TYPE OF REPORT [type of survey(s)]: Reconnaissance Geochem	ical sampling and Mapping TOTALCOST: \$10,913.08
AUTHOR(S): John McClintock P <u>.</u> Eng	SIGNATURE(S): John McClintock P.Eng APEGBC 12078
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):	YEAR OF WORK: 2015
STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE	(S): 5552415 / April 24, 2015
PROPERTY NAME: North Island Project (Hushamu)	
CLAIM NAME(S) (on which the work was done):	
231687, 23686, 231689, 231688, 231691, 231690, 232212, 231	684, 231682 513909,
COMMODITIES SOUGHT: Copper, Gold	
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:	
MINING DIVISION: Nanaimo	NTS/BCGS: 92 L12
LATITUDE: 50 ° 42.5' LONGITUDE: 127	0 58 (at centre of work)
DWNER(S): 1) North Island Mining Corp	2).
/AILING ADDRESS: 1800, 570 Granville Street, Vancouver, BC, V6C 3P1	
DPERATOR(S) [who paid for the work]: Northilse Copper and Gold Inc.(operator)	2)
IAILING ADDRESS:	
1800, 570 Granville Street, Vancouver, BC, V6C 3P1	ture, alteration, mineralization, size and attitude):
Jurassic Bonanza Group andesite, Jurassic Island Intrusions, mineralization, advanced argillic alteration, intermediate argil	Red dog Stock, copper gold molybdenum porphyry type

Ministry of Energy, Mines & Petroleum Resources Mining & Minerals Division BC Geological Survey





Assessment Report
Title Page and Summary

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)		231687, 23 1686, 231688	,
Ground, mapping 400 h	1:5,000	231689, 231684, 231704, 231690	\$ 4,500.00
Photo Interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Electromagnetic			
3			
Radiometric			
Seismic			
other			
Airborne			
GEOCHEMICAL (number of samples analysed for)	,		
Soll 30			\$ 4,500.00
Silt			
Rock 11 (Includes PIME	and way		\$ 1,913.08
		-	1,115.08
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mlneralographic			
Metallurgic			
PROSPECTING (scale, area)		+	
PREPARATORY / PHYSICAL			
Line/grid (kilometres) 39,890 me	#es		
TopographicfPhotogrammetri c (scale, area)			
Legal surveys (scale, area)			
Road, bcal access (kilometres)/trai	. <u></u>		
Trench (metres)			
Underground dev. (metres) Other			
		Ţ	TAL COST:\$10,913.08
		1 l	

# 2015 TECHNICAL ASSESSMENT REPORT ON GEOCHEMICAL SAMPLING AND MAPPING OF THE RED DOG PROPERTY

Nanaimo Mining Division British Columbia BC Geological Survey Assessment Report 35460

NTS 94D/11E 50 42.5' N/127 58' W

Event # 5552415

Tenure #'s: 231680,231681, 231682, 231683, 231684,231685, 231686, 2311687, 231688, 231689, 231690, 231691, 231703, 231704, 232212, 232271, 513909, 513910,

513914

Prepared for: Northisle Copper and Gold Inc.

> Prepared by: John McClintock, P.Eng,

> > June 2015

BC Geological Survey Assessment Report 35460

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Appendix I: Certificates of Analyses Appendix II: Report on PIMA Analyses by K. Heberlein, P. Geo Appendix III Rock Sample Descriptions Appendix IV: Geographical Coordinates of Rock and Soil Samples

# 1.0 SUMMARY

The Red Dog mineral property was optioned by Northisle Copper and Gold (Northisle) in March 2015 from William Botel and Tanya Veerman. Subsequently to optioning the property, Northisle carried out a limited program of geochemical sampling and reconnaissance geological mapping on the Red Dog Property from April 8 through 10, 2015. The purpose of the geochemical sampling was to determine if the still open copper and gold mineralization of the Red dog Deposit continued westward on to the Northisle claims where a prominent induced polarization chargeability anomaly was detected by a 2012 survey. Reconnaissance mapping centred on determining the contact relationship between the previously reported alteration types to see if the higher level alteration to south of the Red Dog deposit was a down dropped block covering the south extension of the Red Dog Deposit.

The soil sampling shows evidence of the Red Dog mineralization continuing west and northwesterly towards the 2012 IP chargeability anomaly. Further exploration to confirm the extent and grades of any mineralization associated with the soil anomaly and the nearby IP anomaly is warranted.

Mapping found the alteration zone surrounding the Red Dog Deposit extends farther south than previously documented. Advanced argillic alteration south of the deposit is likely fault bounded to the copper- gold mineralization hosting potassic and intermediate argillic alteration. The advanced argillic alteration to the south of the Red Dog Deposit is similar to that overlying the Hushamu Deposit and could be capping copper and gold mineralized potassic and intermediate argillic alteration at depth. Bore holes drilled by Utah in the advanced argillic alteration support this hypothesis.

A program of additional mapping and initial drill testing is recommended. Two areas are recommended for drilling: 3 or 4 holes of 300 metre length in the area defined by this year's soil sampling and the 2012 chargeability anomaly; the second area is south of the Red Dog Deposit where a single 600 metre long drill hole is recommended at the site of Utah's hole 145. Soil sampling to the west of the current sampling area is expected to be hindered by thick transported overburden and is therefore not recommended. Mapping should focus on the Red Dog Stock contact and be extended to the Slide Zone area, not looked at this year.

# 2.0 INTRODUCTION AND TERMS OF REFERENCE

The Red Dog mineral property was optioned by Northisle Copper and Gold (Northisle) in March 2015 from William Botel and Tanya Veerman. Subsequently to optioning the property, Northisle carried and limited program of geochemical sampling and reconnaissance geological mapping on the Red Dog Property. The purpose of the geochemical sampling was to determine if the still open copper and gold mineralization of the Red dog Deposit continued westward on to the Northisle claims where a prominent induced polarization chargeability anomaly was detected by a 2012 survey.

Geological mapping focused on confirming the existence of the previously reported abrupt change in alteration from intermediate argillic alteration to high-level advanced argillic alteration, which marks the south boundary of the Red Dog deposit. Samples of the advanced argillic alteration lying to the south of the Red Dog Deposit were analysed by PIMA spectral analyses to compare the Red Dog alteration to the high-level alteration overlying the porphyry copper mineralization at the nearby Hushamu deposit.

This report quotes from historical assessment reports of the area. A list of the referenced reports is provided in the Bibliography.

# **3.0 PROPERTY DESCRIPTION AND LOCATION**

## **3.1** LOCATION AND ACCESS

The Red Dog property is located at the northern end Vancouver Island, in British Columbia Canada. Geographic coordinates are 50° 42.5' north latitude and 127° 57.75' west longitude. The claims are surrounded by Northisle's North Island Claim Block  $\cdot$ 

Access to the claim block is from Port Hardy by the Holberg Road to a point about 45 kilometres from Port Hardy where forestry access road NE 62 leads northward to the property. A number of now reclaimed forestry roads provided access to historical drill sites on the property. At the time of the work program, the roads were largely overgrown and would require significant work to rehabilitate them for use by vehicular traffic. Tide water is 15 km away by road at Holberg.

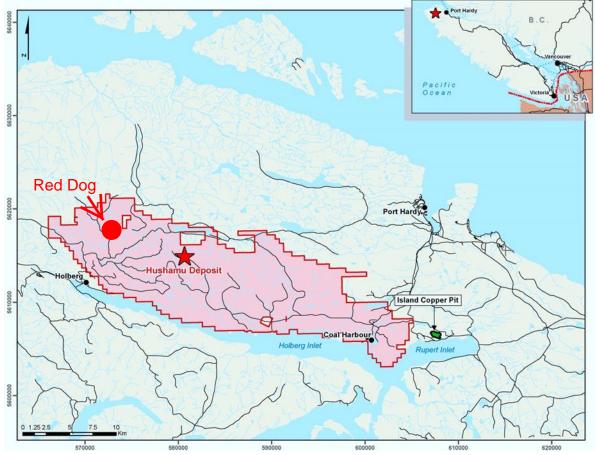
## **3.2 MINERAL TENURE INFORMATION**

The Red Dog property consists of sixteen (16) mineral claims totaling 400 ha (Table 1). The property is located on NTS map sheet 94L/12W in the Nanaimo Mining Division, approximately 45km west of Port Hardy, BC, Vancouver Island B.C. The geographic coordinates of the approximate property centre are 50 42.5' N latitude 127 57.75' W longitude (Figures 2).

Record No.	Claim Name	Issue Date	Good to Date	New Good to Date	Area Hec.
231680	Red Dog 1	1966/Dec/13	2015/May/23	2018/May/23	25
231681	Red Dog 2	1966/Dec/13	2015/May/23	2018/May/23	25
231682	Red Dog 3	1966/Dec/13	2015/May/23	2018/May/23	25
231683	Red Dog 4	1966/Dec/13	2015/May/23	2017/May/23	25
231684	Red dog 5	1966/Dec/13	2015/May/23	2017/May/23	25
231685	Red Dog 6	1966/Dec/13	2015/May/23	2017/May/23	25
231686	Red Dog 7	1966/Dec/13	2015/May/23	2017/May/23	25
231687	Red Dog 8	1966/Dec/13	2015/May/23	2017/May/23	25

### Table 1: Mineral Tenures

231688	Red Dog 9	1966/Dec/13	2015/May/23	2017/May/23	25
231689	Red Dog 10	1966/Dec/13	2015/May/23	2017/May/23	25
231690	Red Dog 11	1966/Dec/13	2015/May/23	2017/May/23	25
231691	Red Dog 12	1966/Dec/13	2015/May/23	2017/May/23	25
231703	Red Dog 14	1967/May/23	2015/May/23	2017/May/23	25
231704	Red Dog Fr.	1967/May/23	2015/May/23	2017/May/23	25
232212	Red Dog 29 Fr.	1967/Dec/01	2015/May/23	2017/May/23	25
232271	Red Dog 13 Fr.	1968/Jun/17	2015/May/23	2017/May/23	25



Location Map Red Dog Property, Fig. 1

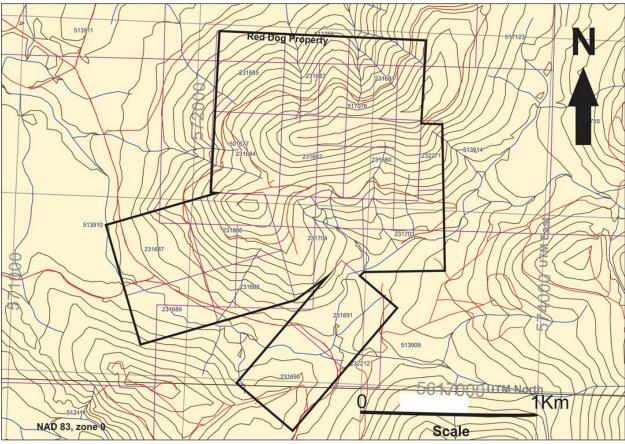


Fig. 2 Claim Location Map

## 3.3 PHYSIOGRAPHY AND CLIMATE

The area is characterized by moderate relief in the order of 360 metres between valley bottoms and hill tops. Slopes are generally moderate although some areas of the west and south slope of Red Dog Hill are precipitous. The main Red Dog mineralization crops out on the summit of Red Dog Hill at an elevation of 470 metres.

