	Cd	Cu	Pb	Zn	Ni	Co	Bi
161369	357650	5380130	4	<10	3	0.30	20	160	4	<4	14	6	<4	<4
161370	357560	5380130	60	10	<2	0.40	24	260	2	<4	10	<4	<4	<4
161371	357540	5379770	230	<10	<2	0.21	8	185	2	<4	18	4	<4	<4
161372	357570	5379670	<4	<10	<2	0.24	6	150	4	<4	10	14	<4	<4
161373	357560	5379645	6	<10	2	0.38	16	230	4	<4	12	6	<4	<4
161374	357505	5379650	<4	<10	2	0.20	6	125	6	<4	12	12	<4	<4
161375	357570	5379990	4	<10	<2	0.25	8	185	2	<4	10	4	<4	<4
161376	357530	5379855	<4	<10	<2	0.15	4	130	2	<4	26	4	<4	<4
161377	357600	5379390	6	<10	<2	0.22	6	90	2	<4	8	<4	<4	<4
161378	357650	5379420	22	<10	<2	0.22	6	120	4	<4	8	8	<4	<4
161379	357720	5380010	<4	<10	<2	0.17	6	130	2	<4	6	<4	<4	<4
161380	357720	5380035	<4	10	3	0.18	4	95	2	<4	6	<4	<4	<4
161381	357570	5379310	10	<10	<2	0.21	6	160	<2	<4	6	<4	<4	<4
161382	357660	5379380	<4	<10	<2	0.23	6	100	<2	<4	8	<4	<4	<4
161383	357890	5380140	4	<10	10	0.77	4	110	<2	<4	12	<4	<4	<4
161384	357900	5380170	<4	<10	<2	0.14	4	90	<2	<4	12	<4	<4	<4
161385	358685	5386675	6	<10	3	0.19	10	120	4	<4	18	10	<4	<4
161386	358725	5386585	<4	<10	<2	0.17	12	120	<2	8	14	<4	<4	<4
161387	358880	5386720	<4	<10	<2	0.17	22	120	<2	<4	6	6	<4	<4
161388	358915	5386655	4	<10	<2	0.14	8	145	2	<4	8	10	<4	<4
161389	358815	5386165	<4	10	2	0.48	24	400	8	<4	16	16	4	<4
161390	359065	5380660	4	<10	3	0.40	26	175	2	<4	12	<4	<4	<4
161391	359130	5380750	14	<10	55	2.70	185	75	16	<4	22	18	8	<4
161392	359100	5380755	<10	10	8	0.85	165	250	6	<4	20	8	8	<4
161393	359410	5380740	4	<10	3	0.44	32	110	4	<4	10	10	4	<4
161394	359425	5380745	18	<10	3	0.24	18	155	2	<4	8	4	<4	<4
161395	359410	5380425	6	10	3	1.30	55	75	10	6	32	55	12	4
161396	359400	5380430	4	10	5	11.7	200	70	10	32	60	24	14	10
161397	359615	5380340	16	10	2	3.40	18	95	12	<4	14	14	6	<4
161398	359985	5380140	8	<10	<2	0.46	18	140	2	<4	8	4	<4	<4
161399	360320	5380040	6	10	<2	0.60	26	320	6	<4	8	6	4	<4
161400	360305	5380020	<4	<10	3	1.95	135	180	<2	<4	8	6	4	<4
161401	360315	5380485	4	<10	10	2.30	400	70	20	12	65	36	32	10
161402	360290	5380505	4	<10	10	2.15	320	70	20	10	60	34	20	10
161403	360245	5380470	10	<10	4	2.60	480	80	6	<4	26	12	10	<4
161404	360240	5380320	6	<10	4	2.90	350	95	8	<4	20	11	8	<4
161405	360215	5380320	50	<10	16	4.30	380	100	8	<4	32	18	10	4
161406	358925	5385885	6	<10	<2	0.17	14	175	<2	<4	6	<4	<4	<4
161407	358960	5385885	9	<10	<2	0.12	12	80	<2	<4	6	4	<4	<4
161408	358805	5385880	46	10	<2	0.14	16	110	<2	<4	10	8	4	<4

Instructions to Analyst:

SEE FIELD SAMPLE DESPATCH SHEET 13047

Results to:

DISBURSEMENT Pink - To Chief Geologist Sydney
Yellow F.H.C.

