



EXPLORATION LICENCE EL 11/2009
MARRAWAH REGION, WESTERN TASMANIA

FINAL AND ANNUAL REPORT FOR THE YEAR ENDED
5TH MARCH 2011

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1 EXECUTIVE SUMMARY

EL 11/2009 was taken out under MHM Metals former name of Macquarie Harbour Limited for the purpose of exploring for high grade silica. Previous exploration in the early 1970's had reported the presence of good quality silica, however the claim was relinquished. The demand for high grade lump silica has grown since that time, with demand coming from China, Korea, Japan, the USA and Europe. Due to the location of the prospect it was believed that export of a relatively untreated product of silica could be transported to an existing port on the northern coast of Tasmania and shipped to an Asian market at a competitive cost.

The quartzite forms part of the MesoProterozoic Rocky Cape Group, which are mapped as shallow marine quartz arenites and siltstones. Outcrop in the area is usually in the form of low to moderately steep hills and ridges covered by thin, poor soils with heath and button grass. These exposures occur as pale grey to white rocky hills and bluffs that have been exploited as road base in places.

To the west of the Arthur River Road most of the area falls under the Arthur-Pieman Protected area while to the east of the main road much of the area is privately owned.

Exploration this year consisted of mapping and surface sampling and analysis of selected samples. The siliceous outcrop appears to be leached of impurities near surface to a depth of between 1-3 metres and has little potential to host a large tonnage, open-pitabile source of high purity silica.

2 INTRODUCTION

EL 11-2009 (area of 53 kms²) was granted on 4th March 2009 to Macquarie Harbour Mining Ltd., for category 5 minerals only. Macquarie Harbour Mining has since changed its name to MHM Metals Ltd. (ASX:MHM). This is the first annual report and final report for the licence.

Most of the western part of the EL (west of the Arthur Road) is covered by the Arthur Pieman Protection area and much of the eastern part is privately owned. On the northwest margin of the EL is the West Point State Reserve and on the southwest margin is the Kings Run Private Nature Reserve. The small town of Marrawah is located approximately 3km north of the northern boundary. Figure 1 shows the location of EL11/2009.