With the exception of small areas adjacent to the Goodspeed River, the entire area of interest was clearcut logged and replanted at various times over the past 60 years. Secondary growth is very dense, and movement through the bush away from abandoned roads or creek beds can be difficult particularly in areas of the most recent logging.

Climate in the area of the Property is typical of coastal areas of British Columbia with an annual precipitation of 3,911mm, and a daily average temperature of 8.8°C (Environment Canada, 1971-2000). Winters are very wet, with 75% of the annual precipitation occurring from October to March, mostly as rainfall at lower elevation (Holberg is at sea level), but with significantly increasing percentage of snowfall accumulation above 300 m elevation. Generally, exploration and development work is possible for most of the year, allowing for a long exploration field season.

# 4.0 HISTORY

The following history of exploration of the Red Dog Claims is taken from Richards (1990):

The Red Dog property is a geochemical find, having been first detected by a regional program in 1962. Follow-up on a 1962 anomaly during the 1966 field season led to the discovery of the mineralization in the bed of a creek and the subsequent staking of the Red Dog claims. Three holes were drilled with a winkie drill in 1967 but core recovery was very poor.

In 1968, a two stage drilling program was carried out; 1,722 metres in 20 holes, with a soil geochemistry survey run in between stages. In 1970 very-low frequency electromagnetic (VLF- EM) and ground magnetic surveys were completed. Four anomalies located in by the geophysical surveys were tested by 4 diamond drill holes totalling 453 metres The roads and creeks were geologically mapped. In 1972 the claims were optioned to Cities Services who remapped the property, relogged the previous drilling and drilled three holes totalling 903 metres. In 1973 Cities Services was joined by Westminex Development. A program of rock geochemistry and 7.7 km. of road I.P. survey were done. Three deep core drill holes were recommended as well as a line I.P. survey, but were not done.

In 1974 Westminex Development drilled the three core holes recommended in 1973, totalling 613 metres as well as 2 winkie holes.

The property was not worked again until 1982 when Utah Mines optioned it and completed the line I.P. work over the Red Dog hill as recommended in 1973, and 664 meters of core drilling in 6 holes in the first stage and 1,059 metres in 6 more holes plus one earlier one deepened. The final work program on the property by Utah Mines was a program of five core holes drilled in the fall of 1983, totalling 779 metres, to test various I.P. anomalies on the south slope of Red Dog hill. The I.P. anomalies were all found to be caused by a zone of advanced argillic alteration with associated pyrite.

In 1988 Crew Capital Corp. drilled 4 holes on Red Dog hill totalling 1041.8m to test the depth and eastern extent of the mineralization.

In 1989 Moraga Resources Ltd drilled 1850.6 m in 10 new holes, and in deepening one old hole, with the objective delineating the quartz-magnetite breccia on the Red Dog Hill zone.

A final drilling program was undertaken by Moraga in 1990 with the drilling of an additional 1240.88 m. Based on all of the previous drilling in the Red Dog Mineralized body, Richards estimated a resource for the Red Dog Deposit of 20 million tonnes grading 0.30% copper, 0.55 gpt gold and 0.012% molybdenum. This resource estimated pre dates National Instrument 43-101 and does not meet current standards of reporting resources. Additional work including re drilling of some holes would be required to confirm the estimate. Moraga completed a scoping study on the mineralization and concluded that the deposit might be feasible as a small open pit mine, but decided to return the property to its owner.

After Moraga relinquished its option, no work was carried out on the property until Northisle acquired an option on the property.

In March 2015, subsequently to optioning the property, Northisle carried out a program of soil and rock sampling and reconnaissance geological mapping on the property.

# 5.0 Geology

## 5.1 REGIONAL GEOLOGY

The regional geology of the Rupert area was mapped by Nixon et al. (2006) and the following summary is a synopsis of Nixon's paper. Figure 3 shows the bedrock geology of northern Vancouver Island. Vancouver Island is comprised of Upper Paleozoic to Lower Mesozoic rocks of Wrangellia – a tectonostratigraphic terrane that occurs discontinuously northward as far as central Alaska. This terrane was amalgamated to the Alexander Terrane of the Alaskan Panhandle (together comprising the Insular Superterrane) by Late Carboniferous time. Subsequently, these terranes were accreted to North America between the Middle Jurassic and the mid-Cretaceous. Thus, Vancouver Island records an early allochthonous history, and a later history with commonality to the North American margin.

The pre-accretion history of Wrangellia is represented by the Paleozoic Sicker Group and the Middle Triassic Karmutsen Formation. The Sicker Group comprises marine Devonian to Early Permian volcanic and sedimentary rocks that host VMS deposits such as at Myra Falls. The Karmutsen conformably overlies the Sicker Group and comprises basaltic and minor sedimentary rocks that underlie about 50% of Vancouver Island. This unit is up to 6000 m thick. Richards et al. (1991) argued that the Karmutsen was initiated by, and extruded above a mantle plume and recent geochemical data support an oceanic plateau origin for the Karmutsen (Greene et al., 2006). The Karmutsen is in turn conformably overlain by the Quatsino Formation of limestone consistent with a period of quietude following impingement of a mantle plume.

The Bonanza Arc (DeBari et al., 1999) formed along the length of Vancouver Island during accretion of Wrangellia. Owing to later tiling, products of this arc from various crustal depths are all preserved. These include the Westcoast Crystalline Complex, Island Intrusions and the Bonanza Group volcanic rocks. DeBari et al. (1999) argue that all these components have similar ages and geochemical signatures and that they are therefore all products of a single arc. Ages for these rocks range from ca 190 to 169 Ma. Intrusive rocks of the Island Intrusions are responsible for porphyry copper mineralization on Vancouver Island.

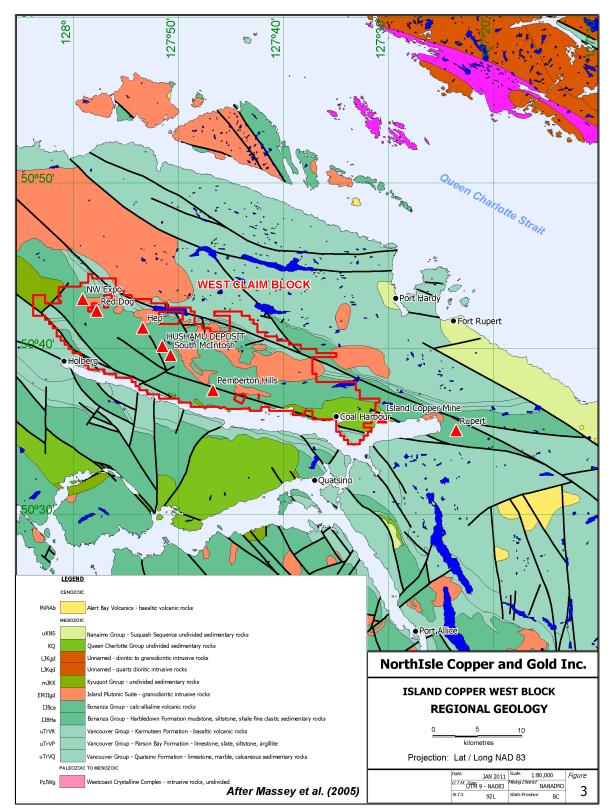
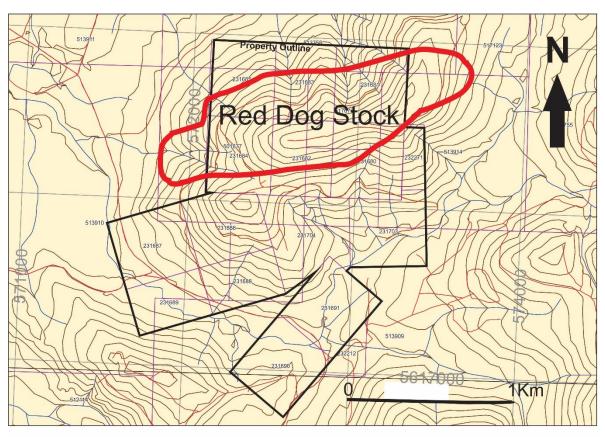


Fig. 3 Regional Geology

## 5.2 RED DOG GEOLOGY

The Red Dog Property is underlain by andesitic flows, tuffs and tuffaceous sedimentary rocks of the lower part of the Bonanza Group. Based on strikes and dips observed at some locations, the volcanic package appears to have a gentle southerly dip. The dominant structure are high angle faults believed to be strike slip and dip slip movement. The absence of marker beds makes determining offsets across faults difficult to determine. The Moraga drilling showed abrupt differences in alteration and it appears there is a series of easterly oriented normal faults that down step stratigraphy and alteration to the south.

The Bonanza volcanic rocks have been intruded, altered and mineralized by a sequence of feldspar porphyry dikes and the Red Dog Stock. The mineralization is thought to be related to a quartz eye porphyry that is very similar in composition to the intruded volcanic rocks with the exception of the quartz eyes. Later intrusions related to the Red Dog stock limit the mineralization to the north.