White - To Assay Lab with Order

Green - Despatch with Samples

025



FIELD SAMPLE DESPATCH SHEET

13049

State Tasmania Project Mt Lindian Prospect No. 605 Locality Regional
 CSR Order No. 30697 Date Sampled Jan/Feb 83 Sampler PDE/S.J./P.K./N.H.
 Date Despatched 1 March 83 Despatcher PDE Despatched per TAA
 Type of Sample Stream Sediment
 Lab. Name Comlabs

Sample Number Co-ordinates	From To		Chemical Analyses (ppm and)							Remarks				
	E/W	N/S	Sr	W	As	% Fe	Mn	C	Cu	Pb	Zn	Ni	Co	Bi
161409	358900	5385175	24	10	2	0.22	20	220	4	4	8	14	4	44
161410	358740	5384950	6	<10	22	0.26	22	260	4	4	8	14	4	44
161411	358690	5384900	24	<10	2	0.20	16	240	22	4	8	4	4	44
161412	358850	5384810	125	15	2	0.21	38	170	22	4	10	4	4	44
161413	358790	5384630	18	10	22	0.14	22	45	22	4	12	4	4	44
161414	358650	5384605	4	<10	22	0.17	16	150	22	4	10	4	4	44
161415	358615	5384500	12	<10	2	0.19	14	230	4	4	10	10	4	44

Instructions to Analyst:

SEE FIELD SAMPLE DESPATCH SHEET 13047

Results to:

BURSEMENT Pink - To Chief Geologist Sydney

White - To Assay Lab with Order

Green - Despatch with Samples

026

429027



FIELD SAMPLE DESPATCH SHEET

13050

State Tasmania Project Mt Lindsay Prospect No. 605 Locality Regional
 CSR Order No. 30697 Date Sampled Jan/Feb 83 Sampler PDE/SJ/P.K./NAH
 Date Despatched 1 March 83 Despatcher PDE Despatched per TAA
 Type of Sample Heavy mineral & rock samples
 Lab. Name Contlab

Sample Number Co-ordinates	From To		Chemical Analyses (ppm or %)							Remarks						
	E/W	N/S	Sn	W	As	% Fe	Mn	Co	Cu	Pb	Zn	Ni	Bi	Ag	Au	
161338 H	358690	5384345	18	<10	<2	0.16	14	125	6	4	6	32	<4	<4	<1	<0.0
161342 H	358445	5382640	1100	100	<2	0.20	70	90	4	4	10	<4	<4	<4	<1	<0.0
161345 H	357840	5382875	520	95	<2	0.25	65	10	6	4	10	<4	<4	<4	<1	<0.0
161370 H	357560	5380130	1747	230	2	2.00	540	14	10	28	16	<4	<4	<4	<1	<0.0
161374 H	357505	5379650	400	<10	<2	1.90	160	10	10	4	6	9	<4	<4	<1	<0.0
161377 H	357600	5379390	250	<10	<2	1.70	150	16	10	4	6	6	<4	<4	<1	<0.0
161385 H	358685	5386675	1150	160	<2	0.52	150	4	4	6	10	<4	<4	<4	<1	<0.0
161390 H	359065	5380660	30	<10	3	0.65	60	10	6	4	6	<4	<4	<4	<1	<0.0
161393 H	359410	5380340	16	<10	2	0.95	145	10	6	4	10	<4	<4	<4	<1	<0.0
161398 H	359985	5380140	4	10	<2	0.95	75	10	6	4	6	<4	<4	<4	<1	<0.0
161401 H	360315	5380485	160	<10	10	2.10	300	16	16	16	32/20	<4	<4	<1	<0.0	
161409 H	358900	5385175	42	<10	<2	0.56	70	10	6	4	6	<4	<4	<4	<1	<0.0
161410 H	358740	5384950	34	<10	<2	0.27	34	4	4	4	6	<4	<4	<4	<1	<0.0
161406 R	358925	5385885	65	15	16	0.64	30	14	9	4	9	<4	<4	<4	<1	<0.0

