EXCALIBUR

MINING CORPORATION LIMITED

Annual Technical Report

Juno Project

MLC45, 46, 47, 68, 154, 155, 284, 578, 579

Period 1/1/2009 – 31/12/2009

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Summary

Exploration during the reporting period consisted chiefly of RC and DD drilling to further define the economic limits of the Juno Deposit. Further work is continuing to date on the validation of the digital database with the hardcopy historical information by EXM staff in conjunction with Cube consulting.

The key exploration targets remain unchanged and include the mineralised and ore body's Juno, M10, G11, Juno East and Juno West. The known mineralisation has a complex copper-bismuth-gold character, similar to other iron oxide copper and gold (IOCAD) deposits found elsewhere in the world.

The work completed during the reporting period included an extensive data compilation (both digital and hardcopy), drilling 8 RC holes for ~1630m, 7 diamond drill holes for 2059m, a DGPS survey pickup of the hole locations, downhole gyro survey of drill hole paths, reviewing of old diamond drill core and geological data interpretation.

Photo 1: Resource Drilling at Juno (Dec 09)

Contents

1. Introduction

Excalibur Mining Corp Ltd has commenced a significant exploration program designed to test further resource potential of the Juno Project. Extensive examination of complied historical data has lead to direct targeting of diamond drill holes into the Juno orebody.

This report details exploration activities undertaken by Excalibur Mining Corporation Limited ("Excalibur") across the Juno Project in the period 1 January 2009 to 31 December 2009.

2. Location

Juno is located in central Northern Territory, some 8km east south east of Tennant Creek (Figure 1). The area is accessed is via bitumen road from Tennant Creek, then various gravel access tracks.

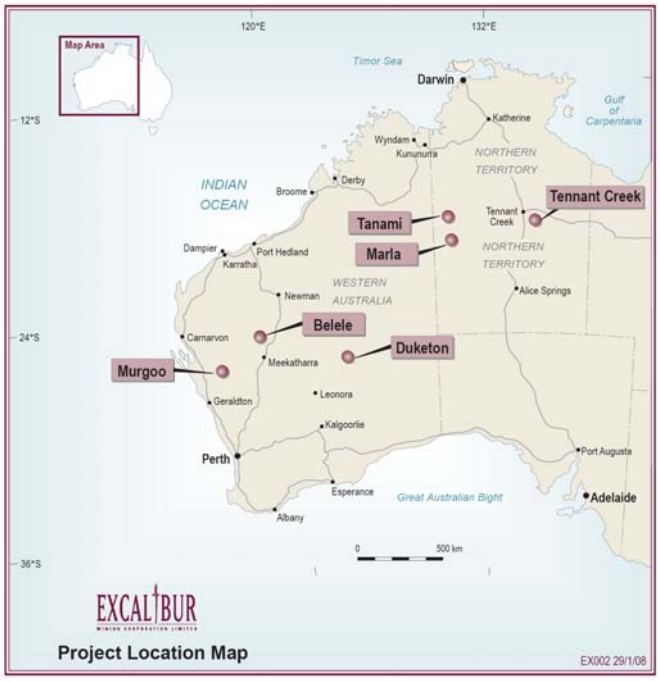

Figure1: Project Location map

3 Tenement Status

The Juno Project consists of nine tenements that lie across the (Figure 2) include MLC45, 46, 47, 68, 154, 155, 284, 578, 579. A tenement status and total area table is included as table 1 below.

