



ANNOUNCEMENT TO THE AUSTRALIAN SECURITIES EXCHANGE: 31 JANUARY 2012

## DECEMBER 2011 QUARTERLY REPORT

The Board of Sierra Mining Limited (“the Company” or “Sierra”) is pleased to present its quarterly report for the period ending 31 December 2011.

### HIGHLIGHTS

The Company acquired the Nalesbitan gold-copper and Mabilo gold projects in Camarines Norte, Luzon. The projects are located adjacent to the Paracale Mineral District where gold production predates Spanish colonial times and has been estimated at approximately 5 million ounces of gold. Both projects have the potential to host world class gold and copper deposits.

**Nalesbitan** has been explored previously with over 24,000 metres of drilling leading to the definition of an extensive zone of mineralisation at Nalesbitan Hill. Previous exploration also identified a number of additional epithermal gold targets with significant drill intercepts being recorded in reconnaissance drilling. The nature of much of the epithermal mineralisation [high sulphidation with significant copper grades] and the presence of adjacent, large, deep seated IP chargeability anomalies indicates potential for the discovery of porphyry copper mineralisation associated with the high sulphidation epithermal gold mineralisation. The geology has distinct similarities with the large Lepanto [high sulphidation epithermal gold] - Far South East [copper-gold porphyry] mineralisation system in northern Luzon.

**Mabilo** is a gold - copper skarn located approximately 15 km ENE of Nalesbitan. Ten holes drilled by a previous explorer in 1989 returned significant intercepts of Au, Ag and Cu associated with oxidized garnet-magnetite skarn. It is currently the site of artisanal mining operations.

Further infill sampling of selected holes from the recently completed drilling program at **Taguibo** has extended the width of the low-grade copper intersection in Hole TDH 12, which was the last hole of the program. The intersection is now 125.6 metres at 0.15% Cu between 184.6 and 310 m depth. This is consistent with the intersection of 111.6 m at 0.15 % Cu in adjacent hole TDH 07 and outlines a blanket of low grade copper mineralisation interpreted to be distal to a buried porphyry copper deposit. Drilling is scheduled to recommence in the March Quarter.

A soil sampling program on 100 x 200 m grid over the prospective western section of the **Bahayan** tenement block was completed in late December. Previous exploration in this area outlined a two square kilometre gold – silver stream anomaly. Results of the recently completed sampling will be reported in the next quarter.

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## The Philippines

The Philippines is one of the world's largest porphyry copper-gold and related epithermal gold-silver provinces. The majority of Cu-Au mineralisation is spatially related to the Philippine Fault System which passes from northern Luzon to eastern Mindanao. Mineralisation is hosted in secondary structures and splays in areas where the fault system multi-furcates and horsetails such as in Luzon, the Paracale Mineral District and eastern Mindanao. Sierra's tenement applications have been carefully selected on the basis of extensive local knowledge of the geology and locations of both historical and current artisanal gold mining operations.

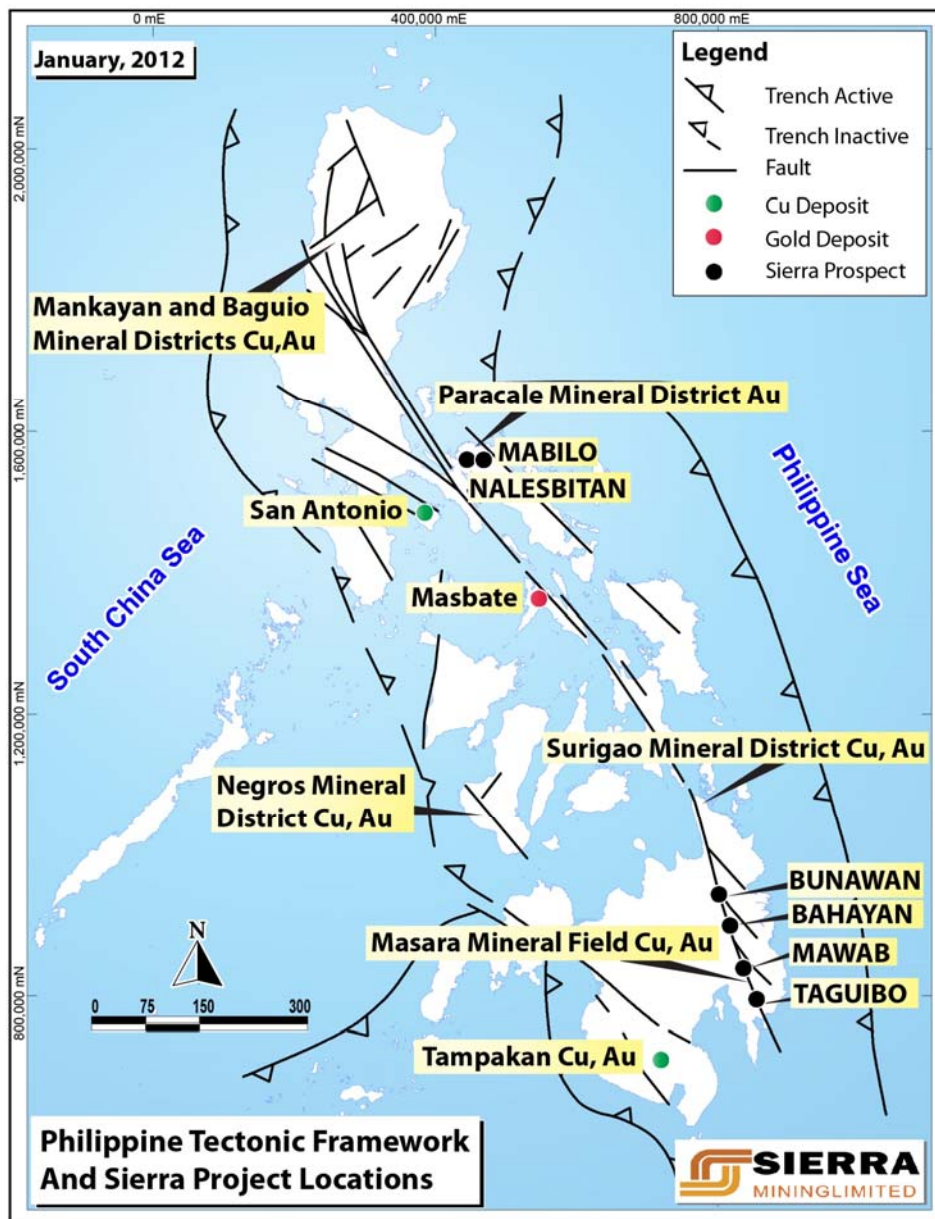


Figure 1. Showing the tectonic framework of the Philippines and the location of Sierra Mining tenements



## NALESBITAN PROJECT

### Background

The Nalesbitan Project comprises Mining Lease Contract MRD-459 of 497Ha and MPSA Application APSA-V-0002 of 637Ha. The Project is located in Camarines Norte Province on the Bicol Peninsular in southern Luzon approximately 200 km ESE of Manila [Figure 2]. Access from Manila is by 300 km of sealed highway to the town of Exiban and then by 13 kilometres of unsealed road to Nalesbitan.



Figure 2. Showing location of the Nalesbitan and Mabilo Projects within the Philippine Fault System



The area is sparsely populated and is not subject to any indigenous land owner claims. The terrain is moderately rugged with elevations of 200-250m ASL rising to the inactive Mt Lobo volcano at an elevation of 1572m ASL approximately 20km to SE.