Instructions to Analyst: WEIGH ALL HEAVY MINERAL (H) SAMPLES
PULVERIZE ALL SAMPLES (ROCKS AFTER PRELIMINARY CRUSHING) AND ANALYSE FOR Sn, W, As
by XRF-1 and Co, Pb, Zn, Bi, Cu, Ni by AAS-1, Cr, Fe, Mn by AAS-2, Ag by AAS-3
and Au by AAS-5A using carbon rod for at least 5ppb
 Results to: RESULTS + SAMPLE BUTTS TO CSR WILLIAM ST WEST HURST, TIS, 7000
RESULTS + INVOICE TO CSR MINERALS DIVISION GPO BOX 483 SYDNEY NSW 2001
 Reimbursement: Pink - To Chief Geologist Sydney White - To Assay Lab with Order Green - Despatch with Samples
 Yellow - Field C

027

429028

APPENDIX II

CHECK DRAINAGE SAMPLING, E.L. 31/82

328



FIELD SAMPLE DESPATCH SHEET

10403

State TASMANIA Project MT LINDSAY Prospect No. 605 Locality REGIONAL
 CSR Order No. 30716 Date Sampled AUGUST 83 Sampler PDE/SJ/JF
 Date Despatched 7/10/83 Despatcher PDE Despatched per ANSETT
 Type of Sample DRAINAGE
 Lab. Name COMLABS

Sample Number Co-ordinates	From		To		Chemical Analyses (ppm or %)									
	E/W	N/S	Sn	W	As	Cu	Pb	Zn	Ni	Co	Bi	Ag	Resample	
161544	358630	5383855	10	80	<2	14	6	8	20	6	<4	<1	161340	
545	358510	5383570	1700	105	<2	10	24	4	14	4	<4	<1	161341	
546	358445	5387640	16	60	<2	10	8	6	16	4	4	<1	161342	
546A	358445	5387640	28	65	<2	14	8	9	10	<4	4	<1	161343	
547	358850	5384810	16	40	<2	8	6	4	12	<4	<4	<4	161414	
548	358805	5385840	50	65	<2	10	14	4	6	<4	4	<1	161400	
548A	358805	5385840	250	60	<2	6	44	6	10	<4	4	<1	161402	
549	357560	5380130	930	90	<2	8	14	6	8	<4	4	<1	161370	
550	357540	5379770	230	65	<2	8	24	4	10	<4	4	<1	161371	
551	357505	5379650	12	65	<2	12	24	<2	10	<4	4	<1	161374	
552	360315	5380485	105	35	10	30	24	40	30	18	4	<1	161401	
553	360215	5380320	45	35	18	32	26	60	37	19	4	<1	161405	
554	359460	5380425	60	30	<2	14	20	22	38	8	4	<1	161345	
555	359400	5380430	10	85	2	20	75	70	20	6	4	<1	161346	
161560	360290	5380505	8	25	8	30	26	50	30	26	4	<1	161402	
561	359130	5380750	16	35	44	24	26	48	28	14	4	<1	161391	
561A	360295	5380470	6	25	3	30	24	34	18	6	4	<1	161403	
562	359100	5380755	90	65	14	14	14	26	16	10	4	<1	161392	
161587	Duplicate of 161549	1600	70	<2	10	12	4	10	4	4	<1			
588	"	" 161550	200	100	<2	8	4	2	10	4	4	<1		
589	"	" 161562	70	60	14	14	10	22	16	10	4	<1		
161544 H	358630	5383855	380	70	<2	6	4	2	10	4	4	<1	161340	
161547 H	358850	5384810	30	40	<2	8	4	2	6	4	4	<1	161412	
161549 H	357560	5380130	1100	115	<2	6	10	2	10	4	4	<1	161370	
550 H	357540	5379770	860	50	<2	8	4	6	14	4	4	<1	161371	
551 H	357505	5379650	100	60	<2	8	4	6	10	4	4	<1	161374	
552 H	360315	5380485	220	25	12	18	14	24	24	6	4	<1	161401	
561 H	359130	5380750	26	35	49	24	12	12	20	4	4	<1	161391	
562 H	359100	5380755	2750	60	10	12	4	12	12	4	4	<1	161392	
161613	Standard	5	14	50	12	110	16	100	50	6	14	1		
616	"	9	28	65	<2	12	4	6	4	4	4	<1		
619	"	11	145	45	<2	16	4	6	4	4	4	<1		
622	"	12	75	35	2	12	4	6	4	4	4	<1		
625	"	13	530	65	<2	10	4	2	4	4	4	<1		