Red Dog Geology Map

Fig 4 Red Dog Property Geology

# 6.0 MINERALIZATION

Past work on the Red Dog Property has centred on two areas: the original discovery referred to as the Slide Zone and the Red Dog Zone. Both mineralized zones are bordered to the north by the Red Dog Porphyry Stock, a relatively unaltered quartz feldspar porphyry. To the south of the stock are altered Bonanza Group rocks hosting two mineralized zones. In general, the alteration immediately south of the contact is potassic to intermediate argillic alteration consisting of biotization and hydrothermal magnetite with over printing of chlorite and sericite. This alteration contains variable amounts of pyrite, chalcopyrite with lesser amounts of bornite and molybdenite. The width of the zone of altered rock ranges from 100 to 300 m. Further south the potassic / intermediate argillic alteration is in contact with advanced argillic alteration containing abundant pyrophyllite, dickite, silicification and pyrite. The contacts between each of the Red Dog Porphyry, the potassic-intermediate argillic and advanced argillic are likely normal, south – dipping faults.

The Red Dog Zone is located at the west side of the property and occurs in a quartz magnetite breccia localized in Bonanza Group rocks adjacent to feldspar porphyry dykes. Based on approximately 9,000 metres of drilling, Richards estimated a resource of 20 million tonnes grading 0.30% copper, 0.55 gpt gold and 0.012% Mo. This resource is not current and should not be relied on and would require additional drilling to confirm its existence.

The Slide Zone lies about 400 m east of the Red Dog Zone. It is underlain by Bonanza Group rocks altered to biotite hornfels with local sericite and chlorite over printing. Mineralization consists of pyrite, chalcopyrite occurring as disseminations and fractures and molybdenite along joints and fractures. A number of steeply dipping, late trachyte dykes oriented north-easterly cut the mineralization. No grade and tonnage estimates have been calculated for the zone due to the difficulty in connecting geology and mineralization between holes. The complexity of the zone results from very limited out crop, many vertical holes drilled sub parallel to the non-mineralized dykes and faulting.

# 7.0 2015 Work Program

The 2015 reconnaissance mapping and geochemical sampling had three objectives. Of most importance was to determine if the still open, north-western side of the Red Dog Deposit continued westerly towards a 1 km diameter chargeability anomaly defined by greater than 15 milliseconds detected by a 2012 induced polarization survey. Secondly, to determine if the alteration types reported by earlier workers were comparable to that at the nearby Hushamu Deposit. In particular, if the reported advanced argillic alteration at Red Dog was similar to that overlying the Hushamu deposit. The third objective was to determine the nature of the contact between the advanced argillic alteration and the intermediate / potassic alteration.

Soil sampling and limited rock sampling was used to evaluate the area between the IP anomaly and the Red Dog porphyry. Evaluation of the alteration and geological contacts was by mapping along road cuts and stream beds.

## 7.1 GEOCHEMICAL SAMPLING

A total of 30 soil samples were collected during the work program. The majority of the samples were collected along two sub parallel northerly oriented lines located west of the Red Dog Deposit (Fig 5). The remainder of the samples were collected from two separate areas where mapping identified altered pyritic rock. It was hoped the sampling would assist in determining the extent and metal content and mineralization in the mineralized and altered out crops. Geographical coordinates of the samples are in provided in Appendix IV.

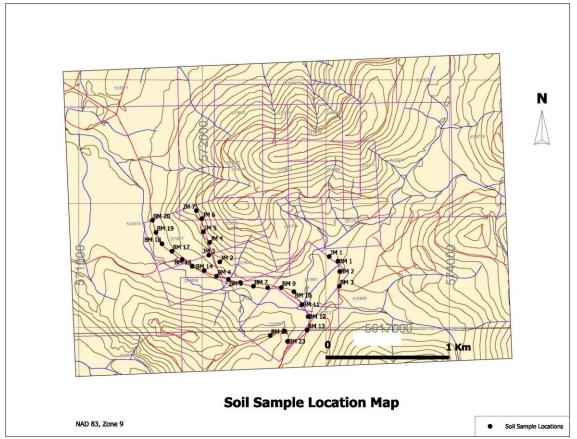


Fig. 5 Soil Sample Location Map

The soil samples were collected with either a grub hoe or rock hammer from the B horizon. Depth to the B horizon ranged from 15 to 30 cm. Once collected, the soil was placed in to numbered, gusseted kraft paper bags and shipped in a sealed container to ALS Labs facility in North Vancouver for analysis. Quality control relied on ALS Lab's internal controls and standards. As the number of samples are limited and the nature of the sampling is preliminary, no blanks or standards were inserted in to the sample stream. At

the laboratory, the samples were dried and sieved to minus 180 microns. A 25 gram sub sample was then analysed for copper and molybdenum and 50 other elements ICP massive spectrometer after digestion with aqua regia. The laboratory results and the method of analyses are provided in Appendix I. Geographical coordinates of the samples are listed in Appendix IV. The results for copper, gold and molybdenum in soils are shown on figures 6, 7 and 8.

No statistical analysis of the results were done due to the limited number of samples. Instead, the threshold and anomalous levels for each of the metals of interest are from previous surveys carried out on the adjoining Northisle claims. Based on the earlier and larger survey, threshold and anomalous levels of the metals of interest are as listed in Table 2.

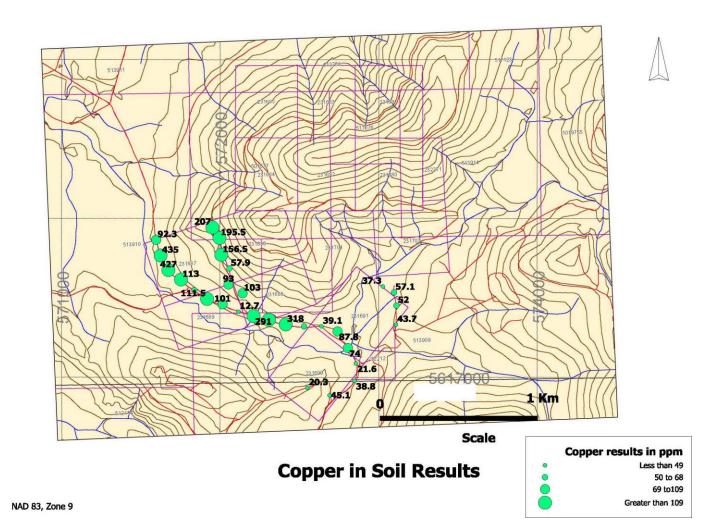
Metal	Threshold	Anomalous
Copper	50	65
Gold	23	69
Molybdenum	2	4

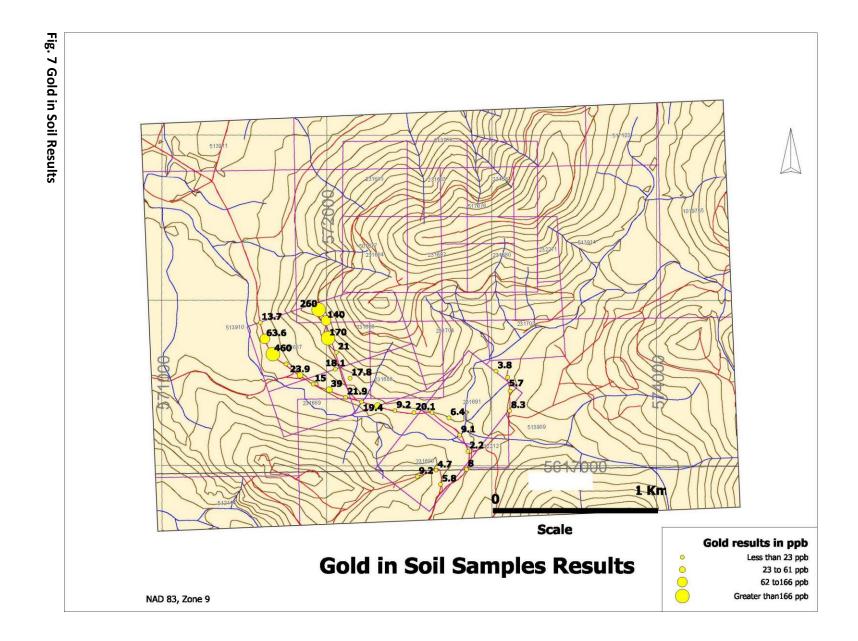
Table 2 Threshold and Anomalous Levels for Soil
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The results for copper, gold and molybdenum show anomalous levels of the metal occur on both of the soil lines located west of the Red Dog Deposit and show the anomalous values are open both to the north and west of the of the lines. Sub outcrop and out crop of intermediate argillic alteration and potassically altered andesite were observed along the eastern soil line suggesting the soil samples here reflect a proximal source of copper, gold and molybdenum mineralization. Along the western line occasional sub crop appears to be in place, although some down slope movement of rock originating further up slope cannot be ruled out. This sub crop material is of intermediate argillic altered andesite. The results of these two lines indicate the mineralization at Red Dog likely continues north westerly towards the 2012 IP anomaly. Nevertheless, it cannot be ruled out that down slope movement may be exaggerating the extent of the north west extension of the Red Dog Zone. Additional work including drilling will be required to determine the extent and grade of mineralization indicated by the current soil sampling results.

