

MANASIA MINING & METALS LTD

Gateway Business Park, Unit 5, 105A Vanessa Street  
Kingsgrove, NSW, 2208

P.O. Box 630, Kogarah  
NSW 2217

**EL31/2005 STEPHENS RIVULET & ROGER RIVER ANNUAL REPORT TO 23.05.2011**

Volume 1 of 1

Prepared by Ron Gregory Prospecting

43 Sprent St.

Waratah, Tasmania 7321

## CONTENTS

1. Summary	Page 3
2. Introduction	Page 3
3. Exploration Philosophy	Page 3
4. Geology	Page 4
5. Work completed 24 May 2010– 23 May 2011	Page 5
6. Future works	Page 5
7. Expenditure	Page 5
APPENDIX	Page 6
Roger River soil samples	Pages A1 – (1-5)
Roger River rock samples Round 1	Page A2
Roger River rock samples Round 2	Page A3

## LIST OF FIGURES

**Figure 1** Locality map

**Figure 2** Regional geology

**Figure 3** Roger River soil sampling 2010 sample numbers and location

**Figure 4** Roger River rock chip sampling 2010, sample numbers and location

## **1. SUMMARY**

The dominant feature in EL31/2005 is the Roger River Fault, which has had a long history of activity including a Neoproterozoic period during the deposition of dolomite, basalts, and volcanoclastics that form a large part of the Togari Group. Mineralizing fluids may have circulated in the fault during this Neoproterozoic period or at some later geological time.

A narrow, three kilometre long zone of silica rocks that coincides with the Roger River Fault at Roger River is interpreted as a relatively high, strongly leached part of an epithermal alteration system that may carry gold at depth. This zone of silification was infill soil sampled by Manasia in 2010. These samples have recently been forwarded for assay.

## **2. INTRODUCTION**

Exploration Licence 31/2005 Stephens Rivulet & Roger River of 24 sq. km. is located in the northwest Tasmania, south of Smithton. It is in 2 separate portions (north & south) for metallic minerals and has an end date of the 23 May 2012. No work was conducted on the southern portion during the year. The land tenure in the licence is State Forest, Forest Reserve and Private Land.

## **3. EXPLORATION PHILOSOPHY**

Assay infill geochemical sampling from the northern portion of the licence and obtain a geological assessment from Nic Turner on the best location to site a diamond drill hole.

The primary target commodity is gold (+copper & nickel).

Obtain a geological prospectivity assessment of the southern portion of the licence

#### **4. GEOLOGY**

Along its entire cumulative length of 17 km EL31/2005 straddles the Roger River Fault (Figure 2). This fault obliquely transects the eastern limb of a north plunging synclinorium in a unit of Neoproterozoic rocks called the Togari Group, which is underlain with mild unconformity by the Middle Proterozoic Rocky Cape Group, and overlain with apparent conformity by the Early Cambrian Salmon River Siltstone and the Middle Cambrian Scopus Group (Everard et al, 2007).

Most of EL31/2005 is occupied by formations belonging to the Togari Group. This group has a discontinuous basal formation of shallow water, quartzose sandstone and conglomerate called the Forest Conglomerate which is overlain by the Black River Dolomite then the Kanunnah Subgroup followed by the Smithton Dolomite. The Kanunnah Subgroup includes the predominantly volcanoclastic Keppel Creek Formation and the intercalated Croles Hill Diamictite and basaltic Spinks Creek Volcanics (Figure 2).

Through much of EL31/2005 the Roger River Fault has juxtaposed Kanunnah Subgroup, to the east, with Smithton Dolomite to the west though the Smithton Dolomite is largely obscured by residual soil and Quaternary alluvium. Although the Roger River Fault has west-side-down displacement the increase in thickness of the Kanunnah Subgroup and Black River Dolomite from west to east across the fault suggests that the fault was active with east-side-down movement during the deposition of these units (Everard et al, 2007).

In the northern block of EL31/2005 there is a belt of silica rocks that is about 3 km long and up to 300 m wide. These rocks are interpreted as being part of an alteration zone associated with the Roger River Fault (Figure 7; Turner, 2003). The silica rocks are of fine to medium grain size, strongly leached and exhibit textures that may be massive, brecciated or vuggy.

In the southern part of EL31/2005 and elsewhere in the general district there are scattered residual deposits of silica in the form of sand and silt that are known locally as silica flour. Some of these deposits are being commercially exploited because of their unusually high purity. The silica flour appears to have been derived from silicified Smithton Dolomite and contrasts with the hard, coherent silicification at Roger River. Hard, coherent silicification is also common in the Black River Dolomite and the silica rocks at Roger River were interpreted as silicified Black River Dolomite by Lennox et al (1982).

## **5. WORK CONDUCTED - 24 May 2010 – 23 May 2011**

Miss Alexandra Lintner & Ian Rogers were engaged to conduct infill soil sampling at Roger River. Further infill rock chips were taken by Miss Lintner. Details of the work are provided in Appendix 1.

The soil and rock chip samples were dried until further funds were available. These samples have recently been lodged with the Burnie Research Laboratory.

## **6. FUTURE WORKS**

Miss Karen Adams has recently been engaged to compile all previous mineral exploration data for EL31/2005. This work had been planned for other employees to complete, but did not eventuate. There is considerable stream sediment data, rock chip data and some soil data as well as a variety of airborne geophysical data.

Following the receipt of assay results a comparison with known epithermal systems may provide a guide to the depth of drilling that will be required to test for economic mineralization. Also, a review aimed at identifying the most appropriate geophysical method to investigate the subsurface nature of the zone of silica rocks will be considered.

## **7. EXPENDITURE**

### **May 2010 – May 2011**

Ron Gregory Prospecting – supervision	\$675
Ron Gregory Prospecting – vehicle for Ron & employees	\$1450
Geologist & field assistant sampling	\$8405
Accommodation	\$1200
Sample drying	\$500
Consumables	\$440
Rogers Exploration Services (including accommodation & vehicle)	\$9230
Geologist on research	\$1300
List costs	\$88
<b><u>TOTAL</u></b>	<b><u>\$23,288</u></b>

**APPENDIX**

## MANASIA - Roger River Soil Sampling 2010

PAGE A - 1/5

(GDA 94)

