

PROSPECTING & TECHNICAL REPORT

#563872 KLASKINO 5/#624623 KLASKINO6

Event #5573379

Nanaimo Mining Division
Vancouver Island B.C.

NTS 92L/5

UTM
590792 5571181

November 8, 2015

Vincent John Buddick
FMC #205212

Report By:
Vincent John Buddick
North Island Exploration



**GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT**

35,837

Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Technical report

TOTAL COST: 3004.06

AUTHOR(S): Vince Buddick
FMC # 205212

SIGNATURE(S): Vince Buddick

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): _____

YEAR OF WORK: 2015

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): Event # 5573379
Work dates: Aug 3-6, 2015

PROPERTY NAME: KLASKINO 5, KLASKIN06

CLAIM NAME(S) (on which the work was done): KLASKINO 5 - 563872
KLASKIN06 - 624623

COMMODITIES SOUGHT: Gold, copper, zinc

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: _____

MINING DIVISION: Nanaimo

NTS/BCGS: 92415

LATITUDE: 50 ° 17 ' 10 " LONGITUDE: 127 ° 42 ' 57 " (at centre of work)

OWNER(S):
1) Vince Buddick 2) _____

MAILING ADDRESS:
1508 Marina Way
Nanose BC, V9P-9B6

OPERATOR(S) [who paid for the work]:
1) Vince Buddick 2) _____

MAILING ADDRESS:
1508 Marina Way
Nanose BC, V9P 9B6

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: _____

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area) Ground, mapping _____ Photo interpretation _____	24 ha	KLASKINO 5 _____ KLASKIN06 _____	$\rightarrow 1126.52 = \$ 1502^{03}$ $\rightarrow 375.51$
GEOPHYSICAL (line-kilometres) Ground Magnetic _____ Electromagnetic _____ Induced Polarization _____ Radiometric _____ Seismic _____ Other _____ Airborne _____			
GEOCHEMICAL (number of samples analysed for...) Soil _____ Silt _____ Rock _____ Other _____			
DRILLING (total metres; number of holes, size) Core _____ Non-core _____			
RELATED TECHNICAL Sampling/assaying _____ Petrographic _____ Mineralographic _____ Metallurgic _____			
PROSPECTING (scale, area) _____	24 ha	KLASKINO 5 _____ KLASKIN06 _____	$\rightarrow 1126.52 = \$ 1502^{03}$ $\rightarrow 375.51$
PREPARATORY / PHYSICAL Line/grid (kilometres) _____ Topographic/Photogrammetric (scale, area) _____ Legal surveys (scale, area) _____ Road, local access (kilometres)/trail _____ Trench (metres) _____ Underground dev. (metres) _____ Other _____			
		TOTAL COST:	3004.06

Page**Table of Contents**

1. Introduction
2. Location
3. Topography, Vegetation and Climate
5. History
5. Geology
10. Summary of Work
10. Notes on Rock Samples
11. Conclusion
12. Author's Qualifications
- 13-15. References
16. Software Used in Prospecting and Map Preparation
- 23-25. Appendix 1: Cost Statement
- 26-37. Appendix 2: Analytical Results

Page	Illustrations
2.	Figure 1) KLASKINO 5/KLASKINO6 1-250,000
3.	Figure 2) KLASKINO 5/KLASKINO6 1-50,000
4.	Figure 3) KLASKINO 5/KLASKINO6 1-20,000
7.	Figure 4) Distribution of Wrangellia
8.	Figure 5) Regional Mesozoic-Cenozoic Stratigraphy of N. Vancouver Island
9.	Figure 6) KLASKINO 5/6 - Local Geology
17.	Figure 7) KLASKINO 5/6 - Mapping Grid
18-22.	Figures 8-12) Geological Mapping in 1:5,000

Introduction

This report details the technical work carried out on tenures #563872 KLASKINO 5 and #624623 KLASKINO6. The tenures consist of 18 cells or 371.64 hectares. KLASKINO 5 was staked on July 30, 2007 and KLASKINO6 was staked on August 26, 2009. The tenures are owned by myself, Vincent John Buddick (North Island Exploration), FMC #205212. A project of general reconnaissance, prospecting and mapping was performed on August 3-6, 2015. Approximately 24 hectares were examined. 36 hours of fieldwork was recorded when the project completed.

Location

The tenure is situated on traditional lands of The Quatsino First Nations. A letter of intention was sent to their respective band office, describing the nature of planned projects.

Located on northwest Vancouver Island, NTS grid 92L/5, it can be accessed with a high clearance vehicle via Highway 19/Port Alice Highway/South Road/Marine Drive/Cayuse Main/Klaskish Main/Klaskino Main. Driving Distance from Port Alice to the tenure boundary is 59 kms.

Access to the tenure has improved with the clearing of Hanson Main, but all other mapped roads and spurs have become overgrown with alders. Access from these spurs is quite laborious, but does allow for inspection of outcrop.

A camp was set up near the tenure on Klaskino Inlet.

Four maps illustrate the tenure locations in 1:250,000, 1:50,000 and 1:20,000 scales. See figures 1, 2 and 3.

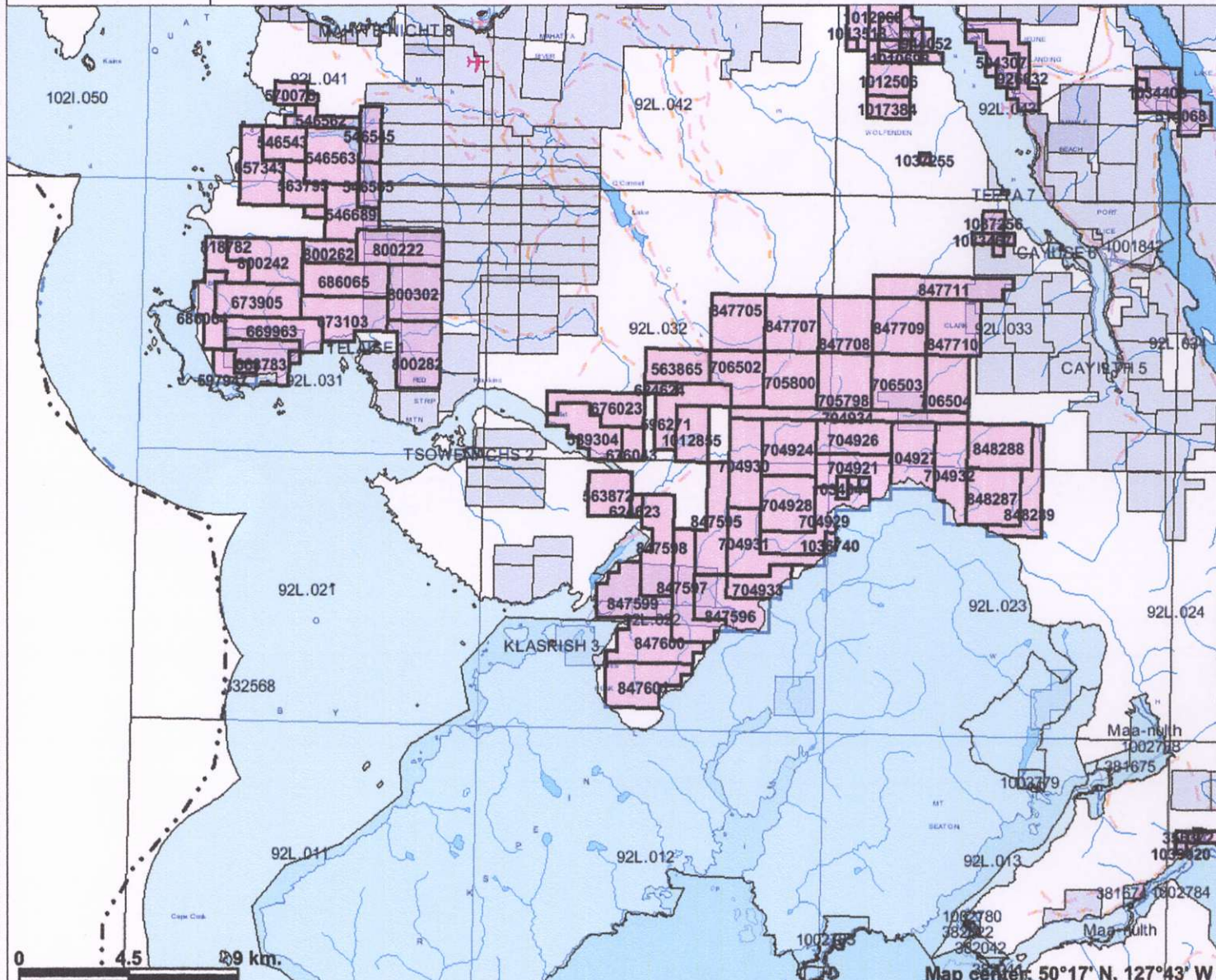
Topography, Vegetation and Climate

The topography consists of steep mountainous terrain. Elevations rise moderately from 0m at Klaskino Inlet to 700m near the southwest corner of the tenure. Numerous small creeks drain quickly into Klaskino Inlet.

Vegetation is typical of a clear-cut logged area. This area had been logged in various stages in recent history and the secondary growth is relatively young. It was challenging to traverse around the remnant logs. The extremely thick alder growth on the logging roads can hinder access equally. In some areas a traverse thru the second growth, paralleling the densely overgrown logging road, proved the safer and more efficient route.

The area is in direct proximity to the Pacific Ocean and receives above average west coast rainfalls from October thru March.

