

Golden Birch Outlines Key Targets at Keveri Project including Exploration Results for Flagship Omu Prospect

Timmins, Ontario (March 12, 2020) - Golden Birch Resources Inc. (CSE:GBRX) (“Golden Birch” or the “Company”) is pleased to announce key copper-gold targets at the Keveri Project, located 200 kilometres southeast of Port Moresby, Papua New Guinea (“PNG”), including exploration results for the Company’s flagship Omu Prospect.

Highlights:

- Most copper-gold targets at Keveri located proximal to intersection of northeast-southwest transverse structures and arc parallel northwest-southeast fault zones within the Papuan Mobile Fold Belt
- Targets include the Company’s flagship Omu Prospect and Waki, Daru/Araboro & Everi Prospects
- Targets contain copper (and some gold) mineralization at surface and all are untested by drilling
- Targets show hydrothermally altered porphyry intrusions and porphyry related alteration zones
- Exploration by the Company at Omu Prospect yields multiple potential drill targets with coincident geological, geochemical and geophysical anomalies
- Drill hole targeting in progress at Omu Prospect - future announcement to provide details
- Exploration results to be provided in future announcements for Waki, Daru/Araboro & Everi Prospects.

Alan Martin, President & Executive Director of Golden Birch states: “We are very excited with the exploration results across the Keveri Project, and at our flagship Omu Prospect. Our exploration program in late 2018 and early 2019 at Omu has delivered anomalous and coincident results from geological mapping, geochemical sampling and geophysical surveying. This will enable us to best locate drill holes to test these targets beneath the surface. We also have anomalous copper and gold results for two new discoveries within the Keveri Project - Waki and Everi - with these results to be provided in future news releases.”

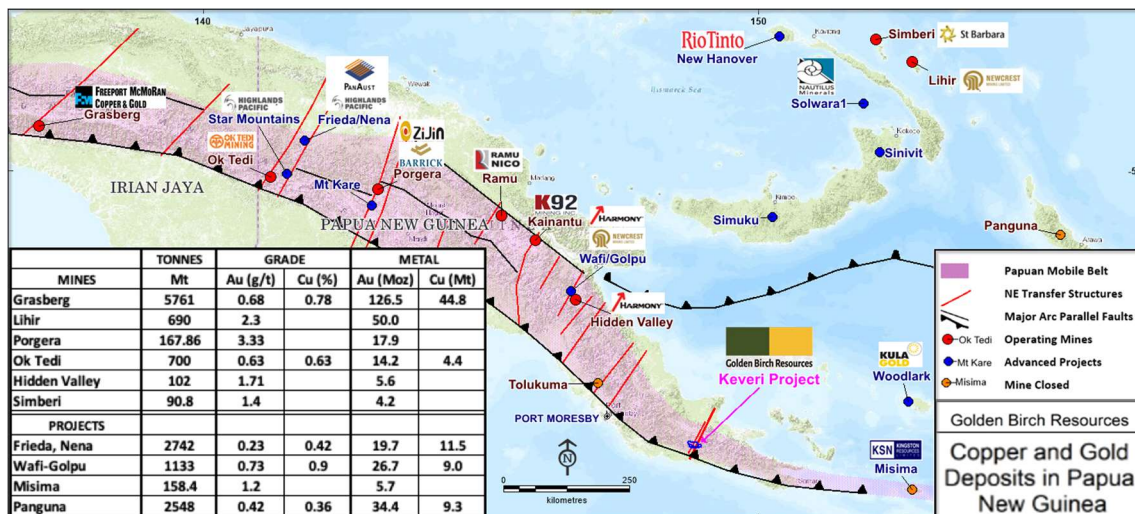


Figure 1: Copper and gold deposits of PNG (table in bottom left of figure), with the location of the Keveri Project within the Papuan Mobile Fold Belt. The Company only has an interest in the Keveri Project. Source data for the deposits provided in Appendix 4. Mineralization hosted on adjacent and/or nearby properties and operations is not necessarily indicative of mineralization hosted at the Keveri Project.

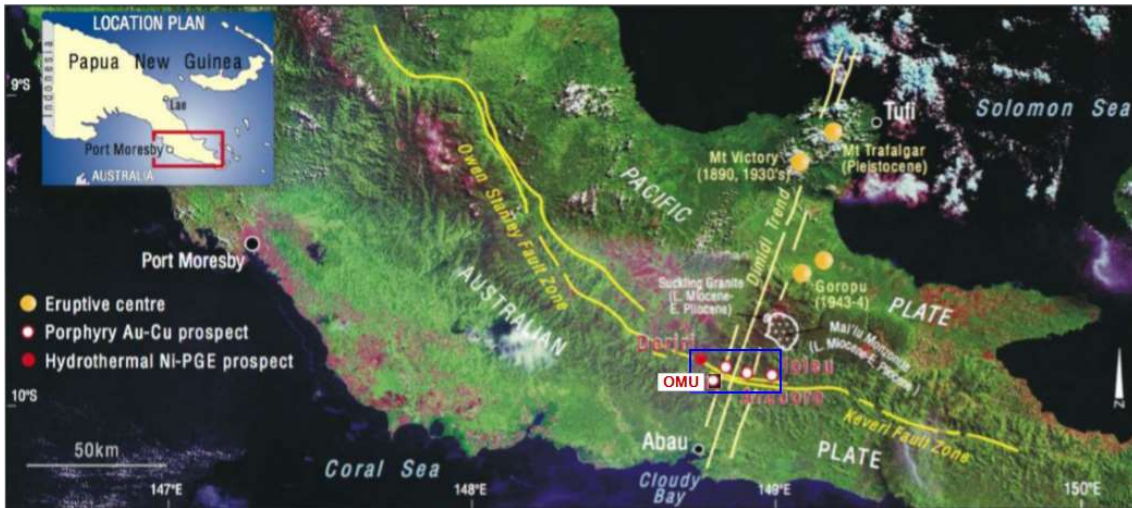


Figure 2: Satellite Image of Keveri Project. The Owen Stanley & Keveri Fault Zones are northwest-southeast “arc parallel” structures of the “Papuan Mobile Fold Belt” or “New Guinea Fold Belt”. Known porphyry copper deposits in the Papuan Mobile Fold Belt are located proximal to the intersection of these structures (Figure 1 and Appendix 4). The Keveri Project (approximate location outlined in blue) has multiple transverse structures associated with the Dimidi Trend (Papuan Minerals Ltd, Exploration Report, D. Lindley, January 2018) which intersect these arc parallel faults.

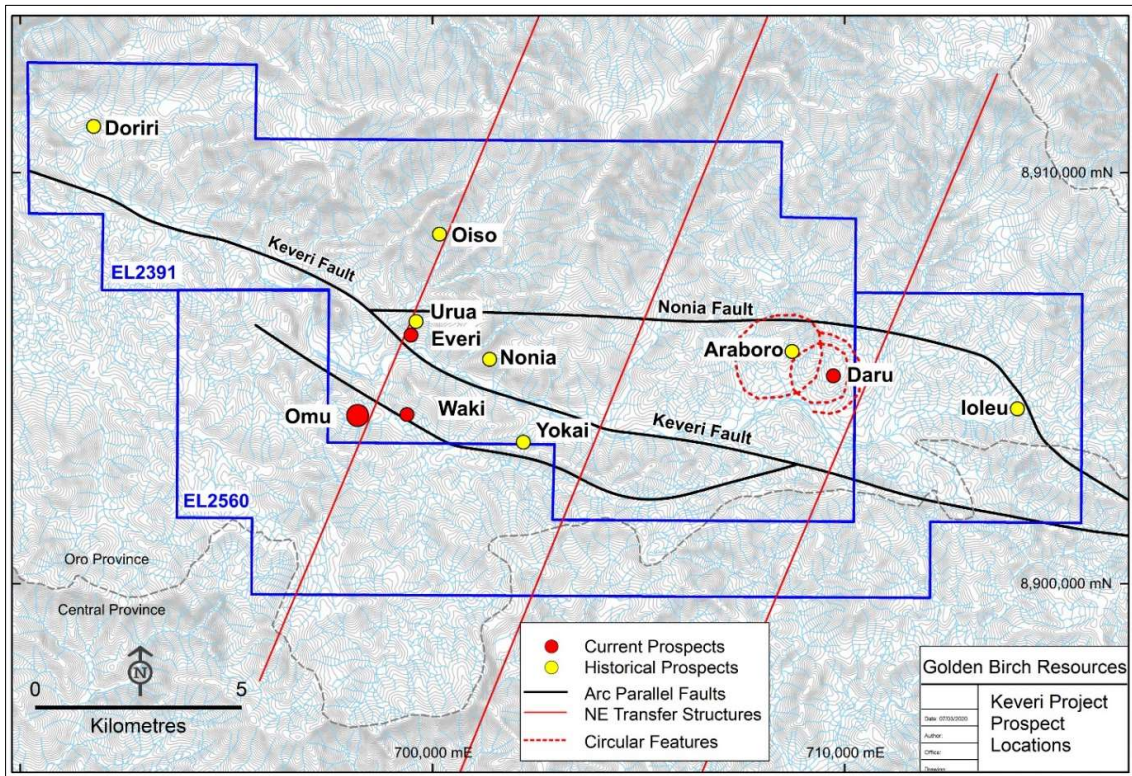


Figure 3: Copper-gold targets within the Keveri Project being explored by Golden Birch. Omu is the flagship prospect for the Company and denoted with a larger red dot symbol.