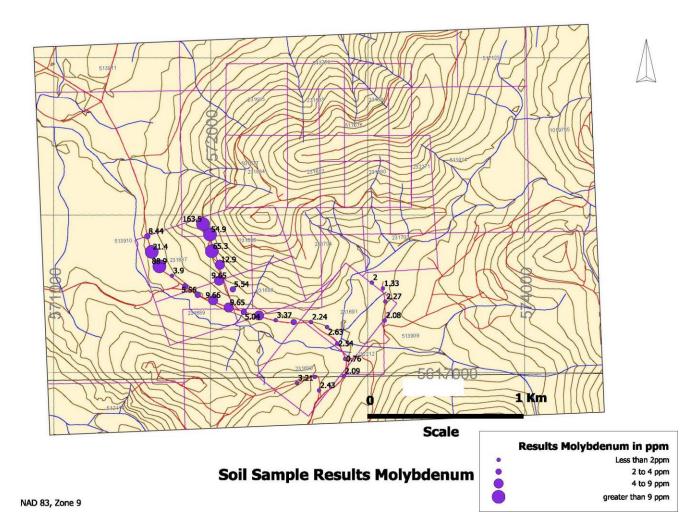
Soil samples collected from the other areas were generally at back ground levels











### 7.2 GEOLOGICAL

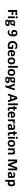
Geological mapping evaluated the nature of the main alteration types and examined the extent of alteration including the outer most limits of pyrite alteration. Several rock samples were collected mainly from out crops outside of the Red Dog deposit. Two rock samples were collected from advanced argillic altered rock exposed in a cliff well to the south of the Red Dog Deposit to see if this alteration is similar to that occurring in advanced argillically altered rock overlying the copper – gold mineralization at the Hushamu deposit.

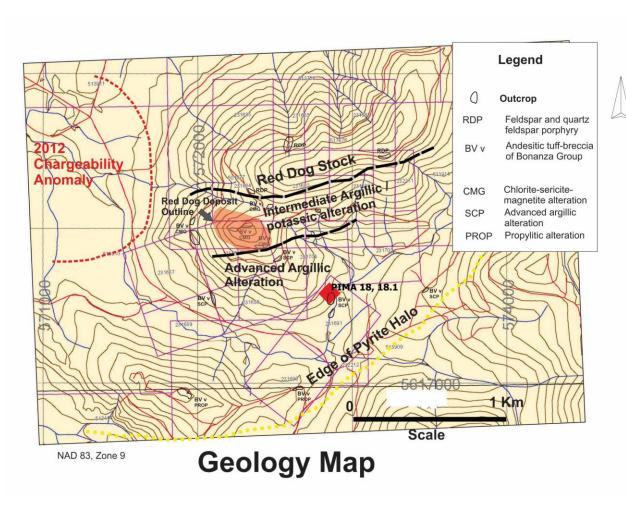
In general, the alteration assemblage at Red Dog is very similar to that at the Hushamu Deposit. The main copper and gold mineralization is hosted in andesite and early feldspar porphyry dykes. These rocks have been biotitized (potassic alteration) and then overprinted with later chlorite and sericite alteration (intermediate argillic alteration). These alteration types contain pyrite, magnetite and lesser amounts of chalcopyrite and even lesser amounts of bornite and molybdenite. The potassic – intermediate alteration zone is bounded to the north by tonnalite of the Red Dog Stock. The exact nature of the contact requires further study, but could be a fault or an intrusive contact (Fig. 9).

To the south of the Red Dog deposit, the potassic – intermediate argillic alteration is in abrupt contact with andesite intensely altered to an assemblage of clay minerals, pyrite and pervasive quartz PIMA analysis of two typical samples showed them to contain pyrophyllite, diaspore, alunite, kaolinite and possible dickite and zunyite; a typical assemblage of advanced argillic and very similar to the advanced argillic alteration at the Hushamu Deposit. A report by K. Heberlein, P. Geo is provided in Appendix II. The geographical coordinates of the two samples are both lat 50.7055 and long -127.9675. The historical drilling and this year's observations suggest the contact between the two alteration types are a fault. As the advanced argillic alteration is a much lower temperature alteration facies, it would imply a down to the south movement. If the fault assumption is correct, then the favourable potassic – intermediate alteration facies would lie at depth beneath the advanced argillic alteration. It is interesting to note that two holes bored in the advanced argillic alteration to the north and north west of the PIMA sample location found increasing copper content with depth with values at the end of the hole in the 0.1% range at a depths below 130 m to the end of the holes at 154 m.

Reconnaissance mapping found that the advanced argillic alteration continues well to the south and south west of the Goodspeed River, although with a gradually diminishing intensity. The outer limits of the alteration is shown on figure 9 as the pyrite line. This indicates the porphyry system of which the Red Dog Deposit is a part is a much larger system than previously assumed and that the deposit may extend significantly further to the south beneath a capping of advanced argillic alteration. It will require additional drilling to confirm this hypothesis including deepening of the two holes north and north west of the PIMA sample location

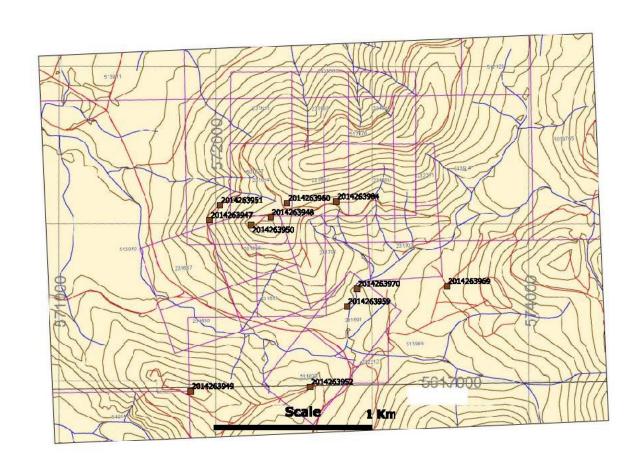
Rock samples collected during mapping were analysed by the following procedure; samples were crushed to 70% passing 2mm. A sub samples was then pulveried to 85% passing 75 microns. A 50 gram sub sample of the pulverized rock was analysed for gold after a fire assay digestion. With ICP mass spectrometer instrument. Results for all metals analysed are provided in Appendix I and the geographical coordinates of the rock samples are provided in Appendix IV.





localized near the Red Dog Deposit and in areas with higher copper and gold in soil (Figs. 10 through 12). Rock sampling carried out during the program showed rocks with appreciable copper and gold are

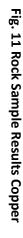


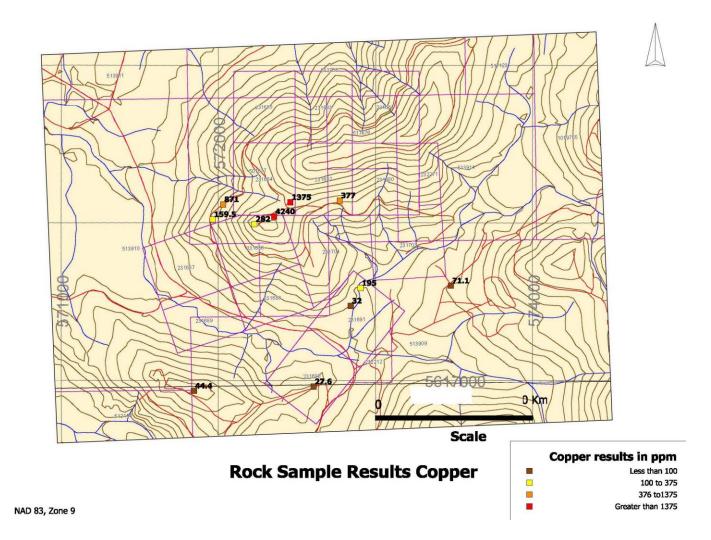


**Rock Sample Location Map** 

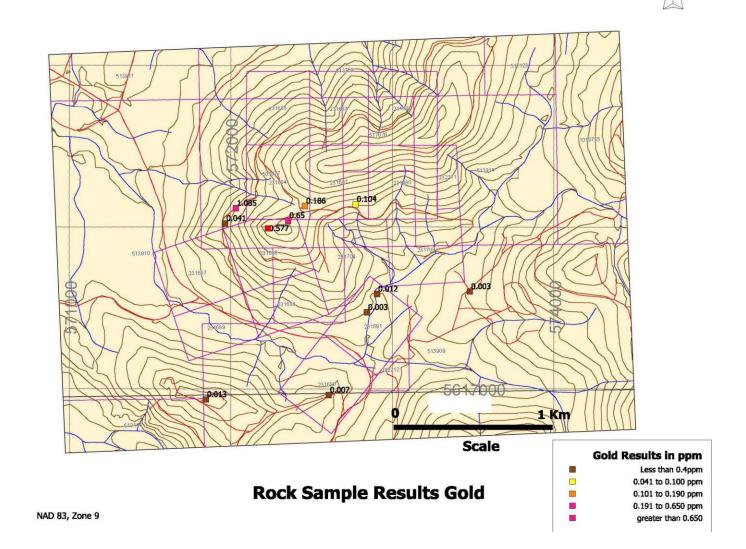
NAD 83 Zone 9

Rock sample location and number









# 8.0 CONCLUSIONS

The soil sampling suggests the Red Dog mineralization continues west and northwesterly towards the 2012 IP chargeability anomaly and warrants further exploration to confirm the extent and grades of any mineralization highlighted both by the soil anomaly and the nearby IP anomaly.

Mapping found the alteration zone surrounding the Red Dog Deposit is significantly larger than previously documented. The advanced argillic alteration is likely fault bounded to the copper- gold mineralization hosting potassic and intermediate argillic alteration. The advanced argillic alteration to the south of the Red Dog Deposit is similar to that overlying the Hushamu Deposit and could be capping copper and gold mineralized potassic and intermediate argillic alteration at depth. Bore holes drilled by Utah in the advanced argillic alteration support this hypothesis.

# 9.0 **RECOMMENDATIONS**

A program of additional mapping and initial drill testing is recommended. Soil sampling to the west of the current sampling area is likely to be hindered by thick transported overburden and is therefore not recommended.

Mapping should focus on the Red Dog Stock contact. Mapping should also be extended to the Slide zone area, not looked at this year.

Two areas of drilling are recommended: 3 or 4 holes each 300 metres long in the area defined by this year's soil sampling and the 2012 chargeability anomaly. The second area is south of the Red Dog Deposit where a single 600 metre long drill hole is recommended at the site of Utah's hole 145.