Sample Number	Easting	Northing	Hole Depth (m)	GPS Accuracy (m)	Elevation (m)	Description
						336550 East is on the road
5001	336600	5457900	1.2			Orange-brown clayey soil
5002	336629	5457896	0.3			Light tan-brown clayey soil. Exact location is in creek
5003	336654	5457899	1	4	66	Orange-brown clayey soil
5004	336678	5457901	0.8	7	74	Dark orange-brown clayey soil
5005	336697	5457896	0.4	5	66	Grey-brown rocky soil
5006	336727	5457900	0.3	5	74	Grey, rocky, friable soil
5007	336755	5457899	0.4	5	76	Grey friable soil
5008	336776	5457902	0.5	6	78	Light orange-grey-brown soil
5009	336798	5457904	0.5	7	83	Grey, rocky, clayey soil
5010	336824	5457901	0.4	10	87	Grey friable soil, occasional rock fragments to 3cm
5011	336853	5457901	0.5	14	89	Grey-brown friable, rocky soil
5012	336878	5457900	0.8	8	95	Brown-grey clayey soil, no rocks
5013	336904	5457898	0.8	8	94	Brown-grey clayey soil
5014	336927	5457906	1	12	89	Yellow-brown clayey soil
5015	336953	5457902	0.8	7	103	Yellow-grey clayey soil. Yellow-grey rock chips to 1.5cm
5016	336975	5457905	1	8	113	Orange-yellow, low to moderate clay content. Not rocky
5017	337003	5457901	0.7	7	126	Fawn clayey soil, red-coloured rock fragments to 2cm, probably sandstone
5018	337026	5457895	1	7	119	Brown-grey friable soil. Small sandstone rock fragments
5019	337056	5457890	0.7	26	129	Red friable soil, possibly over basalt
5020	337080	5457891	1	24	136	Orange-brown clayey soil
5021						<b>Duplicate of sample 5020</b>
5022	337099	5457890	0.7	12		Clayey orange-brown soil. Reddish rock fragments to 2cm, possibly sandstone
5023	337045	5457799	0.8	11	144	Brown-orange slightly clayey. Rock fragments to 1.5cm, brown-orange medium-grained sandstone
5024	337026	5457795	0.85	13	161	Brown-orange friable soil
5025	336997	5457800	0.7	12	143	Brown-orange friable soil. Rock fragments to 3 cm, medium-grained to coarse-grained sandstone, orange-brown
5026	336976	5457796	0.5	9	127	Brown-orange friable soil. Rock fragments to 5cm
5027	336947	5457805	0.6	5	122	Orange-fawn clayey soil. Brown-red rock fragments to 2.5cm
5028	336922	5457806	0.5	5	124	Yellow-brown friable soil
5029	336896	5457805	0.5	9	117	Orange-brown friable soil. Red rock fragments to 1.5cm. Sandstone float in vicinity
5030	336873	5457804	0.6	6	112	Brown-orange, slightly clayey. Rare rock fragments to 1cm
5031	336849	5457797	0.6	12	106	Grey-brown, moderately clayey
5032	336825	5457804	0.8	10	95	Grey-white friable soil to 0.5m then orange-brown-grey clayey soil
5033	336801	5457800	0.5	7	80	Tan-brown clayey soil. Rock fragments at base to 1.5cm, burgundy and dark blue
5034	336775	5457806	0.6	5	92	Light grey-brown clayey soil. Occasional rock fragments to 0.5cm
5035	336747	5457805	0.5	5	94	Light grey friable soil
5036						<b>Duplicate of sample 5035</b>
5037	336722	5457803	0.35	8	87	Light grey-white friable soil. Rock fragments to 2cm, cream-grey, silicic mudstone?
5038	336701	5457801	0.3	9		Light grey-white friable soil.
5039	336673	5457808	0.4	4	89	Grey friable soil, rock fragments to 1.5cm
5040	336648	5457805	0.15	7	82	Medium grey friable soil. Silicic rock fragments to 1cm
5041	336626	5457794	0.4	4	73	Brown friable soil to .2m then grey-white friable soil. White-grey rock fragments to 4cm
5042	336590	5457799	0.5	4	70	Orange-brown, a little clayey. Moderately friable soil. Weathered rock fragments to 0.5cm, red
5043	336569	5457799	0.7	12	78	Orange-brown friable soil. Orange-brown rock fragments to 2cm
5044	336545	5457799	0.4	5	74	Dark grey friable soil, v rocky throughout, fragments to 1cm. Quartz-rich sandstone?
5045	336523	5457803	0.3	8	67	Dark grey friable soil. Silicic rock fragments to 5cm, no visible texture, dark grey to light grey
5046	336506	5457805	0.35	8	60	Dark grey friable soil. Silicic rock fragments <0.5cm
5047	336373	5457700	0.7	5	53	Red-brown clayey soil
5048	336400	5457698	0.7	5	53	Orange-brown clayey soil
5049	336428	5457697	0.3	7	70	Grey friable soil, charcoal fragments to 1cm, disintegrate on contact
5050	336453	5457702	0.5	6	73	Rocky, grey-white soil. Friable. Rock fragments, quartz-rich, to 4.5cm