Exploration Work Completed by Golden Birch at Keveri Project late 2018 and early 2019

Preliminary field mapping and sampling was undertaken at a regional scale of 1:5000 on each prospect covering an aggregate area of 10 square kilometres using a combination of compass-and-tape traverses and GPS (Global Position System) point mapping. This was followed up with detailed 1:1000 (“Anaconda”-style) mapping and sampling on areas deemed prospective for copper mineralization. Geological fact maps were produced from the detailed mapping on all prospects resulting in the creation of interpretive maps (e.g. geology, alteration, sulfide-oxide occurrences and veins).

A total of 702 rock samples for all prospects (Omu, Waki, Everi and Daru/Araboro) were collected for analytical and petrological investigation during the entirety of the geological mapping campaign which included reconnaissance mapping and prospecting campaigns. A description of the sampling and analysis technique is provided in Appendix 3.

Detailed mapping at Omu has revealed hydrothermal, multi-phase porphyry altered intrusions and anomalous surface copper mineralization (both hypogene and supergene) from creek float (loose rock) material and outcrops. In fact, this is also the case for all other prospects within the Keveri exploration licence areas. Summarised below are the geological characteristics of each prospect (Table 1):

Table 1: Key geological characteristics for each of the key prospects within the Keveri Project

Prospect	Host Rock/s	Intrusion	Alteration	Mineralization	Size ⁽¹⁾
Omu	Basalt	Tonalite, Diorite, Quartz Diorite	chlorite+sericite, silica+pyrite (overprint), K-spar, epidote and clay (altered clasts), epidote+magnetite	chalcopryrite, bornite, chalcocite, malachite, chrysocolla	1.5km x 1.5km
Waki	Basalt, Limestone	Diorite, Microdiorite	chlorite+sericite, pyrite+silica+clay, epidote+magnetite	chalcopryrite, bornite, malachite, azurite	1.0km x 1.0 km
Everi	Basalt, Limestone	Microdiorite, Diorite, Gabbro	chlorite, epidote+chlorite, chlorite+sericite, epidote, clay+sericite+silica (alteration in diatreme)	chalcopryrite, bornite, malachite	0.5 km x 0.5 km
Daru	Ultramafic- mafic rocks	Diorite, Microdiorite, Quartz Diorite	K-spar+magnetite+epidote, chlorite+epidote, quartz+sericite+pyrite (overprint)	chalcopryrite, bornite, malachite	1.0 km x 1.0 km

Note:

(1) Size reflects the anomalies of the prospects as represented by geological, geochemical and geophysical (in the case of Omu) characteristics.

Geochemical Sampling (Soil and Rock) at Omu:

A 100m x 100m geochemical soil sampling program using a hand auger drill was carried out at the Omu target area from February to May 2019. A total of 448 soil samples were collected during the soil sampling program. A description of the sampling and analysis technique is provided in Appendix 3.

Geochemical results at Omu yielded a semi-cohesive copper-in-soil footprint (Cu values vary from 180 to 1660 ppm) over an approximate area of 1.5 kms x 1.5 kms coincident with porphyry intrusive rocks associated with hydrothermal alteration and copper mineralization, IP chargeability and ground magnetic anomalies (Figure 4).

A total of 466 rock samples were collected over the Omu prospect. Figures 5, 6 and 7 illustrate the location of rock samples with anomalous copper from these samples. These samples are grab samples of float and in situ, and are selective in nature and are not representative of the mineralization hosted on the properties. A summary of the anomalous results from these rock samples is provided in Appendix 2.

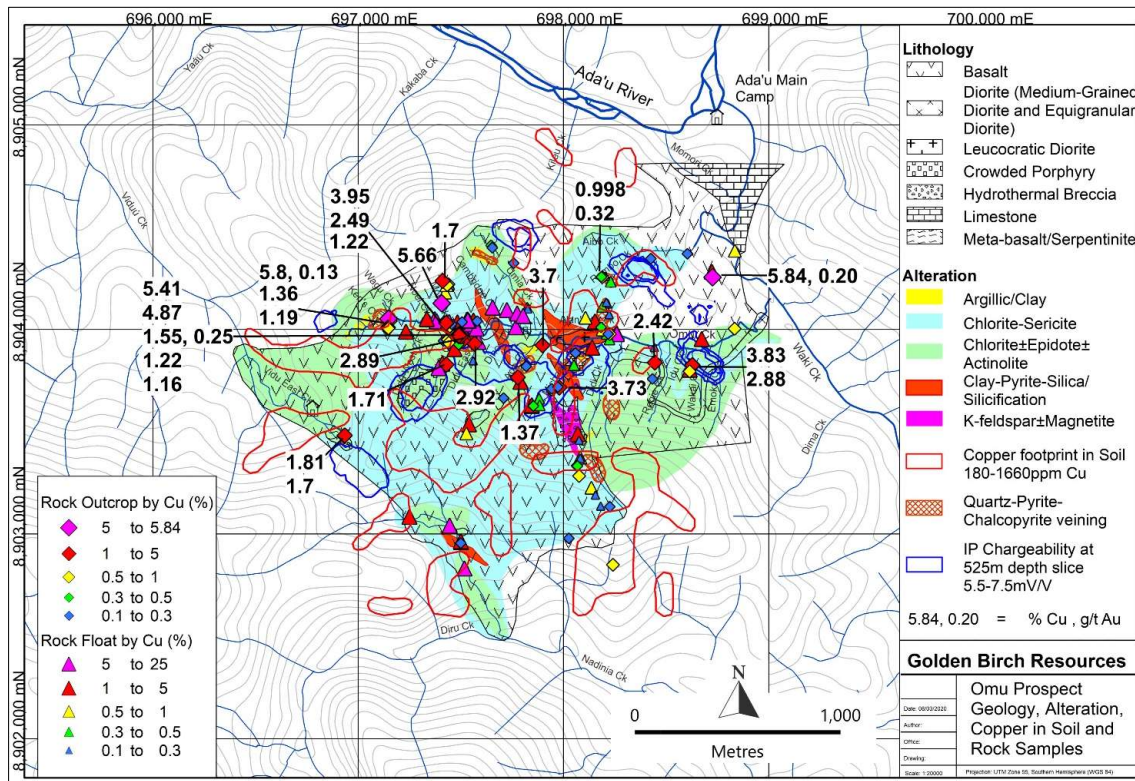


Figure 4: Omu prospect summary map illustrating the results of the detailed geological mapping. Anomalous copper in soil anomalies are plotted over the mapped geology along with the anomalous copper in both outcrop and float samples.

Selected Rock Samples for Illustration:

The following rock samples have been selected for inclusion in this release with description of samples below. Photos of these samples are provided in Appendix 1 along with locations of the samples in Figure A1;

1, Sample 106706, from centre of Omu Main IP target area. Caption in photo reads; Quartz vein breccia float with chalcopyrite and malachite, 3.49% Cu, 0.024 Au ppm. Sample size in photo, 6-8 cm.

2, Sample 106717, from Didu East creek. Caption in photo reads; chlorite-sericite altered diorite float with chalcopyrite + bornite, 7.7% Cu, 0.089 Auppm. Didu East creek is a very narrow creek south of Omu Creek and is entirely contained with the Omu Main IP target area. Sample size in photo 6-8 cm.

3, [Sample LD0031](#), from Omu Main IP target area. Caption in photos reads; Grab sample from 3m wide outcrop of poorly sorted hydrothermal breccia with angular K-feldspar, epidote and clay-altered clasts set in a weakly magnetic cement. Chalcopyrite as blebs/disseminations. Tungsten pen for scale.

4, [Sample EA-009](#), from Omu NE IP target area. Caption in photo reads; Grab sample from a transitional gossanous sub-crop of microdiorite with chalcopyrite and pyrite blebs/disseminations associated with hematite and limonite coatings. Sample size in photo 6-8 cm. 0.485% Cu, 0.017 Au_ppm, 45.3 Mo_ppm.

5, [Sample 109435](#), from southwest part of Omu Main IP target area. Caption in photo reads; Grab sample from a transitional gossanous outcrop of microdiorite with very fine disseminations of chalcopyrite and pyrite associated with limonite coatings. Tungsten pen for scale. 1.7% Cu, 0.019 Au_ppm, 9.3 Ag_ppm.