Nalesbitan is approximately 25 kilometres south west of the Paracale Mining District where gold production dates to the 12 century and was first reported by the Spanish in 1571. Prior to the second world war there were 12 gold mines operating in the Paracale district with production of approximately 250,000 oz pa. Total historical gold production including alluvial gold is estimated to have been approximately 5 million ounces. The presence of buried porphyry copper mineralisation has been postulated by modern explorers but there has been no significant copper production in the Paracale district.

The Nalesbitan area was first worked for gold in the 1800's by artisanal miners but systematic mining only commenced at the prominent ridge of Nalesbitan Hill in the 1930's. A 200 tpd plant was commissioned in 1938 and underground mining was conducted by a Filipino-American company on five levels between 1938 and 1941 producing ore at an average grade of 5.3 g/t Au. The mining operation did not re-commence after the second world war although artisanal mining continued in the area.

In the 1970's Renison Goldfields Consolidated (RGC) of Australia explored and systematically drilled Nalesbitan Hill. RGC commissioned a 250,000 tpa open pit mine and heap leach operation in 1990 which closed within 12 months due to poor results attributed to mining and heap leach recovery problems.

The area has subsequently been explored by other companies leading to a number of areas of mineralisation being outlined within the alteration zone around Nalesbitan Hill. Most of this exploration data [including that of RGC] remains available although all drill core has been lost or degraded to the extent it is un-useable. Comprehensive soil, rock chip, tunnel and trench sampling generated in excess of 4,000 samples. Over 400 diamond, RC and percussion drill holes, totaling over 24,000m, have been drilled in the area by previous explorers. Two Induced Polarisation [IP] surveys were conducted outlining significant chargeability zones to the south of Nalesbitan Hill which have been interpreted to indicate sulphide rich zones associated with a buried porphyry copper deposit.

## **Geology**

The geology within the tenements is dominated by andesitic pyroclastics and tuffs of the Pliocene Macogon Formation. Dacitic lava, tuff and pyroclastics attributed to the regional Pliocene Susungdalaga Volcanics unconformably overly the Macogon Formation [Figure 3] although it has alternately been proposed that the dacitic volcanics are part of a more localised diatreme dome complex emplaced into the Macogon Formation in the Nalesbitan area. Structurally and lithologically controlled alteration and mineralisation occurs in both volcanic units and both are overlain and intruded by un-altered and un-mineralised Pleistocene andesite volcanics and intrusions of the Labo Volcanics. Miocene basement sediments are exposed in an erosion window to the SE of the tenement but are not known to outcrop within the tenement.

The alteration and mineralisation is located between two major NW-trending sinistral strike slip faults, the Bosignon and the Dumagmang Faults of the regional Philippine Fault system. Mineralisation at Nalesbitan Hill is controlled by a WNW trending fault termed the Nalesbitan Hill Fault which is a link fault or dilational jog between the two major regional faults. A number of NE trending faults have been mapped but the structural framework and the structural controls of mineralisation at all prospects at Nalesbitan are still poorly understood.

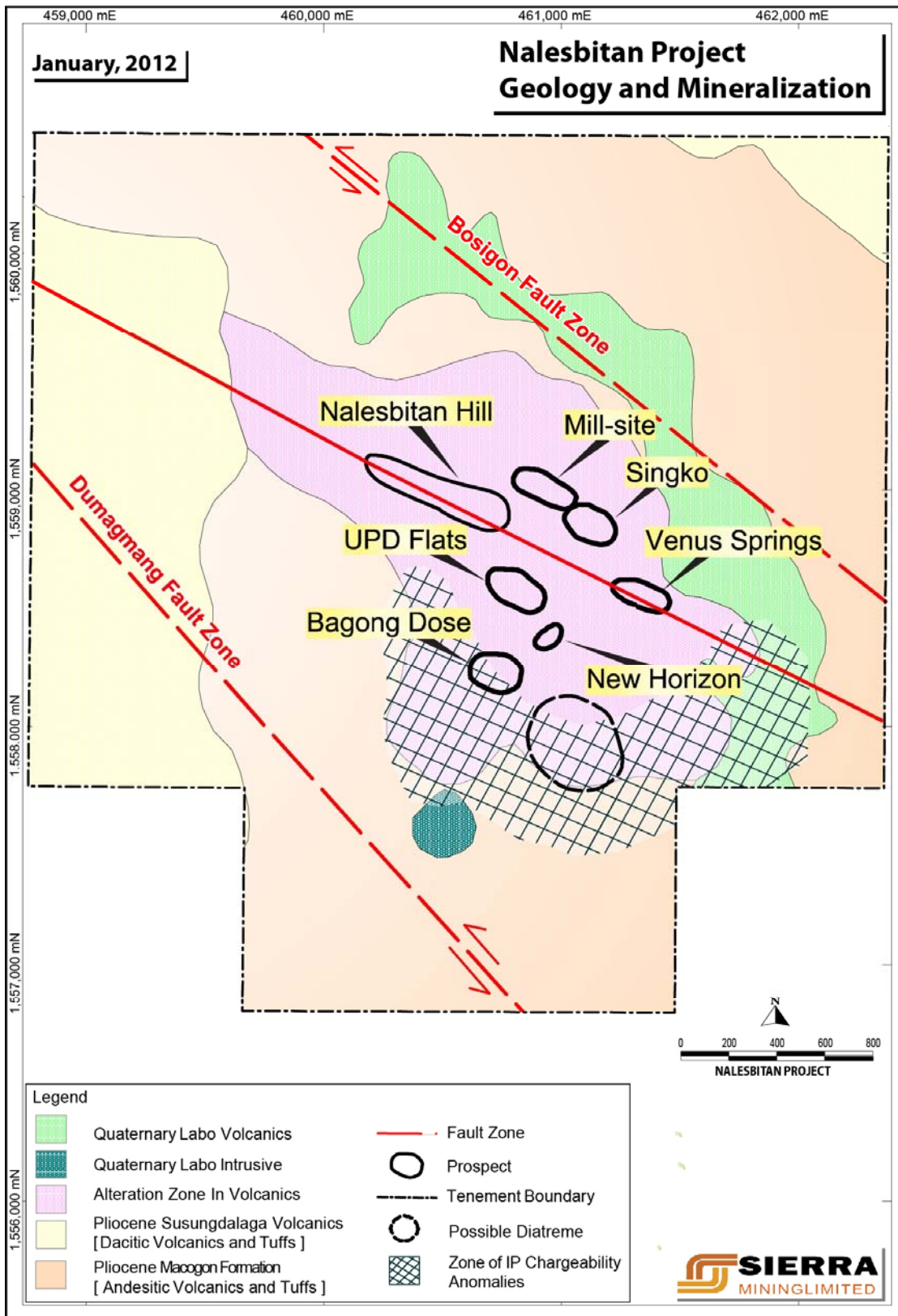


Figure 3. Summary map of the geology and mineralisation at the Nalesbitan Project



## Alteration

Mineralisation in the Nalesbitan area occurs in an extensive alteration zone predominantly in Macogon Formation andesite volcanics and tuffs. The large zoned alteration system is multi-phased and hosts both high and low sulphidation epithermal mineralisation at surface which is indicative of a large long-lived hydrothermal system. Silicification and advanced argillic alteration associated with Au-Ag-Cu mineralisation at Nalesbitan Hill, Mill-site and Singko are typical of high sulphidation epithermal mineralisation which is commonly spatially associated with porphyry copper mineralisation. A buried porphyry Cu source responsible for the Nalesbitan alteration and epithermal mineralisation has been proposed by a number of independent consultants including Richard Sillitoe [as a consultant to RGC] and the late Terry Leach who proposed a porphyry source below the Venus Springs prospect with lateral outflow of fluids forming the mineralisation at the Singko, Mill-site and Nalesbitan Hill prospects as shown in Figure 4 below. This model is analogous to the large Lepanto [high sulphidation epithermal] - Far South East [copper-gold porphyry] mineralisation system in Luzon.