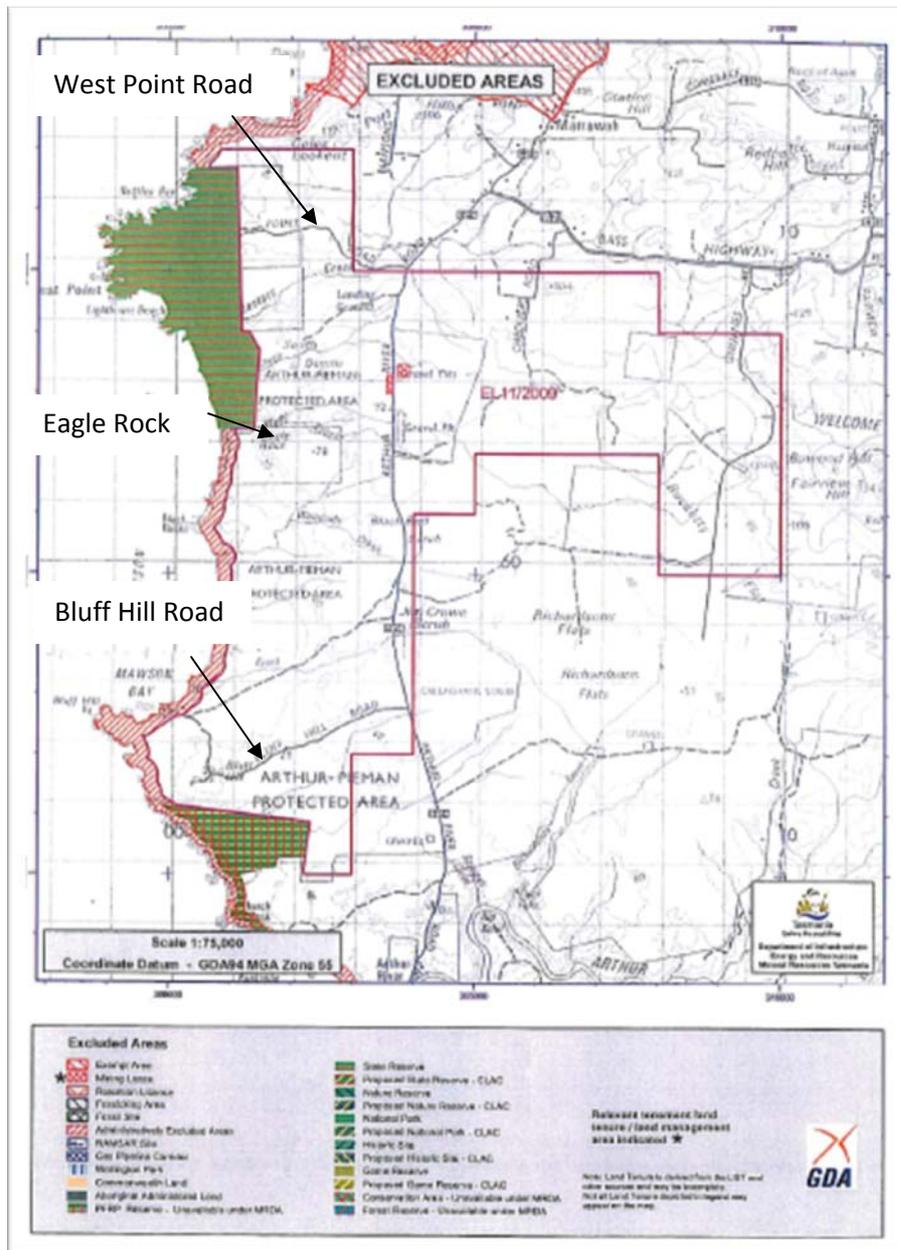


Figure 1. Location of EL11-2009

3 REGIONAL GEOLOGY

The Exploration Licence covers parts of the Rocky Cape Group correlate, consisting of quartz-rich arenites and siltstones underlain by thinly bedded grey-black siltstones and mudstones with interbedded dolomitic siltstones and grainstones. In the north and central parts of the EL, Tertiary basaltic pyroclastics and hyaloclastites overlie the Proterozoic sediments. Throughout much of the area a thin cover of stabilised Quaternary aeolian sand and loose dune sand obscures low-lying areas.

The rocks of interest are fresh, massive and medium grained quartz arenites and well cemented by silica. The quartz arenites are interbedded with grey-pale brown siltstones, otherwise the bedding within the arenites is poorly defined.

In the southern part of the EL from Bluff Hill Point Road to Eagle Rock the Proterozoic sediments dip gently NW. In the north of the EL (from north of Eagle Rock) the ridge and basin topography describes a westerly plunging syncline with its fold axis striking ENE approximately parallel and several hundred metres south of the West Point Road. Dip angles on both limbs vary between 15° and 55° and average approximately 30°.

4 REVIEW OF PREVIOUS WORK

The Australia and New Zealand Exploration company explored for silica in 1973 to 1974 on EL11/73 (Brandt, 1973 and 1974). The company took rock chip and channel samples from an area approximately 2km east of West Point (See Fig.2). A total of 94 samples were assayed for SiO₂ and major deleterious minerals. Results showed that although the silica content was usually above 99% several contaminant compounds were present in unacceptable quantities, in particular Fe₂O₃, Al₂O₃, TiO₂ and K₂O. Chip samples taken from the orthoquartzite averaged 98.9% SiO₂, 0.55% Al₂O₃, 0.11%Fe₂O₃, 0.03%TiO₂, 0.004%P₂O₅, 0.01%CaO,0.13%K₂O, with 0.18%LOI. Detailed chip sampling within the area represented by the above analyses indicated average compositions of: 99.14%SiO₂, 0.43%Al₂O₃ with 0.20% LOI. ANZ Exploration concluded that the level of impurities was slightly too high for feed stock for a ferrosilicon production and the licence was relinquished.

5 EXPLORATION COMPLETED DURING THE REPORT PERIOD

MHM Metals has reviewed the previous data by ANZ Exploration and made two mapping and sampling exercises to the area. The first field exercise was aimed at identifying the best targets in the northern area (north of Eagle Rock) and a total of 16 rock chip samples were assayed by Simcoa Pty Ltd., of Western Australia. The samples were taken mostly from the area surrounding the old ANZ Exploration area of interest in an effort to define a smaller area of higher grade silica. Samples were chip samples between 3-7kg each.