# **10.0 STATEMENT of COSTS**

## Preparatory Work

April 1 through April 5 J. McClintock: Planning / Maps / Supplies 5hrs@ \$125/ hr		\$ 625.00
Field Related		
John McClintock P. Eng: Mapping, Sampling, Supervision April 8 through April 11 25hrs @ \$125 / hr	\$3,125.00	
Blake Macdonald BSc. Sampling, mapping, site logistics April 7 through April 11 4.5 days @ \$600 / day	\$2,700.00	
Accommodation Port Hardy	\$725.94	
Meals Port Hardy & Holberg	\$327.30	
Truck and fuel, 5 days @ \$75 per day	\$375.00	
Sample analysis ALS Labs Vancouver	\$1,964.84	
PIMA analysis K Heberlein	\$70.00	ćo 200 00
<b>Report Preparation</b> J. McClintock P.Eng Jan 8-Feb 15, 8hrs@\$125/hr	\$1,000.00	\$9,288.08
		\$1,000.00
Total Expenditures		\$10,913.08

## **11.0 REFERENCES**

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  - Richards, J. B., 1990, assessment Report on the Red dog Project Vancouver, Island, B.C. BCDM Assessment Report 20610.

**Richards, J. B.,** 1991, Assessment and Drilling Report on the Red Dog Project Located on Vancouver Island, BCDM Assessment Report 21,352.

# **12.0 CERTIFICATION**

I, John McClintock, residing at 902 – 1470 Pennyfarthing Drive, Vancouver, British Columbia, do hearby certify that:

1. I am a consulting Geologist;

2. I obtained a BSc (Hons) from the University of British Columbia in 1973 and an MBA from Simon Fraser University in 1989;

3. I have continually practised my profession as a geologist since 1973;

4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia registration number 12078;

5. I visited the property from April 8 to 10, 2015 and supervised the work carried out on the property;

6. I own shares and have share options in Northisle Copper and Gold Inc. and am the President of the company.

Dated at Vancouver, British Columbia, May 31, 2015

# Appendix 1

Certificated of Analyses



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#### To: NORTHISLE COPPER AND GOLD INC. 1800 - 570 GRANVILLE STREET VANCOUVER BC V6C 3P1

Page: 1 Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 28- APR- 2015 Account: NORCOP

## CERTIFICATE VA15053934

Project: Red Dog
This report is for 30 Soil samples submitted to our lab in Vancouver, BC, Canada on 14- APR- 2015.
The following have access to data associated with this certificate:
J. MCCLINTOCK

	SAMPLE PREPARATION	
ALS CODE	DESCRIPTION	
WEI- 21	Received Sample Weight	
LOG- 22	Sample login - Rcd w/o BarCode	
SCR- 41	Screen to - 180um and save both	
	ANALYTICAL PROCEDURES	

CANADLE DDEDADATION

ALS CODE	DESCRIPTION	INSTRUMENT
Au- AROR43	Au AR Overrange - 25g	ICP- MS
Au- ST43	Super Trace Au - 25g AR	ICP- MS
ME- MS41L	Super Trace AR by ICP- MS	

To: NORTHISLE COPPER AND GOLD INC. ATTN: J. MCCLINTOCK 1800 - 570 GRANVILLE STREET VANCOUVER BC V6C 3P1

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.



Colin Ramshaw, Vancouver Laboratory Manager

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Page: 2 - A Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 28- APR- 2015 Account: NORCOP

Project: Red Dog

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt, kg 0,02	Au- ST43 Au ppm 0.0001	ME- MS41L Au ppm 0.0002	ME-MS41L Ag ppm 0⊾001	ME- MS41L AI % 0.01	ME-MS41L As ppm 0.01	ME-MS41L B ppm 10	ME-MS41L Ba ppm 0.5	ME-MS41L Be ppm 0_01	ME-MS41L Bi ppm 0.001	ME-MS41L Ca % 0.01	ME-MS41L Cd ppm 0.001	ME-MS41L Ce ppm 0.003	ME-MS41L Co ppm 0.001	ME-MS41L Cr ppm 0.01
BM 1 BM 2 BM 3 BM 4 BM 5		0.30 0.22 0.16 0.34 0.12	0.0057 0.0064 0.0083 0.0219 0.0194	0.0139 0.0045 0.0023 0.0205 0.0186	0.030 0.093 0.088 0.022 0.504	3.74 5.94 5.44 0.10 2.42	5.45 6.31 4.62 6.29 3.47	<10 <10 <10 <10 <10	178.5 56.7 75.9 26.7 33.3	0.48 0.49 0.29 <0.01 0.09	0.198 0.270 0.234 1.500 0.278	0.52 0.16 0.15 0.01 0.90	0.149 0.079 0.050 <0.001	39.4 25.9 17.60 6.62	22.6 14.10 18.85 0.180	18.20 27.7 24.7 1.60
BM 6 BM 7 BM 8 BM 9 BM 10		0.12 0.28 0.30 0.22 0.20 0.16	0.0374 0.0092 0.0201 0.0076 0.0064	0.0307 0.0080 0.0165 0.0074 0.0040	0.133 0.049 0.306 0.101 0.041	3.10 3.85 2.24 2.19 3.04	5.58 4.88 3.04 1.51 5.00	<10 <10 <10 <10 <10 <10	76.1 115.0 53.8 53.2 80.7	0.09 0.21 0.26 0.15 0.13 0.20	0.369 0.188 0.307 0.139 0.165	0.90 0.40 0.60 0.61 0.84 1.35	0.053 0.036 0.031 0.094 0.045 0.035	9.46 11.20 8.60 6.40 5.32 9.78	4.87 7.53 12.45 7.03 7.35 11.65	6.75 15.00 17.10 8.31 6.49 9.96
BM 11 BM 12 BM 13 BM 14 BM 15		0.20 0.12 0.26 0.28 0.30	0.0091 0.0022 0.0080 0.0390 0.0153	0.0049 0.0013 0.0016 0.0685 0.0100	0.072 0.185 0.139 0.066 0.107	3.47 2.05 1.83 2.41 3.08	5.92 2.05 3.53 4.11 6.21	<10 <10 <10 <10 <10 <10	91.5 42.7 87.7 30.7 46.6	0.25 0.11 0.15 0.21 0.12	0.371 0.093 0.070 0.173 0.277	1.43 0.49 0.57 1.17 0.54	0.068 0.119 0.128 0.044 0.099	13.40 5.37 10.35 8.57 8.83	13.45 6.04 10.05 9.66 8.87	10.05 7.98 10.25 10.55 11.70
BM 16 BM 17 BM 18 BM 19 BM 20		0.26 0.30 0.18 0.22 0.22	0.0239 0.0116 >0.1000 0.0636 0.0137	0.0169 0.0102 0.536 0.143 0.0124	0.067 0.057 0.435 0.212 0.049	0.92 3.40 1.86 2.27 0.56	7.49 7.11 18.70 9.96 5.23	<10 <10 <10 <10 <10 <10	14.6 64.0 35.4 35.1 11.6	0.06 0.23 0.07 0.15 0.04	0.469 0.228 1.100 0.477 0.235	0.31 0.26 0.08 0.53 0.11	0.033 0.058 0.014 0.029 0.036	3.92 12.00 9.68 7.74 3.66	3.51 10.90 2.07 7.37 2.12	5.10 17.75 10.25 13.55 7.00
BM 21 BM 22 BM 23 JM 1		0.28 0.18 0.22 0.32	0.0092 0.0047 0.0058 0.0038	0.0068 0.0037 0.0084 0.0050	0.132 0.099 0.228 0.112	2.95 7.82 7.90 4.48	6.91 10.00 8.38 4.48	<10 <10 <10 <10	240 45.5 75.9 44.0	0.24 0.41 0.37 0.12	0.697 0.226 0.140 0.206	0.94 0.08 0.40 0.09	0.058 0.030 0.029 0.069	9.90 10.95 19.35 10.60	7.78 7.28 9.05 6.65	3.77 19.50 16.50 21.4
JM 2 JM 3 JM 4 JM 5 JM 6 JM 7		0.44 0.28 0.20 0.36 0.36 0.28	0.0178 0.0181 0.0210 >0.1000 >0.1000 >0.1000	0.0202 0.0100 0.0149 0.150 0.0932 0.0827	0.159 0.080 0.091 0.152 0.218 0.031	4.63 4.61 4.04 2.79 1.80 2.78	6.88 8.46 6.95 19.45 12.45 7.64	<10 <10 <10 <10 <10 <10	102.5 75.5 25.3 76.8 98.5 16.9	0.31 0.36 0.19 0.32 0.13 0.14	0.285 0.405 0.452 1.630 0.724 0.600	0.59 0.14 0.06 0.07 0.24 0.02	0.092 0.073 0.029 0.029 0.010 0.010	31.9 19.15 10.50 10.85 9.76	7.66 9.33 3.33 4.47 5.41	11.65 22.7 18.65 15.35 12.85
		0.20	20.1000	0.0827	0.031	2.70	7.04	<10	10.9	0.14	0.600	0.02	0.018	14.30	1.915	5.33



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Page: 2 - B Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 28- APR- 2015 Account: NORCOP