MANASIA - Roger River Soil Sampling 2010						PAGE A - 2/5	(GDA 94)
Sample Number	Easting	Northing	Hole Depth (m)	GPS Accuracy (m)	Elevation (m)	Description	
5051	336475	5457697	0.4	8	82	Light grey-white friable soil. Quartz rock fragments to 1.5cm	
5052	336507	5457694	0.4	11	87	Old quarry, disturbed site. Dark grey friable soil. Rock fragments to 4 cm. Lots of A horizon soil. Qtz boulders to 4m in area	
5053	336528	5457699	0.3	4	93	White grey friable soil. Quartz-rich rock fragments to 1cm	
5054	336552	5457703	0.2	7	91	Dark grey-brown mud, rock fragments to 0.5cm	
5055	336575	5457699	0.2	3	85	Disturbed ground, heaped up dirt, rocks. Light grey-brown friable soil	
5056	336605	5457699	0.2	3	79	Disturbed ground, heaped up dirt, rocks. Light grey-brown friable soil. Rock fragments to 1cm, quartz-rich, white	
5057	336630	5457702	0.1	5	75	Grey-white friable soil. White-grey rock fragments to 2cm	
5058	336649	5457699	0.2	6	88	White-light grey friable soil. Rock fragments to 1.5cm, white	
5059	336672	5457694	0.2	12	91	Light grey rocky mud. Rock fragments to 1cm	
5060	336702	5457700	0.7	11	93	Orange-brown clayey soil	
5061	336728	5457702	0.7	11	92	Orange-brown clayey soil. Rock fragments to 2.5cm	
5062	336755	5457695	0.5	9	111	Cream-yellow clayey soil	
5063	336775	5457700	0.5	10	126	Tan-orange clayey soil. Weathered sandstone at base of sample	
5064	336805	5457695	0.5	12	131	Brown-yellow clayey soil. Rock chips to 2mm	
5065	336828	5457695	0.4	19	98	Tan-brown-cream clayey rocky soil. Rock fragments to 1.5cm	
5066	336856	5457704	0.5	10	125	Tan-brown clayey soil. Rock fragments to 3.5cm, possibly sandstone	
5067	336879	5457700	0.5	6	117	Tan-brown clayey soil, sandstone rock fragments to 2 cm, orange patches, possible bedding lines	
5068						<b>Duplicate sample 5068</b>	
5069	336901	5457702	0.4	12	122	Orange-tan clayey soil, rock fragments to 3cm. Weathered sandstone, medium-grained, orange to red colour	
5070	336928	5457700	0.5	7	129	Orange-brown friable soil, minor clay. Rock fragments to 3cm, orange-brown with red bands	
5071	336951	5457706	0.7	12	142	Light brown-orange. Moderate clay content. Orange rock fragments to 1cm	
5072	336976	5457705	0.7	12	140	Medium grey-brown soil. Orange-pink rock fragments to 2cm, possibly medium-grained sandstone	
5073	336896	5457546	0.5	12	156	Light orange-brown friable soil. Moderately clayey. Red-orange rock fragments to 1.5cm - sandstone?	
5074	336873	5457546	0.8	9	137	Tan-brown moderately clayey soil, orange patches	
5075	336845	5457548	0.7	6	141	Tan-grey moderately clayey, partly friable	
5076	336824	5457553	0.8	6	129	Brown-orange friable soil, moderately clayey	
5077	336805	5457547	0.7	7	123	Orange-brown clayey soil	
5078	336773	5457559	0.7	14	127	Grey-yellow clayey soil	
5079	336722	5457551	1	17	127	Yellow-brown moderately clayey soil	
5080	336695	5457556	0.7	17	127	Light brown-yellow clayey soil	
5081						<b>Duplicate of sample 5080</b>	
5082	336558	5457550	0.2	16	73	In boggy, potholed paddock. Grey-white friable soil with grey rock fragments to 0.5cm	
5083	336579	5457552	0.4	18	73	Dark and light grey friable soil. Rock fragments to 1.5cm. Start of forest, open, eucalypts.	
5084	336602	5457549	0.1	21	93	Sample difficult. Augered 4 holes. Grey-brown friable soil. Humus layer then almost immediately rock. Manfern/eucalypt/blackwood forest.	
5085	336626	5457557	0.5	16	87	Brown clayey soil. Next to creek, sample taken in side of bank between two creeks. Manfern/eucalypt/blackwood forest	
5086	336652	5457547	0.7	15	93	Brown-orange clayey soil. 15m from creek in blackwood/manfern forest. Sandstone rock fragments to 0.5cm	
5087	336674	5457545	0.8	35	91	Orange-brown clayey soil	
5088	336523	5457556	0.1	3	90	Grey mottled mud, not much soil, very rocky. Hand dug sample in ploughed up paddock	
5089	336503	5457553	0.1	4	85	Grey mottled mud, not much soil, very rocky. Hand dug sample in ploughed up paddock	
5090	336470	5457553	1	6	74	Grey-fawn friable soil. Rock fragments <0.5cm, possible seathered sandstone	
5091	336447	5457555	0.1	5	77	Grey-brown friable soil. In quarry, disturbed site	
5092	336428	5457554	0.1	10	84	Grey-brown mud, quartz-rich rock fragments to 0.5cm	
5093	336394	5457560	0.1	15	75	Orange-brown friable soil. Rocky fragments to 0.5cm	
5094	336374	5457555	0.2	10	67	Grey-fawn friable soil. Rock fragments to <4mm. Just past edge of eucalypts	
5095	336351	5457553	0.2	11	57	Orange-brown friable soil. Very small rock fragments to ~3mm. Edge of eucalypt forest	
5096	337278	5458154	0.4	13	123	Orange-yellow. Friable rocky soil. Rock fragments to 3cm, possibly sandstone	
5097	337255	5458150	0.3	14	106	Orange-brown friable soil. Rock fragments to 5cm. Possibly very weathered sandstone with bedding planes just visible	
5098	337223	5458156	0.4	13	105	Orange-brown friable soil. Sandstone fragments with bedding plane, banding visible. Adjacent to creek, manferns	
5099	337195	5458160	0.5	8	90	Orange-brown clayey soil. Rocky at base of hole. Adjacent to creek- manferns	
5100	337184	5458114	0.8	15	88	Yellow-brown friable soil. Sample site 175E, 150N is on edge of road, colmpetely disturbed, next to built up area of sawmill.	

## MANASIA - Roger River Soil Sampling 2010

PAGE A - 3/5

(GDA 94)