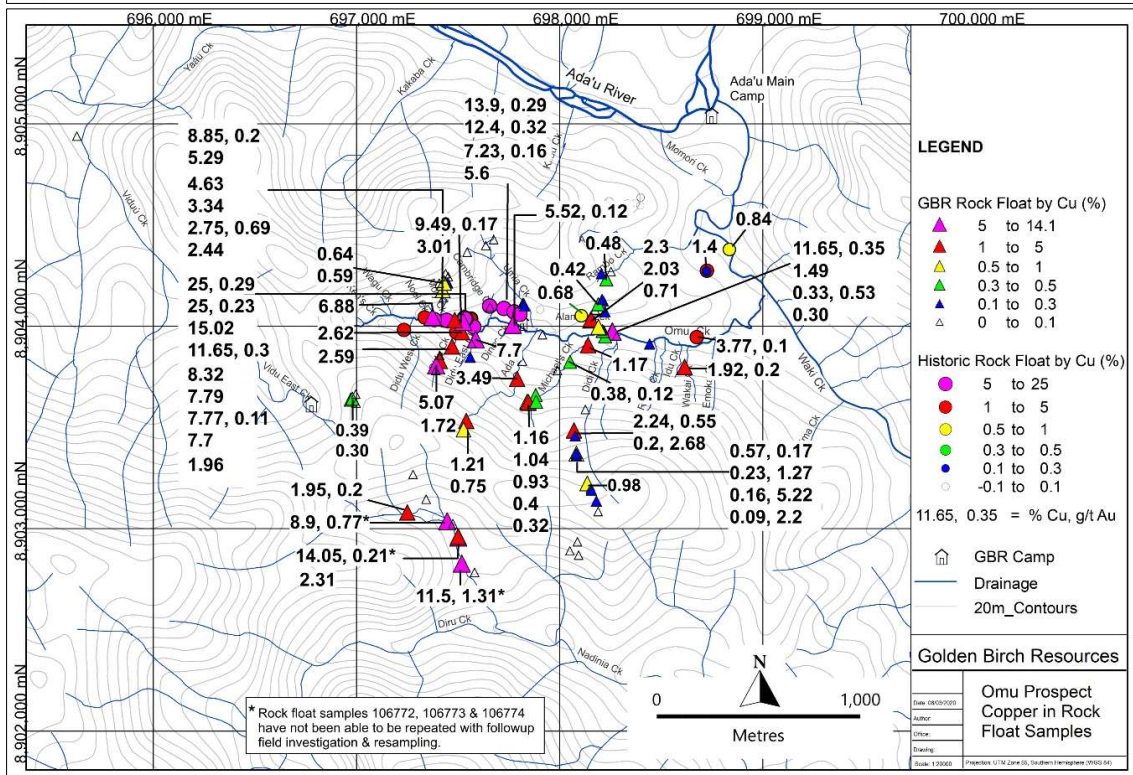
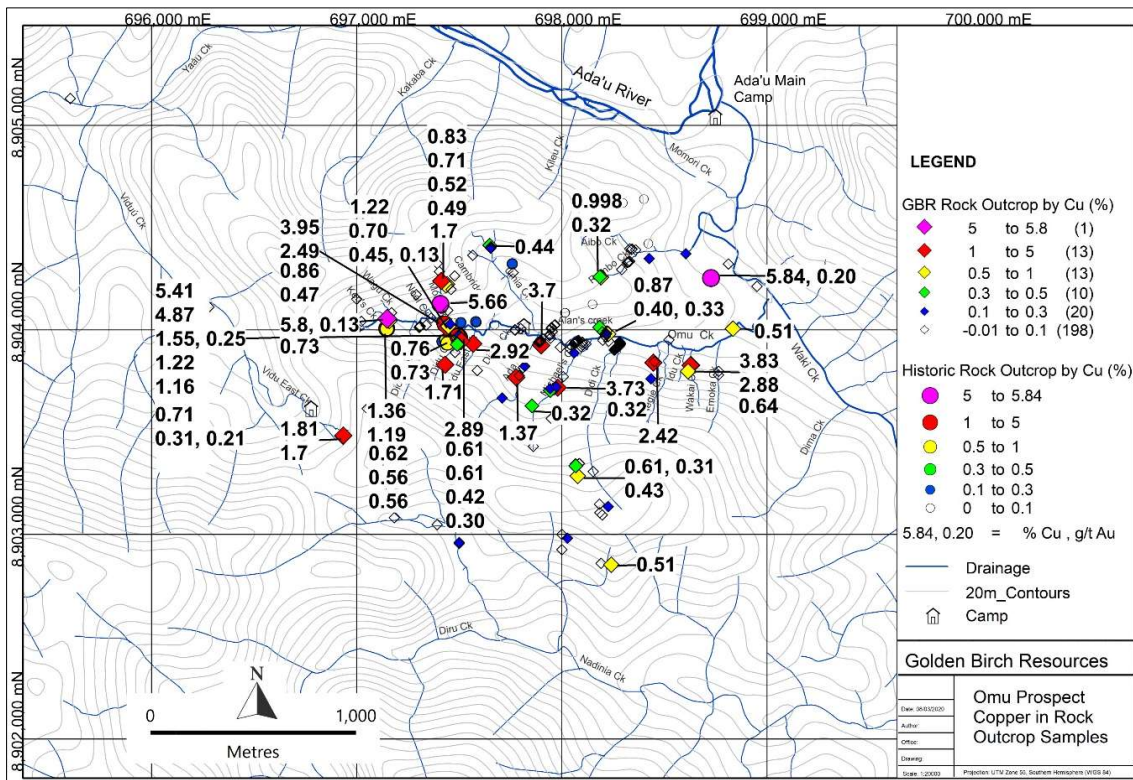
6, [Sample RF-18100910](#), sample near up-dip projection of Omu Main IP target. Caption in photo reads; Float sample in Omu Creek of quartz+chalcopyrite vein hosted by diorite with strong malachite coatings.

7, [Sample RF-18100806](#), sample near up-dip projection of Omu Main IP target. Caption in photo reads; Float sample in Omu Creek of limonitized rock with chalcopyrite and strong malachite coatings (sample 6-8 cm).

8, [Sample 106782](#), sample south of Omu Creek. Caption in photo reads; Grab sample from an outcrop of brecciated and silicified rock associated with chalcopyrite and bornite. Sample size in photo 6 cm.

9, [Sample RF-18100804](#), sample in Omu Creek near up-dip projection of Omu Main IP target. Caption in photo reads; Float sample of intrusive with silica+chalcopyrite+bornite vein hosted by intrusive. Strong chalcopyrite in fractures. Sample size in photo 6-8 cm. 9.49% Cu, 0.17 Au_ppm, 9.9 Ag_ppm, 2 Mo_ppm.

10, [Sample EA-026](#), from Didi Creek south within southeastern part of Omu Main IP target area. Caption in photo reads; Angular float sample of a silicified and oxidized rock with pyrite and chalcopyrite associated with sericitic/clay alteration. Sample size in photo 7 cm. 0.164% Cu, 5.2 Au_ppm, 10 Mo_ppm.



Figures 5 & 6: Anomalous copper results at Omu for both Outcrop (figure above) and Float Samples (figure below).



Geophysical Survey:

An induced polarisation (“IP”) geophysical survey was completed by SJ Geophysics (of British Columbia, Canada) at the Omu prospect area from May to June 2019. A total of 50 line-kms were surveyed along with a ground magnetic survey. The IP survey had an approximate survey depth limitation of 350 m to 400 m below surface.

Results from the IP survey delineated two main chargeability anomalies occurring to a depth of ≥ 335 metres labelled Omu Central (or Main) and Omu Northeast (NE) (Figures 8 – 14). These chargeability anomalies are sometimes coincident with mapped surface hypogene copper mineralization at surface hosted by both the younger intrusive rocks and/or older basalt wall-rocks.