Project: Red Dog

Sample Description	Method	ME-MS41L	ME-MS41L	ME- MS41L	ME- MS41L	ME-MS41L	ME-MS41L	ME-MS41L	ME- MS41L	ME-MS41L	ME- MS41L	ME-MS41L	ME-MS41L	ME-MS41L	ME-MS41L	ME- MS41L
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOR	0.005	0.01	0.001	0.004	0.005	0.002	0.004	0_005	0.01	0.002	0.1	0,01	0.1	0.01	0.001
BM 1		0.744	57.1	5.52	9.51	0.062	0.232	0.055	0.066	0.06	7.39	6.9	0.79	1200	1.33	0.013
BM 2		0.829	52.0	5.39	9.88	0.064	0.175	0.097	0.083	0,02	6.51	8.7	0.64	424	2.27	0.010
BM 3		1.095	43.7	3.95	9.92	0.050	0.115	0.136	0.063	0.02	6.56	10.2	0.66	368	2.08	0.012
BM 4		0.018	12.70	0.770	1.240	0.069	0.010	0.014	0.009	<0.01	3.71	0.2	0.01	3.4	9.65	0.004
BM 5		0.513	291	4.94	5.76	0.064	0.024	0.120	0.150	0.05	4.11	2.2	0.32	207	5.04	0.031
BM 6		0.987	110.5	4.42	7.40	0.044	0.057	0.085	0.093	0.03	4.55	4.8	0.58	312	11_15	0.041
BM 7		1.230	318	7.26	10.15	0.075	0.249	0.042	0.050	0.05	3.60	8.3	0.99	602	3.37	0.139
BM 8		1.020	57.6	3.53	7.99	0.038	0.011	0.132	0.043	0.04	2.99	4.3	0.56	292	4.54	0.036
BM 9		0.857	39.1	2.29	6.89	0.034	0.048	0.116	0.023	0.04	2.55	3.8	0.57	277	2.24	0.039
BM 10		1.280	87.8	4.10	7.54	0.067	0.106	0.034	0.027	0.04	4.13	5.1	0.77	419	2.63	0.086
BM 11		0.862	74.0	4.56	8.74	0.071	0.129	0.043	0.029	0.05	5.12	5.8	0.97	711	2.54	0.055
BM 12		0.423	21.6	2.45	6.30	0.023	0.036	0.178	0.032	0.04	2.58	3.2	0.43	297	0.76	0.028
BM 13		1.285	38.8	3.46	5.67	0.041	0.042	0.141	0.023	0.05	4.02	3.1	0.46	788	2.09	0.027
BM 14		0.435	101.0	3.60	6.93	0.116	0.138	0.022	0.029	0.05	3.82	4.6	0.81	439	9.66	0.033
BM 15		0.655	111.5	4.62	9.10	0.044	0.048	0.099	0.048	0.04	3.75	4.0	0.73	454	5.56	0.024
BM 16 BM 17 BM 18 BM 18 BM 19 BM 20		0.236 0.634 0.399 0.441 0.200	63.9 113.0 427 435 92.3	2.67 6.47 7.33 5.73 2.03	3.28 10.35 8.32 6.23 2.48	0.064 0.044 0.081 0.078 0.034	0.010 0.118 0.007 0.019 0.005	0.034 0.081 0.129 0.061 0.029	0.022 0.057 0.196 0.074 0.066	0.02 0.03 0.03 0.05 0.01	1.935 4.03 5.09 3.88 1.740	1.4 7.2 1.5 3.8 1.1	0.28 0.83 0.31 0.51 0.17	143.5 598 126.5 277 120.5	8.92 3.90 88.9 21.4 8.44	0.014 0.015 0.011 0.023 0.011
BM 21		0.812	20.3	7.08	8.88	0.058	0.155	0.080	0.051	0.09	3.82	7.3	0.94	722	3.21	0.016
BM 22		1.745	36.4	7.43	14.90	0.045	0.246	0.209	0.061	0.03	3.03	8.2	0.39	400	2.01	0.015
BM 23		1.210	45.1	5.97	12.30	0.055	0.219	0.175	0.061	0.04	5.89	8.4	0.58	429	2.43	0.018
JM 1		0.573	37.3	5.83	12.05	0.033	0.070	0.143	0.066	0.02	2.18	7.5	0.47	297	2.00	0.012
JM 2		0.443	103.0	4.73	8.08	0.059	0.200	0.088	0.074	0.05	6.54	3.6	0.49	388	5.54	0.016
JM 3		0.866	93.0	3.76	10.40	0.056	0.063	0.112	0.084	0.03	7 17	9.3	0.49	430	9.65	0.010
JM 4		0.464	57.9	4.99	9.56	0.046	0.032	0.131	0.076	0.01	4 27	8.9	0.24	158.5	12.90	0.008
JM 5		0.347	156.5	6.25	7.75	0.076	0.057	0.113	0.165	0.03	5 19	4.3	0.59	273	65.3	0.017
JM 6		0.385	195.5	6.09	7.07	0.097	0.037	0.068	0.123	0.06	4 68	3.1	0.54	307	54.9	0.013
JM 7		0.888	207	4.65	8.38	0.045	0.022	0.086	0.093	0.04	7.29	9.0	0.17	53.8	163.5	0.008



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Page: 2 - C Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 28- APR- 2015 Account: NORCOP

Project: Red Dog

Sample Description	Method	ME-MS41L	ME-MS41L	ME- MS41L	ME-MS41L	ME-MS41L	ME-MS41L	ME- MS41L	ME-MS41L	ME- MS41L	ME-MS41L	ME-MS41L	ME-MS41L	ME-MS41L	ME-MS41L	ME-MS41L
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOR	0_002	0_04	0.001	0.005	0.005	0.001	0.01	0.005	0.005	0.1	0,01	0,01	0,005	0.01	0,002
BM 1		0.787	11.70	0.097	7.80	2.84	0.001	0.01	0.240	13.25	0.8	0.67	56.9	0.017	0.25	0.973
BM 2		2.31	13.25	0.053	7.88	4.61	0.001	0.13	0.181	12.90	2.5	0.72	25.0	0.024	0.29	1.095
BM 3		2.22	13.30	0.036	7.69	5.58	<0.001	0.03	0.189	11.65	1.7	0.82	20.5	0.014	0.20	0.886
BM 4		0.038	0.85	0.013	6.15	0.119	0.004	0.05	0.585	0.503	14.0	5.37	43.4	<0.005	0.48	0.288
BM 5		0.707	3.71	0.074	6.33	2.51	0.014	0.13	0.152	4.78	6.5	0.80	51.2	<0.005	0.19	0.144
BM 6		1.345	6.69	0.055	55.3	2.35	0.014	0.06	0.244	6.64	5.5	1.14	40.3	0.009	0.22	0.482
BM 7		1.515	11.30	0.060	8.46	2.35	0.003	0.06	0.186	8.06	3.0	0.93	61.2	0.013	0.31	0.954
BM 8		1.005	5.13	0.060	6.62	2.76	0.002	0.09	0.130	3.47	4.0	1.02	43.1	0.007	0.12	0.137
BM 9		1.395	4.81	0.036	4.40	1.595	0.008	0.08	0.089	4.81	2.9	0.92	59.2	0.005	0.05	0.203
BM 10		1.575	7.92	0.045	4.62	2.03	0.004	0.09	0.179	7.06	3.3	1.16	98.9	<0.005	0.09	0.436
BM 11 BM 12 BM 13 BM 14 BM 15		1.300 0.964 1.265 0.988 1.395	7.14 4.61 7.10 7.25 6.84	0.068 0.078 0.071 0.036 0.043	4.97 6.84 6.88 3.68 6.62	1.875 1.160 2.52 1.685 2.91	0.006 <0.001 0.002 0.023 0.011	0.05 0.16 0.11 0.05 0.06	0.192 0.110 0.166 0.160 0.350	7.76 2.43 3.72 5.81 5.27	2.1 1.6 1.2 3.8 3.4	0.85 0.42 0.60 0.92 1.26	95.6 34.3 63.8 63.8 36.3	<0.000 <0.005 0.011 0.008 <0.005 0.007	0.25 0.05 0.09 0.18 0.30	0.495 0.044 0.107 0.620 0.413
BM 16		0.490	3.13	0.021	6.05	1.075	0.013	0.04	0.423	2.42	7.7	2,95	19.65	<0.005	0.55	0.244
BM 17		1.850	8.90	0.056	9.45	2.95	0.003	0.07	0.244	7.57	3.2	0.80	31.2	0.028	0.40	0.791
BM 18		0.573	2.65	0.057	7.43	2.45	0.013	0.07	1.795	3.64	17.2	4,46	22.5	<0.005	1.18	0.244
BM 19		0.918	7.08	0.045	5.16	2.21	0.071	0.83	0.480	5.14	10.5	1,99	32.0	0.007	0.52	0.433
BM 20		0.371	3.04	0.020	3.72	0.824	0.008	0.03	0.214	1.580	4.9	1,35	13.75	<0.005	0.44	0.178
BM 21		0.505	1.93	0.092	11.60	3.02	<0.001	0.92	0.235	4.72	4.9	0.20	135.0	0.005	0.55	0.586
BM 22		2.62	4.26	0.057	7.12	6.25	<0.001	0.27	0.210	17.15	4.7	0.93	9.13	0.015	0.64	0.976
BM 23		2.22	6.93	0.059	6.20	4.44	<0.001	0.10	0.272	11.90	3.6	0.61	52.8	0.009	0.38	0.740
JM 1		2.39	7.57	0.025	6.93	1.705	<0.001	0.04	0.221	5.46	2.0	0.79	10.90	0.008	0.17	0.635
JM 2		1.365	5.66	0.121	9.48	2.00	0.003	0.09	0.184	8.55	4.4	0.44	49.5	0.011	0.50	0.838
JM 3		1.885	8.81	0.061	8.92	4.06	0.003	0.04	0.331	11.00	4.2	1.53	22.6	0.022	0.42	0.658
JM 4		1.565	4.64	0.034	6.85	2.77	0.001	0.05	0.285	6.16	5.5	2.05	13.60	0.014	0.31	0.610
JM 5		1.215	5.39	0.063	9.48	2.55	0.011	0.11	0.634	5.71	11.2	1.61	23.4	0.008	1.50	0.411
JM 6		0.895	5.53	0.080	8.26	2.41	0.073	0.15	0.611	7.16	13.0	1.55	44.7	0.010	0.86	1.185
JM 7		0.383	1.94	0.047	9.02	8.65	0.004	0.03	0.166	2.45	2.9	1.51	5.05	0.005	0.39	1.795
										2.10	2.0			0.000		
				23												
				er												



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CERTIFICATE OF ANALYSIS VA15053934