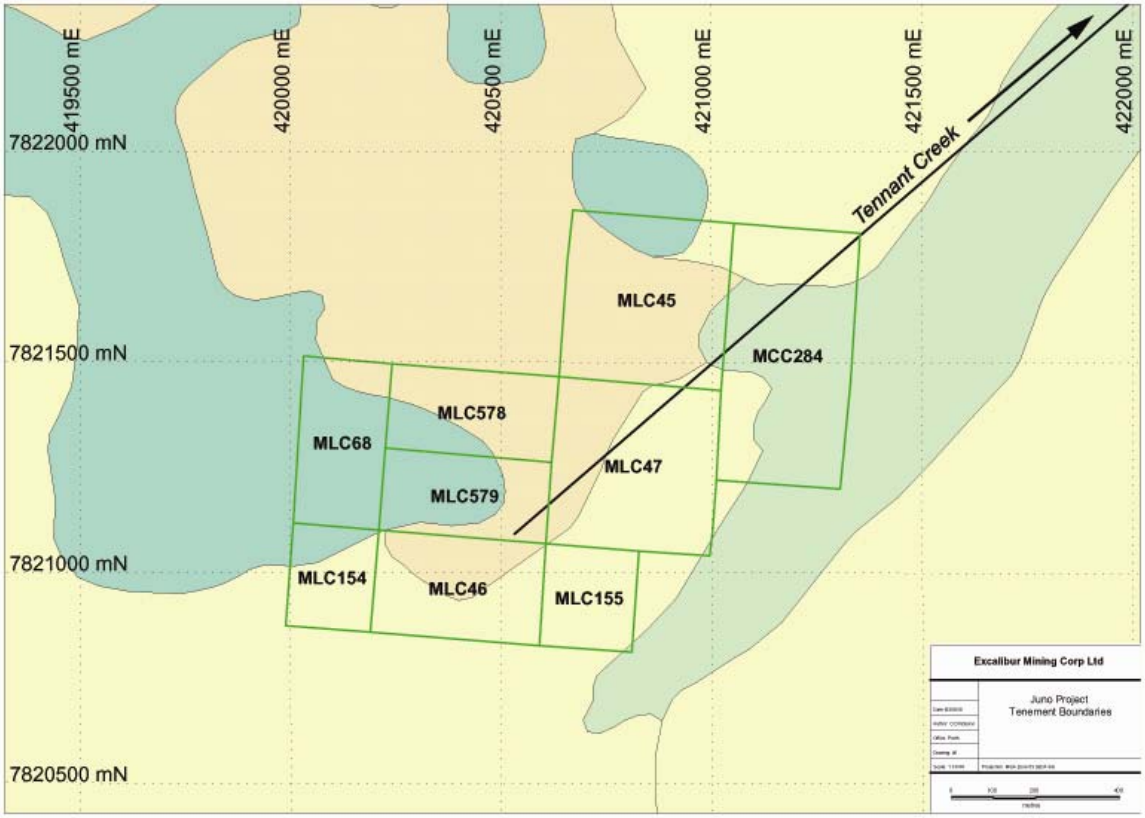

Figure 2: Tenement Location and Geology.

TENEMENT	AREA (HA)	GRANTED
MCC284	18	08/07/1989
MLC45	16	05/01/1965
MLC46	10	05/01/1965
MLC47	16	05/01/1965
MLC68	9	18/06/1968
MLC154	5	17/02/1973
MLC155	6	17/02/1973
MLC578	9	28/05/1968
MLC579	9	28/05/1968

Table 1: Juno project tenement status

4 Geology and Mineralisation

The project area (Figure 3) is located within the Proterozoic Tennant Creek Inlier which is comprised of a turbiditic flysch sedimentary sequence abutting various volcanic rocks. In the Tennant Creek region, these rocks are typified by the Warramunga Group, which commonly strikes east-west with variable dip. They have also been intruded by various granites and also deformed by the Tennant Event of 1850 Ma.

Gold-copper-bismuth mineralisation has been found to be hosted by fine grained haematitic mudstones and shaley siltstones. The mineralisation is poddy in nature and is typically located within steep dipping hinge zones of regionally minor folds with localised shearing and accompanying chlorite and silica +/- dolomite alteration. These dilation zones of rich gold mineralisation are also typified by strong magnetite alteration below the base of oxidation. Above the base of oxidation the magnetite is chemically weathered to haematite.

The distribution of the metals is variable, with no direct correlation between bismuth, gold and copper though some of the better known deposits display zonation. For example, it is common to find an outer magnetite/dolomite altered copper zone, a mixed magnetite-silica bismuth zone and magnetite + gold zone in the core.

The mineralisation style at Tennant Creek is generally small tonnage but high grade pods of iron rich mineralisation. Gold is also generally very fine grained in fresh deposits, but very coarse and nuggety in the oxidised deposits, such as Nobles Nob. In a practical sense this was a guide to the amount of reported gold pilfering reported in the past from many mines.