Sample Number	Easting	Northing	Hole Depth (m)	GPS Accuracy (m)	Elevation (m)	Description
5101	336778	5458112	0.4	25	59	Grey friable soil. Tea tree scrub
5102	336808	5458091	0.3	24	67	Grey friable soil. Tea tree scrub
5103	336830	5458088	0.3	20	69	Grey friable soil. Paddock, dumped cars
5104	336858	5458085	0.5	16	63	Grey-brown friable soil. Open ground, bracken, eucalypts, tea tree
5105						<b>Duplicate of sample 5104</b>
5106	336880	5458084	0.4	19	65	Grey friable soil. Near rubbish dump, very disturbed
5107	336913	5458071	0.5	17	64	Grey friable soil. In blackberries adjacent to tea tree scrub
5108	336932	5458072	0.5	21	65	Grey friable soil. Tea tree scrub
5109	336958	5458083	0.2	24	79	Brown-grey friable soil. Minor clay content. Tea tree scrub
5110	336986	5458105	0.3	9	79	Grey friable soil. Tea tree scrub. Moss groundcover. Possibly old road
5111	337002	5458114	0.2	17	73	Dark grey friable soil. Probably A horizon sample. Tea tree scrub. Possibly old road
5112	337025	5458109	0.2	23	72	Grey friable soil. Probably A horizon sample. Tea tree scrub. Possibly old road
5113	337047	5458109	0.4	10	78	Grey friable soil. Tea tree scrub
5114	337071	5458100	0.4	6	85	Yellow-brown soil, minor clay content. Adjacent to sawmill. Disturbed tea tree scrub
5115	337097	5458093	0.5	5	93	Grey-brown sandy soil. Tea tree scrub, blackberries
5116	337119	5458100	0.6	7	93	Yellow-brown soil, minor clay content. Adjacent to sawmill. Disturbed spindly dogwood, tea tree scrub
5117	337148	5458100	0.6	4	89	Brown-yellow clayey soil. Adjacent to sawmill. Tea tree, bordering eucalypts
5118	337268	5458425	0.3	4	61	Dark grey friable soil. Rocky at base, rock fragments to 3.5cm, rounded, quartz-rich. 337275E is on road, 5458400 is in someone's driveway
5119	337248	5458426	0.2	5	59	Light grey white friable soil. Rocky at base
5120	337225	5458431	0.5	4	59	Grey-white friable soil. In paddock, next to fenceline
5121	337195	5458429	0.4	4	61	Grey friable soil, rock fragments. In paddock next to fenceline
5122	337167	5458419	0.4	4	61	Dark grey friable soil. Rock fragments to 2.5cm. Possibly sandstone. In paddock
5123	337150	5458391	0.2	4	65	Dark grey-light grey friable soil. 5458400N is in a small dam
5124	337125	5458399	0.3	5	69	Light grey-white friable soil. In paddock
5125	337096	5458405	0.3	4	65	Light grey-white friable soil, under eucalypts, blackwood
5126	337073	5458411	0.4	4	65	Dark grey friable soil
5127	337025	5458396	0.6	15	56	Dark grey/brown loamy soil. In open paddock
5128	336997	5458403	0.5	4	47	Dark grey-medium grey loamy soil
5129	336970	5458403	0.5	5	56	Light red-brown friable soil. In paddock at edge of eucalypt stand
5130	336939	5458395	0.6	4	55	Brown-orange friable soil. Moderately clayey. Open paddock
5131	336926	5458399	0.4	3	52	Brown-orange moderately clayey soil
5132	336920	5458299	0.6	4	56	Brown-orange moderately clayey soil. In bank in paddock
5133	336948	5458300	1.6	5	61	Orange-brown friable soil. Sample taken from bank
5134	336969	5458308	0.8	6	61	Bright orange-brown friable soil. Moderately clayey
5135	337004	5458300	0.3	4	65	Light grey-white friable soil
5136	337052	5458299	0.4	7	64	Light grey-white friable soil
5137	337052	5458299	0.4	7	64	Light grey-white friable soil
5138	337080	5458306	0.3	6	60	Light grey-white friable soil. 15m from creek
5139	337096	5458304	0.4	9	61	Light grey-white friable soil. 10m up gully from creek
5140						<b>Duplicate of sample 5139</b>
5141	337154	5458305	0.1	6	64	A-horizon sample, no soil in vicinity. Beside creek/road, manferns
5142	337154	5458310	0.3	8	63	Brown moderately clayey friable soil. 1m from creek, 15m from road
5143	337178	5458304	0.4	6	65	Brown-grey clayey soil. Next to small dam, disturbed, large cut trees
5144	337197	5458294	0.1	5	70	Beside road, very disturbed. Brown-orange clayey soil
5145	337227	5458304	0.5	15	61	Grey-brown friable soil. Minor clay. Quartz-rich rock fragments to 1cm. Beside road, on track beside paddock
5146	337254	5458297	0.8	15	75	Orange-brown clayey soil. In paddock, disused, overgrown
5147	337276	5458297	0.7	9	78	Orange-brown clayey soil. Paddock as above
5148	337300	5458296	0.5	8	77	Orange-brown clayey soil. Weathered sandstone fragments to 1cm
5149	337328	5458308	0.5	8	76	Orange-brown clayey soil. Weathered sandstone fragments to 1cm
5150	337347	5458307	0.4	9	80	Light yellow-brown clayey soil. Overgrown blackberry paddock

MANASIA - Roger River Soil Sampling 2010

Sample Number	Easting	Northing	Hole Depth (m)	GPS Accuracy (m)	Elevation (m)	Description
5151	337375	5458321	0.5	7	86	Light brown clayey soil. Red and orange weathered sandstone fragments
5152	337403	5458427	0.8	9	71	Light orange-brown clayey soil. Possibly on old road. In bank. Manfern gully near sometime creek. 5458400N is an extremely large blackberry patch
5153	337381	5458432	0.2	6	63	A horizon sample, no soil. Lots of rock
5154	337357	5458438	0.3	18	70	Grey sludge from stagnant swamp
5155	337325	5458431	0.3	15	55	Dark grey friable soil. Open field 10m from road
5156	337296	5458407	0.2	5	53	Light grey-brown mud. Rock fragments<0.4cm
5157	337302	5458147	0.5	4	97	Orange-brown friable soil, minor clay. Disturbed site, edge of plantation
5158	337325	5458149	0.4	13	113	Dark orange-brown friable soil. Weathered sandstone fragments to 1cm. In plantation
5159	337350	5458146	0.3	6	123	Brown-yellow friable soil. Moderately clayey
5160	337733	5459702	0.6	3	46	Orange-brown clayey soil. Edge of eucalypt plantation
5161	337751	5459701	0.5	4	46	Orange-brown friable soil, moderately clayey. Beside road into plantation
5162	337775	5459704	0.6	3	46	Orange-brown clayey soil. Yellow firm weathered fragments. In plantation
5163	337801	5459698	0.7	7	49	Brown-yellow clayey soil. In ditch in plantation
5164	337825	5459696	0.8	4	52	Brown-grey clayey soil.
5165						<b>Duplicate of sample 5164</b>
5166	337851	5459700	0.3	4	58	In furrow along plantation line. Dark grey-medium grey non-clay soil
5167	337879	5459696	0.6	3	59	Orange-brown clayey soil. In plantation furrow
5168	337902	5459693	0.7	7	55	Brown-yellow clayey soil
5169	337930	5459702	0.7	4	59	Brown-yellow friable soil. Moderately clayey
5170	337953	5459702	0.5	5	59	Orange-brown moderately clayey soil. Red & yellow sandstone fragments to 1.5cm. Next to plantation, disturbed, near heaped up stumps.
5171	337975	5459714	0.5	13	65	Brown-orange clayey soil. In furrow in plantation
5172	338004	5459706	0.6	11	64	Brown-orange clayey soil. In furrow in plantation
5173	338025	5459703	0.6	3	73	Brown-grey clayey soil. Side of gully 20m from creek
5174						<b>STANDARD</b>
5175	338054	5459700	0.6	4	73	Orange-brown clayey soil. Eastern side of creek, next to plantation. White silicic rock fragments
5176	338077	5459698	0.6	6	65	Brown-orange clayey soil. In plantation
5177	338099	5459700	0.7	4	67	Brown-orange clayey soil. In plantation
5184	337704	5459703	0.4	10	45	Brown-orange clayey soil. In cow paddock
5185	337675	5459702	0.4	6	46	Brown-orange clayey soil
5186	337643	5459703	0.5	14	47	Brown-orange clayey soil. In cow paddock
5187	337853	5459855	0.9	8	55	Brown-orange friable soil. Moderately clayey. 10m from road, at edge of plantation
5188	337871	5459853	0.8	4	54	Brown-yellow clayey soil. In plantation
5189	337898	5459850	1	4	57	Brown-yellow clayey soil. In plantation
5190	337931	5459854	0.9	4	71	Brown-orange clayey soil. In between plantation and native forest
5191	337945	5459853	0.7	6	75	Brown-orange clayey soil. In between plantation and native forest
5192	337978	5459848	0.8	5	79	Brown-yellow clayey soil. In plantation
5193	338003	5459886	0.7	6	85	Brown-yellow clayey soil. In plantation
5194	338029	5459849	0.7	6	87	Brown-yellow clayey soil. In plantation
5195	338047	5459849	0.8	8	87	Brown-orange clayey soil. In plantation
5196	338076	5459846	0.7	6	91	Brown-yellow-orange clayey soil. In plantation
5197	338099	5459853	0.8	5	91	Brown-yellow clayey soil. In plantation

