ANNUAL REPORT EL 9874
2010
ANNUAL REPORT
EL 9874 from Dehne McLaughlin 1st September 2010

E mail to -
Attention Alison Spiker.

Introduction. EL 9874 (2 blocks) was granted on the 12th August 2008 following application in 1996 and 1998 to the NTG and appropriate approvals by the Central Land Council. The field season commenced in May 2009 commensurate with cooler desert weather and continued at about the same time in 2010 over the May to July-August period.

A Mineral Claim was pegged over the azurite containing formation exposed in the adit at the end of the field season for the purposes of producing specimens in known zones of high quality and to further exploration in the adit.

Due to problems with finding rental accommodation in Alice Springs (ie a house with parking for two 4WD vehicles and trailer for a short term rental), Darwin became the exploration base for field work carried out on the EL in 2010. Alice Springs was utilised in 2009 when short term housing, or housing of any sort, was much more available. A fly camp was set up on the waste rock dump for the duration of the 3 month field season. See PHOTO 1.

Field work was carried out over May, June and July 2010 from the Darwin house rental base, consisting of 4 days of travelling and 7 full days of exploration work in the adit. Maureen Hughes (D. McLaughlin’s wife) provided field camp support and specimen handling services and Tim Hughes was flown in from Hobart to Alice Springs for the last week on site to assist with waste rock handling and specimen extraction work.

Detailed sampling continued in the adit over the May-June-July period as in 2009 and new perspectives were gained on the distribution and nature of the copper mineralisation. The Expenditure Covenant was achieved, but much of the cost was in vehicle travel to the tenement.

The focus of 2010 exploration was on continuing a sampling decline down the southern dip of the anticlinal limb in an area of azurite mineralisation. This report is about the outcomes of this work, which has lead to the justification to apply for a Mineral Claim.

There was no surface disturbance of the land by exploration in 2010 as the old open cut in front of the adit showed that azurite mineralisation was tied to a kaolinite lense contained within sandstone and that any economic mineral specimen exploration needed to be aimed well out of weathered regolith ie within the adit.

Detailed location information is provided on NTG files in a November 2004 application to the Central Land Council and copied to NTG Mines. The EL is approached via gravel roads to the Areyonga Aboriginal Community (Utju). A rough 4WD 15 kilometre track proceeds from the end of the Areyonga airstrip through a long valley to the EL. The Utju/Areyonga Council is advised of each entry to the land and departure from the EL, so they are aware of who is in the valley at any time.
GEOLOGY and MINERALISATION at the Adit.

The 2009 Annual Report described the geological setting and the nature of the copper mineralisation in the immediate setting of the adit. No additional technical information has come to light on the origin of the mineralisation and the persistent discoidal habit of the azurite and at times, malachite. The latter mineral has been found pseudomorphing azurite, a common process where secondary oxidation of initial azurite crystallisation is replaced by malachite.

PHOTO 1. Adit and fly camp on waste rock dump 2010. Note two vehicles, three tents and anticlinal cusp above the adit.

SAMPLING PROGRAM

The 2009 Annual Report advised that:

“The 2010 exploration program proposes to continue sampling down dip under the silicified sandstone slump structure to assess whether azurite suns of adequate quality persist, despite the change in structure of the enclosing kaolinite, the fluctuating presence of azurite seams under the hanging wall sandstone. This action is significant for the project as the current general picture of the economics of the specimen mineralisation is that azurite areas elsewhere in the adit will only be supportive of an economic project if site S1 under the slump structure demonstrates persistence of quality azurite sun mineralisation.”

The sampling decline (SD), 25.5 metres in from the adit entrance, was commenced in 2009 and continued in 2010- See PHOTO 2. The SD is now over 5 meters down dip from the southern wall of the adit. Waste rock shovelled or wheelbarrowed from the SD was mostly placed in the
adit in 2010. Four metres of wall rock has been exposed in the side of the SD and over 4 metres in the down dip face of the SD on the other side of silicified slump structure.

As predicted, the SD reached the other side of the sandstone slump structure and the hanging wall of the SD returned to its starting height. Azurite specimens were still found in the roof kaolinite. On the roll of the edge of the slump, nodules of pure lustrous crystalline azurite up to 10 cms across were found.

PHOTO 2. Sampling Decline testing down dip mineralisation.

Results of Exploration

Following extraction, samples were removed to home base. Although much work remains to be done in cleaning specimens to assess their potential market value (failure rate can be up to 30% upon cleaning), it was clear while on site that based on previous years work, that the quality, variety of form and continuity of azurite mineralisation in the area of the SD was of sufficient standard to declare it of economic value.

The single focus this year on continuing the SD that was started in 2009, also gave an accurate measure of the amount of work required at the mine to support a commercial mineral specimen sales phase. Ie any commercial mining carried out would be of no different scale to the amount of effort needed during the exploration phase. This is not unusual in this specialised area of mining.