Instructions to Analyst: ANALYSE -20+80# for Sn, W, As by XRF-1
ANALYSE -80# for Cu, Pb, Zn, Bi, Co, Ni, Ag by AAS-1
ANALYSE 161544H, 161547H, 161549H, 161550H, 161551H, 161552H, 161581H, 161562H for Sn, W, As, Cu, Pb, Zn, Bi
 RESULTS & INVOICE TO CSR MINERALS DU GPO BOX 483 SYDNEY NSW 2001 C. Ni. Ny
 Results to: RESULTS TO CSR 35 EAST DERWENT HIGHWAY LINDSEAFARNE, TAS, 7015.

E.L. 17/77
RENISON

REFERENCE

- Watercourse
- Road, track
- E.L. boundary
- Dyke
- Geological boundary
- Trend of bedding
- Fault
- Gossan

QUATERNARY

- Qs Swamp
- Qra Alluvials
- Qg Gravel

CAMBRIAN

SUCCESS CREEK GROUP

- 6cl Lower chert
- 6s Siltstones
- 6cu Upper chert
- 6m Fine clastic sediments, some tufts

DRIMMON CREEK FORMATION

- 6g Mainly tufts, some fine clastic sediments
- 6 Undifferentiated
- 6h Hornfels

DOMAN FORMATION

- Eq Massive quartzite
- Es Siltstones
- Esh Shales, often graphitic and slumped
- Em Mudstones, siltstones