KLASKINO 5/KLASKINO6 1-250,000



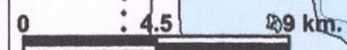
Legend

- Indian Reserves
- National Parks
- Conservancy Areas
- Parks
- Federal Transfer Lands
- Mineral Tenure (current)
- Mineral Claim
- Mineral Lease
- Mineral Reserves (current)
- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others
- First Nations Treaty Related Lands
- First Nations Treaty Lands
- Survey Parcels
- BCGS Grid
- Annotation (1:250K)
- Transportation - Points (1:250K)
- ✈ Airfield
- ⚓ Anchorage - Seaplane
- ⚓ Ferry Route
- ⚓ Heliport
- ⚓ Seaplane Base
- ✈ Air Field
- ✈ Airport
- ✈ Air Feature - Condition Unknown

Scale: 1:250,000

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

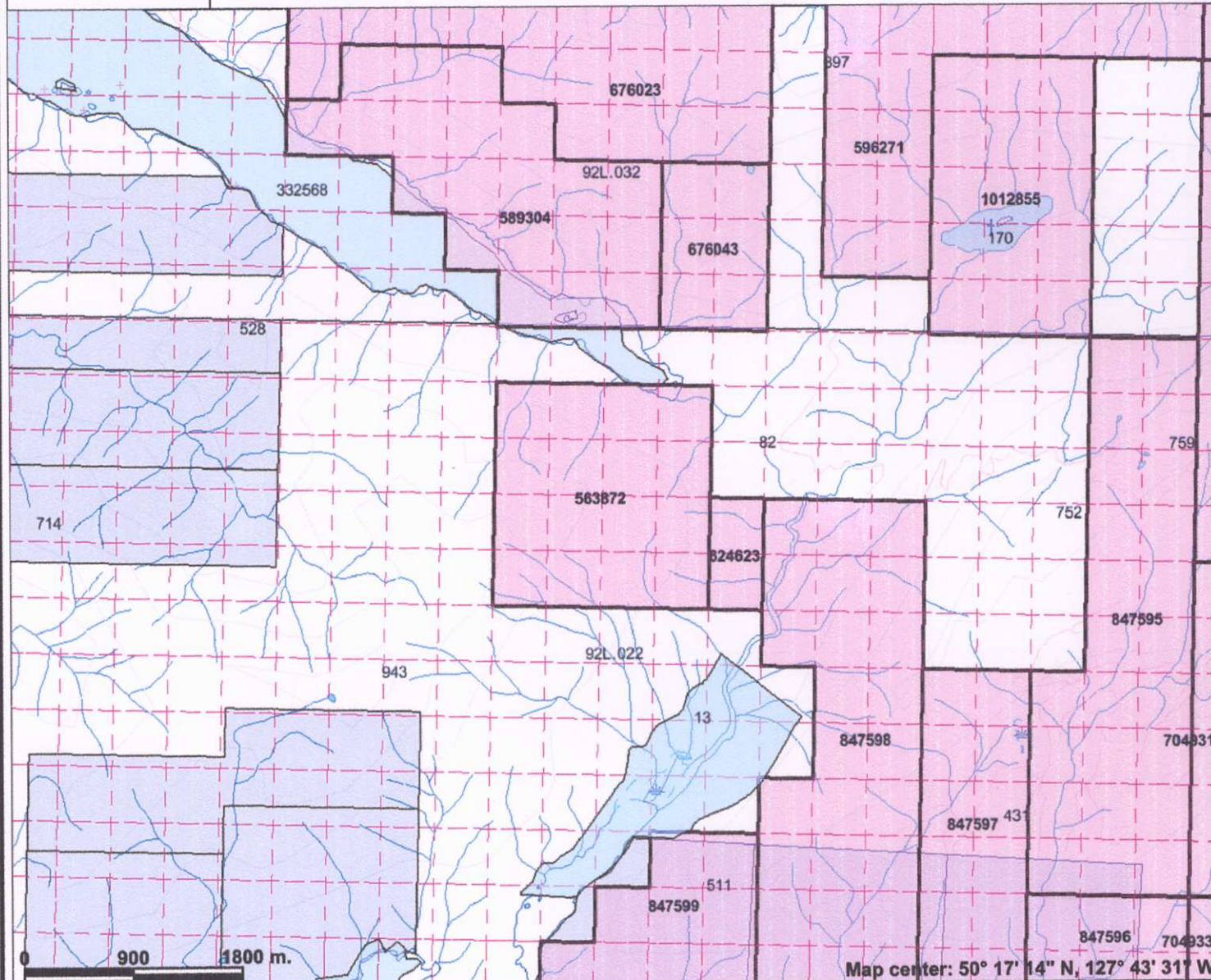
Notes: Page 2
Figure 1



Map center: 50°17' N, 127°43' W



KLASKINO 5/KLASKINO6 1-50,000



Legend

- MTO Grid (MTO)
- Mineral Tenure (current)
- Mineral Claim
- Mineral Lease
- Mineral Reserves (current)
- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others
- First Nations Treaty Related Lands
- First Nations Treaty Lands
- Survey Parcels
- BCGS Grid
- Contours (1:250K)
- Contour - Index
- Contour - Intermediate
- Area of Exclusion
- Area of Indefinite Contours
- Transportation - Points (TRIM)
- Helipad
- Transportation - Lines (TRIM)
- Airfield
- Airport
- Airstrip
- Airport.Abandoned
- Ferry Route
- Road (Gravel Undivided) - 1 Lane



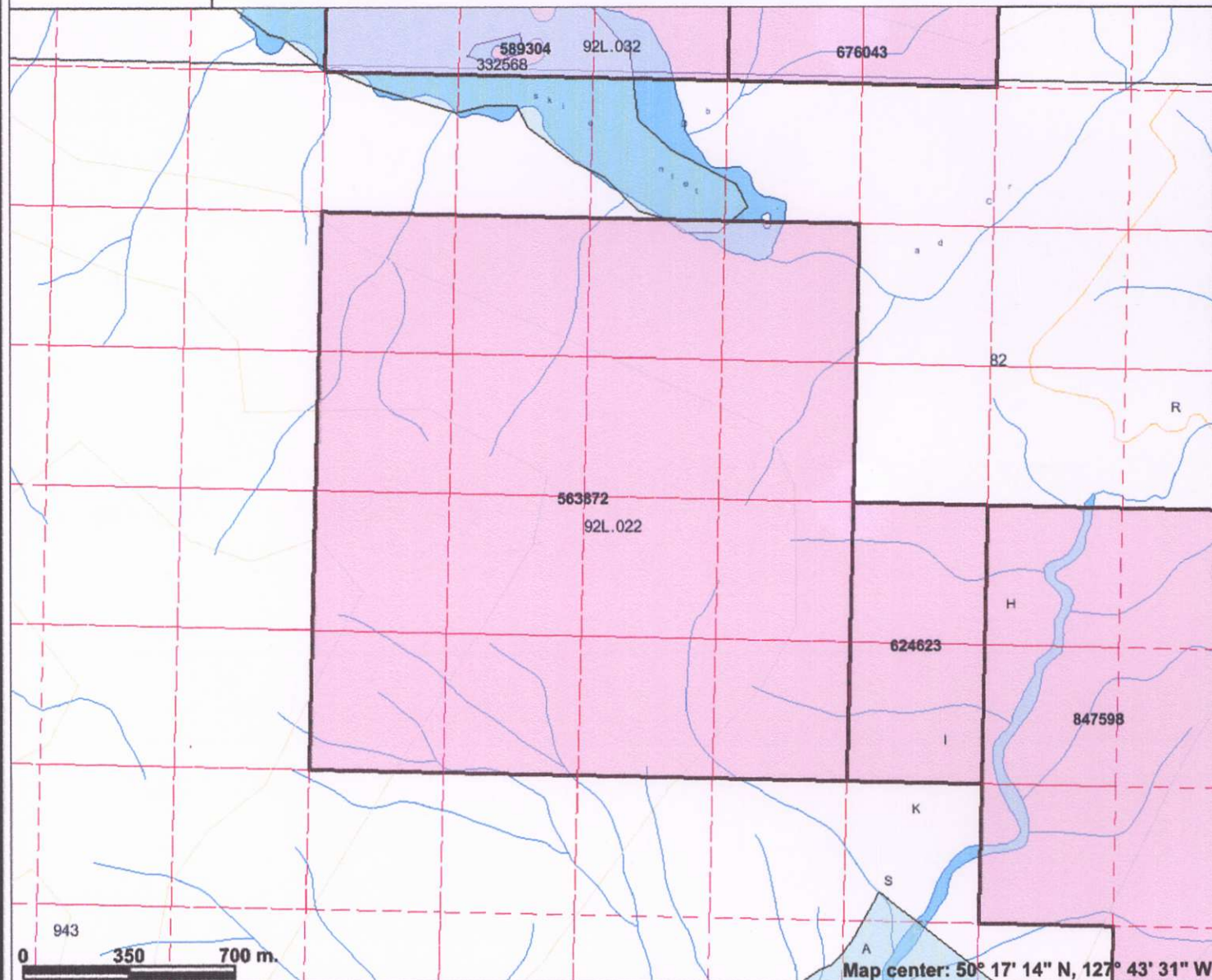
Scale: 1:50,000

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: Page 3
Figure 2



KLASKINO 5/KLASKINO6 1-20,000



Legend

- MTO Grid (MTO)
 - Mineral Tenure (current)
 - Mineral Claim
 - Mineral Lease
 - Mineral Reserves (current)
 - Placer Claim Designation
 - Placer Lease Designation
 - No Staking Reserve
 - Conditional Reserve
 - Release Required Reserve
 - Surface Restriction
 - Recreation Area
 - Others
 - First Nations Treaty Related Lands
 - First Nations Treaty Lands
 - Integrated Cadastral Fabric
 - Survey Parcels
 - BCGS Grid
 - Contours (1:250K)
 - Contour - Index
 - Contour - Intermediate
 - Area of Exclusion
 - Area of Indefinite Contours
 - Annotation (1:20K)
 - Transportation - Points (TRIM)
 - Helipad
 - Transportation - Lines (TRIM)
 - Airfield
 - Airport
 - Airstrip
 - Airport Abandoned
- Scale: 1:20,000

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: Page 4
Figure 3

History

ARIS 11226: In 1982 BP Minerals showed interest in the Klaskino area. A project involving geological mapping, stream and soil geochemical testing and rock chip sampling was conducted on the north and south shore of Klaskino Inlet. Resulting geochemistry suggested the widespread distribution of arsenic bearing minerals with local associations of gold, silver, copper, mercury and antimony. Further work was deemed to be warranted based on the potential for an epithermal gold mineralization.

ARIS 30215: Details my initial 2008 projects, including discovery of talus sample RF001. Lab results show the sample to be highly mineralized with anomalies in **Cu (>10 000ppm)**, **Zn (834ppm)**, **Ag (6130ppb)**, **Ni (268ppm)**, **Co (439ppm)**, **As (103ppm)**, **Au (126ppb)**, **Hg (344ppb)** and **Fe (15%)**.