The second field exercise concentrated in the lower portion of the EL, between Bluff Hill Road and Eagle Rock. A total of 25 rock chip samples were collected and all were field assayed by portable Niton® X-ray analyser. Results were taken as a guide only and were used to select the best samples

(samples with the least impurities) for laboratory assay. Results of the Niton® analyses are listed in Table 1 and shown in Fig 2.

SAMPLE	easting	northing	Fe	Ti	Ca	Sn	Sb	Cr	Zr	Sr	K	Ba
11-001	302591	5457368	248	235	1689	44	51	87	59	5	21662	284
11-002	302589	5457545	679	591	2632	21	28	58	85	0	20620	252
11-003	302777	5457574	332	293	1233	43	60	78	37	0	10498	262
11-004	302834	5457763	152	133	1831	45	34	117	61	0	19994	333
11-005	302777	5457818	229	131	1681	49	56	75	49	5	19706	369
11-006	302631	5457894	174	169	1419	43	60	98	47	0	15230	345
11-007	302672	5457963	220	209	1411	49	50	97	37	0	17156	338
11-008	302589	5458194	580	1152	2224	31	0	97	117	6	8716	245
11-009	303274	5457825	559	368	1541	43	34	64	56	0	14562	312
11-010	302651	5458753	326	212	1674	53	61	80	66	6	16779	339
11-011	302726	5458673	205	284	1978	45	43	55	55	5	16625	280
11-012	302944	5458758	998	740	2238	32	42	117	79	6	15229	248
11-013	303011	5456696	185	0	1320	36	42	57	70	4	10888	298
11-014	302577	5459106	339	0	1466	23	0	0	41	5	14847	227
11-015	302633	5460031	178	295	1006	49	38	106	76	0	15741	347
11-016	303478	303478	261	193	1989	28	35	0	50	0	18807	290
11-017	302997	5461009	240	654	1782	51	54	103	71	0	19412	346
11-018	302724	5460858	204	338	1950	61	39	65	35	0	15911	365
11-019	302370	5461300	188	216	1932	34	39	111	43	0	18393	312
11-020	301602	5462002	292	232	1775	27	32	97	98	8	15067	215
11-021a	301863	5462312	297	366	2371	39	47	98	88	5	19635	268
11-021b	302193	5462811	281	207	1600	42	49	76	25	10	19800	316
11-022	302757	5462587	367	369	1759	38	51	86	143	0	18872	332
11-023	303607	5464337	359	325	1752	48	52	96	240	5	21044	357
11-024	302472	5464762	220	384	1108	31	40	93	374	4	14641	287
11-025	302322	5464990	260	180	2061	0	0	91	92	0	17972	94

11-024 sample selected for assay by ALS

Table 1. Niton® analyses of rock chip samples from the southern part of EL11-2009. Analyses are in ppm.

Some elements, such as Al cannot be assayed accurately by the Niton®.

Prospective quartzites in the eastern area are largely overlain by volcanic soils and where they crop out, appear to be of a low purity. For this reason the geology in this area was given no more than a brief reconnaissance.