Evidence for porphyry copper mineralisation includes biotite, epidote and K feldspar alteration in andesite and dacite clasts interpreted to have been erupted in a diatreme complex which “sampled” a porphyry at depth and sub-surface chargeability anomalies from two IP surveys interpreted to reflect the presence of sulphides associated with a porphyry body.

Lower temperature low sulphidation epithermal alteration and textures [banded colloform and crustiform quartz veins] are associated with bonanza gold grades at the Bagong Dose prospect indicating a long-lived hydrothermal system.

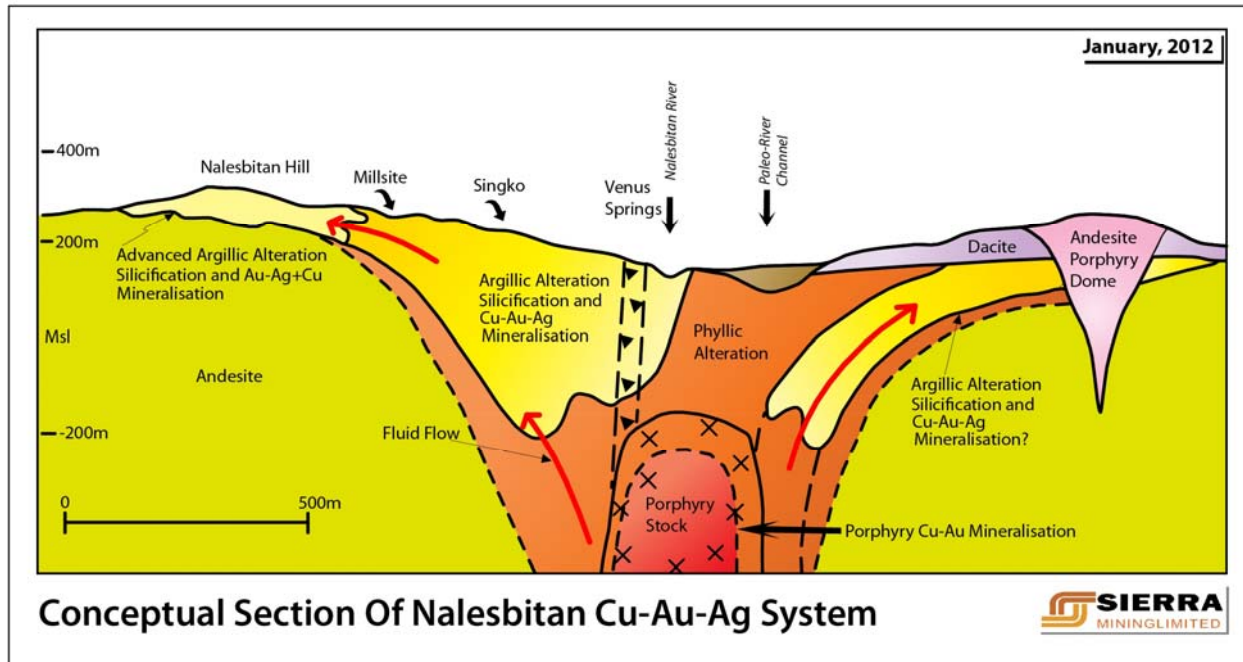


Figure 4. Conceptual NW-SE cross-section [looking north east] through the Nalesbitan Cu-Au-Ag alteration system showing postulated porphyry source below the Venus Springs prospect and lateral fluid outflow forming the alteration and high sulphidation epithermal mineralisation at Singko, Mill-site and Nalesbitan Hill.



## **Nalesbitan Hill Prospect**

The Nalesbitan Hill gold deposit is hosted by andesite volcanics and tuffs within a northwest-striking fault zone (Nalesbitan Fault) in which steeply south west dipping silicified mineralized structures and breccias occur over widths of up to 300 metres and along strike for at least 800 metres, forming a prominent ridge. Mineralisation is late stage and occurs as matrix to the breccias, and in chalcedonic veins predominantly hosted by two parallel bodies of hydrothermal breccias within an envelope of advanced argillic alteration transitional to a halo of intermediate argillic alteration. The mineralisation flares upward and pinches out approximately 200 metres below surface.

Gold and silver mineralisation is supergene enriched and closely associated with copper sulphides including chalcocite, bornite, covellite, chalcopyrite and enargite. The high sulphidation mineral assemblage along with the presence of anomalous molybdenum suggest the deposit formed from fluids derived from a porphyry copper bearing intrusion at depth.

The Nalesbitan Hill deposit has been extensively drilled and sampled and was briefly mined by RGC in 1990. The extensive drilling database was used by previous explorers and their independent consultants to prepare a number of models of the deposit which included estimates of tonnage and grade using Multiple Indicator Kriging across a range of cut-off grades and with varied model parameters. Quality control measures have varied over time with different phases of exploration but sufficient quality control data have been collected by the previous operators and analysed by their independent consultants to conclude that the data from all phases of exploration is essentially reliable. These quality control data include twinning of 6 RGC holes, RC sample duplicates, pulp duplicates, umpire assaying and internal and external standards collected from drilling by the previous operators.

Sierra's independent consultant, Resource Analytics and Management, has reviewed and assessed the historical data and modeling and determined an initial exploration target for the Nalesbitan Hill deposit ranging from 5-10 mt at grades ranging from 0.9-1.1g/t Au. The lower range of the exploration target is consistent with the modeling resulting from a search ellipse radius of 32.5m along strike by 32.5m across strike by 13m vertical based on existing drilling data only, with no allowance for identification of additional mineralisation due to infill or extension, or of the high silver grades within the deposit.

*It should be noted that Sierra's "exploration target" is not a Mineral Resource. The potential quantity and grade is conceptual in nature and there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource.*

Sierra will investigate the potential for establishing a small open pit mining operation based on the near surface Nalesbitan Hill deposit, in conjunction with a local partner while continuing to explore for additional near surface epithermal mineralisation at the adjacent prospects as well as deeper porphyry copper mineralisation.

## **Mill-site and Singko Prospects**

The Mill-site and Singko prospects are located on a separate structural trend at a lower elevation along the north east flank of Nalesbitan Hill. The mineralisation was uncovered by earth works during the construction of the Nalesbitan mine and led to a major artisanal mining rush exploiting high grade vein material. The artisanal activity is now much reduced due to



depletion of the shallow oxide mineralisation and the difficulty of recovering gold from the highly sulphidic ore.

Gold – silver – copper mineralisation occurs in a series of sub-parallel sheeted vein zones associated with intense silicification and argillic alteration over an area of 600m by 150 m. Mineralisation occurs in banded quartz-sulphide veins and as a matrix to breccias. Bornite and tennantite are the main copper minerals with lesser chalcopyrite and enargite. The mineralisation is thought to have been deposited from a higher temperature, more acidic fluid than Nalesbitan Hill and therefore was possibly formed closer to the magmatic source.

Artisanal activity previously hindered mapping and access to the prospects and the limited drilling conducted to date has only been reconnaissance in nature. Better intersections recorded by previous explorers are shown in the table below.