Project: Red Dog

	Method	ME- MS41L	ME- M\$41L	ME- MS41L	ME- MS41L	Au- AROR43				
	Analyte	Ti	ΤI	U	v	w	Y	Zn	Zr	Au
Sample Description	Units	%	ppm	ppm	ppm	ррт	ppm	ppm	ppm	ppm
Sample Description	LOR	0.001	0.002	0.005	0.1	0,001	0.003	0.1	0.01	0.01
BM 1		0.222	0.063	0.492	132.0	0.088	10.45	59.7	9.74	
BM 2		0.247	0.054	0.555	137.5	0.140	17.85	64.8	6.52	
BM 3		0.190	0.079	0.622	128.5	0.109	10.20	61.8	4.67	
BM 4		0.003	0.027	0.021	4.8	0.010	0.930	1.4	0.34	
BM 5		0.056	0.027	0.302	53.7	0.082	4.30	18.4	1.05	
BM 6		0.131	0.041	0.367	94,2	0.078	5.36	36.6	1.95	
BM 7		0.233	0.094	0.406	135.5	0.100	4.65	55.3	9.26	
BM 8		0.105	0.047	0.439	85.7	0.062	2.91	31.1	0.80	
BM 9		0.146	0.027	0.390	64.9	0.063	2.87	30.3	2.13	
BM 10		0.184	0.029	0.321	110.0	0.069	6,13	37.2	4.08	
BM 11		0.192	0.048	0.319	113.5	0.092	9.76	54.1	4.34	
BM 12		0.091	0.023	0.397	69.1	0.057	2.97	26.4	1.12	
BM 13		0.123	0.026	0.322	75.1	0.081	5.03	32.1	2.06	
BM 14		0.177	0.029	0.419	107.0	0.074	5.37	35.4	5.00	
BM 15		0,150	0.045	0.403	108.5	0.107	3.90	38.4	2.29	
BM 16		0.066	0.026	0.157	44.7	0.055	2.28	14.3	0.67	
BM 17		0.214	0.079	0.368	157.5	0.104	5.16	56.7	4.29	
BM 18		0.037	0.070	0.305	78.4	0.064	5.15	15.8	0.26	0.46
BM 19		0.100	0.040	0.253	85.7	0.122	4.81	27.6	1.15	
BM 20		0.046	0.019	0.104	35.2	0.032	1.245	10.6	0.25	
BM 21		0.056	0.087	0.123	43.3	0.093	2.72	41.4	3.36	
BM 22		0.179	0.064	0.502	167.5	0.174	13.85	38.7	6.85	
BM 23		0.135	0.063	0.624	113.5	0.131	10.55	44.7	6.30	
JM 1		0.184	0.036	0.388	156.0	0.089	1.785	37.7	3.32	
JM 2		0.110	0.075	0.481	86.1	0.135	9.48	31.7	5.71	
JM 3		0.171	0.099	0.577	154.0	0.113	8.29	48.6	3,18	
JM 4		0.090	0.081	0.457	115.5	0.081	3.49	23.1	2,00	
JM 5		0.148	0.098	0.283	109.5	0.090	5.27	31.8	2.05	0.17
JM 6		0.119	0.065	0.305	93.8	0.092	3.76	29.6	1.80	0.14
JM 7		0.006	0.113	0.444	62,4	0.062	2.82	20.0	0.88	0.26



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Project: Red Dog

		CERTIFICATE COMMENT	ſS	
Applies to Method:	Gold determinations by this method a ME- MS41L	<b>ANALYTICAL</b> ( are semi- quantitative due to the sr		
	Processed at ALS Vancouver located a	LABORATORY t 2103 Dollarton Hwy, North Vanc		
Applies to Method:	Au- AROR43 SCR- 41	Au- ST43 WEI- 21	LOG- 22	ME- MS41L
			φ.	



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#### To: NORTHISLE COPPER AND GOLD INC. 1800 - 570 GRANVILLE STREET VANCOUVER BC V6C 3P1

Page: 1 Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 21- APR- 2015 Account: NORCOP

CERTIFICATE VA15053935

Project: Red Dog This report is for 11 Rock samples submitted to our lab in Vancouver, BC, Canada on 14- APR- 2015. The following have access to data associated with this certificate:

J. MCCLINTOCK

	SAMPLE PREPARATION	
ALS CODE	DESCRIPTION	
WEI- 21	Received Sample Weight	
LOG- 21	Sample logging - ClientBarCode	
CRU- QC	Crushing QC Test	
PUL- QC	Pulverizing QC Test	
CRU- 31	Fine crushing - 70% < 2mm	
SPL- 21	Split sample - riffle splitter	
PUL- 31	Pulverize split to 85% < 75 um	

	ANALYTICAL PROCEDUR	RES
ALS CODE	DESCRIPTION	
ME- MS61 Au- ICP22	48 element four acid ICP- MS Au 50g FA ICP- AES finish	ICP- AES

To: NORTHISLE COPPER AND GOLD INC. ATTN: J. MCCLINTOCK 1800 - 570 GRANVILLE STREET VANCOUVER BC V6C 3P1

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Page: 2 - A Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 21- APR- 2015 Account: NORCOP

Project: Red Dog

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt, kg 0.02	Au- ICP22 Au ppm 0.001	ME-MS61 Ag ppm 0_01	ME- MS61 Al % 0.01	ME- MS61 As ppm 0_2	ME-MS61 Ba ppm 10	ME- MS61 Be ppm 0_05	ME-MS61 Bi ppm 0,01	ME- MS61 Ca % 0.01	ME- MS61 Cd ppm 0,02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME- MS61 Cs ppm 0.05	ME- MS61 Cu ppm 0,2
2014263947		0.80	0.041	0.07	0.98	0.9	70	0.12	0.12	0.01	0.05	4.95	9.4	15	0.17	159.5
2014263948		0.70	0.650	1.96	2.18	6.6	80	0.26	0.31	0.10	0.26	3.15	10.6	20	0.18	4240
2014263949		0.80	0.013	0.05	7.46	2.8	40	0.27	0.89	0.10	0.03	9.09	3.3	17	<0.05	44.4
2014263950		0.74	0.577	0.19	0.26	7.3	10	0.06	0.30	0.01	0.09	0.71	0.9	17	<0.05	282
2014263951		0.84	1.085	2.29	2.94	16.6	130	0.12	0.55	0.02	0.04	2.49	4.8	24	0.91	871
2014263952		0.84	0.007	0.10	8.34	5.0	890	0.59	0.61	0.23	0.06	17.05	7.9	17	1.16	27.6
2014263959		1.02	0.003	0.06	7.72	0.8	750	0.83	0.30	1.89	0.19	27.9	9.0	10	0.49	32.0
2014263960		1.16	0.186	0.82	8.76	4.3	170	0.75	0.28	4.57	1.53	25.5	9.8	9	1.59	1375
2014263969		0.94	0.003	0.03	8.92	2.4	820	0.76	0.92	0.13	0.02	29.1	10.8	54	0.33	71.1
2014263970		0.70	0.012	0.06	3.94	10.2	60	0.17	1.14	0.10	0.02	18.60	39.0	21	<0.05	195.0
2014263984		0.78	0.104	0.08	9.18	2.1	410	0.78	0.65	1.91	0.05	29.7	4.6	14	0.57	377



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Project: Red Dog

Sample Description	Method Analyte Units LOR	ME- MS61 Fe % 0.01	ME-MS61 Ga ppm 0.05	ME-MS61 Ge ppm 0,05	ME-MS61 Hf ppm 0_1	ME- MS61 In ppm 0.005	ME- MS61 K % 0.01	ME- MS61 La ppm 0_5	ME- MS61 Li ppm 0.2	ME- MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME- MS61 Mo ppm 0.05	ME- MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME- MS61 Ni ppm 0,2	ME-MS61 P ppm 10
2014263947		2.17	1.88	<0.05	0.1	0.019	0.36	2.4	1.7	0.03	45	45.6	0.04	0.9	1.9	30
2014263948	1	9.80	9,20	< 0.05	0.2	0.590	0.34	1.4	5.6	1.07	419	22.1	0.27	1.4	4.6	200
2014263949		0.62	13.55	<0.05	1.5	0.022	0.02	4.2	0.8	0.01	22	3.91	0.03	5.2	3.4	890
2014263950		11.60	9.25	80.0	0.1	0.110	0.02	<0.5	2.1	0.13	47	101.5	0.01	1.4	2.0	50
2014263951		7.93	21.6	0,10	0.4	0.599	1.01	1.4	4.3	0,11	83	90.8	0.06	1.7	1.7	110
2014263952		5.92	20.5	0.05	1.3	0.137	1.93	7.8	7.6	1.78	1050	2.12	1.29	3.7	2.7	720
2014263959		3.67	16.75	0.07	2.4	0.217	1.05	14.4	4.4	1.10	1240	3.00	2.90	5.7	4.6	460
2014263960		6.56	20.2	0.08	101	0.785	0.83	9.2	4.4	1.27	594	21.7	3,73	4.6	11.8	1030
2014263969		4.46	20.4	0.08	3.1	0.253	1.96	14.3	3.5	3.17	319	1.42	0.14	4.4	18.3	770
2014263970		9.45	4.22	0.05	0.6	0.045	0.04	9.7	0.5	0.04	38	2.95	0.02	2.5	22.4	530
2014263984		4.04	22.7	0.08	0.8	0.158	0.73	11.4	9.3	2.02	157	13.00	2.71	5.0	7.4	1340



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Project: Red Dog

Sample Description	Method Analyte Units LOR	ME-MS61 Pb ppm 0_5	ME-MS61 Rb ppm 0.1	ME- MS61 Re ppm 0,002	ME- MS61 S % 0_01	ME- MS61 Sb ppm 0=05	ME-MS61 Sc ppm 0,1	ME-MS61 Se ppm 1	ME- MS61 Sn ppm 0_2	ME- M561 Sr ppm 0,2	ME- MS61 Ta ppm 0.05	ME- MS61 Te ppm 0.05	ME-MS61 Th ppm 0_2	ME- MS61 Ti % 0.005	ME- MS61 Tl ppm 0.02	ME- MS61 U ppm 0, 1
2014263947		2.5	10.2	0.216	1.84	0.13	2,1	9	1.6	4.7	0.05	0.52	0.9	0,020	0.10	0.1
2014263948		9,7	10.5	0.073	2.46	0.21	5.6	10	1.8	21.8	0.10	0.81	0.7	0.088	0.15	0.1
2014263949		8.4	0.4	0.013	0.58	0.48	9.6	3	11.2	131.0	0.37	0.37	1.8	0.424	0.05	0.8
2014263950		3.1	0.7	0.167	0.14	0.39	1.9	9	3.3	1.2	< 0.05	1.03	0.3	0.023	0.02	0.2
2014263951		3.3	35.7	0.132	0.11	0.32	3.9	29	7.4	11.3	0.16	0.68	2.7	0.077	0.35	0,3
2014263952		15.4	40.9	<0.002	2.32	0.23	21.8	5	0,9	261	0.24	1.29	1.3	0,374	0.61	0.6
2014263959		6.3	19.7	< 0.002	0.02	0.14	14.3	1	0.8	497	0.48	0.13	4.4	0.279	0.20	1.9
2014263960		19.4	11.3	0.083	0.75	0.45	19.1	3	4.5	505	0.28	0.39	1.1	0.483	0.22	0.9
2014263969		3.3	48.5	0.003	2.39	0.21	21,2	6	4,2	34.9	0.30	0.39	2.2	0.340	1.88	1.0
2014263970		7,1	0.7	0.006	>10_0	0.49	5.3	10	7.1	270	0.15	0.39	1.2	0.286	0.07	0.3
2014263984		4.2	12.6	0.060	1.33	0.19	24.9	5	4.2	502	0.24	1.63	1.4	0.415	0.32	0.5