PROTEROZOIC

IGNEOUS ROCKS

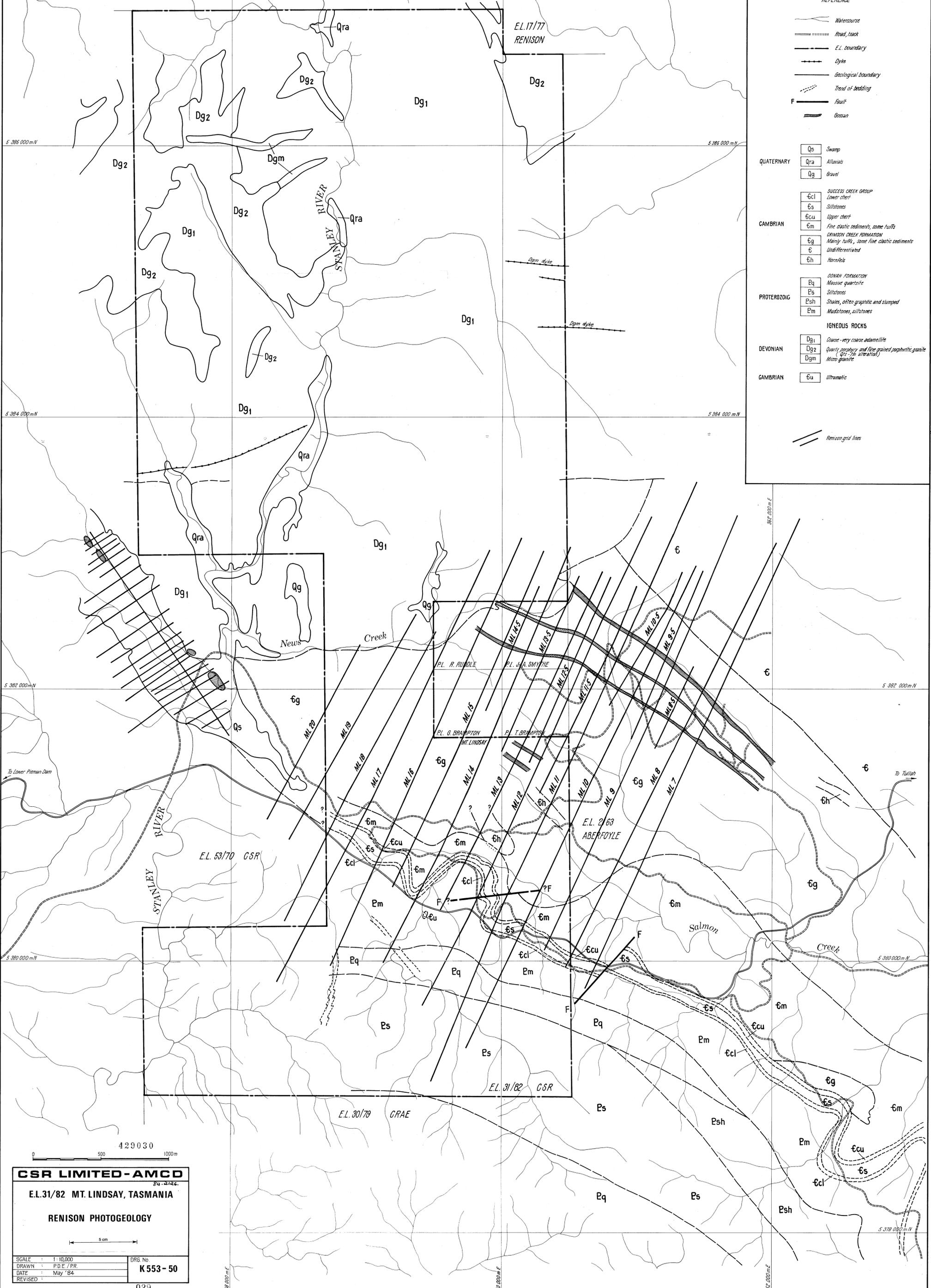
DEVONIAN

- Dg1 Gneiss - very coarse adamellite
- Dg2 Quartz porphyry and fine grained porphyritic granite (Qtz-75 alteration)
- Dgm Micro granite