<b>Hole</b>	<b>From</b>	<b>To</b>	<b>Interval</b>	<b>Au g/t</b>	<b>Ag g/t</b>	<b>Cu %</b>
ND003	14	16	2	11.93	66	2.24
ND010	37	47	10	3.79	31	1.45
ND011	3	7	4	2.84	51	0.19
ND011	20	39	19	2.06	21	0.34
ND011	43	45	2	3.16	36	5.69
ND011	48	49	1	2.02	10	1.87
ND011	51	53	2	1.29	7	2.79
ND013	25	34	9	2.29	23	0.50

### **Venus Springs Prospect**

The prospect is located on the Nalesbitan Hill Fault zone along strike to the SE of the Nalesbitan Hill mineralisation and covers a zone of hydrothermal brecciation and a possible pebble dyke. Significant rock chip samples up to 8.98 g/t Au have been collected in the area and the magmatic source for the mineralizing fluids in the Nalesbitan area has been proposed to lie beneath the prospect.

The prospect has not been drilled but reconnaissance drilling immediately to the NW on the Nalesbitan Hill Fault trend has returned encouraging results as shown in the table below.

<b>Hole</b>	<b>From</b>	<b>To</b>	<b>Interval</b>	<b>Au g/t</b>	<b>Ag g/t</b>	<b>Cu %</b>
ND015	12	14	2	2.47	4	0.01
ND015	18	19	1	7.63	10	0.92
ND019	9	15	6	2.62	31	0.10

### **Bagong Dose Prospect**

The prospect, located approximately 500 m south of the main Nalesbitan Hill workings, is a former artisanal mining zone where bonanza grade gold grades were recovered from narrow sheeted quartz veins before flooding made artisanal mining impossible. The veins trend E-W within an overall NW trending zone hosted by andesite flows and intercalated fine grained pyroclastic units which have undergone intense argillic alteration to an assemblage of quartz-illite clay with minor kaolinite and disseminated pyrite.





The veins are characterised by crustiform and banded colloform textures which together with the presence of adularia and the relative low levels of associated base metals are typical of low sulphidation epithermal mineralisation.

Previous drilling was reconnaissance in nature but returned a number of encouraging intersections as shown in the table below.

<b>Hole</b>	<b>From</b>	<b>To</b>	<b>Interval</b>	<b>Au g/t</b>	<b>Ag g/t</b>	<b>Cu %</b>
ND016	42	49	7	2.50	11	0.08
ND022	61	69	8	6.60	16	0.21
ND072	78	84	6	5.26	11	0.02

### **New Horizon Prospect**

New Horizon covers an area of Au, Cu and Ag mineralisation hosted in silicified hydrothermal breccias. Initial reconnaissance drilling has returned a number of encouraging intersections as shown in the table below.

<b>Hole</b>	<b>From</b>	<b>To</b>	<b>Interval</b>	<b>Au g/t</b>	<b>Ag g/t</b>	<b>Cu %</b>
ND046	30	39	9	1.69	42	0.36
ND060	1	3	2	2.57	-	0.02
ND087	28	30	2	1.15	12	1.91
ND088	50	56	6	2.28	21	0.05
ND091	49	54	5	1.19	55	1.18

### **UPD Flats Prospect**

The prospect is located between the Nalesbitan high sulphidation and Bagong Dose low-sulphidation epithermal deposits and shows evidence of both styles of mineralisation although the veins hosting mineralisation do not have crustiform or colloform textures. Mineralisation occurs in multiple quartz veins over an area of 400 by 150 metres within pervasively argillic altered andesitic volcanics characterized by crackle and mosaic breccias textures. Better intersections from reconnaissance drilling include:

<b>Hole</b>	<b>From</b>	<b>To</b>	<b>Interval</b>	<b>Au g/t</b>	<b>Ag g/t</b>	<b>Cu %</b>
ND064	40	42	2	2.08	1	0.02
ND060	42	54	12	1.39	7	0.02

### **Conclusion**

The Nalesbitan Project is considered to be an outstanding project with widespread near surface epithermal Au-Ag-Cu mineralisation having been identified by previous explorers. The mineralisation is located within an extensive alteration zone and there is considerable potential for the discovery of additional high sulphidation and low sulphidation epithermal deposits. The potential for the discovery of buried porphyry copper mineralisation within the magmatic intrusion which provided the fluids responsible for the alteration and surface epithermal mineralisation is considered high. Previous geophysical exploration outlined a zone of anomalous high chargeability IP anomalies which is interpreted to be due to sulphide mineralisation associated with porphyry copper mineralisation.



Sierra will investigate the potential for establishing a small open pit mining operation based on the near surface Nalesbitan Hill deposit while continuing to explore for:

- a] additional near surface epithermal mineralisation at the adjacent prospects, and/or
- b] deep seated porphyry copper mineralisation

Sierra's initial focus is on compilation and assessment of all previous data to enable a better understanding of the architecture of the extensive hydrothermal system responsible for the widespread mineralisation at Nalesbitan. Drilling to date at the surface epithermal prospects [other than Nalesbitan Hill] has only been reconnaissance in nature.

An initial review of the two geophysical studies [IP] indicates they were not detailed enough to fully define the chargeability zone sufficient for a deep drilling program. Only one hole was drilled to test this zone and it is considered to have been poorly positioned and terminated prematurely. Plans to conduct a more detailed IP survey ahead of a program of deep drilling are underway.

## **MABILO PROJECT**

### **Background**

The Mabilo Project comprises six contiguous Mining Claims covering a combined 486 hectares, approximately 15 km east of the Nalesbitan Project. Access is by nine kilometers of sealed road and three kilometres of all weather gravel road from the national highway. The topography is undulating with a maximum relief of 100m ASL.

Gold-silver-copper mineralisation occurs in strongly oxidized magnetite-garnet skarn altered sediments and hornfelsed volcanics of the Palaeogene Universal Formation which is exposed in a 170 x 100 m window in the overlying post-mineralisation Quaternary Labo volcanics [Figure 5]. The skarn displays lateral zoning from a central garnet magnetite skarn through wollastonite skarn to hornfelsed andesitic volcanics. The Labo volcanics comprise laharic breccias and tuffs and cover much of the project area to a maximum depth of approximately 30 metres.

Diorite boulders 200 metres north east of the deposit suggest the presence of an intrusive centre responsible for the mineralisation and hence potential for the discovery of porphyry copper mineralisation. Sub-economic porphyry Cu-Mo-Au mineralisation associated with calc-silicate and magnetite-hematite skarns has been reported elsewhere in the region.

The deposit was previously known as Vein Venida when it was mined for Fe ore between 1963-65, producing approximately 3,000 tonnes. The Bureau of Mines conducted sampling and ground magnetics over the area in 1965 and reported two rock chip samples grading of 2 and 6 g/t Au. Renison Goldfields Consolidated gained title to the area and conducted soil sampling, trenching, pitting and ground magnetics surveys and drilled 10 holes [893 m] in 1989 which encountered significant Au, Ag and Cu values. Exploration appears to have halted when the Nalesbitan Hill mine was closed. Much of the data from this work is no longer available, although sections showing the geology [Figure 5] and analytical results from the drilling program have been located.