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Project: Red Dog

Method Analyte Units LOR	ME-MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME-MS61 Zr ppm 0_5	
	13 40 149 20 48	0.4 0.3 0.4 1.5 0.4	5.6 4.1 6.3 1.1 1.6	4 251 3 21 30	2.5 6.8 47.6 2.4 10.8	
	214 100 234 116 103	0.4 0.5 0.5 0.2 0.2	6.2 15.9 17.1 13.5 3.1	67 135 174 41 4	44.9 80.5 32.7 113.0 21.6	
	138	0.3	21.0	38	23.8	
	Analyte Units	Analyte Units LOR         V           13         40           149         20           48         214           100         234           116         103	Manalyte Units LOR         V         W           1         0.1           1         0.1           1         0.1           1         0.1           1         0.1           1         0.1           1         0.3           149         0.4           20         1.5           48         0.4           100         0.5           234         0.5           116         0.2           103         0.2	Manalyte Units LOR         V         W         Y           1         0         ppm         ppm           1         0.1         0.1           1         0.1         0.1           1         0.1         0.1           1         0.1         0.1           1         0.1         0.1           1         0.1         0.1           1         0.1         0.1           1         0.1         0.1           1         0.1         0.1           1         0.4         5.6           40         0.3         4.1           149         0.4         6.3           20         1.5         1.1           48         0.4         1.6           100         0.5         15.9           234         0.5         17.1           116         0.2         13.5           103         0.2         3.1	Analyte Units LOR         V         W         Y         Zn           1         ppm         ppm         ppm         ppm           1         0.1         0.1         2           1         0.1         0.1         2           1         0.1         0.1         2           1         0.1         0.1         2           1         0.1         0.1         2           1         0.1         0.1         2           1         0.1         0.1         2           1         0.4         5.6         4           40         0.3         4.1         251           149         0.4         6.3         3           20         1.5         1.1         21           48         0.4         1.6         30           234         0.5         15.9         135           234         0.5         17.1         174           116         0.2         13.5         41           103         0.2         3.1         4	Manalyte Units LOR         V         W         Y         Zn         Zr           1         0.1         0.1         0.1         2         0.5           1         0.1         0.1         2         0.5           13         0.4         5.6         4         2.5           40         0.3         4.1         251         6.8           149         0.4         6.3         3         47.6           20         1.5         1.1         21         2.4           48         0.4         1.6         30         10.8           100         0.5         15.9         135         80.5           234         0.5         17.1         174         32.7           116         0.2         13.5         41         113.0           103         0.2         3.1         4         21.6



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Project: Red Dog

		CERTIFICATE CO	MMENTS					
Applies to Method:	ANALYTICAL COMMENTS REE's may not be totally soluble in this method. ME- MS61							
	LABORATORY ADDRESSES Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.							
Applies to Method:	Au- ICP22 ME- MS61 WEI- 21	CRU- 31 PUL- 31	CRU- QC PUL- QC	LOG- 21 SPL- 21				
			2					

# Appendix II Report by K. Heberlein P.Geo

Kim Heberlein 21146 Stonehouse Avenue Maple Ridge, B.C. Canada V2X 8L9 Tel: 778-228-5231 604-466-2087

28<sup>th</sup> April 2015

Northisle Copper and Gold Inc 1800 – 570 Granville Street Vancouver BC Canada V6C 3P1

Attn:Jack McClintockRe:PIMA Spectral (Red Dog/KH220)

PIMA spectral analysis was run on 2 rock samples from the Red Dog property. Two readings were taken of each sample; the quality of the spectra was excellent. Results are on the attached Excel sheet.

Minerals identified include pyrophyllite, diaspore, alunite, kaolinite, possible dickite and possible zunyite. This conforms to advanced argillic alteration.

Pyrophyllite is the major mineral in both samples, with strong diaspore present.

Kaolinite is present in both samples. There is a faint suggestion that dickite is also present in RD18, but I was unable to get a distinct reading for it.

Alunite is "normal" potassic. It is present in both samples in minor amounts. The spectrum for RD019b was taken from a fracture and shows minimal alunite compared to the pervasive alteration.

Sample RD018 shows a weak absorption shoulder at 2138nm which is suggestive of zunyite. Again, I was unable to get distinct identification.

If you have any questions regarding the interpretation please don't hesitate to contact me.

Best Regards

Kim Heberlein, P.Geo. kimheberlein@telus.net

## PIMA SPECTRAL ANALYSIS Red Dog (KH220)

SAMPLE		2200	ALUN										
ID	SPECTRUM		WAVE	ALUN	KAO	PYR	DIAS	DIK	ZUNY	COMMENTS	Mineral ID_1	Mineral ID_2	Mineral ID_3
RD18	RD018a	2166	1480	Х	Х	Х	Х	?	?	Pervasive mod soft grey/white altn	Pyrophyllite	Alunite	Kaolinite
										Pervasive mod soft grey/white altn.			
										Weak feature at 2138nm suggests			
RD18	RD018b	2166	1480	х	х	Х	х	?	?	zunyite?	Pyrophyllite	Alunite	Kaolinite
RD18.1	RD019a	2166	1479	tr	tr	х	x			Pervasive mod soft grey/white altn	Pyrophyllite	Diaspore	Kaolinite
	112010u	2100					<i>x</i>			Pervasive mod soft grey/white altr.	i jiopiijiito	Diaoporo	
RD18.1	RD019b	2166		?	x	x				White fracture	Pyrophyllite	Kaolinite	Diaspore
11010.1	INDOTOD	2100		•	^	~						Raomine	Ыазрыс
		<u> </u>									<u> </u>		

# Appendix III Rock Sample Descriptions

Sample Number	Sample Description
2014263947	Grab sample. Sericite clay pyrite alteration (advanced argillic) of andesit tuff-
	breccia. Approximately 15% pyrite. Original texture unrecognizable.
2014263948	Grab sample. Sericite – chlorite alteration overprint of earlier potassic
	alteration (biotite – magnetite). Host is andesite tuff. Pyrite with lesser
	chalcopyrite.
2014263949	1 metre chip. Pyrite stockwork cutting chloritized andesite tuff breccia.
2014263950	Grab sample. Quartz magnetite breccia clasts are andesite tuff-breccia.
2014263951	1 metre chip. Sericite – chlorite altered andesite (intermediate argillic
	alteration)
2014263952	1 metre chip. Silica clay pyrite altered andesite tuff- breccia. Stockwork of pyrite
	veins
2014263959	1 metre chip. Sericite, clay and chlorite altered andesite tuff-breccia.
2014263960	0.5 metre chip. Chlorite – sericite altered andesite tuff-breccia.
2014263969	0.5 metre chip. Silica clay pyrite altered andesite. 10% pyrite (advanced argillic
	alteration
2014263970	1 metre chip. Advanced argillically altered tuff-breccia. Primary textures
	obscure. Pervasive silicification, strong clay alteration and 15% pyrite.
2014263984	1 metre chip. Feldspar porphyry. Minor magnetite, weak sericitization of
	feldspar phenocrysts and chloritization of mafic minerals. Magnetite and pryrite
	as disseminations and fracture fillings. Rock is from a narrow dyke cutting more
	strongly altered andesite tuff.

### Appendix IV Geographical coordinates of Rock and Soil Samples

Rock Samples	NAD 83 Zone 9	
SAMPLE	Lat	Long
2014263947	50.70953275	-127.9807696
2014263948	50.70964163	-127.9752413
2014263949	50.69974084	-127.9826789
2014263950	50.7092248	-127.9770262
2014263951	50.71037287	-127.9798193
2014263952	50.69988971	-127.9718985
2014263959	50.70446924	-127.9684519
2014263960	50.71044378	-127.9737533
2014263969	50.70554766	-127.9593953
2014263970	50.70548228	-127.967543
2014263984	50.7105017	-127.9693109

Soil Samples	NAD 83 2	Zone 9	
SAMPLE	UTM E		UTM N
BM 1	573096		5617531
BM 2	573111		5617448
BM 3	573108		5617328
BM 4	572114		5617410
BM 5	572210		5617382
BM 6	572307		5617359
BM 7	572413		5617329
BM 8	572528		5617317
BM 9	572638		5617317
BM 10	572740		5617285
BM 11	572805		5617180
BM 12	572855		5617083
BM 13	572847		5616973
BM 14	572015		5617456
BM 15	571917		5617490
BM 16	571837		5617545
BM 17	571753		5617612
BM 18	571673		5617672
BM 19	571624		5617764
BM 20	571596		5617863
BM 21	572549		5616929
BM 22	572662		5616968
BM 23	572689		5616882
SAMPLE		Lat	Long
JM 1		50.70534121	-127.9658231
JM 2		50.70506587	-127.9783621
JM 3		50.70557389	-127.9796055
JM 4		50.70648526	-127.9795006
JM 5		50.70726226	-127.9802111
JM 6		50.70822291	-127.9803585
JM 7		50.70882482	-127.9809749