ARIS 31358: My 2009 prospecting project. A target zone was set up to locate the source of RF001 discovered in 2009. The source was located along with numerous other highly mineralized areas.

ARIS 31723: My 2010 project identifying hard rock sources of mineralized talus discovered in 2008. Two new mineralized zones were discovered.

ARIS 33532: My 2012 project confirming mineralizations in 3 main study areas.

Geology

Vancouver Island belongs to the Insular Tectonic Belt, the westernmost subdivision of the Canadian Cordillera. Wrangellia, *an accreted oceanic plateau (Green Andrew R., et al)*, forms the dominant terrane. See figure 4, Distribution of Wrangellia.

The Wrangellia Terrane is a complex and variable terrane that extends from Vancouver Island to central Alaska. Wrangellia is most commonly characterized by widespread exposures of Triassic flood basalts and complementary intrusive rocks (Jones et al., 1977). Triassic flood basalts extend in a discontinuous belt from Vancouver and Queen Charlotte Islands (Karmutsen Formation), through southeast Alaska and the Kluane Ranges in southwest Yukon, and into the Wrangell Mountains and Alaska Range in east and central Alaska (Nikolai Formation). This belt of flood basalt sequences has distinct similarities and is recognized as representing a once-contiguous terrane (Jones et al., 1977).

Wrangellia has a long and diverse geologic history spanning much of the Phanerozoic. On Vancouver Island, the oldest rocks of Wrangellia, which lie at the top of an imbricated stack of northeast-dipping thrust sheets (Monger and Journeay, 1994), are Late Silurian to Early Permian arc sequences (Muller, 1980; Brandon et al., 1986; Sutherland Brown et al., 1986). In the Late Triassic, rapid uplift associated with a rising plume head lead to eruption of voluminous flood basalts as part of an extensive oceanic plateau (Richards et al., 1991). As volcanism ceased, the oceanic plateau soon began to subside and accumulate deep-water carbonate sediments (Jeletzky, 1970; Carlisle and Suzuki, 1974). Sedimentation within the Wrangellia Terrane lasted until the Early Jurassic, when the resurgence of arc volcanism developed in response to subduction, forming the Bonanza arc (Armstrong and MacKevett, 1977; DeBari, 1999).

The enormous exposures of the Karmutsen appear to represent a single flood basalt event (Richards et al., 1989). A mantle plume initiation model has been proposed for the Wrangellia flood basalts based on (1) relatively limited geochemical data, (2) the nature of the underlying and overlying formations, (3) rapid uplift prior to volcanism, (4) the lack of evidence of rifting associated with volcanism and (5) the short duration and high eruption rate of volcanism (Richards et al., 1991). The basalt flows are estimated to have erupted a minimum volume of $1 \times 10^6 \text{ km}^3$ (Panuska, 1990) within a maximum of five million years (Carlisle and Suzuki, 1974). During the 80 million years or so between arc activity and emergence of oceanic plateau flood basalts, as the continents gathered into a great landmass, Wrangellia became part of a composite terrane (Plafker et al., 1989). By the Middle Pennsylvanian, Wrangellia may have joined with the Alexander Terrane (Gardner et al., 1988) or been in close proximity (stratigraphic continuity) with the Alexander Terrane (Yorath et al., 1985). The ocean-bound Wrangellia Terrane amalgamated with the Taku Terrane of southeast Alaska and the Peninsular Terrane of southern Alaska by as early as the Late Triassic (Plafker et al., 1989). Paleomagnetic and faunal evidence indicate the Wrangellia Terrane originated far to the south of its present position (Hillhouse, 1977; Yole and Irving, 1980; Hillhouse et al., 1982; Hillhouse and Gromme, 1984). Wrangellia accreted to the North American craton by the Late Jurassic or Early Cretaceous (Monger et al., 1982; Tipper, 1984; Plafker et al., 1989; Gehrels and Greig, 1991; van der Heyden, 1992; Monger et al., 1994).

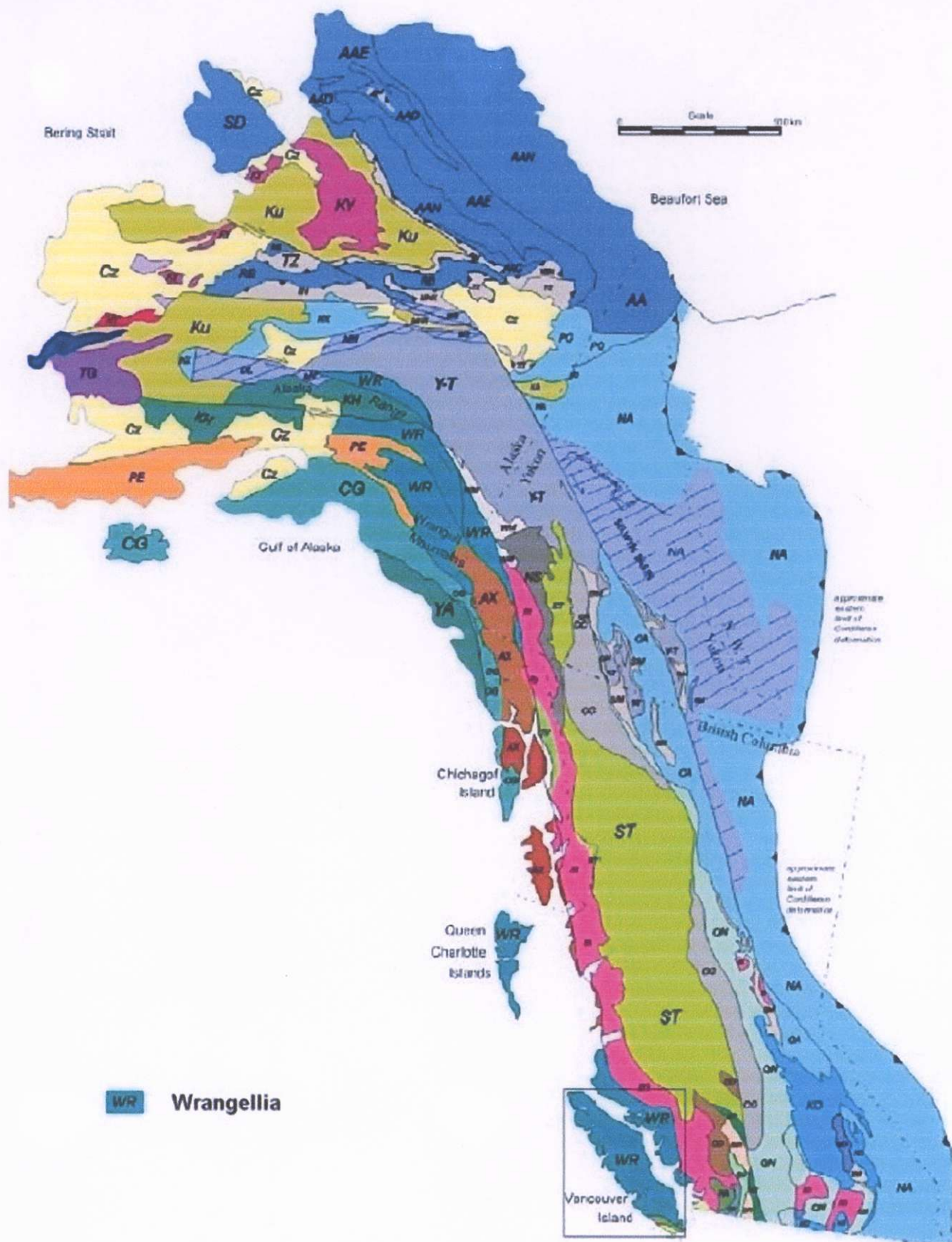
The regional geology consists of two thick volcanic/sedimentary cycles. The first is the Vancouver Group of Triassic age consisting of Karmutsen volcanics, Parson Bay and Quatsino limestones. Secondly the Bonanza Group volcanics of Lower Jurassic age. These packages are intruded by the Island Intrusives of the Middle Jurassic age, see figure 5, Regional Mesozoic-Cenozoic Stratigraphy of Northern Vancouver Island (modified after Muller, et al. 1974, 1981). The area was mapped for the GSC in 1974 by Muller, Northcote and Carlisle.

Local geology is a mix of Karmutsen volcanics, Bonanza volcanics, Quatsino limestone and Parson Bay limestone, see figure 6, KLASKINO 5/6 - Local Geology. This map shows the Mineral Titles On-line grid transposed on the Digital Geology Map of British Columbia, January 2005, N.W.D. Massey, et al.

Vancouver Island has numerous highly mineralized areas. Strongly mineralized zones are known to exist in the northwest area of the island. Five specific deposit types are found:

- 1) Porphyry copper-molybdenum deposits
- 2) Copper-iron-gold skarns
- 3) Base metal skarns
- 4) Copper bearing quartz veins and shear zones (with precious metals)
- 5) Epithermal gold deposits

Figure 4
Distribution of Wrangellia



Terrane map of western Canada and Alaska (modified after Wheeler et al. [1991]) showing the distribution of the Wrangellia Terrane (WR) in British Columbia, the Yukon and Alaska.