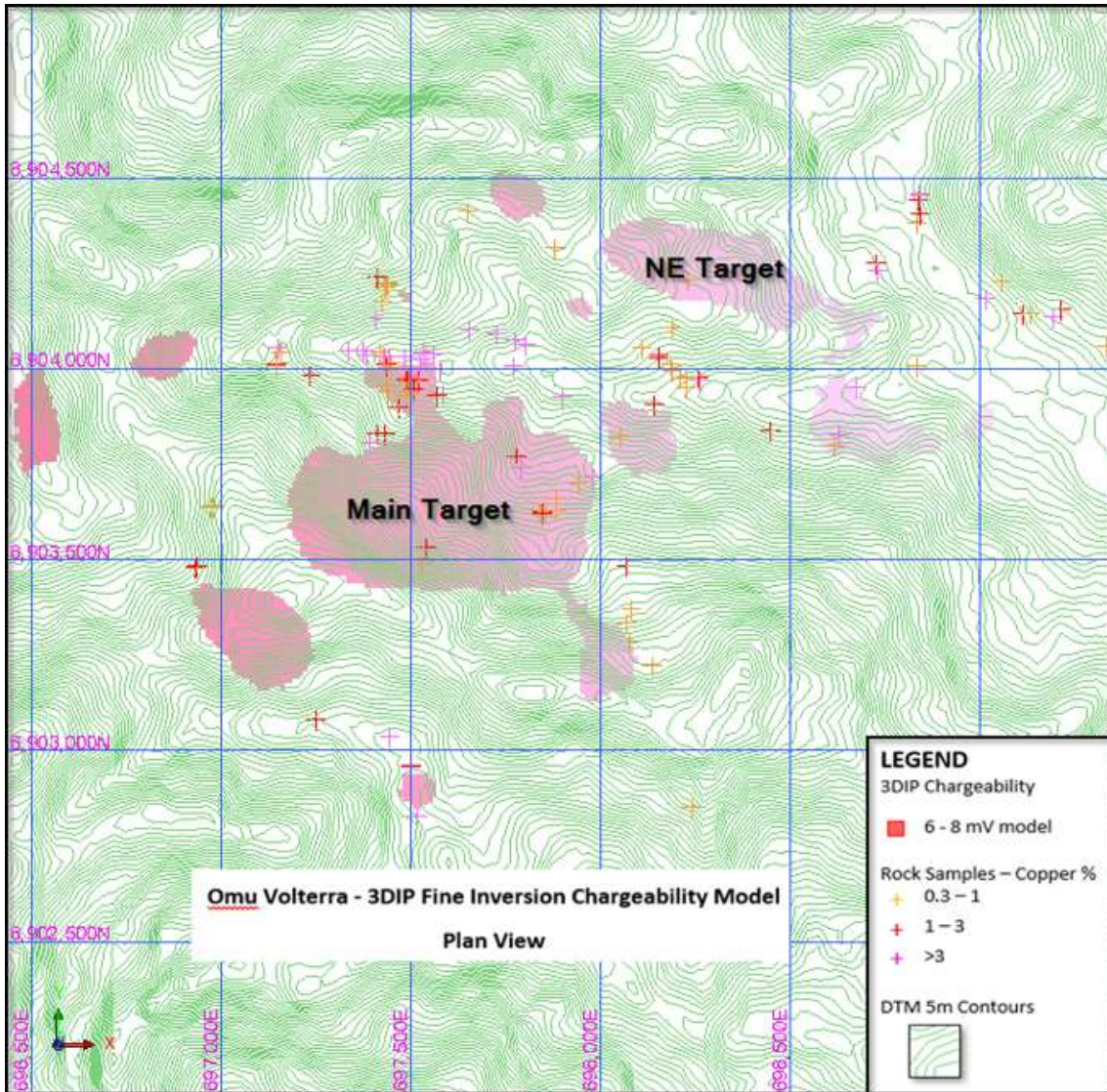
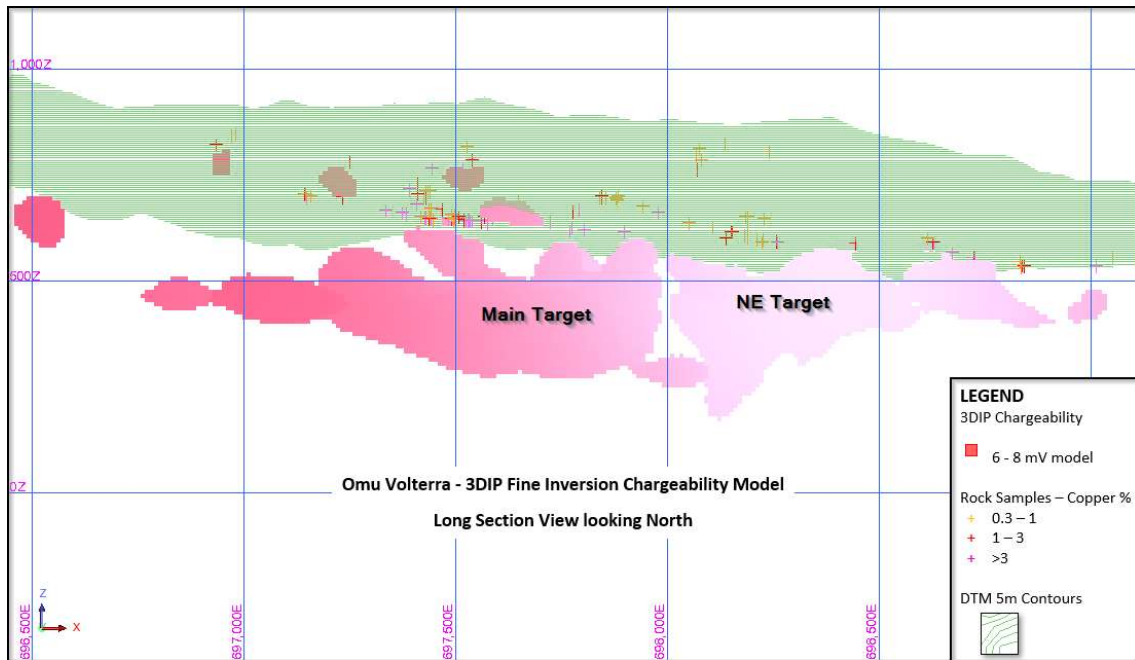
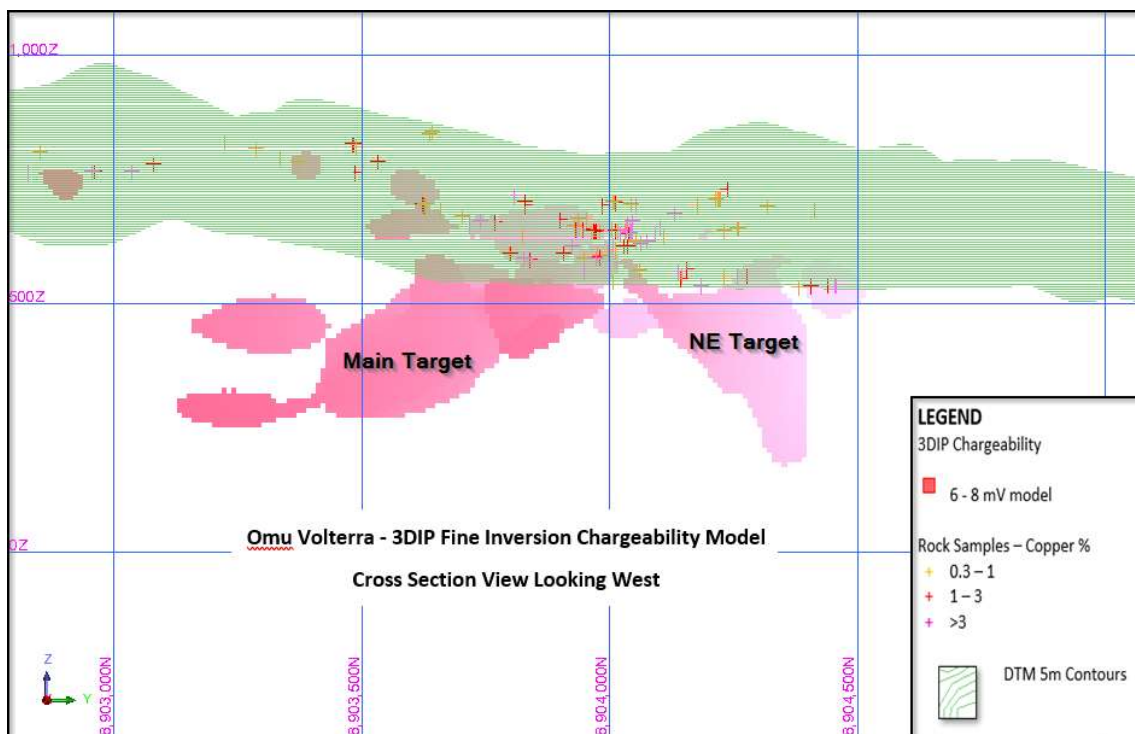


Figure 7: Plan view of the IP anomalies. Key IP anomalies named Main Target and NE Target.



Figures 8: Long section looking from south to north illustrating the strike length of the Omu Main and Omu NE targets. Given the depth limitation of the IP survey, both the Main and NE targets appear open at depth.



Figures 9: This section is a view from east to west and illustrates the thickness of the Omu Main and Omu NE targets.

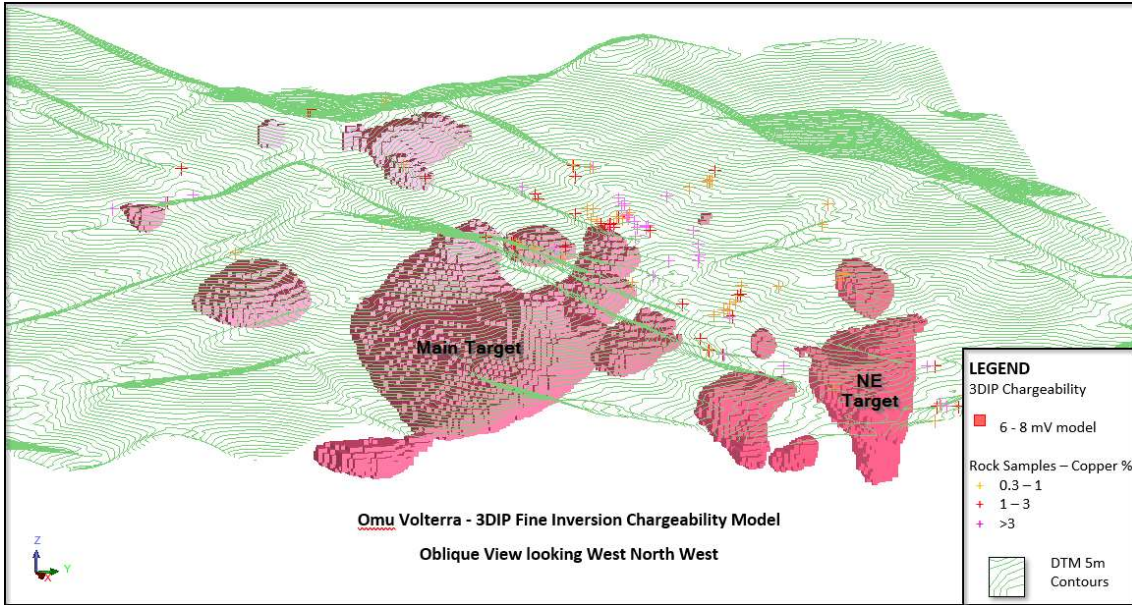


Figure 10: 3D image of modelled IP results. Targets open at depth given the constraints of the survey below 400 metres.