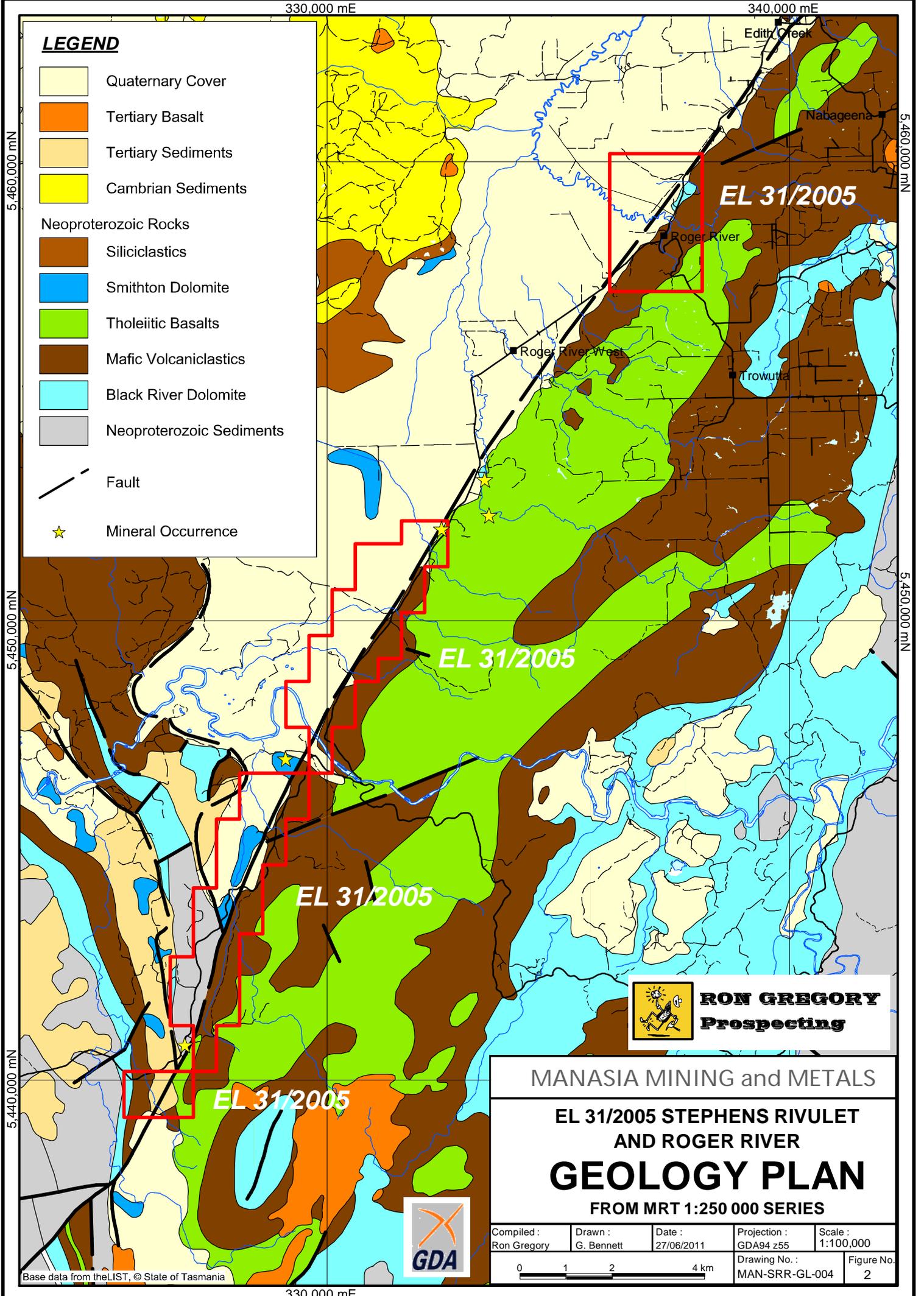
MANASIA - Roger River Soil Sampling 2010

Sample Number	Easting	Northing	Hole Depth (m)	GPS Accuracy (m)	Elevation (m)	Description
5205						Duplicate of sample 5204
5206	337928	5459945	0.6	17	87	Grey-brown clayey soil. In eucalypt native forest, less disturbed
5207	337956	5459952	0.6	13	88	Brown-orange clayey soil. In plantation. Dark orange fragments to 1.5cm, probably highly weathered sandstone
5208	337972	5459951	0.6	7	74	Brown-orange clayey soil. In plantation. Dark orange fragments to 1.5cm, probably highly weathered sandstone
5209	337998	5459950	0.7	8	79	Brown-orange-grey clayey soil. Rock fragments<0.5cm. On road next to plantation
5210	338023	5459950	0.6	6	83	Brown-yellow clayey soil. In plantation
5211	338046	5459947	0.5	6	88	Brown-yellow clayey soil. In plantation
5212	338075	5459956	0.7	7	95	Brown-grey-yellow clayey soil. In plantation
5213	338099	5459950	0.7	4	97	Brown-grey-yellow clayey soil. In plantation
5223	337802	5459854	0.7	4	46	Brown-orange friable soil. Reddish decomposed fragments to 1cm. In cow paddock
5224	337775	5459849	0.5	4	45	Brown-yellow-orange friable soil. In cow paddock adjacent to old train line, now farmers track
5225	337742	5459845	0.6	4	47	Brown-yellow friable soil. Easting slightly off to accommodate cow watering station. In paddock
5226	337725	5459849	0.6	4	50	Brown-yellow friable soil. In cow paddock
5227	337705	5459853	0.5	4	49	Brown-yellow friable soil. In cow paddock
5228	337876	5459952	0.6	4	48	Brown-yellow friable soil. In cow paddock. Minor clay
5229	337850	5459949	0.7	4	46	Grey-brown friable soil, brown increasing with depth. Augering stopped at water table. Top layer all grey mud. In cow paddock. Next to old railway line
5230	337827	5459950	0.5	4	49	Grey-brown mud. In cow paddock. Augering stopped at water table. Next to old railway line. Top layer all grey mud. In cow paddock.
5231	337800	5459950	0.5	4	48	Grey-brown mud. In open cow paddock
5232	337775	5459950	0.5	3	47	Brown-grey mud. In cow paddock 5m from ditch
5233	337749	5459951	0.5	4	46	Brown-yellow friable soil. Cow paddock