Figure 5

Regional Mesozoic - Cenozoic Stratigraphy of Northern Vancouver Island
(modified after Muller et al., 1974, 1981)

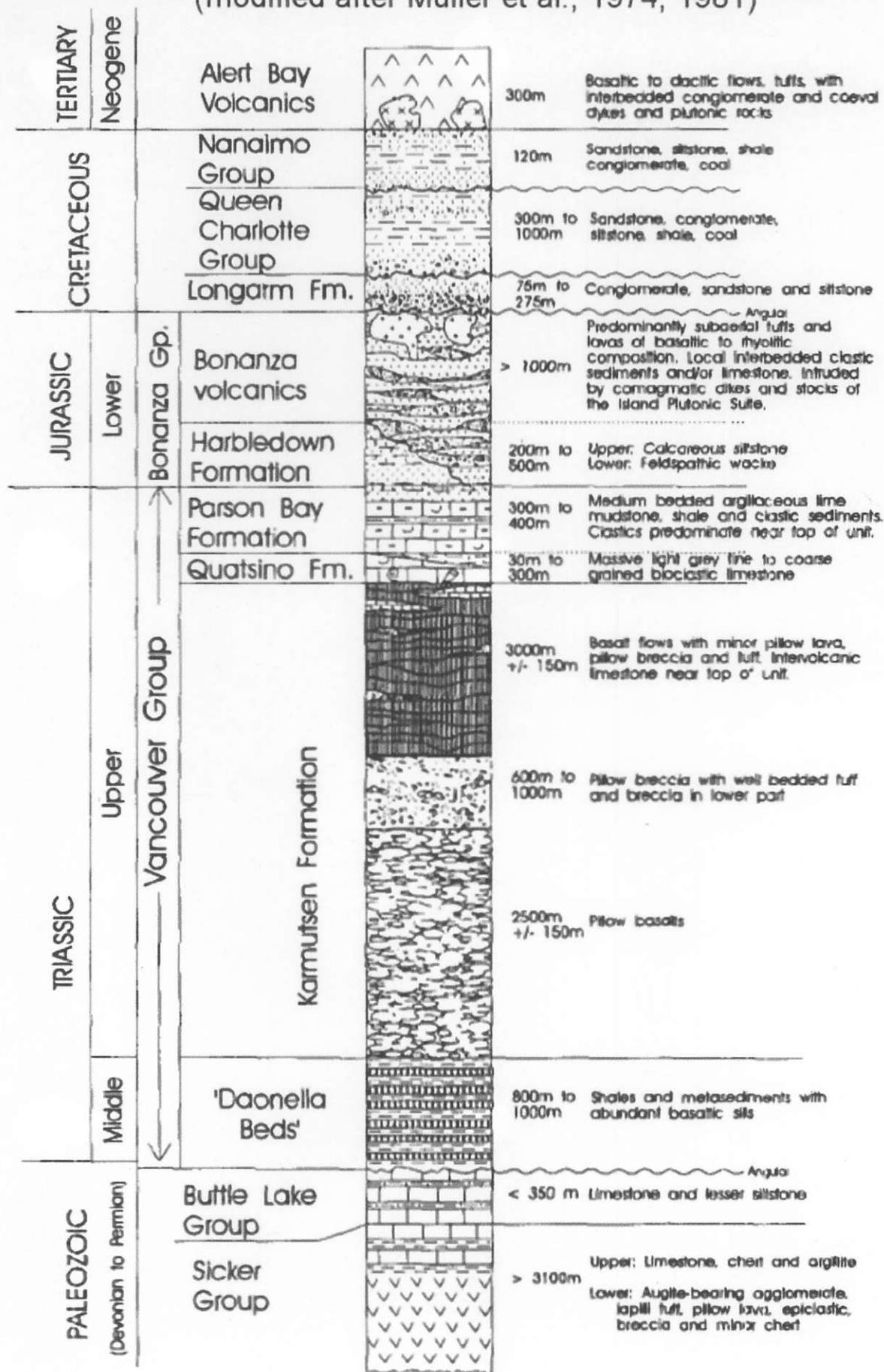
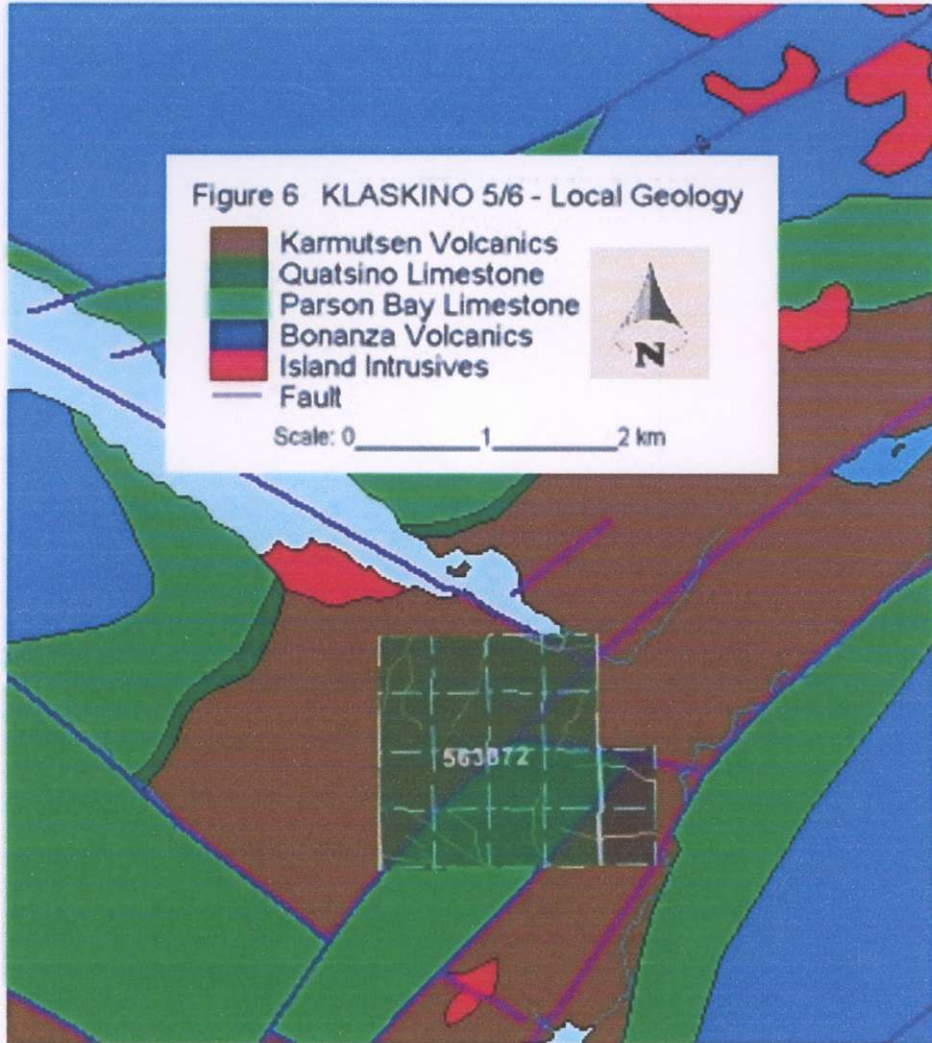


Figure 6 KLASKINO 5/6 - Local Geology

- Karmutsen Volcanics
- Quatsino Limestone
- Parson Bay Limestone
- Bonanza Volcanics
- Island Intrusives
- Fault



Scale: 0 _____ 1 _____ 2 km



Summary of Work

The 2015 project focussed on an examination of some outlying target zones containing numerous outcrops that had been visually noted in previous years, but yet to be physically studied. The target areas were a considerable distance off road which required lengthy traverses to reach. All outcrops and areas of interest were mapped and stored as GPS waypoints. 14 rock samples were collected for further study.

All data was recompiled and hand drawn on 1:5,000 maps, which are keyed into a main mapping grid. See figures 7 - 12. The areas targeted in this year's project are shown in red circles.

This technical report is a compilation of all work projects completed to date.

Notes on Rock Samples

Rock samples collected during field projects are placed in clean plastic snap-tight containers and labelled on-site. The specimens are further studied and stored at the office. Specimens chosen for lab analysis are weighed and divided in 2 with one half prepared for analysis the other half stored for future study, field recognition or retesting. Some more notable samples are photographed.

Analysis samples are placed in numbered kraft paper envelopes and packaged for shipment.

Samples were hand delivered to ACME Analytical Laboratories (Vancouver).

Rock samples were tested for 36 elements using the 1DX2 analytical package. Rock samples are crushed, split and pulverised to 200 mesh, then processed using the Aqua Regia digestion and Ultratrace ICP-MS analysis procedure.

Full analytical results for all projects completed to date are located in the appendix.

Conclusion

This is the first noted geological interpretation of these outlying outcrops since the area was opened up by clear cutting. These outcrops are all in proximity to the mineralizations discovered in 2009, 2010 and 2012, but no new mineralizations were discovered in them. The recent work will help to define the local geology and stratigraphy.

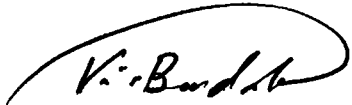
The tenure holds interest with the notable mineralizations previously confirmed in the three main study areas which support the potential for an epithermal gold mineralization.

Future plans on KLASKINO 5/KLASKINO6 include additional reconnaissance, rock sampling and traversing. A 500m x 800m soil sampling project is suggested encompassing the three mineralized areas. This would be a cost efficient way of detecting a possible dispersion halo which may help define targets for trenching or drilling. A magnetic survey would be a compliment to the ongoing work program.

Author's Qualification

I, Vincent John Buddick, of 1508 Marina Way, Nanoose Bay, British Columbia, hereby certify;

- 1) I have completed the British Columbia Institute of Technology, Introduction to Prospecting and Exploration course, in two parts; mine 1003/spring 2007 and mine 1004/fall 2007.
- 2) I have been physically prospecting for 9 years
- 3) I am the sole owner of North Island Exploration, 1508 Marina Way, Nanoose Bay, British Columbia, and currently hold 100% interest in the tenures.