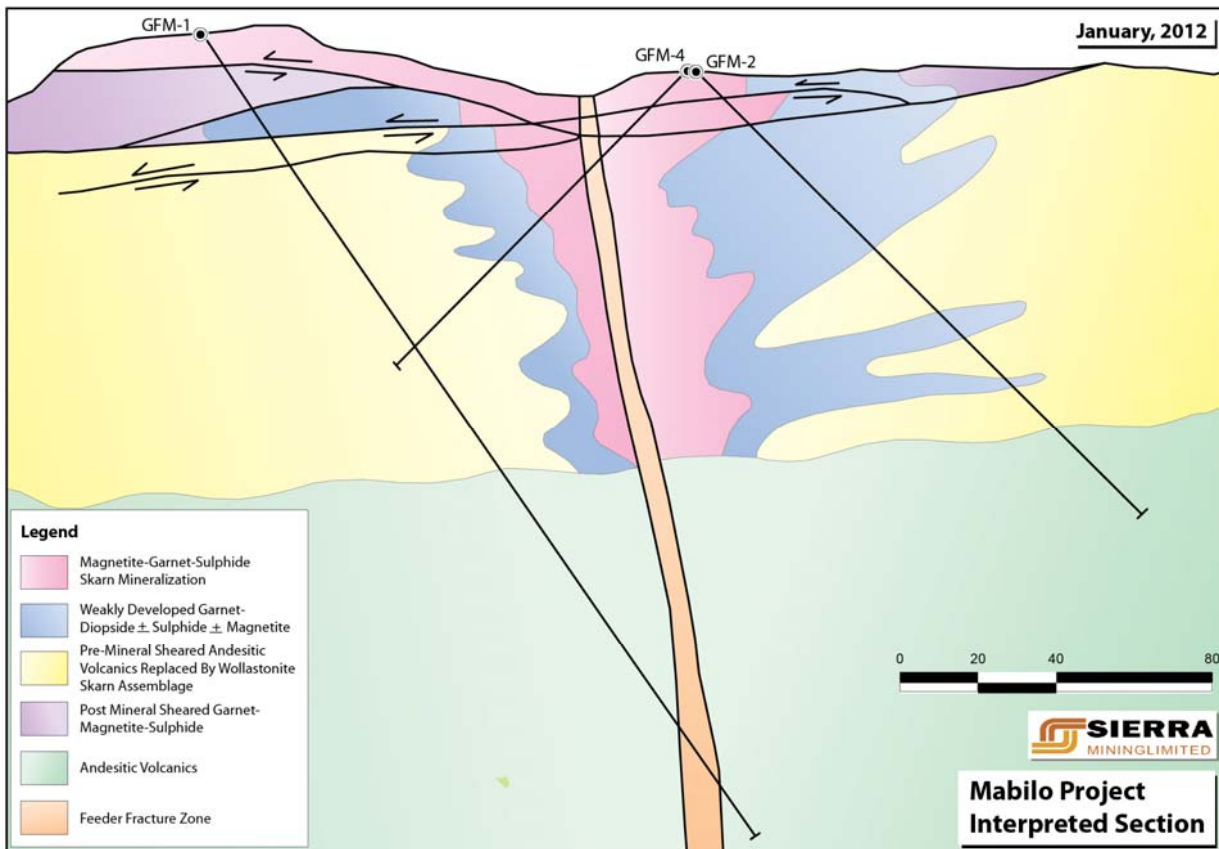


Figure 5. Schematic section through Mabilo skarn mineralisation [after RGC]

### Previous Exploration

The ten holes drilled by Renison Goldfields Consolidated returned a number of excellent intersections from the surface as shown in the table below.

Hole	Interval [m]	Au g/t	Ag g/t	Cu %	
1	20	1.18	8.46	0.68	from surface
2	16	1.35	7.43	0.92	from surface
3	12	1.05	3.11	0.14	from surface
4	26	3.15	65.4	1.38	from surface
5	24	2.59	NA	NA	from surface. Not analysed for Ag and Cu
8	30	1.97	20.7	0.23	from surface
10	18	2.21	7.6	0.72	from surface

Mineralisation extended down hole below the intervals listed above although it was more erratically distributed and holes were not completely sampled at lower levels.

The presence of hydrothermal breccias and free gold in panned concentrates in test pits indicated the mineralisation extended to the south beneath the shallow cover of Labo volcanics. Ground magnetics defined a number of magnetic bodies beneath the Labo volcanics further suggesting the potential to discover additional mineralisation.



## **Proposed Work**

The prospect has excellent potential for the definition of a moderate sized poly-metallic Au-Ag-Cu deposit at surface. It is at an advanced stage and has a number of identified drill targets. There is also potential for the discovery of deeper porphyry copper mineralisation related to the skarn mineralisation.

The first phase of Sierra's exploration will involve mapping, a ground magnetic survey and a program of shallow drilling to better define the extent of the mineralisation beneath the shallow Labo volcanic cover.

## **MINDANAO PROJECTS**

The Company has four projects located in areas of known mineralisation along the Philippine Fault System in eastern Mindanao as shown in Figure 6 further below.

### **TAGUIBO PROJECT**

#### **Background**

The Taguibo Project comprises two granted exploration permits (EP-01-06-XI and EP-01-10-XI) and one exploration permit application (EXPA-118) covering a combined area of 12,858 Ha. The combined block covers a section of the Philippine Fault Zone where it is intersected by a second regional structural zone known as the Kingking Trend which extends from the Company's Taguibo project to the Kingking porphyry Cu deposit some 30 km to the north-west. Exploration to date has been concentrated on the Taguibo Complex.

#### **Taguibo Complex**

The Taguibo Complex is a variably brecciated, hydrothermally altered and mineralised volcanic-intrusive complex outcropping over an area of approximately 200 ha along the western margin of the large regional Miocene-aged Carteel granodiorite batholith. The batholith contact with the Taguibo Complex coincides with the Mati Fault Zone, a major fault zone within the regional Philippine Fault system. The Complex is bound on the west by inter-bedded sandstones and siltstones of the Oligocene - Miocene aged Sanghay Formation.

The complex includes both intrusive and volcanic phases as well as zones of brecciation and is interpreted to overlie a buried porphyry copper-gold mineralized intrusive based on the presence of widespread "porphyry-style" alteration and evidence of copper mineralisation throughout the complex.

Previous work conducted by Sierra has outlined extensive zones of brecciation, silicification and hydrothermal Cu, Au and base metal mineralisation. The mineralisation was initially defined by multi-element soil and rock chip anomalies and low level geophysical [Induced Polarisation] anomalies. Recent mapping and logging of drill core indicates the presence of multiple intrusions effected by inner propylitic and pro-grade potassic alteration, massive magnetite flooding and sulphide veining. Extensive retrograde argillic alteration characterised by intensive clay alteration overprints much of the prograde propylitic and potassic alteration.