Sample no.	Easting	Northing	Sample Source	Description
4051	336629	5457896	Float	Cream/brown, crumbly, soft highly weathered possibly medium-grained sandstone
4052	336678	5457901	Float	Weathered orange. Possibly matrix-supported conglomerate with blue/grey lithic angular clasts to 10*5mm or preferentially weathered breccia
4053	336755	5457899	Outcrop	White/grey silicified mudstone with acicular grey silicic crystals to 20mm long, 1mm wide. Extremely brittle and powdery
4054	336824	5457901	Soil sample hole	Powdery, brittle, white/grey very fine-grained rock. Moderately weathered. Sample from augered soil sample hole, small pieces only (0.4m depth)
4055	336853	5457901	Outcrop	Grey/white highly silicified breccia. Dark grey angular clasts in breccia to 14mm in light grey matrix
4056	337003	5457901	Soil sample hole	Fawn coloured, moderately weathered medium-grained sandstone. Sample taken from rocky base of augered soil sample hole (0.7m depth)
4057	336997	5457800	Soil sample hole	Orange/brown moderately weathered sandstone. Rock fragments from base of hole (0.7m depth)
4058	336701	5457801	Outcrop	Silicified breccia, possibly replacing mudstone? as very fine-grained. Rare acicular clear quartz? crystals to 1mm*10mm long. Rare anhedral quartz crystals to 4mm*3mm
4059	336626	5457794	Soil sample hole	White-grey rock fragments from base of hole. Moderately weathered quartz crystal rich, vughy vein material. Occasional acicular crystals to 15mm
4060	336590	5457799	Outcrop	Soft white, highly weathered, brittle rock. Outcrop. Majority of texture destroyed. Abundant 1mm quartz crystals, rare darker coloured discontinuous veinlets 1mm wide
4061	336507	5457694	Outcrop	Sample taken from old quarry site. Highly weathered quartz rich white/cream rock. Texture obliterated.
4062	336503	5457553	Float	Mottled grey/white moderately weathered quartz-rich breccia(?) Only minor texture visible
4063	336447	5457555	Outcrop old quarry	Highly weathered quartz rich brittle grey/white/cream silicified mudstone(?). Brecciated texture
4064	337223	5458156	Soil sample hole	Fragments from base of hole (0.4m depth). Brown/cream fine-grained sandstone. Some bedding plane visible
4065	337184	5458114	Outcrop - road cut	Moderately weathered medium-grained sandstone. Bedding plane 021/12E. 10m southeast, road cutting (landslip between outcrops) Bedding plane 042/25E. Medium-grained sandstone interbedded with mudstone. Some evidence of scouring, slumping of beds. Light grey/orange/brown/dark brown/cream/yellow-brown bands 1-15mm
4066	337195	5458429	Float	Medium-grained moderately weathered orange-cream sandstone. Float
4067	336948	5458297	Outcrop?	Blue-black, very fine grained basalt. Glassy matrix with some conchoidal fracturing evident at edges of sample. Brittle, patchy white quartz-rich zones. Sample taken from bank, most likely outcrop, above height of soil sample (1.6m depth)
4068	337851	5459700	Float	Red-grey fine-grained silicic rock. Sub-rounded white quartz clasts to 6mm
4069	338025	5459703	Outcrop	Road-cutting. Western side of gully, 20m from creek. Highly weathered brown-orange rock. Very oddly weathered to small bulbous shapes, like ironstone nodules. Very heavy
4070	338227	5459946	Possibly Outcrop	Sample taken around tree stump. Fine-grained sandstone, medium-brown to light-brown. Selectively weathered around lighter coloured rounded tabular zones
4071	340925	5468521	Outcrop - road cut	Massive, fine-grained blue-grey, weathered orange basalt. Occasional crystals just visible in mostly uniform groundmass
4072	340920	5468513	Outcrop - road cut	Massive, fine-grained blue-grey, weathered orange basalt. Weathered edges, some with metallic blue tinge, some with slight green tinge. Reddish-purple colour on other weathered surfaces.
4073	337073	5458411	Float	Coarse crystalline quartz vein material. Euhedral crystals to 8mm. Host rock almost completely eroded away
4074	337010	5457892	Outcrop	Moderately weathered orange-brown fine to medium-grained sandstone. Banding evident in texture only