Date: Nov. 8, 2015

Vince Buddick,
Prospector

References

- 1) Armstrong, A.K. and MacKevett, E.M., Jr. (1977): The Triassic Chitistone Limestones, Wrangell Mountains, Alaska; United States Geological Survey, Open File Report 77-217, pages D49-62.
- 2) Brandon, M.T., Orchard, M.J., Parrish, R.R., Brown, A.S. and Yorath, C.J. (1986): Fossil ages and isotopic dates from the Paleozoic Sicker Group and associated intrusive rocks, Vancouver Island, British Columbia; Current Research, Part A, Geological Survey of Canada, Paper 86-1A, pages 683-696.
- 3) Carlisle, D. and Suzuki, T. (1974): Emergent basalt and submergent carbonate-clastic sequences including the Upper Triassic Dilleri and Welleri zones on Vancouver Island; Canadian Journal of Earth Sciences, Volume 11, pages 254-279.
- 4) DeBari, S.M., Anderson, R.G. and Mortensen, J.K. (1999): Correlation Among Lower to Upper Crustal Components in an Island Arc: the Jurassic Bonanza arc, Vancouver Island, Canada; Canadian Journal of Earth Sciences, Volume 36, pages 1371-1413.
- 5) Gardner, M.C., Bergman, S.C., Cushing, G.W., MacKevett, E.M., Plafker, G., Campbell, R.B., Dodds, C.J., McClelland, W.C. and Mueller, P.A. (1988): Pennsylvanian pluton stitching of Wrangellia and the Alexander terrane, Wrangell Mountains, Alaska; Geology, Volume 16, pages 967-971
- 6) Gehrels, G.E. and Greig, C.J. (1991): Late Jurassic detrital zircon link between the Alexander-Wrangellia terrane and Stikine and Yukon-Tanana terranes; Geological Society of America, Abstracts with Programs, Volume 23, page A434.
- 7) Greene, Andrew R., Scoates J.S., and Weis D (2004): Wrangellia Terrane on Vancouver Island, British Columbia: Distribution of Flood Basalts with Implications for Potential Ni-Cu-PGE Mineralization in Southwestern British Columbia. Terrane map of western Canada and Alaska (modified after Wheeler et al. [1991]) showing the distribution of the Wrangellia Terrane (WR) in British Columbia, the Yukon and Alaska.
- 8) Greene, Andrew R., Scoates J.S., and Weis D. (2005): Picritic Lavas and Basal Sills in the Karmutsen Flood Basalt Province, Wrangellia, Northern Vancouver Island, British Columbia.
- 9) Hillhouse, J.W. (1977): Paleomagnetism of the Triassic Nikolai Greenstone, McCarthy Quadrangle, Alaska; Canadian Journal of Earth Sciences, Volume 14, pages 2578-3592.
- 10) Hillhouse, J.W., Gromme, C.S. and Vallier, T.L. (1982): Paleomagnetism and Mesozoic tectonics of the Seven Devils volcanic arc in northeastern Oregon; Journal of Geophysical Research, Volume B. 87, pages 3777-3794.

- 11) Hillhouse, J.W. and Gromme, C.S. (1984): Northward displacement and accretion of Wrangellia: New paleomagnetic evidence from Alaska; *Journal of Geophysical Research*, Volume 89, pages 4461-4467.
- 12) Jeletzky, J.A. (1970): Some salient features of Early Mesozoic history of Insular Tectonic Belt, western British Columbia; *Geological Survey of Canada, Paper 69-14*, 26 pages.
- 13) Jones, D.L., Silberling, N.J. and Hillhouse, J. (1977): Wrangellia; a displaced terrane in northwestern North America; *Canadian Journal of Earth Sciences*, Volume 14, pages 2565-2577.
- 14) Massey N.W.D., et al, *Digital Geology Map of British Columbia, January 2005, Open File 2005-2*.
- 15) Monger, J.W.H., van der Heyden, P., Journeay, J.M., Evenchick, C.E. and Mahoney, J.B. (1994): Jurassic-Cretaceous basins along the Canadian Coast Belt: Their bearing on pre-mid-Cretaceous sinistral displacements; *Geology*, Volume 22, pages 175-178.
- 16) Muller, J.E. (1980): The Paleozoic Sicker Group of Vancouver Island, British Columbia; *Geological Survey of Canada, Paper 79-30*, 22 pages.
- 17) Panuska, B.C. (1990): An overlooked, world class Triassic flood basalt event; *Geological Society of America, Abstracts with Programs*, Volume 22, page A168.
- 18) Plafker, G., Nokleberg, W.J. and Lull, J.S. (1989): Bedrock geology and tectonic evolution of the Wrangellia, Peninsular, and Chugach terranes along the Trans-Alaskan Crustal Transect in the northern Chugach Mountains and southern Copper River basin, Alaska; *Journal of Geophysical Research*, Volume 94, pages 4,255-4,295.
- 19) Richards, M.A., Duncan, R.A. and Courtillot, V. (1989): Flood basalts and hotspot tracks: plume heads and tails; *Science*, Volume 246, pages 103-107.
- 20) Richards, M.A., Jones, D.L., Duncan, R.A. and DePaolo, D.J. (1991): A mantle plume initiation model for the Wrangellia flood basalt and other oceanic plateaus; *Science*, Volume 254, pages 263-267.
- 21) Sutherland Brown, A., Yorath, C.J., Anderson, R.G. and Dom, K. (1986): Geological maps of southern Vancouver Island, LITHOPROBE I 92C/10, 11, 14, 16, 92F/1, 2, 7, 8; *Geological Survey of Canada, Open File 1272*.
- 22) Tipper, H.W. (1984): The allochthonous Jurassic-Lower Cretaceous terranes of the Canadian Cordillera and their relation to correlative strata of the North American craton; *Geological Association of Canada, Special Paper 27*, pages 113-120.

23) van der Heyden, P. (1992): A middle Jurassic to early Tertiary Andean-Sierran arc model for the coast belt of British Columbia; *Tectonics*, Volume 11, pages 82-97.

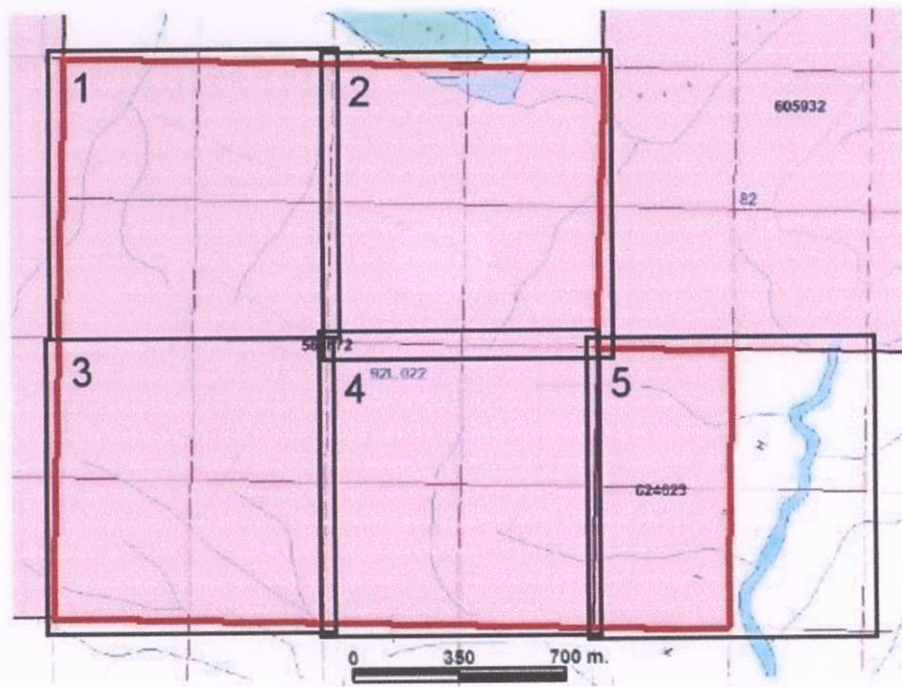
24) Yole, R.W. and Irving, E. (1980): Displacement of Vancouver Island, paleomagnetic evidence from the Karmutsen Formation; *Canadian Journal of Earth Sciences*, Volume 17, pages 1210-1228.

25) Yorath, C.J., Clowes, R.M., Green, A.G., Sutherland Brown, A., Brandon, M.T., Massey N.W.D., Spencer, C., Kanasewich, E.R. and Hyndman, R.D. (1985): Lithoprobe - Phase 1: Southern Vancouver Island: Preliminary analyses of reflection seismic profiles and surface geological studies; in *Current Research, part A*, Geological Survey of Canada, Paper 85-1A, pages 543-554.

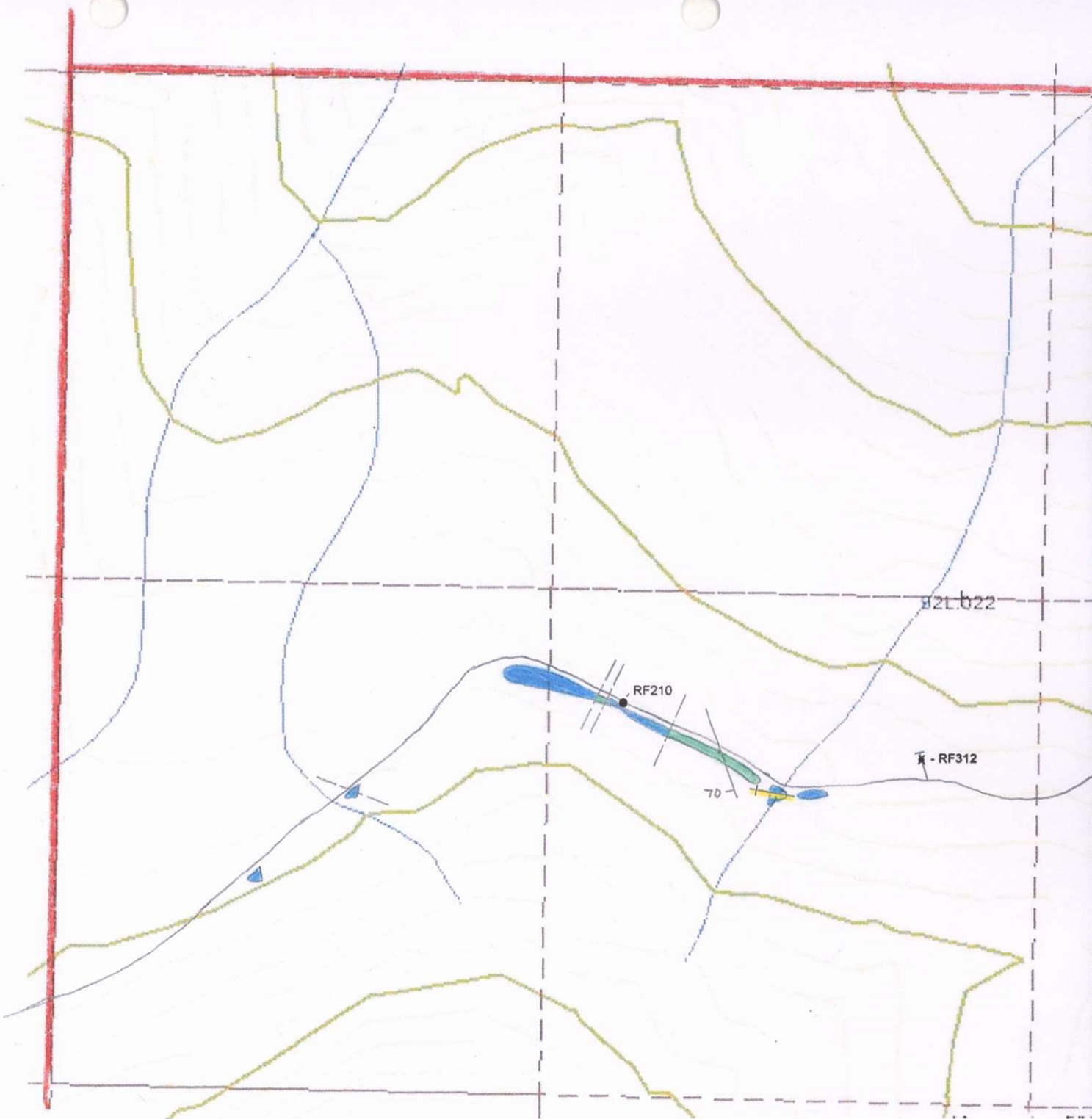
Software Used in Prospecting and Map Preparation