CAMBRIAN

- 6u Ultramafic

Renison grid lines



429030

0 500 1000m

CSR LIMITED-AMCD

E.L.31/82 MT. LINDSAY, TASMANIA

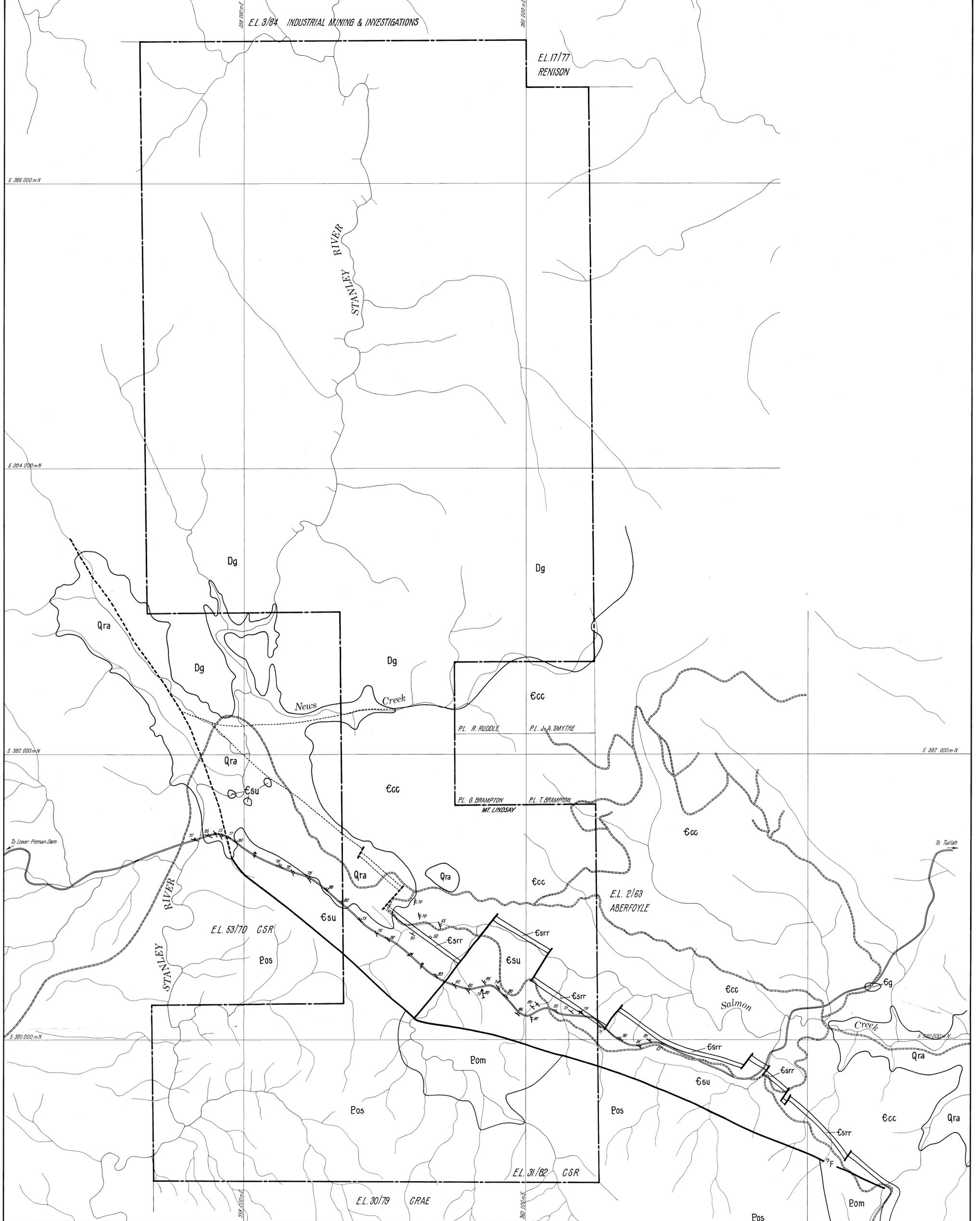
RENISON PHOTOGEOLOGY

5 cm

SCALE : 1:10,000
DRAWN : P.D.E./P.R.
DATE : May '84
REVISED :

DRG No.
K 553-50

029



CSR LIMITED-AMCD
84-212.C
E.L.31/82 MT. LINDSAY, TASMANIA
A.V. BROWN
GEOLOGY

SCALE : 1 : 10,000
DRAWN : F.D.E./P.R.
DATE : May '84
REVISED :

DRG. No.
K 553-51

030

REFERENCE

- Watercourse
- Road, track
- E.L. boundary
- Strike and dip, facing known
- Vertical bedding, facing known
- Overturned bedding
- Facing unknown
- Vertical bedding facing unknown
- Fold hinge with plunge and dip of axial surface
- Vertical axial surface
- Strike and dip of compositional banding

QUATERNARY

- Qra Alluvials

CAMBRIAN

- Ecc CRIMSON CREEK FORMATION
- Gsrr RENISON FORMATION and chert
- Gsu SUCCESSE CREEK GROUP