Figure 6. Location of prospects in eastern Mindanao

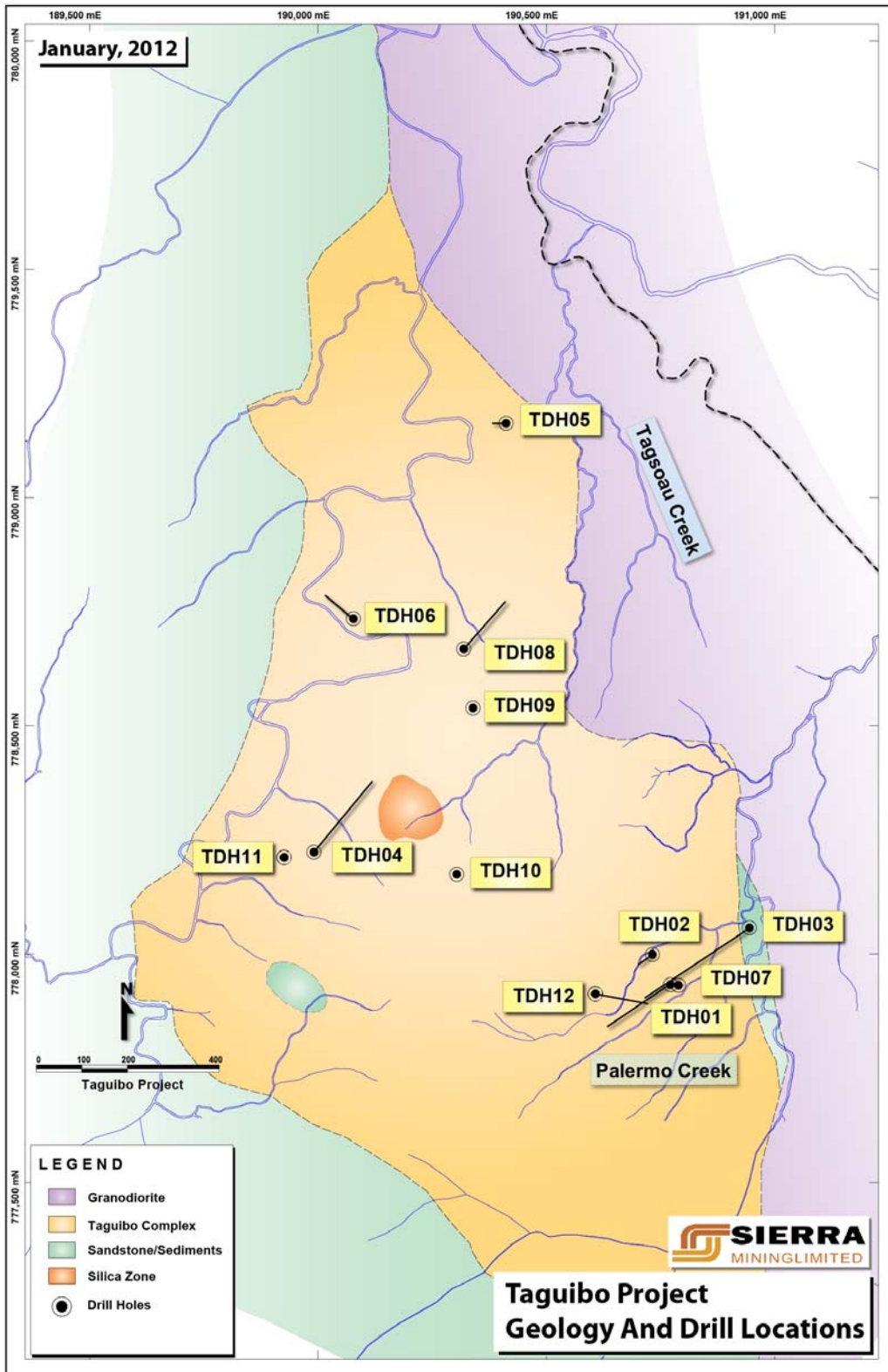


Figure 7. Showing local geology and the location of drill holes in the Taguibo Complex.

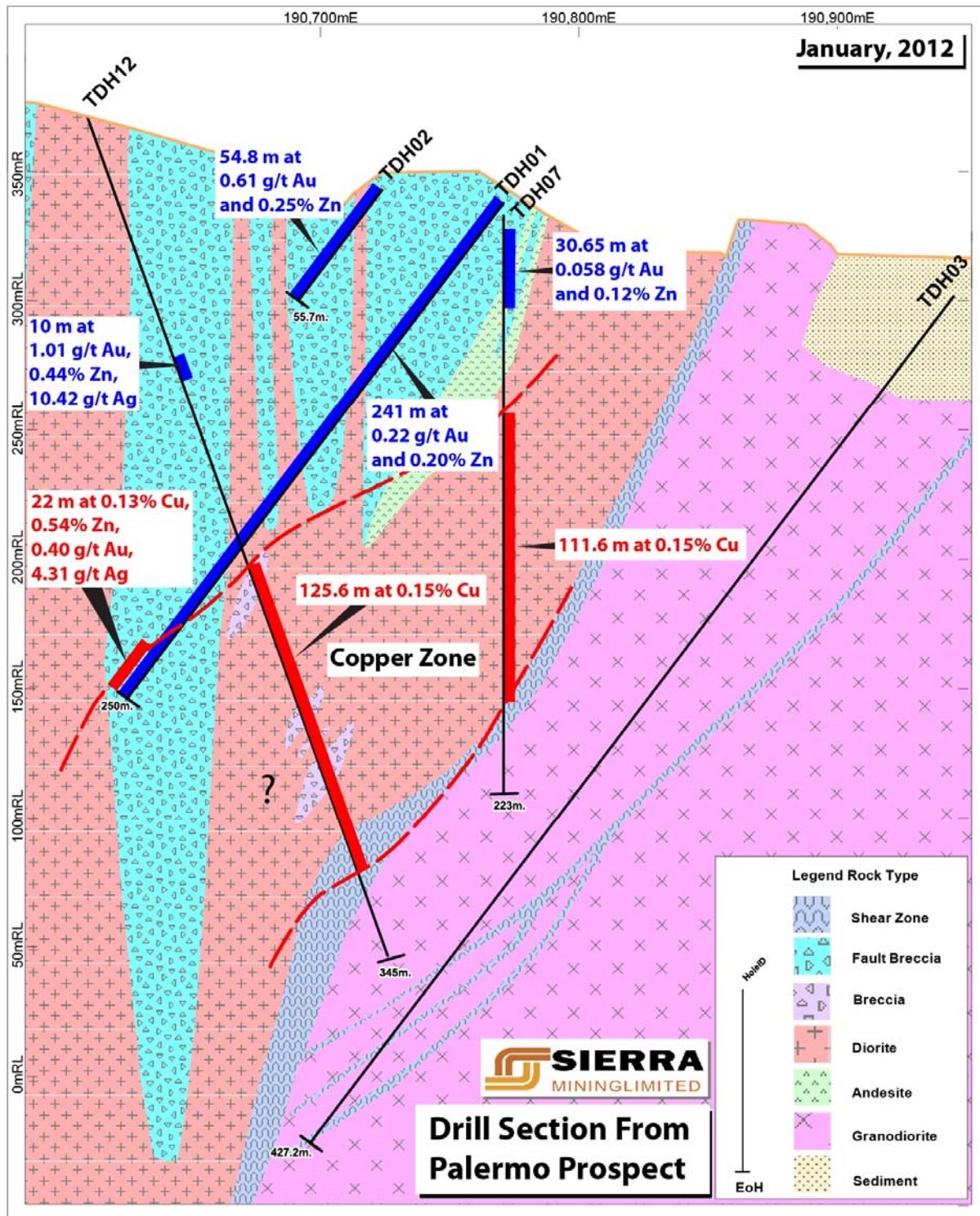


Figure 8. East-west cross section showing mineralised intervals in holes in the Palermo area and their relationship with the contact between the Taguibo Complex and the regional Maragusan batholith. Note the intervals for Holes TDH 01 and 02 are for all core assayed. Nine metres was lost from hole 01 and 0.9 metres from hole 02. Hole 01 ended in copper mineralised zone with an end of hole interval of 242-250 m; 8 m at 0.29 % Cu, 0.98% Zn, 0.70 g/t Au and 10.0 g/t Ag.