- 1) Adobe Reader X/10.1.0
- 2) ArcExplorer/2.0
- 3) Arcsoft/Photoimpression 2000
- 4) Backroad Mapbooks VIBC/2.0.0
- 5) Garmin/MapSource/6.16.3
- 6) GoogleEarth/7.1
- 7) Hewlitt-Packard/Photo Imaging Software/2.5.0.1
- 8) Kodak/EasyShare/6.4.0.100
- 9) Microsoft/Excel 2000/9.0.2720
- 10) Microsoft/Paint/5.0
- 11) PowerArchiver 2004/9.10.06
- 12) TopoCanada/v2/2.00
- 13) Wordperfect10/10.0.0.518

KLASKINO 5/6 - Mapping Grid
Figure 7









K51








Legend






Topographical Symbols

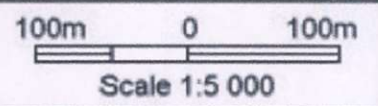
- Road 
- Creek 
- Elevation Contours 
- Claim Boundary 
- Waterfalls/Rapids 
- Cliffs 

Geological Symbols

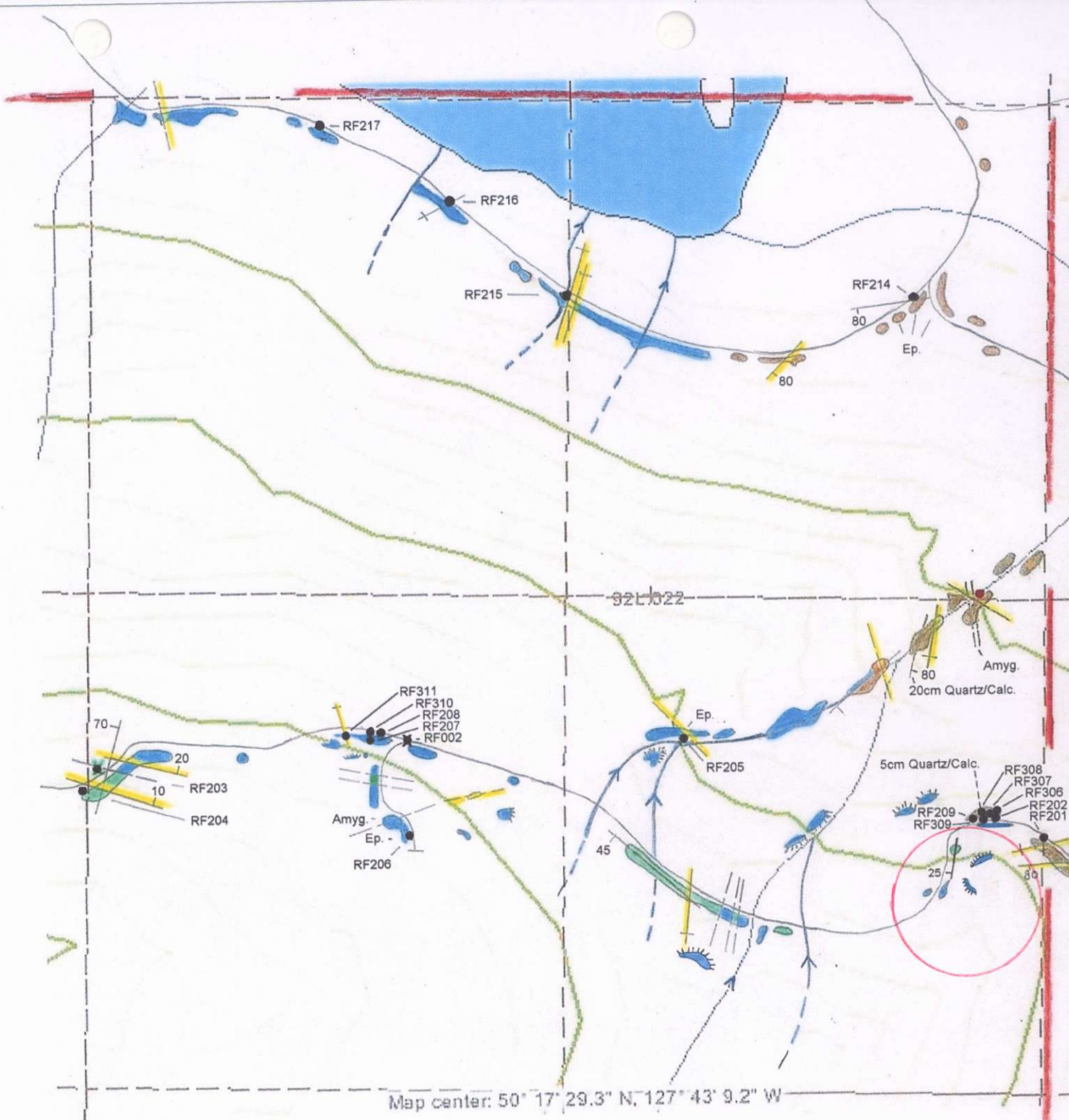
- Outcrop 
- Contact/Bedding/Dike 
- Approximate 
- Float/Talus 
- Analysis Sample 

Geology

- Karmutsen Volcanics 
- Quatsino Limestone 
- Parson Bay Limestone 
- Bonanza Volcanics 
- Island Intrusives 
- Dikes 
- Skarn 
- Sulphides 



Page # 18
 Mapping Grid # 1
 Figure: 8
 Tenure: KLASKINO 5
 Date: Nov. 8, 2015
 By: Vire



Legend

Topographical Symbols

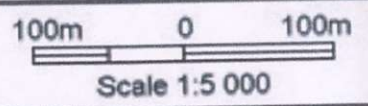
- Road
- Creek
- Elevation Contours
- Claim Boundary
- Waterfalls/Rapids
- Cliffs

Geological Symbols

- Outcrop
- Contact/Bedding/Dike
- Approximate
- Float/Talus
- Analysis Sample

Geology

- Karmutsen Volcanics
- Quatsino Limestone
- Parson Bay Limestone
- Bonanza Volcanics
- Island Intrusives
- Dikes
- Skarn
- Sulphides



Page # 19
 Mapping Grid # 2
 Figure: 9
 Tenure: KLASKINO 5
 Date: NOV. 8, 2015
 By: V2

Map center: 50° 17' 29.3" N, 127° 43' 9.2" W

K 53



92L022

92L022



Legend

Topographical Symbols

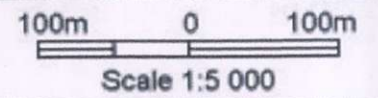
- Road
- Creek
- Elevation Contours
- Claim Boundary
- Waterfalls/Rapids
- Cliffs

Geological Symbols

- Outcrop
- Contact/Bedding/Dike
- Approximate
- Float/Talus
- Analysis Sample

Geology

- Karmutsen Volcanics
- Quatsino Limestone
- Parson Bay Limestone
- Bonanza Volcanics
- Island Intrusives
- Dikes
- Skarn
- Sulphides



Page # 20
 Mapping Grid # 3
 Figure: 10
 Tenure: KLASKINO 5
 Date: Nov. 8, 2015
 By: Vp

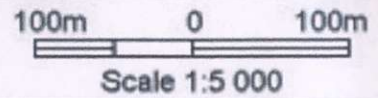


Legend

- Topographical Symbols**
- Road
 - Creek
 - Elevation Contours
 - Claim Boundary
 - Waterfalls/Rapids
 - Cliffs

- Geological Symbols**
- Outcrop
 - Contact/Bedding/Dike
 - Approximate
 - Float/Talus
 - Analysis Sample

- Geology**
- Karmutsen Volcanics
 - Quatsino Limestone
 - Parson Bay Limestone
 - Bonanza Volcanics
 - Island Intrusives
 - Dikes
 - Skarn
 - Sulphides



Page # 21
 Mapping Grid # 4
 Figure: 11
 Tenure: KLASKINOS
 Date: Nov. 8, 2015
 By: V



Legend

Topographical Symbols

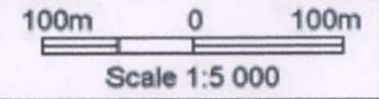
- Road
- Creek
- Elevation Contours
- Claim Boundary
- Waterfalls/Rapids
- Cliffs

Geological Symbols

- Outcrop
- Contact/Bedding/Dike
- Approximate
- Float/Talus
- Analysis Sample

Geology

- Karmutsen Volcanics
- Quatsino Limestone
- Parson Bay Limestone
- Bonanza Volcanics
- Island Intrusives
- Dikes
- Skarn
- Sulphides



Page # 22
 Mapping Grid # 5
 Figure: 12
 Tenure: KLASKIN06
 Date: Nov. 8, 2015
 By: Vc