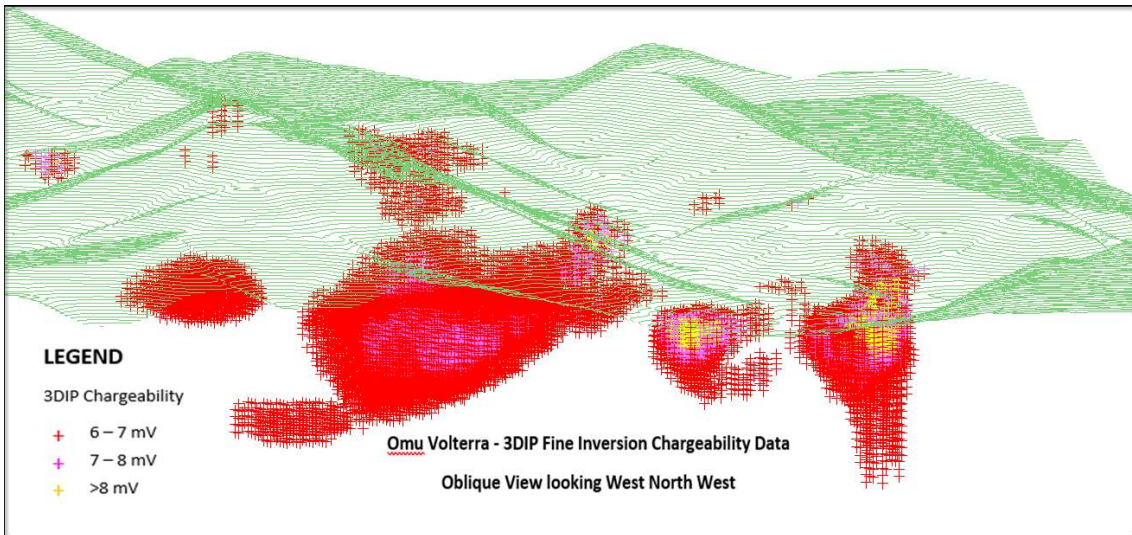


Figure 11: 3D images of modelled IP results. This image illustrates the variability of chargeability for the anomalies. The legend in the bottom left indicates the differing degrees of chargeability. The variability shown in the figure may be due to the presence of disseminated sulphides. Targets appear open at depth.

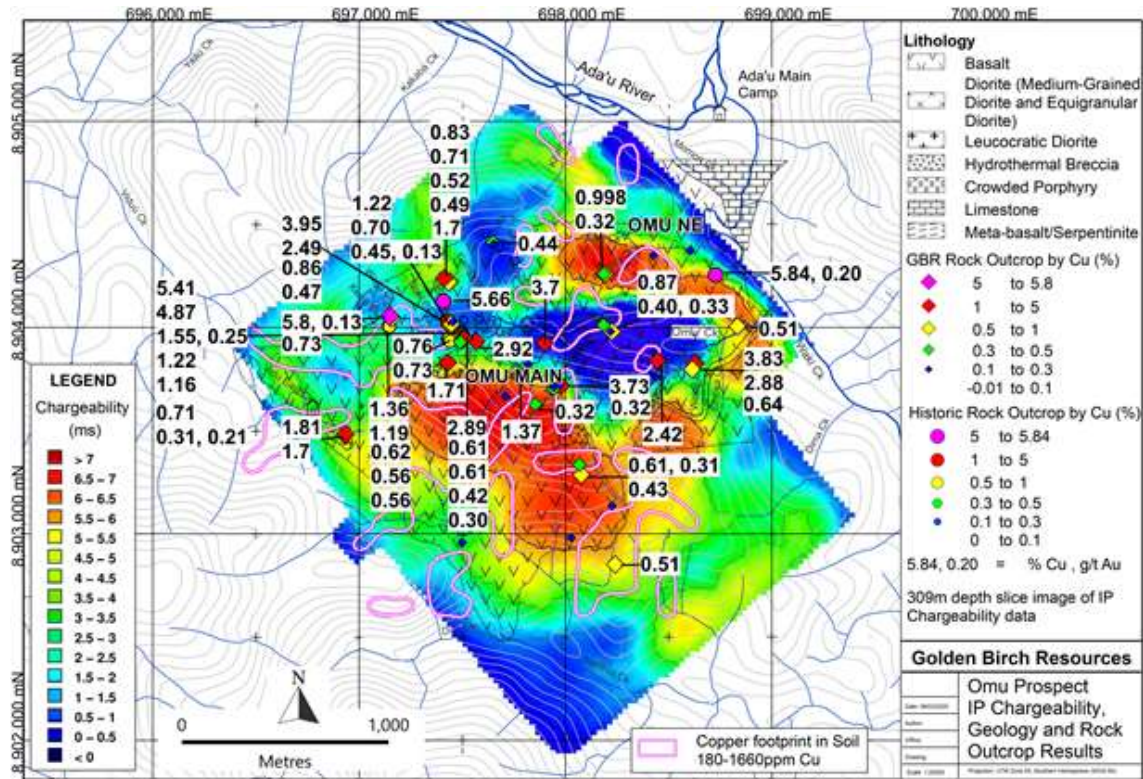


Figure 12: This image illustrates the presence of the IP Chargeability anomaly (orange-red coloration) at a depth approximately 335 metres. The surface is at a relative level (RL) of approximately 645 metres. Reference to “309 metre depth slice” in the legend means 309 m RL. Copper in soil anomalies and copper in rock outcrops at surface are shown. Omu Main and Omu NE anomalies are labelled in the figure.

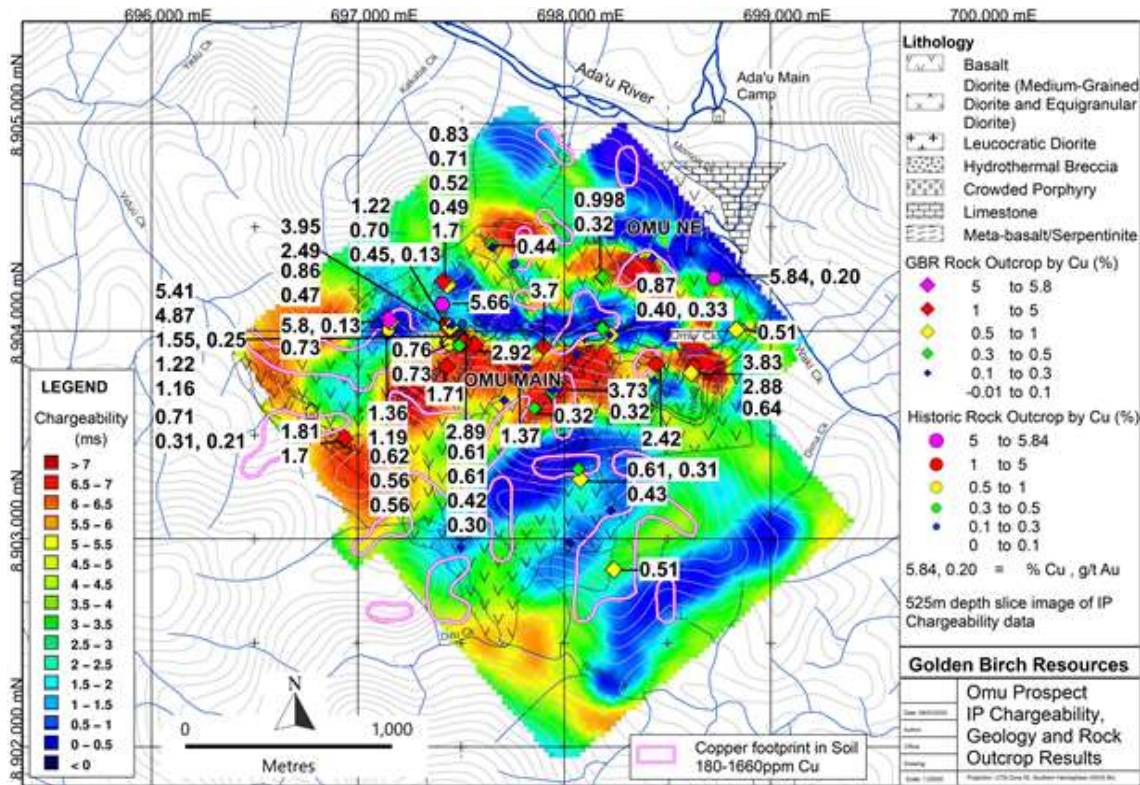


Figure 13: Image of the IP Chargeability anomaly at a depth of approximately 120 metres. Reference to 525 m depth slice means 525 m RL. This image illustrates the presence of the IP Chargeability anomaly (orange-red coloration) at a depth of approximately 120 metres. The surface is at a relative level (RL) of approximately 645 metres. Reference to “525 metre depth slice” in the legend means 525 m RL. Copper in soil and copper in rock outcrops at surface are shown. Omu Main and Omu NE targets are labelled in the figure.