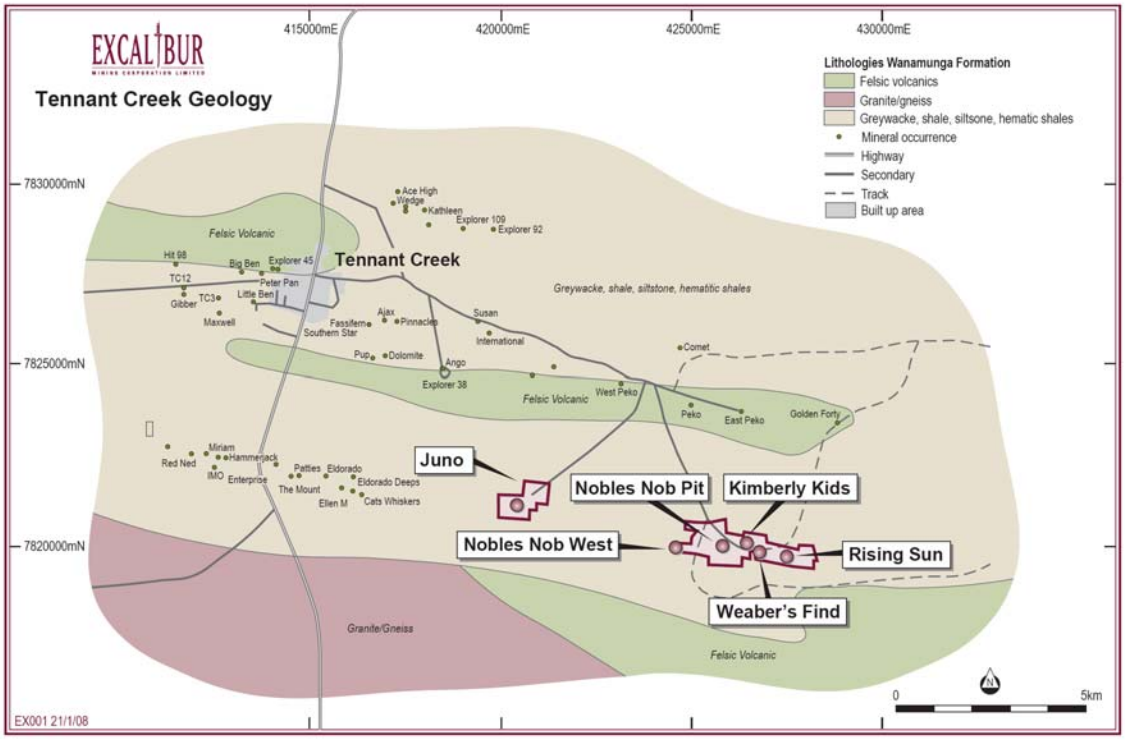

Figure 3: Regional Geology Map

5 Previous Exploration

Previous exploration within some of these tenements has been extensive. The magnetic anomaly that was formed by the Juno deposit was discovered by the Aerial, Geological and Geophysical Survey of Northern Australia in 1936. Drilling was first conducted on this area by National Lead of America prior to 1960. In March 1960 Peko Mines N.L acquired the tenements from Merloo Gold Mines N.L, and commenced the diamond drilling programme that ultimately discovered the Juno deposit in DDH02 in October 1964. Of interest holes 1, 3 and 4 were all barren, whilst the deviation of hole two from its planned target saw it hit significant values that would have been missed had it stayed on course.

Exploration drilling activity increased following the discovery hole intersection (12.19m @ 170.11g/t Au, 30.63g/t Ag, 0.13% Cu, and 1.39% Bi, from 229.21m), with a considerable amount of surface and underground diamond drilling being completed over the years.

Photo 2: Historical diamond Drilling at the tenant Creek Project - Juno

6 Exploration during the reporting period 1/1/2009 – 31/12/2009

During the reporting period Excalibur began an extensive drilling exploration program to better define the current resource and to probe for mineralised extensions in the immediate vicinity of the Juno Orebody. To achieve this, RC and diamond drilling methods were employed. During the reporting period 8 RC holes for ~1630m were drilled and 7 diamond drill holes were completed for 2059m. Drilling is ongoing.

Lithological units intersected during drilling included alternating siltstone/sandstone turbidite wacke units that are moderately chloritised with minor hematite and or ironstone magnetite units interbedded into the folded sequence. RC drill holes had an average depth of ~181m. Diamond drill holes had an average depth of 257m. All drill holes were surveyed using highly accurate DGPS equipment on contract from BBS surveys. All drill holes also wireline gyro surveyed to get accurate direction of the hole path. Geological logs, assays results and all survey data are attached as appendix.