Seismic refraction					
Well logging	Define by total length				
Geophysical interpretation					
Petrophysics					
Other (specify)					
				\$0.00	\$0.00
Geochemical Surveying	Number of Samples	No.	Rate	Subtotal	
Drill (cuttings, core, etc.)			\$0.00	\$0.00	
Stream sediment			\$0.00	\$0.00	
Soil	<i>note: This is for assays or</i>	0.0	\$0.00	\$0.00	
Rock	<i>laboratory costs</i>	0.0	\$0.00	\$0.00	
Water			\$0.00	\$0.00	
Biogeochemistry			\$0.00	\$0.00	
Whole rock			\$0.00	\$0.00	
Petrology			\$0.00	\$0.00	
Other (specify)	Sample prep 16 hours	0.0	\$0.00	\$0.00	
				\$0.00	\$0.00
Drilling	No. of Holes, Size of Core and Metres	No.	Rate	Subtotal	
Diamond			\$0.00	\$0.00	
Reverse circulation (RC)			\$0.00	\$0.00	
Rotary air blast (RAB)			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Other Operations	Clarify	No.	Rate	Subtotal	
Trenching			\$0.00	\$0.00	
Bulk sampling			\$0.00	\$0.00	
Underground development			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Reclamation	Clarify	No.	Rate	Subtotal	
After drilling			\$0.00	\$0.00	
Monitoring			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Transportation		No.	Rate	Subtotal	
Airfare			\$0.00	\$0.00	
Taxi			\$0.00	\$0.00	
truck rental		4.00	\$50.00	\$200.00	
kilometers		491 ####	\$0.40	\$196.48	
ATV			\$0.00	\$0.00	
fuel			\$0.00	\$0.00	
Helicopter (hours)			\$0.00	\$0.00	
Fuel (litres/hour)			\$102.48	\$102.48	
Other					
				\$498.96	\$498.96
Accommodation & Food	Rates per day				
Hotel			\$0.00	\$0.00	
Camp		4.00	\$60.00	\$240.00	
Meals		4.00	\$23.85	\$95.10	
				\$335.10	\$335.10

Miscellaneous					
Telephone			\$0.00	\$0.00	
Other (Specify)	office	4.00	\$7.50	\$30.00	
				\$30.00	\$30.00
Equipment Rentals					
Field Gear (Specify)	GPS/camera/batteries/gloves	4.00	\$10.00	\$40.00	
Other (Specify)					
				\$40.00	\$40.00
Freight, rock samples				0	
			\$0.00	\$0.00	
			\$0.00	\$0.00	
				\$0.00	\$0.00
TOTAL Expenditures					\$3,004.06



ACME ANALYTICAL LABORATORIES LTD.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: North Island Exploration
 1508 Marina Way
 Nanoose Bay BC V9P 9B6 Canada

Project: None Given
 Report Date: August 19, 2008

Page: 2 of 2 Part 1

CERTIFICATE OF ANALYSIS

VAN08007677.1

Method	WGHT	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	

RF001	Rock	0.76	0.34	>10000	3.35	834.3	6130	268.1	439.8	429	15.36	103.5	0.2	126.2	<0.1	31.2	2.40	0.28	4.05	19	4.33
RF002	Rock	0.91	6.76	2855	3.32	21.5	1562	553.9	859.7	266	27.26	204.5	<0.1	1280	<0.1	16.6	0.28	0.04	2.05	68	0.77

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



AcmeLabs

ACME ANALYTICAL LABORATORIES LTD.

1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: North Island Exploration

1508 Marine Way
Nanoose Bay BC V9P 9B6 Canada

Project: None Given

Report Date: August 19, 2008

Page: 2 of 2 Part 2

CERTIFICATE OF ANALYSIS

VAN08007677.1

Method	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30	1F30
Analyte	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ge
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm
MDL	0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1

RF001	Rock	0.011	<0.5	13.3	0.63	4.1	0.076	2	1.17	0.007	0.04	<0.1	1.5	0.10	>10	344	9.9	0.56	3.2
RF002	Rock	0.028	<0.5	48.9	0.59	15.0	0.032	2	0.74	0.055	0.06	<0.1	1.8	0.46	>10	1529	56.2	0.51	6.7

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: North Island Exploration
 1506 Marina Way
 Nanose Bay BC V9P 9B6 Canada

Project: Klaskino
 Report Date: November 20, 2009

Page: 2 of 2 Part 1

CERTIFICATE OF ANALYSIS

VAN09005254.1

Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	
RF003	Rock	0.85	0.2	6854	2.8	23	4.1	103.9	38.4	206	2.05	24.4	0.2	40.7	<0.1	25	0.2	0.2	0.3	26	4.36
RF004	Rock	0.89	<0.1	1164	1.8	27	0.5	77.6	16.8	470	3.06	<0.5	<0.1	22.4	<0.1	80	0.1	0.2	<0.1	45	2.76
RF005	Rock	0.86	<0.1	39.1	4.1	34	<0.1	102.9	44.8	553	3.82	20.6	<0.1	4.3	0.1	15	<0.1	<0.1	0.2	91	1.78
RF006	Rock	0.66	4.2	3556	1.9	179	3.3	16.6	11.7	316	1.09	13.0	1.6	2.6	0.2	36	1.1	0.3	0.2	17	9.12
RF007	Rock	0.83	<0.1	121.3	2.1	39	<0.1	153.5	143.4	594	5.12	4.4	<0.1	4.4	<0.1	24	<0.1	<0.1	0.4	53	3.34
RF008	Rock	0.60	<0.1	1890	0.7	24	0.6	54.3	34.3	634	2.81	5.5	0.2	23.3	<0.1	33	0.1	0.2	<0.1	41	9.78
RF009	Rock	0.60	0.1	8805	4.9	27	3.7	107.3	54.6	385	3.29	24.5	<0.1	23.6	<0.1	24	0.3	0.3	0.2	59	11.87
RF010	Rock	0.71	0.6	>10000	4.4	49	7.8	302.5	232.8	579	7.63	133.1	<0.1	280.6	<0.1	56	0.5	0.4	1.3	44	19.86
RF011	Rock	0.92	<0.1	1094	2.1	27	0.4	67.7	34.6	863	2.79	3.3	0.1	10.3	<0.1	58	<0.1	<0.1	0.1	50	16.73
RF012	Rock	0.90	1.2	2161	18.6	31	2.1	1087	888.7	74	35.90	<0.5	0.1	32.6	<0.1	2	0.3	0.3	2.7	7	0.13
RF013	Rock	0.85	19.4	9660	29.9	413	20.7	123.3	430.5	512	11.90	909.0	1.2	64.9	0.2	12	1.6	3.4	3.2	120	4.33
RF014	Rock	0.62	0.7	75.6	3.4	81	0.2	21.9	14.6	697	5.11	4.7	<0.1	0.8	0.2	8	0.1	0.4	<0.1	95	0.15
RF015	Rock	0.54	8.4	126.4	22.3	298	3.1	38.5	16.4	254	6.20	61.5	0.2	0.6	<0.1	56	1.3	12.1	0.2	12	8.47
RF016	Rock	1.00	4.0	86.4	7.3	57	0.4	211.4	147.4	636	21.90	40.3	<0.1	76.2	<0.1	22	0.1	0.1	6.9	90	0.40

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval, preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: North Island Exploration
 1508 Marina Way
 Nanoose Bay BC V9P 9B6 Canada

Project: Klaskino
 Report Date: November 20, 2009

Page: 2 of 2 Part 2

CERTIFICATE OF ANALYSIS

VAN09005254.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	
RF003	Rock	0.016	2	8	0.42	<1	0.070	2	1.80	0.004	<0.01	<0.1	0.05	2.0	<0.1	1.23	3	3.4
RF004	Rock	0.008	<1	28	1.52	1	0.073	2	2.20	0.003	<0.01	<0.1	0.02	2.8	<0.1	0.17	4	0.8
RF005	Rock	0.031	<1	45	2.56	1	0.162	<1	2.30	0.065	<0.01	0.1	0.02	9.7	<0.1	0.63	7	0.7
RF006	Rock	0.076	2	6	0.07	1	0.024	2	2.93	<0.001	<0.01	<0.1	0.18	1.2	<0.1	0.70	3	4.1
RF007	Rock	0.009	<1	48	2.62	14	0.130	2	2.59	0.062	0.07	<0.1	0.01	4.1	<0.1	1.05	4	0.7
RF008	Rock	0.018	<1	19	1.42	9	0.089	2	1.65	0.054	0.06	<0.1	0.05	3.5	<0.1	0.33	4	1.2
RF009	Rock	0.012	<1	23	0.84	1	0.085	4	3.46	<0.001	<0.01	<0.1	0.10	5.4	<0.1	1.69	7	2.4
RF010	Rock	0.006	<1	13	0.62	<1	0.057	1	1.73	<0.001	<0.01	<0.1	0.32	6.7	<0.1	4.98	3	8.2
RF011	Rock	0.015	<1	20	0.79	4	0.081	1	1.26	0.025	0.01	<0.1	0.02	6.2	<0.1	0.77	3	0.7
RF012	Rock	0.010	<1	3	0.04	2	0.002	<1	0.10	0.003	<0.01	<0.1	0.10	0.2	<0.1	>10	<1	>100
RF013	Rock	0.182	2	45	0.89	1	0.082	2	3.93	<0.001	<0.01	0.2	0.88	4.0	<0.1	6.36	10	>100
RF014	Rock	0.039	4	25	2.04	33	0.004	3	2.90	0.042	0.05	<0.1	0.05	8.2	<0.1	0.45	11	3.9
RF015	Rock	0.033	5	5	0.29	24	0.002	3	0.12	0.039	0.05	<0.1	0.50	2.9	<0.1	6.01	<1	40.8
RF016	Rock	0.010	<1	41	2.00	7	0.142	3	2.54	0.076	0.04	<0.1	0.87	5.2	0.1	>10	6	2.8

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: North Island Exploration
 1508 Marina Way
 Nanoose Bay BC V9P 9B6 Canada

Project: KM 2010
 Report Date: July 07, 2010

Page: 2 of 3 Part 1

CERTIFICATE OF ANALYSIS

VAN10002917.1

Method	WGHT	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit	kg	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL	0.01	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