Drill Hole Target Selection:

Work now includes final compilation of the exploration results to best locate drill holes to test the targets. The selection process will entail application of geological (surface mapping), geochemical (rock and soil sampling) and geophysical (IP survey) results carried out in the field. A 3D (dimensional) model of the IP data is currently being created to gain a better understanding of the nature of the IP chargeability-conductivity-resistivity anomalies that occur at depth at the Omu prospect area to aid drill hole targeting (Figures 9 – 13).

Further details of drill hole selection and their location will be provided in subsequent news releases.

Interpretation of Relative Geological Position of Omu Prospect

Senior Geological consultant to Golden Birch Mr Leo Dagdag makes the following comments in relation to the prospectivity of the Omu prospect as a geological target for porphyry copper mineralization (Mr Dagdag has agreed to the release of his comments):

“The Omu target has certain characteristics of a Tier-1 porphyry copper deposit based on its relatively cohesive geochemical footprint (1.5km x 1.5km) and reinforced by strong coincidences of mapped porphyry-style intrusions, hydrothermal alteration, hypogene and supergene copper mineralization at surface from outcrops and rock floats and IP chargeability and ground magnetic anomalies from geophysical surveying. Omu is interpreted to be positioned in the right erosional level in terms of deposit preservation (red outline, Figure 14). The mapped hydrothermal breccia with porphyry-altered and mineralized clasts (rock outcrop sample LD-0031, Appendix 1) supports the concept of a mineralized intrusion at depth.”

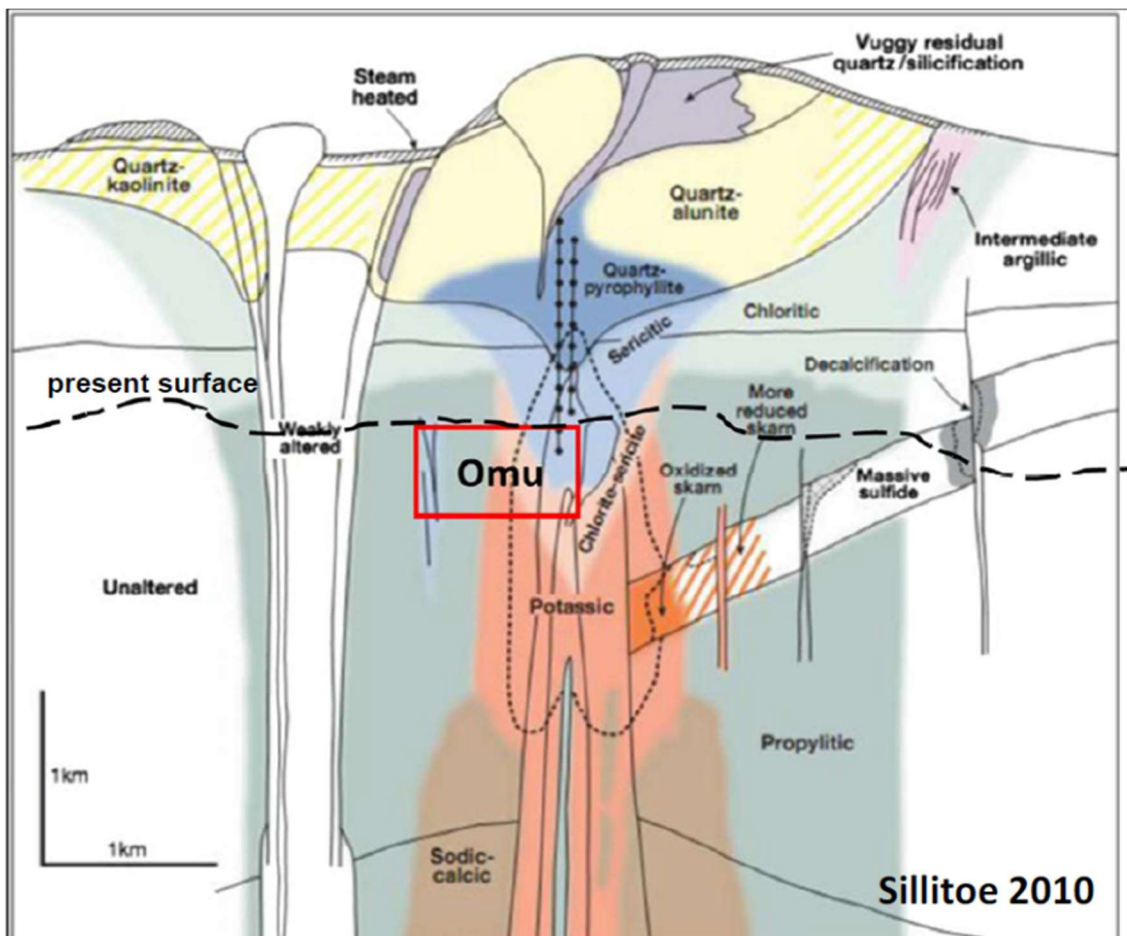


Figure 14: Interpretive location of the Omu target area in terms of porphyry copper alteration mineralization zoning pattern by R. Sillitoe (2010).

Qualified Person

Mr. Ian Taylor, MAusIMM(CP), a consultant to the Company, and a Qualified Person as defined by National Instrument 43-101 – *Standards of Disclosure for Mineral Projects*, has approved the applicable contents of this news release.

About Golden Birch Resources Inc.

Golden Birch Resources Inc. is a mineral exploration company focused on acquiring, exploring, and developing quality mineral properties in Papua New Guinea. Core values for the Company are respect for the Community, the Landowners, the environment and operating a safe workplace for its employees. The Company is also committed to best practise standards of Corporate Governance.

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For further information please visit the Company's website at www.goldenbirchresources.ca or contact:

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Forward-Looking Statements

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This Press Release contains forward-looking statements that involve risks and uncertainties, which may cause actual results to differ materially from the statements made. Such statements reflect the Company's present views, future plans, objective or goals, including words to the effect that the Company or management expects a stated condition or result to occur. When used in this document, the words "may", "would", "could", "will", "intend", "plan", "anticipate", "believe", "estimate", "expect" and similar expressions are intended to identify forward-looking statements. Since forward-looking statements are based on assumptions and address future events and conditions, by their very nature they involve inherent risks and uncertainties. Although these statements are based on information currently available to the Company, the Company provides no assurance that actual results will meet management's expectations. Many risks, uncertainties, and other factors involved with forward-looking information could cause our actual results to differ materially from the statements made, including those factors discussed in filings made by us with the Canadian securities regulatory authorities.

Forward looking information in this news release includes, but is not limited to, the Company's objectives, goals or future plans, statements, such actual results of current exploration programs, the general risks associated with the mining industry, the price of copper, gold and other metals, currency and interest rate fluctuations, increased competition and general economic and market factors, potential mineralization, the estimation of mineral resources, exploration and mine development plans, timing of the commencement of operations and estimates of market conditions. Factors that could cause actual results to differ materially from such forward-looking information include, but are not limited to failure to identify mineral resources, failure to convert estimated mineral resources to reserves, the inability to complete a feasibility study which recommends a production decision, the preliminary nature of metallurgical test results, delays in obtaining or failures to obtain required governmental, environmental or other project approvals, political risks, , uncertainties relating to the availability and costs of financing needed in the future, changes in equity markets, inflation, changes in exchange rates, fluctuations in commodity prices, delays in the development of projects, capital and operating costs varying significantly from estimates and the other risks involved in the mineral exploration and development industry, and those risks set out in the Company's public documents filed on SEDAR.

Although the Company believes that the assumptions and factors used in preparing the forward-looking information in this news release are reasonable, undue reliance should not be placed on such information, which only applies as of the date of this news release, and no assurance can be given that such events will occur in the disclosed time frames or at all. The Company disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, other than as required by law.