Cube Consulting of West Perth, Western Australia have been contracted to carry out a resource review, assist with historical/digital data validation/manipulation and make further exploration recommendations at Juno. After receiving more historical hardcopy maps, plans, and cross sections, continuation of the validation process has highlighted many errors previously unknown in the digital database. Examples of theses errors include poor and imprecise metrication of the original digital database, basic key stroke errors during data entry and incorrect methods used during initial digitization of maps, plans and sections.

Approximately 7,000m of the historic diamond core from Juno has been acquired. Detailed re-logging and re-analysing of this core continues, with selected intervals being re-assayed and re-logged as well as SG determination.

Photo 3: Diamond Drilling (Night shift) at the Juno project

7. Current Resources at Juno

Consultation with Cube Consulting in conjunction with receiving more hardcopy historical data has proved very useful in validating and correcting errors in the Excalibur database. Thus far the current resource remains unchanged.

The current gold resource at Juno is divided in to indicated and inferred categories. Greater confidence in the historic data i.e., increasingly reliable S.G. information, cross-checked and transformed re-interpretations of historic gold mineralisation producing highly accurate 3D models, re-enforces the foundations for the current resource model.
Juno also has a separate copper resource (with contained Au oz). This is due to the complex geological zonation of the deposit.

The following tables list the current resources at Juno, including the copper resource.

Gold Resources

JUNO GOLD RESOURCES

T	Au g/t	Au oz	Cu %	Cu T	Ag g/t	Ag oz	Bi %	Bi T
1,101,300	18.68	661,488	0.34	3744	nd	nd	0.29	3194

JORC Category - Indicated
Note nd means no silver assay data

T	Au g/t	Au oz	Cu %	Cu T	Ag g/t	Ag oz	Bi %	Bi T
501,850	10.68	172,340	0.17	853	nd	nd	0.06	301

JORC Category - Inferred
Note nd means no silver assay data

M10 GOLD RESOURCE

T	Au g/t	Au oz	Cu %	Cu T	Ag g/t	Ag oz	Bi %	Bi T
1,117,000	6.57	235,971	0.03	335	nd	nd	0.09	1005

JORC Category - Inferred

Copper Resources

JUNO COPPER RESOURCE

T	Cu %	Cu T	Au g/t	Au oz	Ag g/t	Ag oz	Bi %	Bi T
306,150	0.85	2602	1.14	11,222	nd	nd	0.13	398

JORC Category - Indicated
Note nd means no silver assay data

Table 2 – Current Resources

8. Future work

Resource drilling on the Juno deposit will continue through the New Year. Data will be collated and massaged and integrated into the new database and geologically interpretated. Cube Consulting will continue with the resource review and data validation exercise. They will provide further technical assistance and aid in developing an updated resource model at Juno and its surrounding prospects.

Drilling to ascertain the current status of historical underground development will commence shortly. An understanding of the stope / depletion's is important to any further ground stability studies, geotechnical work and resource modelling.

Verification of nearby targets i.e., M10, G11 Juno East and Juno West will begin with a short program of RC drilling at Juno East/West and Diamond drilling at M10. Confirmation of size, shape and position of these targets is vital when considering any possible mining opportunities that exist in the vicinity.