The alteration system at Taguibo is considered to be characteristic of the upper levels of a porphyry system immediately overlying the intrusion responsible for the mineralisation and hydrothermal alteration in the complex. The mineralisation outlined in the Palermo area [Figure 8] is considered to be most proximal to a Cu porphyry intrusion.

### **Work Undertaken During the quarter**

Work during the quarter consisted of infill sampling of selected holes from the 2010 drilling program. This work has significantly extended the width of the low-grade copper intersection in Hole TDH 12 which was the last hole of the program. The intersection is now 125.6 metres at 0.15% Cu between 184.6 and 310 m depth which is consistent with the intersection of 111.6 m at 0.15 % Cu in adjacent hole TDH 07 and outlines a blanket of low grade copper mineralisation interpreted to be distal to a buried porphyry copper deposit [See figure 8].

The zone of low grade copper mineralisation is strongly altered and characterised by widespread inner propylitic (epidote-actinolite) alteration with less pervasive potassic alteration (secondary biotite) in brecciated diorite. The copper occurs as both disseminations and fracture fill veins and is associated with disseminated magnetite, silicification and pyrite.

The polymetallic mineralisation intersected above the copper zone in holes TDH 1, 2, 7 and 12 occurs in veins within zones of clay matrix supported breccia interpreted to be an extensively argillic altered fault zones. There is evidence of silica alteration of the diorite clasts as well as clasts of quartz-sulphide vein material. This mineralisation can be correlated with poly-metallic vein zones seen on surface in the Palermo area. The sphalerite within the poly-metallic zone is a distinct black high temperature variety which is typical of veins which form above source porphyry intrusions and thus are consistent with the presence of buried porphyry copper mineralisation in the Palermo area.

### **Proposed Work programs**

The results of the reconnaissance drilling at Taguibo are encouraging. Logging of the wide spaced drill holes has revealed features which are typical of the alteration halo proximal to a mineralised porphyry copper ore body. These include inner propylitic actinolite-epidote-magnetite alteration grading to potassic alteration (K feldspar and biotite) with associated magnetite and hornfelsed magnetite mineralisation. The retrograde argillic alteration which has been superimposed on and masks much of the prograde alteration is also typical of a large porphyry system.

The target porphyry intrusion responsible for the widespread mineralisation and alteration within the Taguibo complex is interpreted to be near surface but un-eroded and thus has potential for significant copper gold mineralisation in the immediate un-eroded overlying country rock as well as in the intrusive itself.

The mineralisation intersected in holes TDH 01, 02, 07 and 12 in the Palermo area is considered to be the most proximal to the porphyry source. The down dip extension of the mineralisation intersected in these holes will be the immediate focus of on-going exploration, including further drilling.





## **BAHAYAN PROJECT**

### **Background**

The Bahayan application (EXPA-123) comprises two blocks located to the NW of the famous Diwalwal gold rush area where artisanal gold production from epithermal veins is reputed to amount to 20 million ounces. The northern block, which is expected to be granted separately ahead of the southern block, covers an area of 21 km<sup>2</sup> [Figure 8] and is approximately 20 km NNW of Diwalwal and 30 km SSE of the Co-O mine and the Company's Bunawan Project. A Memorandum of Agreement with the local indigenous people was signed in October 2011.

Preliminary exploration programs on the northern block has produced very encouraging results. Initial exploration focused on the Cogonon vein zone where a number of high grades [eg. 108.44 g/t Au] were recovered from veins in the artisanal workings. Subsequent regional exploration identified widespread evidence of gold and silver mineralisation in the Falcata and Tondan areas in the western part of the block. The mineralisation is associated with chalcedonic to opaline silica occurring as breccia fill and in veins and is interpreted to represent the upper levels of a low sulphidation epithermal vein system.

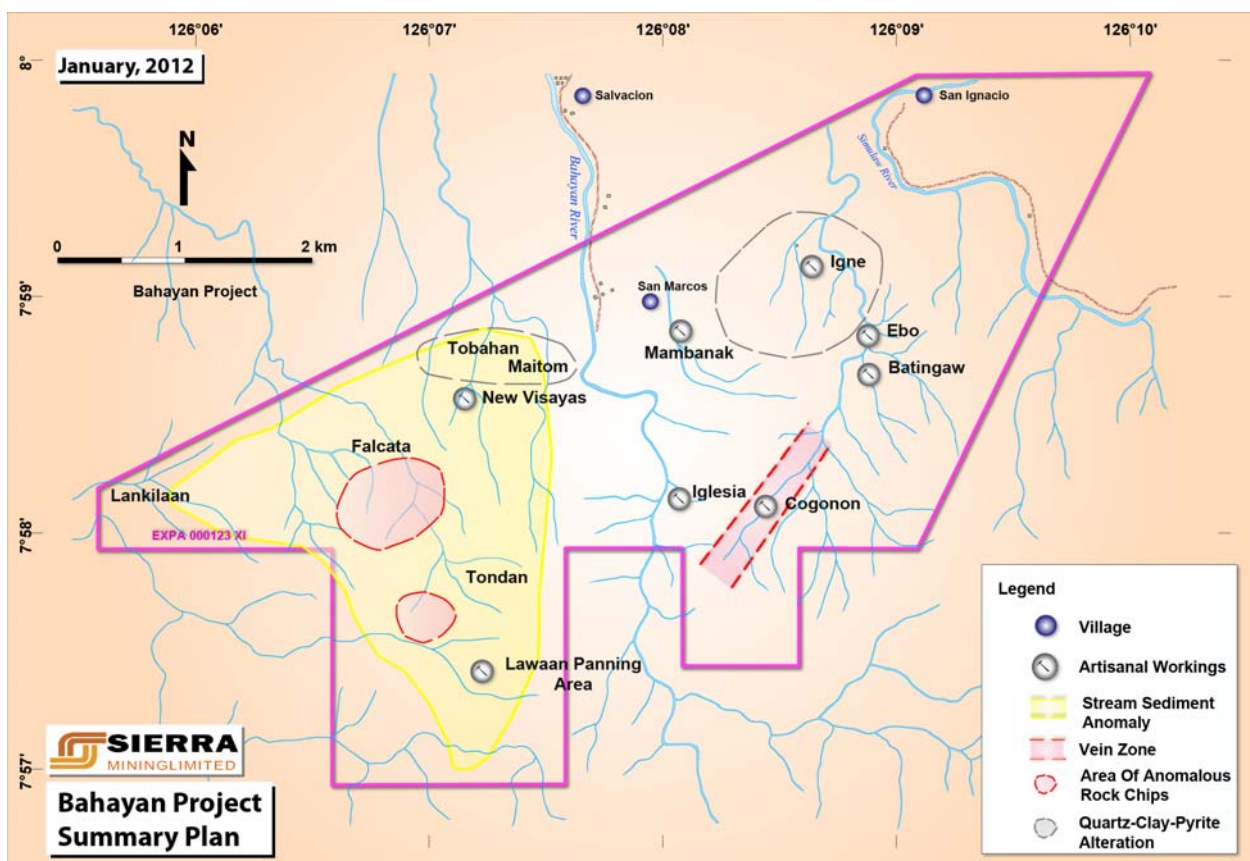


Figure 9. Bahayan Project North Block with location of alteration zones and artisanal workings.



Following the identification of these epithermal veins the Company conducted a stream sediment sampling program over the entire northern block. Both pan concentrate samples [analysed for gold only] and – 80 mesh samples [analysed for gold and a multi element suite] were collected. The results outlined an approximate 2 x 1 km anomaly over the western part of the tenement centred on the Tondan and Falcata prospects. The anomaly was defined by greater than 0.10 ppm Au in both -80 mesh and pan concentrate samples, low level Ag (all samples above the 0.5 ppm detection level lie within it) and anomalous Zn and As.