In numeric terms, the removal of a face 4 metres wide, 2 metres high and two metres long, requires only 16 cubic metres of rock removal using electric hand tools. The surface area exposed is 8 square meters. As there is often two layers of commercial grade azurite in the
faces, the total potential resource in this size cut is occurring on 16 square meters of rock. If a specimen on average occurs within each 15 cm by 15 cm of area, a 16 square meter area will produce over 700 potential marketable specimens of varying quality with a market price variation of $10 to $1000, falling out at an estimated wholesale value of $50,000 to $100,000. Greater production of specimens does not mean more sales as the most significant limiting factor between mine and market is the time required for specimen cleaning and preparation. Every piece has to be individually handled, cleaned and prepared for marketing. It is estimated that for every day of specimen production at the mine, no less than four days specimen preparation is required.

Hanging wall integrity in the SD is very high. The hanging wall sandstone is silicified, sometimes containing fine crystals of atacamite. It forms a sharp contact with the enclosed kaolinite beds. This stability is further assisted by the fact no explosives are being used. In any event, explosives would impact on specimen quality, so they are ruled out of this project.

Application for a Mineral Claim

At least 2 years of reserves for azurite specimen production have been identified in the sampling decline based on a mining effort of removing 16 cubic metres per year. Sixteen cubic metres is typical of the volume of rock removed for exploration purposes during the year. Excavating west and east along the strike of the hanging wall on the edge of the silicified slump feature would yield a range of different types of commercial azurite specimens.

With this in mind a Mineral Claim of 120 by 183 metres was pegged in August over the azurite bearing formation within the Crown Land Portion of the EL, an area which is subject to native
title. The Titles Division has advised that the title number is **MC28231**. Advertising may take place after receipt of this report by the Department. Amendments to the Mining Act may take place during the processing of the MC which may mean the application becomes one for a Mineral Lease. See Appendix 1 for a scan of the application area.


**Future Exploration-2011**

The down dip part of the SD would continue to be explored to assess if specimen quality will persist down dip, as it has shown to be along strike in the SD under the sedimentary slump feature. The lower specimen seam of azurite has been fluctuating in quality, usually downwards and work in this direction would help either dismiss down dip exploration or establish additional reserves of specimens.

No further assessment will be undertaken of the eastern block of the EL. This block contains open cut workings in cuprite rich mineralisation located at the base of a fault. This area was abandoned by the earlier miners in favour of exploration in the adit area. The eastern block will be removed by the department as a part of the two year requirement to half the original EL.
Mineral Specimen Economics.

Mineral specimen economics is not readily accessible in the same way that metal miners can refer to the LME\(^1\) or other commodity prices indexes to assess the potential economic viability of their exploration projects.

To assist the process of azurite sun mineral economic assessment some processed mineral specimens have been put out in the international and Australian market to obtain a perspective on potential returns to the project under a mining environment. The specimens are marketed as originating from the Malbunka copper mine, the name of the patrilineal estate owners. Copper mineralisation is far too sparse and of too low a volume to support a metal mine. This was demonstrated by past exploration involving open cutting and the construction of the adit by miners under previous mineral claims.

Field Visits

The CLC planned a field visit to take some of the traditional Aboriginal owners (TAOs) of the land to the site during the field season. Unfortunately, TAOs have had more pressing matters before them in 2010 and were not able to visit the site during the field program.

ENVIRONMENTAL MATTERS

Exploration did not disturb any natural vegetation or land surface in the EL. This was achieved by;

1. Nil necessity to make any new roads into the site;
2. Erecting a fly camp on the disturbed old waste rock area opposite the adit;
3. Restricting sampling to the adit itself-ie no surface trenching was required in the regolith as the geology shown in exposures from old past mining efforts was sufficient to demonstrate potential azurite distribution for the purpose of evaluating mineral specimen potential;
4. Any waste rock placed outside the adit was placed over old barren former waste rock.
5. No fuel spills
6. Human waste enclosed in hardened kaolinitic clay.

Minor fire wood was picked up west of the adit. Gas was used for cooking.

The project exploration program was deemed to fall well below substantial disturbance criteria by the NTG in 2008 and hence did not require an Authorisation under the Mine Management Act.

No rehabilitation work was required as no impact occurred.

The PVC pipes used to define the mineral claim application area were capped with the standard commercial ends to prevent animals being trapped in the pipe.

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\(^1\) London Metal Exchange
EXPENDITURE 2010 for exploration program on EL from May to August 2010.

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<thead>
<tr>
<th>ITEMS</th>
<th>EXPENDITURE</th>
<th>NOTIONAL EXPENDITURE</th>
<th>COMMENTS</th>
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<td>Portable 2Kw Honda Generator</td>
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<td>maintenance</td>
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<td>Electric Hammer drills (4)</td>
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<td>Repairs to older Hammers. New Chisels</td>
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<td>Accommodation costs Darwin-May to July-12*150</td>
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<td>Not charged against project.</td>
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<td>Food for field camp</td>
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<td>Vehicle transport to EL 70 cents Kilometre and 3 round trips from Darwin of 3240K</td>
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2011 COMMITMENTS

Similar levels of expenditure to the above are expected in the 2011 exploration program. If the Mineral claim is granted before the field season, expenditure will be split between production mining and exploration per a $19,509 minimum work program submitted with the MC application.
APPENDIX ONE

Mineral Claim 28231 over the Adit and waste rock dump area and azurite bearing formation.