Appendix 1: Selected Rock Samples, Omu Prospect

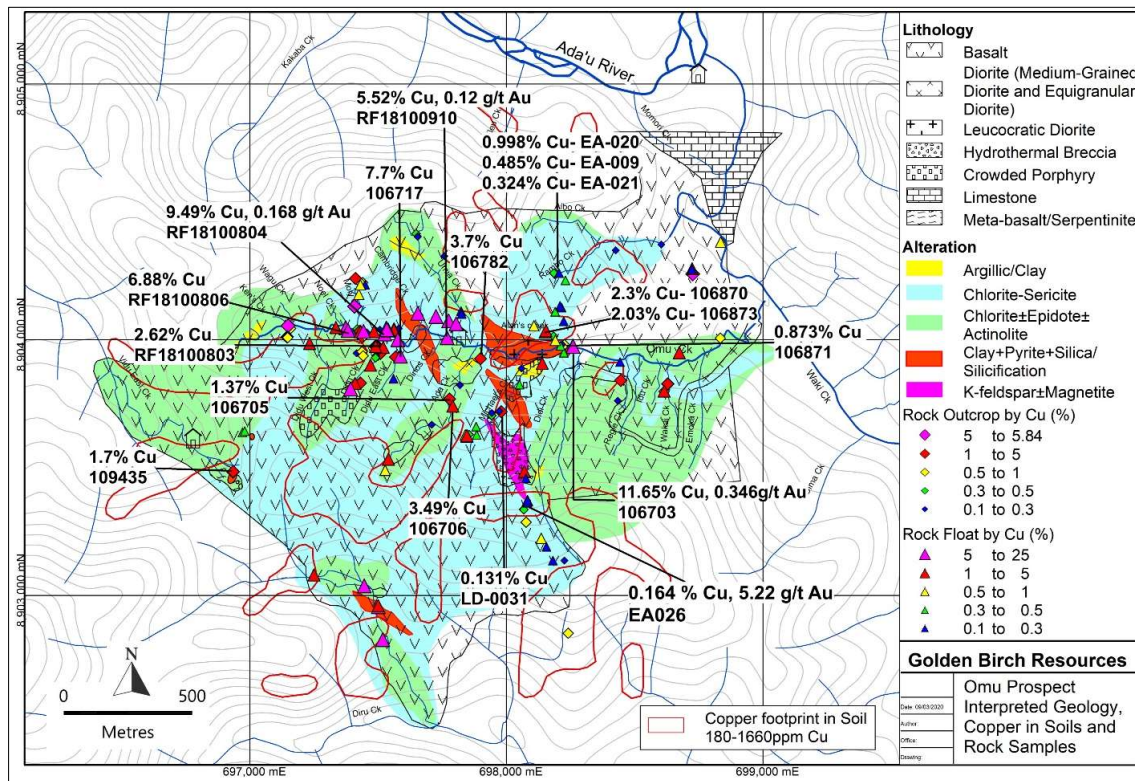


Figure A1: Location of selected rock samples in rock photos from the Omu prospect

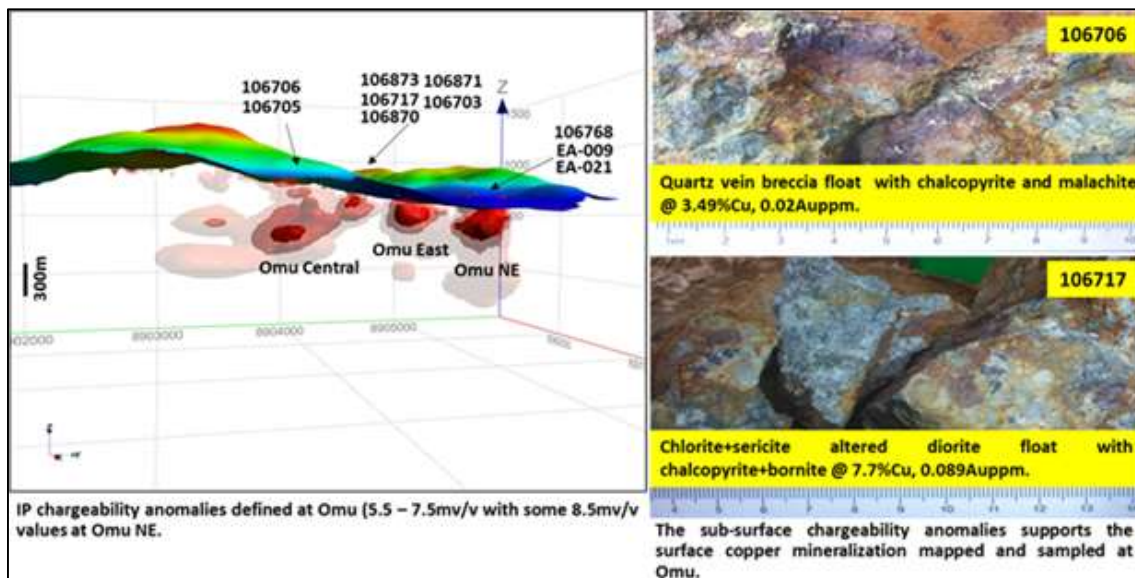


Figure A2: Location of selected rock sample photos in relation to IP chargeability targets at Omu



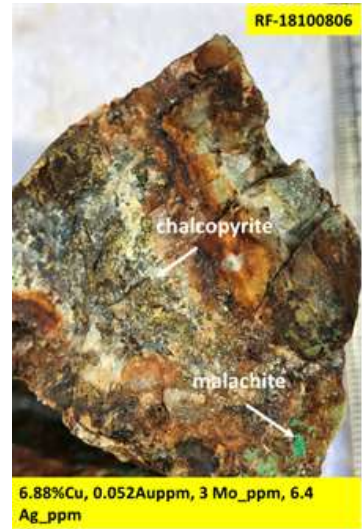
Figure A3: Grab sample from ~3m wide outcrop of poorly sorted hydrothermal breccia with angular K-feldspar, epidote and clay-altered clasts set in a weakly magnetic cement. Chalcopyrite as blebs/disseminations.



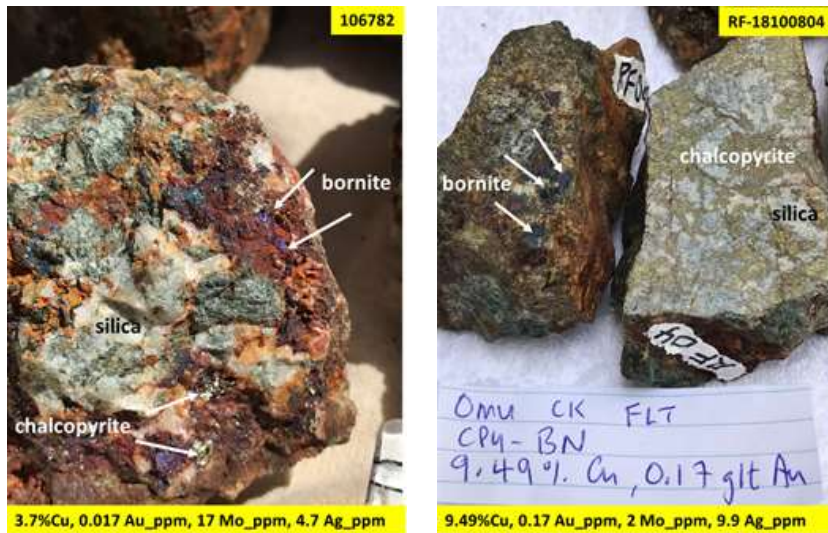
Figure A4: Grab sample from a transitional gossanous sub-crop of microdiorite with chalcopyrite and pyrite blebs/disseminations associated with hematite and limonite coatings.



Figure A5: Grab sample from transitional gossanous outcrop of microdiorite with very fine disseminations of chalcopyrite and pyrite associated with limonite coatings.



Figures A6, A7, A8: From left to right, Angular float sample of silicified and oxidized rock with pyrite and chalcopyrite associated with sericitic/clay alteration; Float sample in Omu Creek of quartz+chalcopyrite vein hosted by diorite with strong malachite coatings; Float sample in Omu Creek of limonitized rock with chalcopyrite and strong malachite coatings.



Figures A9 and A10: From left to right, Grab sample from an outcrop of brecciated and silicified rock associated with chalcopyrite and bornite; Float sample of intrusive with silica+chalcopyrite+bornite vein hosted by intrusive. Strong chalcopyrite in fractures.

Appendix 2: Rock Samples

Table 2: Anomalous Cu (copper) and Au (gold) in Rock Samples at Omu Prospect.