### **Work Conducted during the Quarter**

During the quarter the Company completed a reconnaissance soil sampling program over the western half of the tenement block. Samples were collected from the soil “C horizon” on a 100 x 200 metre spacing. The Program was completed on December 15<sup>th</sup> and results will be reported in the next quarter.

### **MAWAB PROJECT**

No work was conducted during the quarter.

### **BUNAWAN PROJECT**

No work was conducted during the quarter. The Company continues to monitor and collect royalties from small scale mining operations on the Project, while working on resolution of title issues prior to exploration.

### **PAPUA NEW GUINEA PROJECTS**

Barrick (PNG Exploration) Limited is earning an 80% interest in Sierra’s Salumei and Magavara projects in PNG. Barrick is the operator of both projects.

Barrick advise as follows:

“Field work was carried out in October and November, concentrating on the known intrusive complex and the main magnetic high feature at the Salumei prospect. A total of 179 rock chips samples, 145 auger soil samples and 6 BLEG samples were collected, and geological mapping was completed over an area of approximately 16km<sup>2</sup>. Wacker drilling was attempted over the northeast corner to penetrate the colluvial gravel scree profile but was unsuccessful in penetrating the gravel dominated soil profile.

Mapping has defined three main porphyry dyke units and an equigranular diorite all intruding the Salumei Formation basement rocks. Alteration is commonly chlorite-epidote-pyrite±magnetite. Quartz-pyrite± trace chalcopyrite veining up to 3-5% density is common in the porphyries with lesser quartz-pyrite±molybdenite veining in the metasediments.



Results have been received for the initial 92 rock chip samples and 45 soil samples. Rock chip results are generally lower than historic results with one sample of potassic altered feldspar porphyry with chalcopyrite-pyrite-bornite veinlets returning 0.36% Cu and 0.08g/t Au. Soil results indicate a NW trending Cu and Mo anomaly (Cu > 250 ppm and Mo > 10 ppm) with peripheral anomalous Pb and Zn to the northwest and west. Further results will provide more detail on the extent of the anomalous zones. All data will be reviewed in the first quarter.”

The information in this report relating to exploration results, mineral resources or ore reserves is based on information provided to Mr Robert McLean by Sierra Mining Limited. Mr McLean is an independent consultant geologist and is a corporate member of the Australian Institute of Mining and Metallurgy. Mr McLean has the relevant qualifications, experience, competence and independence to be considered an “Expert” under the definitions provided in the Valmin Code and “Competent Person” under the JORC Code. Mr McLean consents to the inclusion in the report of the matters based on the information he has been provided and the context in which it appears.

# Appendix 5B

## Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001, 01/06/10.

Name of entity

**SIERRA MINING LIMITED**

ABN

**89 118 060 441**

Quarter ended ("current quarter")

**31 DECEMBER 2011**

### Consolidated statement of cash flows

Cash flows related to operating activities	Current quarter \$A'000	Year to date (6 months) \$A'000
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for (a) exploration & evaluation (b) development (c) production (d) administration	(126) - - (171)	(223) - - (385)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	141	289
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Other (provide details if material): - Business development	(28)	(97)
<b>Net Operating Cash Flows</b>	<b>(184)</b>	<b>(416)</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of: (a) prospects (b) equity investments (c) other fixed assets	- (501) -	- (501) -
1.9 Proceeds from sale of: (a) prospects (b) equity investments (c) other fixed assets	- - -	- - -
1.10 Loans to other entities	-	-
1.11 Loans repaid by other entities	-	-
1.12 Other (provide details if material): - Advances to Philippines associates to fund exploration activities	(309)	(789)
<b>Net investing cash flows</b>	<b>(810)</b>	<b>(1,290)</b>
1.13 Total operating and investing cash flows (carried forward)	(994)	(1,706)

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	(994)	(1,706)
	<b>Cash flows related to financing activities</b>		
1.14	Proceeds from issues of shares, options, etc.	1	1
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other (provide details if material): - capital raising expenses	(5)	(6)
	<b>Net financing cash flows</b>	(4)	(5)
	<b>Net increase (decrease) in cash held</b>	(998)	(1,711)
1.20	Cash at beginning of quarter/year to date	9,799	10,512
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	<b>Cash at end of quarter</b>	<b>8,801</b>	<b>8,801</b>

**Payments to directors of the entity and associates of the directors**  
**Payments to related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	93
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

Payments include directors fees and superannuation, executive remuneration and consulting fees.

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

During the quarter, the Company completed the acquisition of the Nalesbitan and Mabilo Projects in the Philippines. Consideration for the acquisition included the issue of 5,250,000 new ordinary shares on settlement, of which 3,750,000 shares are subject to voluntary escrow for 1 year. Sierra will issue a further 1,750,000 new ordinary shares, plus pay additional cash consideration of up to A\$125,000, conditional on receiving approval of the Motion for Reconsideration of a Notice of Denial of the Nalesbitan APSA # V-0002, within 2 years of settlement.

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

Not applicable

+ See chapter 19 for defined terms.

### Financing facilities available

Add notes as necessary for an understanding of the position.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	-	-
3.2 Credit standby arrangements	-	-

### Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	400 (includes exploration expenditure incurred by Philippines Associate)
4.2 Development	-
4.3 Production	-
4.4 Administration	200
<b>Total</b>	<b>600</b>

### Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	95	209
5.2 Deposits at call	8,706	9,590
5.3 Bank overdraft	-	-
5.4 Other (provide details): -	-	-
<b>Total: cash at end of quarter (item 1.22)</b>	<b>8,801</b>	<b>9,799</b>

### Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1 Interests in mining tenements relinquished, reduced or lapsed	Nalesbitan Project: MRD 459 APSA V 0002 Mabilo Project	Sierra holds its interest in the Projects through direct and indirect equity investments in the Philippines.	0%	64%
6.2 Interests in mining tenements acquired or increased				

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity quarterly report**

**Issued and quoted securities at end of current quarter**

*Description includes rate of interest and any redemption or conversion rights together with prices and dates.*

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 <b>Preference securities</b> <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>+Ordinary securities</b>	232,854,663	232,854,663	Not applicable	Not applicable
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	5,255,833	5,255,833		
7.5 <b>+Convertible debt securities</b> <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 <b>Options</b> <i>(description and conversion factor)</i>	3,583,333 3,683,333 31,970,363 8,333,334	- - 31,970,363 -	<i>Exercise price</i> \$0.15 \$0.20 \$0.10 \$0.25	<i>Expiry date</i> 1 July 2013 1 July 2014 31 December 2014 1 July 2015
7.8 Issued during quarter	1,000,000	-	<i>Exercise price</i> \$0.25	<i>Expiry date</i> 1 July 2015
7.9 Exercised during quarter	(5,833)	(5,833)	<i>Exercise price</i> \$0.10	<i>Expiry date</i> 31 December 2014
7.10 Expired during quarter			<i>Exercise price</i>	<i>Expiry date</i>
7.11 <b>Debentures</b> <i>(totals only)</i>				

+ See chapter 19 for defined terms.

7.12	<b>Unsecured notes</b> ( <i>totals only</i> )		
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## Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does ~~/does not~~\* (*delete one*) give a true and fair view of the matters disclosed.

Sign here: ..... Date: 31 January 2012  
(~~Director~~/Company secretary)

Print name: Clint McGhie

## Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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+ See chapter 19 for defined terms.