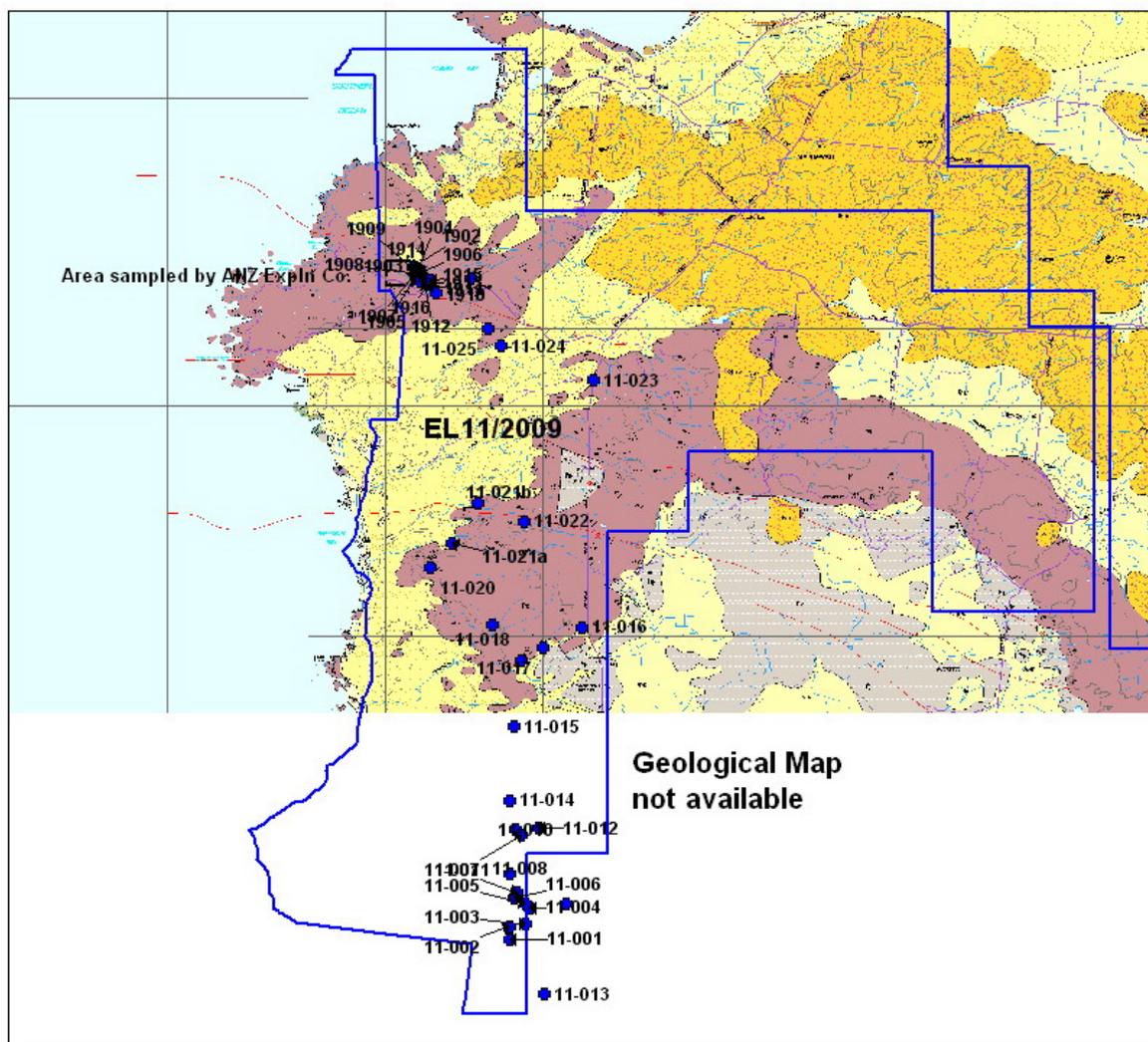


Figure 2. Sample locations and geology of EL11-2009. No published map is available for Bluff

Table 2 shows laboratory analyses of selected samples from EL11-2009. Sample numbers 1901 to 1916 were assayed by Simcoa Operations Pty. Ltd, a silica mining and smelting company based in Western Australia. Comparison of the table 1 and table 2 shows some large variations between individual assays using the Niton® portable assayer and laboratory assay.