Sample #	UTM_East	UTM_North	Type	Au g/t	Cu %	Sample #	UTM_East	UTM_North	Type	Au g/t	Cu %
16632	698612	8904108	Float	0.015	1.40	106782	697899	8903925	Outcrop	0.017	3.70
16635	698562	8903780	Float	0.104	3.77	106856	698281	8903952	Float	0.669	0.07
16636	698615	8904088	Outcrop	0.204	5.84	106870	698151	8904029	Float	0.017	2.30
16639	697450	8903870	Float	0.059	7.79	106872	698184	8904013	Outcrop	0.335	0.41
16640	697449	8903869	Float	0.231	25.0	106873	698154	8904035	Float	0.033	2.03
16641	697450	8903869	Float	0.058	1.96	109001	698082	8903373	Float	2.200	0.09
16642	697420	8903875	Float	0.292	25.0	109010	698077	8903286	Outcrop	0.315	0.61
16643	697419	8903875	Float	0.111	7.77	109042	697250	8903080	Float	0.201	1.95
16644	697420	8903876	Float	0.093	7.70	109046	698630	8903827	Outcrop	0.059	3.83
16645	697380	8903804	Outcrop	0.250	1.55	109047	698628	8903827	Outcrop	0.051	2.88
16646	697380	8903803	Outcrop	0.005	1.16	109048	698615	8903799	Float	0.210	1.92
16648	697318	8903863	Outcrop	0.033	2.49	109050	697846	8903622	Float	0.050	1.16
16650	697317	8903864	Outcrop	0.064	3.95	109051	697846	8903625	Float	0.031	1.05
16651	697319	8903862	Float	0.038	3.34	109060	696934	8903482	Outcrop	0.031	1.81
16652	697543	8903934	Float	0.324	12.40	109106	697500	8902960	Float	0.066	2.31
16653	697613	8903922	Float	0.071	5.60	109121	697540	8903532	Float	0.007	1.21
16654	697663	8903905	Float	0.159	7.23	109128	691166	8902236	Outcrop	1.790	0.13
16655	697692	8903893	Float	0.291	13.90	109303	698446	8903840	Outcrop	0.006	2.42
16657	708000	8890937	Float	0.027	1.39	109424	697412	8904239	Sub-crop	0.027	1.70
16659	697380	8903805	Outcrop	0.089	5.41	109435	696935	8903484	Outcrop	0.019	1.70
16660	697378	8903804	Float	0.688	2.75	EA020	698190	8904258	Outcrop	0.009	1.00
16715	697034	8903842	Outcrop	0.060	1.36	EA025	698082	8903371	Float	1.270	0.23
16717	697296	8903961	Outcrop	0.061	5.66	EA026	698082	8903362	Float	5.220	0.16
16718	697121	8903816	Float	0.021	2.44	LD-0007	698211	8903976	Float	0.528	0.33
16721	697465	8903831	Float	0.074	8.32	R18100802	697431	8903830	Outcrop	0.017	1.71
16733	697387	8903801	Outcrop	0.058	4.87	R18100807	697149	8904054	Outcrop	0.131	5.80
16734	697389	8903798	Outcrop	0.043	1.22	RF18100803	697520	8903970	Float	0.065	2.62
106702	698259	8903979	Float	-0.005	1.50	RF18100804	697525	8904022	Float	0.168	9.49
106703	698260	8903973	Float	0.346	11.65	RF18100805	697484	8904031	Float	0.042	3.01
106705	697778	8903768	Outcrop	0.014	1.37	RF18100806	697374	8904046	Float	0.052	6.88
106706	697791	8903740	Float	0.020	3.49	RF18100910	697769	8904007	Float	0.121	5.52
106707	697980	8903718	Outcrop	0.013	3.73	RM002	697509	8903946	Outcrop	0.044	2.89
106714	697568	8903932	Outcrop	0.044	2.92	RM019	698070	8903485	Float	0.551	2.24
106715	697410	8903829	Float	0.015	1.73	RM019	698070	8903485	Float	0.551	2.24
106716	697392	8903807	Float	0.096	5.07	RM020	698076	8903458	Float	2.680	0.20
106717	697587	8903935	Float	0.089	7.70	RM021	698082	8903371	Float	0.701	0.19
106740	697438	8904011	Outcrop	0.010	1.22	SP021	697427	8903869	Float	0.034	15.02
106771	697470	8903900	Float	0.024	2.59	SP023	697331	8903863	Float	0.204	8.85
106772	697518	8902827	Float	1.310	11.50	SP024	697422	8903871	Float	0.297	11.65
106773	697501	8902956	Float	0.213	14.05	SP025	697271	8903867	Float	0.041	5.29
106774	697446	8903037	Float	0.769	8.90	SP026	697223	8903878	Float	0.069	4.63
106775	698140	8903907	Float	0.008	1.17	SP029	697033	8903841	Outcrop	0.056	1.19

Appendix 3: Geochemical Sample Preparation Methodology

The following is a description of the sampling methods for the collection of geochemical (rock and soil) samples during the exploration program at Omu and other prospects within the Keveri Project by the Company.

Sampling Method and Analysis (for Rock samples)

Fist-size rock samples from outcrop and floats free from dirt are collected from the field and secured in a clean pre-labeled calico bag with location determined and recorded using a GPS (Global Positioning System) digital reading and recorded in a field notebook. The rocks obtained may be from loose "float" or outcrops and if from outcrop may include grab and channel sampling. These samples are selective in nature and are not representative of the mineralization hosted on the properties. The samples are dispatched from TNT Air Cargo Services in Port Moresby to Analytical Laboratory Services (ALS) in Townsville, Queensland, Australia for multi-element analysis. ALS is one of the leaders in providing analytical geochemistry with high degree of confidence in the global mining industry.

At ALS, sample preparation using PREP-31 technique is utilized prior to analysis. ME-ICP61 and *Cu-OG62 analytical techniques are applied in determining the multiple elements present in the rock samples except for gold (Au-AA24 is applied for gold). Assay results are provided by ALS in a timely manner.

ALS Analytical Techniques are as follows:

- PREP-31 (Crush to 70% less than 2mm, riffle split off 250g, pulverize split to better than 85% passing 75 microns)
- ME-ICP61 (33 elements, 1ppm-1% Cu)
- Au-AA24 (Au by fire assay and AAS)
- Cu-OG62 (Four acid digestion and ICP or AAS finish, automatically triggered on GBRX's samples with high copper content.

Sampling Method and Analysis (for Soil samples)

Soil samples weighing approximately 1- 2kgs are collected from the field using a hand auger drill. The samples are obtained from the bottom of a 30-50cm hole produced by the auger drill which is generally comprised of deeply weathered bedrock or materials from the "C" horizon of the soil profile. The collected soil samples are laid out in a clean canvas and subsequently quartered for homogenization prior to bagging. Soil properties were later recorded in a waterproof field notebook. GPS locations of the samples are recorded digitally and manually in a field notebook. The samples are secured in pre-labeled clean zipped plastic bags and brought to the exploration camp. The samples are sun-dried for 1-3 days and transferred to clean calico bags with proper labels for dispatch via TNT Air Cargo in Port Moresby and then to Analytical Laboratory Services (ALS) in Townsville, Queensland, Australia for multi-element analysis. A photo of the soil sampling is provided below.

At ALS, sample preparation using PUL-32 technique is used prior to analysis. ME-MS41 analytical technique is employed in determining the multiple elements present in the soil samples except for gold (Au-AA24 and **Au-TL43 is applied for gold). Assay results are provided in a timely manner by ALS.



ALS Analytical Techniques are as follows:

- PUL-32 (Pulverize a 1,000g split to 85% passing 75 microns)
- ME-MS41 (51 elements, 0.2ppm-1% Cu)
- Au-AA24 (Au by fire assay and AAS)
- **Au-TL43 (Au by aqua regia extraction with ICP-MS finish, applied in pre-2019 soil samples).



Figure A11: Geochemical soil sampling using hand auger (left), bagging of soil sample (centre), and sun-drying of soil samples prior to dispatch.

Appendix 4: Copper and gold deposits of PNG

Table 3: Known porphyry copper and gold deposits in the Papuan Mobile Fold Belt. Total indicated and inferred tonnes of mineral resources. See Figure 1 above.

MINES	TONNES	GRADE		METAL	
	Mt	Au (g/t)	Cu (%)	AU (Moz)	Cu (Mt)
Grasberg (<i>Porter GeoConsultancy, Rio Tinto 2007/2008</i>)	5761	0.68	0.78	126.5	44.8
Lihir (<i>Newcrest December 2018, Explanatory Notes</i>)	690	2.3	-	50.0	-
Porgera (<i>Porter GeoConsultancy, Total Mineral Resources December 2007</i>)	167.86	3.33	-	17.9	-
Ok Tedi (<i>Porter GeoConsultancy, Resources at 1984</i>)	700	0.63	0.63	14.2	4.4
Hidden Valley (<i>Porter GeoConsultancy, Resources at 2010/2011, Morobe JV</i>)	102	1.71	-	5.6	-
Simberi ⁽¹⁾ (<i>St Barbara Ltd Mineral Resources Statement, August 2019</i>)	90.8	1.4	-	4.2	-
PROJECTS	Mt	Au (g/t)	Cu (%)	AU (Moz)	Cu (Mt)
Frieda, Nena (<i>Highlands Pacific Feasibility Study, April 2017</i>)	2742	0.23	0.42	19.7	11.5
Wafi-Golpu ⁽²⁾ (<i>Porter GeoConsultancy, Newcrest Mining Ltd. August 2012</i>)	1133	0.73	0.9	26.7	9.0
Misima (<i>Kingston Resources, November 2017 Resources Release</i>)	158.4	1.2	-	5.7	-
Panguna (<i>Porter GeoConsultancy, incl historic prod & Resources at March 2016</i>)	2548	0.42	0.36	34.4	9.3

Notes:

- (1) Mineral Resources excludes historic gold production.
- (2) Includes total resources for both Golpu and Wafi deposits.