Sample no.	Easting	Northing	Sample Source	Description
4075	336413	5457467	Outcrop	Silicified mudstone? Very brittle. White/grey with rare grey patches to 5mm. Very fine-grained. Brecciated
4076	336420	5457502	Outcrop	Silicified mudstone? Very brittle. White/grey with rare grey patches to 5mm. Very fine-grained
4077	336393	5457440	Outcrop	Brecciated silicified mudstone. Possibly silicified angular conglomerate. Grey-white brittle silicified breccia. Darker grey clasts to 12mm.
4078	336393	5457440	Outcrop	Brecciated silicified mudstone. Possibly silicified angular conglomerate. Grey-white brittle silicified breccia. Darker grey clasts to 20mm.
4079	336365	5457428	Float	Brecciated siliceous mudstone. Grey-white brittle silicified breccia. Angular darker grey clasts to 25mm. White angular clasts to 25mm
4080	336401	5457380	Float	Grey-white, brittle silicified breccia? White angular clasts to 16mm. Fine quartz veinlets through 'clasts'
4081	336437	5457317	Outcrop	Quarry at edge of paddock, bordering plantation. Probably edge of silicification. Grey-white-red brittle silicified breccia. Light grey-white angular clasts to 12mm. Common vughy texture throughout sample with quartz crystals to 2mm. Reddish patches from weathered out red-orange angular clasts to 12mm. Weathered red, silicified.
4082	336623	5457724	Float	Grey-white silicified breccia. Very fine-grained angular clasts to 18mm
4083	336678	5457691	Float	Grey-white silicified breccia. Fine-grained matrix. White finer-grained 'clasts' to 60mm. Minor vughy quartz veins with darker selvage
4084	336727	5457705	Float	Red-grey-purple quartz-rich angular conglomerate. Common vughy quartz texture. Angular white clasts to 5mm. Patchy red <1mm crystal-rich veins to 30mm long, 3mm wide. Silicic clasts in silicic breccia
4085	336738	5457813	Float	Orange, v hard. Grey-white-peach medium-grained quartzite. Occasional vughy texture, partially infilled with crystals to 1mm.
4086	336709	5457809	Possibly Outcrop	Patchy orange very hard, silicified. Quartz clasts to 0.5mm. Vughy, white-peach medium-grained quartzite. Minor vughy texture apparent on weathered surfaces
4087	336549	5457602	Outcrop	Silicified, not brecciated. White-grey honeycomb texture. Quartz-rich brittle rock. Mostly vughy, interlocking texture with minor zones coherent quartzite
4088	336582	5457595	Outcrop	Grey-white, silicic, coarse texture. Very fine grained siliceous altered siltstone clasts to 20mm. Fine grained vughy cement. Clasts rarely have laminations. Very brecciated, clast rich.
4089	336583	5457519	Outcrop	Red clasts fine-grained siliceous sandstone with rare mudstone rip up clasts in silicic breccia/ angular conglomerate. White/grey matrix. + Cream-orange weathered sandstone.
4090	336848	5458133	Outcrop	Blue-grey-white Quartz rich basalt?
4091	336839	5458118	Outcrop	Blue-grey-white brittle silicic intrusive? Quartz crystals to 6mm. Quarry. Glassy, basalt?
4092	336842	5458145	Outcrop	Blue-grey-white brittle, silicic. Basalt, shattered. Coarse crystalline quartz vein with euhedral quartz crystals to 10mm
4093	336776	5458089	Outcrop	Blue-grey-white brittle, silicic. Basalt, shattered. Coarse crystalline quartz vein with euhedral quartz crystals to 10mm. Glassy
4094	336786	5458085	Outcrop	Quarry face. Fault proximal meta-basalt. Blue-grey-white brittle, silicic. Basalt, shattered. Coarse crystalline quartz vein with euhedral quartz crystals to 10mm. Glassy. Glassy. Weathered orange-red-brown on exposed surface.
4095	337402	5457511	Outcrop	Very weathered, randomly fractured. Probably sandstone. Weathered brown-orange on surface, interior cream-yellow
4096	337439	5457587	Outcrop	Highly weathered, lower specific gravity than other samples. Weathered orange brown, cream with pisolitic-looking crust on one surface. Non-magnetic. Non-magnetic. Possible sub-horizontal bedding? Possibly basalt
4097	337410	5458930	Outcrop	Basalt, weathered. Blue-brown, fine-grained rock. Purple-cream worm-like, blotchy concentric texture. Lower specific gravity than other silicified samples. Ex-sediment?
4098	337414	5459036	Outcrop	White-cream-orange quartz-rich sandstone. Brittle, fine-grained, massive. Hard, siliceous white/orange
4099	334884	5442254	Outcrop	Blue-cream massive, dolerite? Feldspar altering to clay phenocrysts to 2mm, regularly distributed to give spotty texture.
4100	328277	5441092	Outcrop	Highly weathered, orange. Basalt? Heavily jointed. Black joint fill to 3mm wide, commonly narrower. Weathered around concentric shapes ~5-6cm diameter. Fe-rich
4101	330551	5446292	Outcrop	Massive fine-grained, blue-black greenish. Igneous, possible chilled margin or fine-grained hornfels. Rare vitreous crystals with good cleavage to 0.5mm
4102	338039	5459875	Float	Massive, black, weathered brown float.
4103	338055	5459874	Possibly Outcrop	Weathered feldspathic sandstone? Orange-cream weathered brown massive, fine-grained sandstone
4104	337895	5459470	Outcrop	White-cream-yellow quartz-rich, siliceous. Quartz phenocrysts to 6mm. White anhedral quartz crystal patches to 30mm





**LEGEND**

- Quaternary Cover
- Tertiary Basalt
- Tertiary Sediments
- Cambrian Sediments
- Neoproterozoic Rocks
  - Siliciclastics
  - Smithton Dolomite
  - Tholeiitic Basalts
  - Mafic Volcaniclastics
  - Black River Dolomite
  - Neoproterozoic Sediments
- Fault
- Mineral Occurrence

**EL 31/2005**

**EL 31/2005**

**EL 31/2005**

**EL 31/2005**



**RON GREGORY  
Prospecting**

MANASIA MINING and METALS

**EL 31/2005 STEPHENS RIVULET  
AND ROGER RIVER**

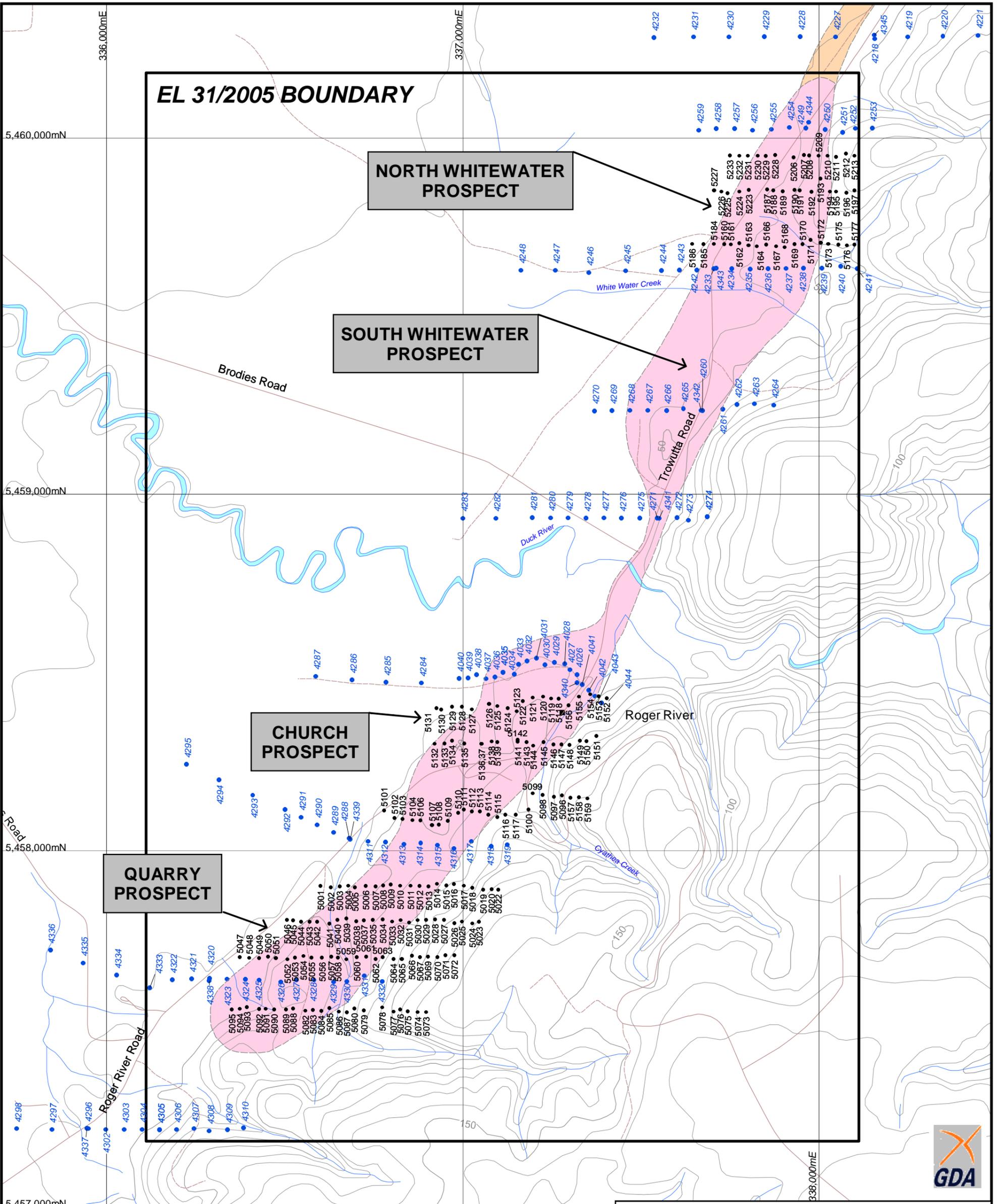
**GEOLOGY PLAN**

FROM MRT 1:250 000 SERIES

Compiled : Ron Gregory	Drawn : G. Bennett	Date : 27/06/2011	Projection : GDA94 z55	Scale : 1:100,000
0 1 2 4 km			Drawing No. : MAN-SRR-GL-004	Figure No. 2