SAMPLE	East	North	Assayor/Method	Al2O3	Fe2O3	TiO2	Cr2O3	Cu	Ni	CaO	MgO	P2O5
DESCRIPTION	Units			%	%	%	ppm	ppm	ppm	%	%	%
11/004	302834	5457763	ALS Laboratories, Brisbane/ME-PKG85	0.055	0.014	0.016	3	<10	10	0.005	0.003	N/A
11/006	302631	5457894	ALS Laboratories, Brisbane/ME-PKG86	0.058	0.015	0.022	3	<10	10	0.005	0.003	N/A
11/013	303011	5456696	ALS Laboratories, Brisbane/ME-PKG87	0.329	0.016	0.021	3	<10	10	0.004	0.012	N/A
11/015	302633	5460031	ALS Laboratories, Brisbane/ME-PKG88	0.17	0.028	0.034	2	<10	10	0.004	0.012	N/A
11/019	302370	5461300	ALS Laboratories, Brisbane/ME-PKG89	0.239	0.019	0.023	3	<10	10	0.005	0.015	N/A
11/021	302193	5462811	ALS Laboratories, Brisbane/ME-PKG90	0.477	0.021	0.022	4	<10	10	0.005	0.019	N/A
11/024	302472	5464762	ALS Laboratories, Brisbane/ME-PKG91	0.892	0.025	0.051	5	<10	10	0.005	0.051	N/A
1901	302105	5465602	Simcoa Operations Pty Ltd, Bunbury W.A. method unknown	0.0833	0.031	0.052	N/A	N/A	N/A	N/A	N/A	0.004
1902	301382	5465756	as above	0.376	0.024	0.026	N/A	N/A	N/A	N/A	N/A	0.003
1903	301407	5465756	as above	0.293	0.027	0.02	N/A	N/A	N/A	N/A	N/A	0.003
1904	301439	5465712	as above	0.234	0.017	0.028	N/A	N/A	N/A	N/A	N/A	0.003
1905	301451	5465699	as above	0.346	0.019	0.025	N/A	N/A	N/A	N/A	N/A	0.003
1906	301447	5465678	as above	0.953	0.026	0.037	N/A	N/A	N/A	N/A	N/A	0.006
1907	301421	5465666	as above	0.77	0.033	0.037	N/A	N/A	N/A	N/A	N/A	0.015
1908	301426	5465678	as above	0.552	0.025	0.041	N/A	N/A	N/A	N/A	N/A	0.006
1909	301445	5465688	as above	0.717	0.025	0.038	N/A	N/A	N/A	N/A	N/A	0.005
1910	301681	5465432	as above	0.469	0.032	0.028	N/A	N/A	N/A	N/A	N/A	0.003
1911	301581	5465539	as above	0.609	0.043	0.035	N/A	N/A	N/A	N/A	N/A	0.004
1912	301530	5465556	as above	0.637	0.025	0.031	N/A	N/A	N/A	N/A	N/A	0.004
1913	301481	5465577	as above	0.351	0.021	0.03	N/A	N/A	N/A	N/A	N/A	0.004
1914	301536	5465615	as above	0.63	0.043	0.031	N/A	N/A	N/A	N/A	N/A	0.005
1915	301600	5465589	as above	0.5	0.55	0.037	N/A	N/A	N/A	N/A	N/A	0.004
1916	301576	5465540	as above	0.329	0.028	0.033	N/A	N/A	N/A	N/A	N/A	0.004
Colour Key: within normal industry tolerances												
borderline, depending on customer specs												
Outside of industry tolerances												

Table 2. Laboratory assays of selected samples from EL11-2009.

Based on the results of table 2, most samples are not of sufficient purity to be considered for high grade commercial silica. Two samples (11/004 and 11/006) are located close-by each other and are located about 200m north of the Bluff Hill Road. These sample localities are close by a disused quarry (Fig 3), which shows that there is a leached silica capping of about 1.5m thick overlying a less pure substrate. The two pure samples are thought to reflect this leached cap and may not be representative of the lower stratigraphy.



Figure 3. Disused quarry on Bluff Hill Road showing leached quartzite cap overlying mixed sedimentary units.

6 CONCLUSIONS

Based upon previous work conducted by ANZ Exploration company and results of sampling from this work there is little potential for a large tonnage, high purity silica resource on EL11-2009.

7 REFERENCES

Brandt. R.T., 1973, Summary Report on Exploration Licence 11/73 for the period May-December, 1973. Australia and New Zealand Exploration Company. MRT Report No. 616001

Brandt. R.T., 1974, Final Report on Exploration Licence 11/73 for the period to May 1974. Australia and New Zealand Exploration Company. MRT Report No. 582001

8 EXPENDITURE

Total annual expenditure for tenement EL11-2009.

Geoscientific Costs	
Geology	18,938.70
Geochemistry	
Geophysics	
Remote sensing	
Drilling & Gridding Costs	
Gridding	
Drilling	
Earthmoving	
Land Access Costs	
Rehabilitation Costs	
Feasibility Costs	
Other Costs	5506.11
Rental fees	
Vehicular track Construction	
Surveying, contract drafting etc	
Capital equipment purchase	
Administration Costs	
(note: not to exceed 10% of annual expend)	
Legal	
Office & Admin	
Total	\$24,444.81