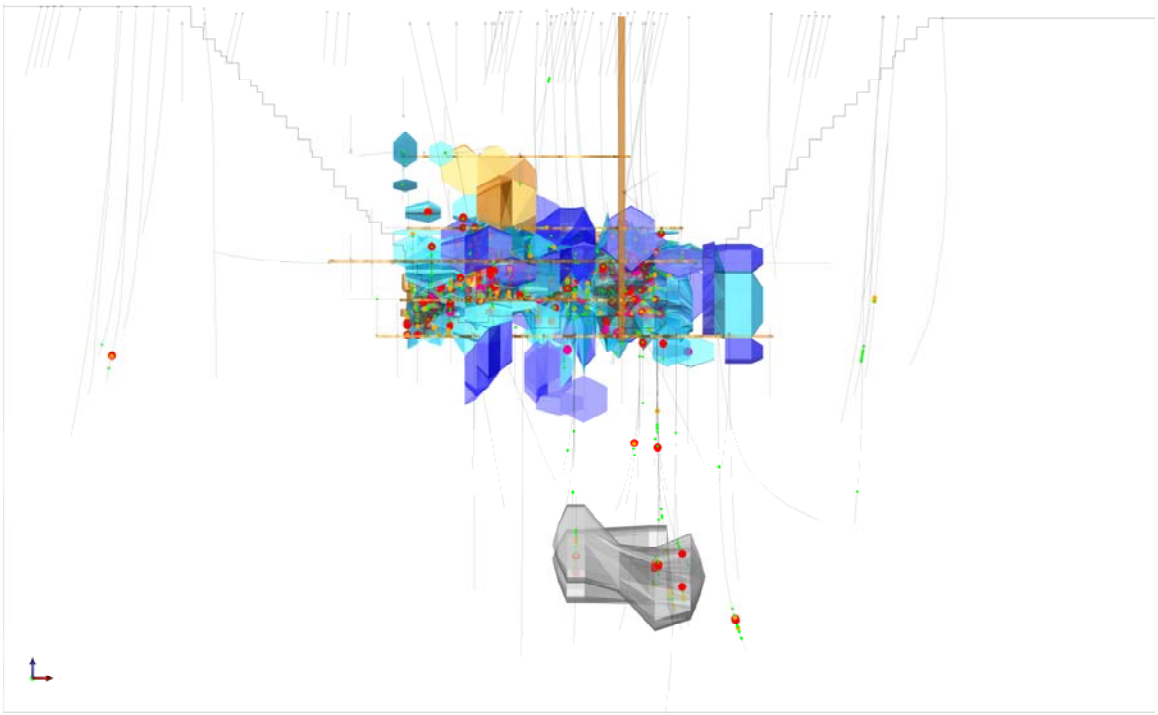

Figure 4: Image from 3d model (viewed north)

9. References

Edwards, G C, 1987. Structural and geochemical controls on alteration and mineralisation, Tennant Creek goldfield, Northern Territory, B Sc Honours thesis (unpublished), Monash University, Melbourne.

Jones, P, 2006. Excalibur Tennant Creek Tenement Package Exploration Potential, August 2006.

McNeill, R. D., 1965. Indicated Ore Reserves at Explorer 8, Peko Mines N.L. Internal Report, 28th April 1965.

Sullivan, M.P., 2009. Combined Annual Report, Juno Project. For Excalibur Mining Corp. Ltd, February 2009.

Appendix 1
Drill hole collar table

Hole ID	East Nominal	North Nominal	Dip	Az	Completed	Meters Drilled	Comments
EJDD005.2	420439	7821407	60	170	2/11/2009	248.1	Wedge off 005 at 16m
EJDD005.2.B	420439	7821407	60	170	9/11/2009	358.2	Wedge off 005.2 at 149.5m
EJDD006	420468	7821199	75	360	14/11/2009	184.9	Hole Abandoned vanruth failed
EJDD007	420439	7821328	60	180	30/11/2009	235.0	
EJDD008	420448	7821497	60	180	6/12/2009	412.0	
EJDD009	420440	7821298	60	180	9/12/2009	262.0	
EJDD010	420469	7821110	60		11/12/2009	61.0	
EJDD011	420560	7821417	60	180	14/12/2009	298.0	
EJRC001	420396	7821302	60	180	6/12/2009	221.0	Chlorite 10% from 134m increasing to strong alteration zone at 174 - 191. Ironstone 190-191.
EJRC002	420357	7821258	60	180	9/12/2009	191.0	Mineralised zone 146-157 including 1-2m chlorite halo
EJRC003	420392	7821325	60	180	10/12/2009	158.5	
EJRC004	420361	7821314	60	180	11/12/2009	125.5	
EJRC005	420322	7821317	60	180	12/12/2009	134.5	
EJRC006	420278	7821351	60	180	12/12/2009	149.5	
EJRC007	420282	7821301	60	180	12/12/2009	251.0	Trace mineralisation only.
EJRC008	420280	7821251	60	180	13/12/2009	197.0	
EJRC009	420319	7821265	60	180	15/12/2009	203.0	Mineralised zone 172-177 including 1-2m chlorite halo

Appendix 2.
Drill hole survey table
(attached spread sheet)

Appendix 3
Assay Results
(attached spread sheet)

Appendix 4
Geological logs
(attached disc)