Base data from theLIST, © State of Tasmania



**EL 31/2005 BOUNDARY**

**NORTH WHITWATER PROSPECT**

**SOUTH WHITWATER PROSPECT**

**CHURCH PROSPECT**

**QUARRY PROSPECT**

**LEGEND**

- Widespread silicification
- Minor silicification

**KEY TO ASSAYS**

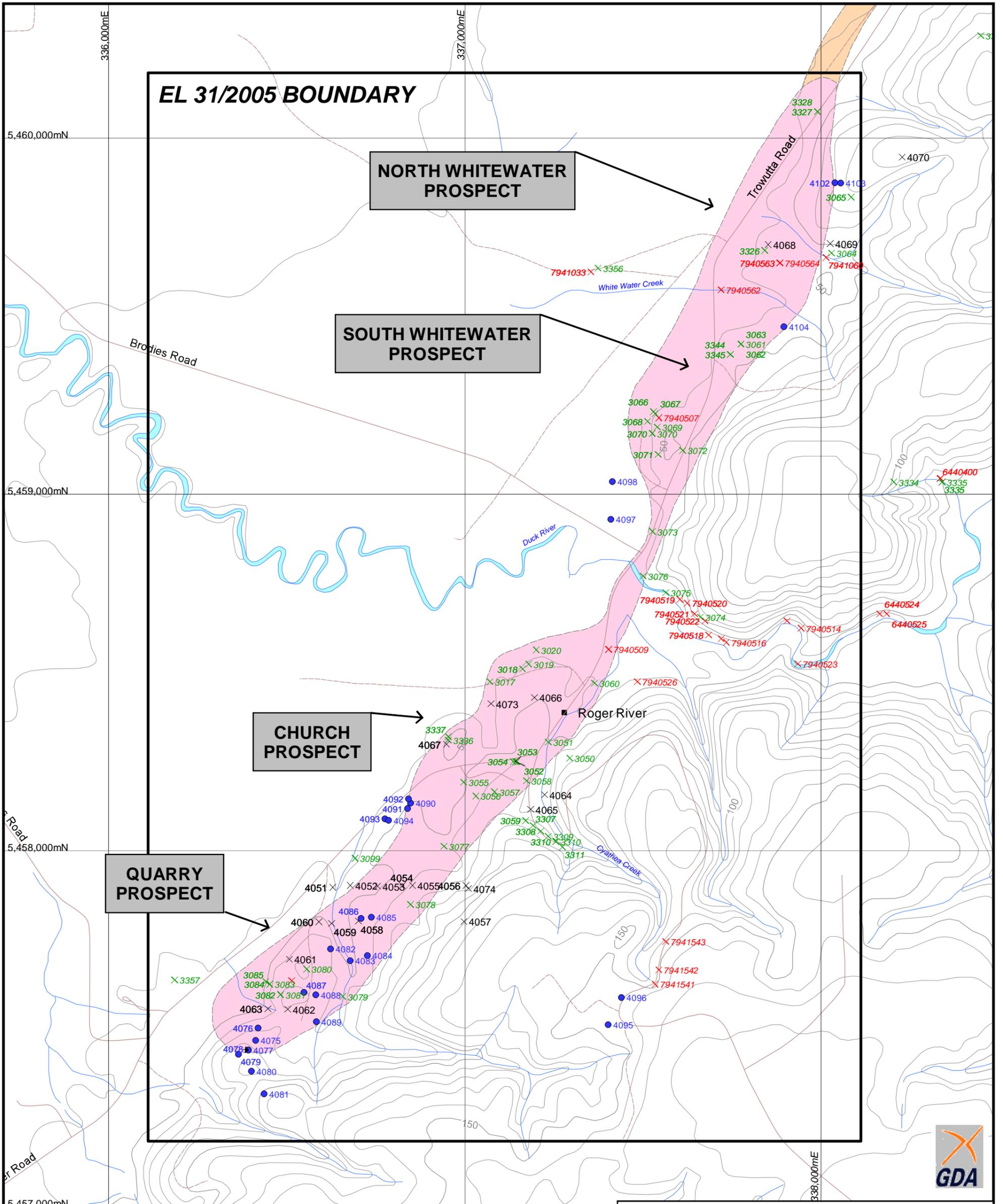
- 4229 Greenstone Resources Soil Sample
- 4229 Manasia Soil Sample



**MANASIA MINING and METALS**

**EL 31/2005 STEPHENS RIVULET and ROGER RIVER  
ROGER RIVER ALTERATION ZONE  
SOIL SAMPLE LOCATIONS 2010  
& GREENSTONE RESOURCES 2002 (N. TURNER)**

Compiled : A. Lintner	Drawn : G. Bennett	Date : 26/06/11	Projection : GDA94z55	Scale : 1:10,000
0 125 250 500 m			Drawing No. : MAN-SRR-GCS-005	Figure No. 3



**EL 31/2005 BOUNDARY**

**NORTH WHITWATER PROSPECT**

**SOUTH WHITWATER PROSPECT**

**CHURCH PROSPECT**

**QUARRY PROSPECT**

**LEGEND**

- Widespread silicification
- Minor silicification

**KEY TO ASSAYS**

- X 7941541 Pacific Nevada Rock Chip Sample
- X 3051 Greenstone Resources Rock Chip Sample
- X 4051 Manasia Rock Chip Sample
- 4096 Manasia Repeat Rock Chip Sample



**MANASIA MINING and METALS**

**EL 31/2005 STEPHENS RIVULET and ROGER RIVER  
ROGER RIVER ALTERATION ZONE  
ROCK CHIP SAMPLE LOCATIONS 2010  
& GREENSTONE RESOURCES 2002 (N. TURNER)**

Compiled : A. Lintner	Drawn : G. Bennett	Date : 26/06/11	Projection : GDA94z55	Scale : 1:10,000
			Drawing No. : MAN-SRR-GCR-006	Figure No. 4