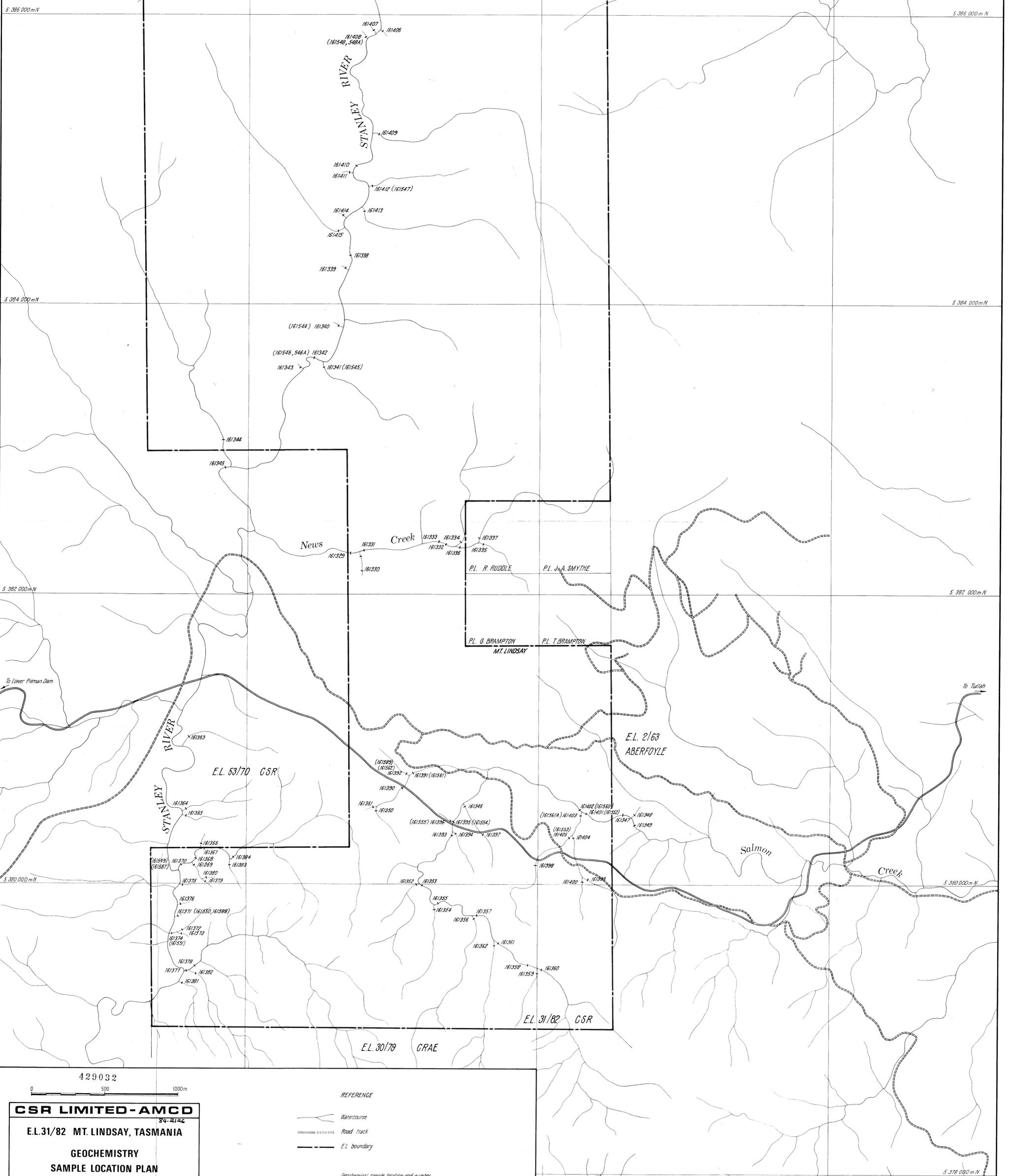
PRECAMBRIAN

- Pom COVAM FORMATION
Mudstones, siltstones, dolomites
- Pos Insaturated quartz sandstones, siltstones

Geological boundary

- boundary concealed
- Fault

E.L. 17/77
RENISON



429032

0 500 1000m

CSR LIMITED-AMCD
84-2122

E.L. 31/82 MT. LINDSAY, TASMANIA

**GEOCHEMISTRY
SAMPLE LOCATION PLAN**

5 cm

SCALE	: 1:10,000	DRG. No.	
DRAWN	: P.D.E./P.R.		
DATE	: May '84		
REVISED	:		

K553-52

- REFERENCE
- Watercourse
 - Road track
 - E.L. boundary
 - 161401 Geochemical sample location and number (note all numbers prefixed with an A)
 - (161552) Brackets indicate resample of anomaly