RF 201	Rock	0.78	0.22	79.78	2.56	41.8	65	15.2	39.9	1088	8.56	7.6	<0.1	12.5	0.2	36.0	0.05	0.27	0.09	291	3.73
RF 202	Rock	0.86	0.81	37.51	0.83	29.3	29	6.2	23.2	651	7.55	13.8	0.1	4.5	0.1	11.8	0.05	1.56	0.07	216	0.89
RF 203	Rock	0.92	2.66	217.4	11.82	1399	715	30.6	24.4	533	7.54	34.3	0.6	0.4	0.5	92.7	4.94	2.05	0.16	77	12.12
RF 204	Rock	0.97	6.32	78.51	16.75	182.3	802	48.8	11.1	442	3.83	18.6	0.6	<0.2	0.6	134.0	0.93	1.50	0.10	67	9.88
RF 205	Rock	0.92	0.17	1240	0.52	53.4	268	107.4	60.4	866	5.14	7.6	<0.1	4.3	<0.1	28.4	0.04	0.12	0.33	69	6.41
RF 206	Rock	0.82	1.04	111.2	4.07	74.7	357	24.7	36.7	1279	8.96	38.0	0.2	<0.2	0.4	6.8	0.13	0.40	0.29	268	0.55
RF 207	Rock	0.97	0.62	1467	0.95	17.3	2481	791.2	1245	249	27.09	436.5	<0.1	94.5	<0.1	5.4	0.06	0.06	2.57	64	0.81
RF 208	Rock	0.87	0.07	104.2	0.24	33.9	51	46.5	31.4	591	5.54	7.6	<0.1	0.9	0.1	35.8	0.03	0.05	0.03	229	2.28
RF 209	Rock	0.99	0.24	>10000	4.11	69.5	7547	380.6	940.8	623	15.05	227.1	<0.1	44.0	<0.1	65.4	6.68	0.98	1.17	35	12.66
RF 210	Rock	1.00	0.77	92.71	3.70	29.7	205	20.8	17.4	920	6.22	6.4	0.1	1.6	0.2	9.5	0.04	0.05	0.13	141	0.33

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.

1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: **North Island Exploration**
 1508 Marina Way
 Nanoose Bay BC V9P 9B6 Canada

Project: KM 2010
 Report Date: July 07, 2010

Page: 2 of 3 Part 2

CERTIFICATE OF ANALYSIS

VAN10002917.1

Method	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
Analyte	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.001	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.1

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

RF 201	Rock	0.132	4.4	8.3	2.45	12.9	0.029	<20	3.04	0.021	0.04	<0.1	23.9	0.11	2.38	483	0.8	<0.02	16.1	0.49	0.2
RF 202	Rock	0.194	2.3	1.0	1.46	13.2	0.393	<20	2.08	0.044	0.04	0.4	10.3	0.07	1.58	754	0.6	<0.02	12.0	0.31	0.3
RF 203	Rock	0.107	6.1	31.8	0.80	31.9	0.002	<20	1.15	0.029	0.06	<0.1	6.0	0.16	5.57	1296	12.3	0.13	5.0	0.40	<0.1
RF 204	Rock	0.093	6.7	61.5	1.11	55.0	0.002	<20	1.48	0.021	0.08	<0.1	7.3	0.05	2.13	437	12.5	0.09	4.3	0.44	<0.1
RF 205	Rock	0.019	<0.5	47.1	2.82	27.0	0.158	<20	2.85	0.044	0.17	<0.1	8.6	<0.02	1.84	115	0.3	0.03	6.4	0.45	0.1
RF 206	Rock	0.106	3.4	23.6	2.44	19.4	0.313	<20	3.40	0.032	0.01	<0.1	14.6	<0.02	0.73	107	5.0	0.02	14.8	0.25	0.3
RF 207	Rock	0.034	0.5	18.7	0.52	12.0	0.176	<20	0.91	0.080	0.08	0.1	3.0	0.21	>10	2515	>100	0.64	5.1	0.04	0.3
RF 208	Rock	0.080	1.1	58.0	1.73	16.8	0.336	<20	2.80	0.091	0.08	0.1	7.1	<0.02	0.07	44	1.0	<0.02	11.0	0.24	0.3
RF 209	Rock	0.015	<0.5	26.1	0.99	2.2	0.023	<20	1.16	<0.001	<0.01	<0.1	2.0	0.03	>10	827	15.9	0.44	3.7	0.12	0.2
RF 210	Rock	0.052	2.0	17.4	3.00	14.1	0.129	<20	3.05	0.080	<0.01	0.1	8.9	<0.02	0.71	209	1.3	0.02	14.3	0.57	0.2

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

Acme Analytical Laboratories (Vancouver) Ltd.

www.acmelab.com

Client: North Island Exploration
 1508 Marina Way
 Nancoose Bay BC V9P 9B6 Canada

Project: KM 2010
 Report Date: July 07, 2010

Page: 2 of 3 Part 3

CERTIFICATE OF ANALYSIS

VAN10002917.1

Method	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
Analyte	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Ra	Be	Li	Pd	Pt
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
MDL	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	6.1	10	2

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

RF 201	Rock	0.05	<0.02	1.9	0.4	<0.05	1.0	19.28	11.8	0.09	2	0.3	10.2	<10	<2
RF 202	Rock	0.33	0.08	1.4	0.3	<0.05	6.6	12.49	6.1	0.05	2	0.5	7.3	<10	<2
RF 203	Rock	<0.02	0.02	1.6	0.1	<0.05	0.5	9.77	7.4	0.33	21	0.3	7.6	<10	<2
RF 204	Rock	0.02	<0.02	2.5	0.2	<0.05	0.6	13.06	6.9	0.06	31	0.4	12.2	<10	<2
RF 205	Rock	0.10	<0.02	3.8	0.1	<0.05	3.5	5.89	0.3	<0.02	1	<0.1	21.4	24	10
RF 206	Rock	0.31	0.03	0.5	0.6	<0.05	9.4	13.25	7.6	0.03	21	0.2	26.8	<10	<2
RF 207	Rock	0.34	0.47	0.2	1.4	<0.05	11.0	3.84	1.3	0.07	69	<0.1	1.9	53	<2
RF 208	Rock	0.27	0.06	0.7	0.8	<0.05	10.5	7.28	2.8	0.04	1	0.2	11.0	23	5
RF 209	Rock	0.02	0.05	0.1	<0.1	<0.05	0.4	0.98	0.2	0.05	3	<0.1	4.5	<10	<2
RF 210	Rock	0.10	0.02	0.3	0.3	<0.05	2.1	6.99	3.8	0.02	4	0.2	24.8	<10	<2

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: **North Island Exploration**
 1508 Marina Way
 NanOOSE Bay BC V9P 9B6 Canada

Project: KM 2010
 Report Date: July 07, 2010

Page: 3 of 3 Part 1

CERTIFICATE OF ANALYSIS

VAN10002917.1

Method	WGHT	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	
RF 211	Rock	0.83	12.96	8.64	3.03	8.1	31	1.9	2.3	1092	2.37	5.9	2.5	1.2	<0.1	496.2	0.05	0.09	<0.02	16	34.40
RF 212	Rock	0.81	4.95	23.39	7.79	1825	51	3.1	1.7	796	0.96	2.4	2.0	0.5	<0.1	560.3	6.36	0.04	<0.02	14	32.42
RF 213	Rock	0.59	1.05	120.5	35.46	376.2	416	30.7	48.2	1182	8.16	248.2	<0.1	51.5	0.2	11.5	1.48	1.72	0.03	126	0.50
RF 214	Rock	0.87	0.13	137.2	0.51	6.1	27	7.1	5.1	284	1.70	2.8	<0.1	5.7	<0.1	77.5	0.08	0.25	0.03	46	4.00
RF 215	Rock	0.54	0.24	48.51	0.87	45.4	36	37.5	24.9	1316	4.88	7.5	<0.1	3.1	0.1	98.0	0.06	0.24	0.06	131	7.21
RF 216	Rock	0.87	0.75	102.1	2.22	61.3	102	12.8	32.8	971	10.59	7.2	<0.1	18.3	0.2	5.8	0.04	0.23	0.04	273	0.48
RF 217	Rock	0.88	0.60	167.7	0.78	19.1	63	11.1	18.0	422	5.25	5.4	<0.1	3.2	0.2	12.0	0.04	0.29	<0.02	178	2.87
RF 218	Rock	0.89	0.87	79.03	10.36	96.4	83	12.1	18.8	1163	7.34	5.1	0.3	0.5	0.8	10.4	0.06	0.28	0.07	195	1.45
RF 219	Rock	0.84	0.21	99.14	1.93	67.9	85	52.4	26.6	1322	4.93	85.8	<0.1	0.3	0.4	85.5	0.05	1.42	0.04	59	7.17

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.

1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: **North Island Exploration**
 1508 Marina Way
 Nanoose Bay BC V9P 9B6 Canada

Project: KM 2010
 Report Date: July 07, 2010

Page: 3 of 3 Part 2

CERTIFICATE OF ANALYSIS

VAN100029¹7.1

Method	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	
Analyte	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	
MDL	0.001	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	
RF 211	Rock	0.016	1.2	6.6	1.29	19.2	0.026	<20	0.68	0.001	<0.01	<0.1	1.4	<0.02	1.40	29	0.9	0.17	1.1	0.04	<0.1
RF 212	Rock	0.021	1.4	11.9	0.81	30.8	0.018	<20	0.59	0.002	<0.01	<0.1	1.6	<0.02	0.30	1047	0.5	0.11	2.0	0.06	<0.1
RF 213	Rock	0.076	1.7	93.3	2.40	10.3	0.194	<20	2.77	0.040	<0.01	<0.1	7.4	<0.02	2.74	55	7.5	<0.02	7.9	0.06	0.1
RF 214	Rock	0.023	1.1	16.1	0.39	4.5	0.107	<20	0.94	0.006	0.08	<0.1	3.8	<0.02	<0.02	21	0.2	<0.02	2.5	2.17	<0.1
RF 215	Rock	0.043	5.0	53.3	1.84	29.0	0.002	<20	2.26	0.024	0.06	<0.1	14.7	<0.02	0.03	207	0.2	0.04	9.2	0.76	<0.1
RF 216	Rock	0.241	4.2	7.3	2.27	10.8	0.007	<20	3.40	0.018	0.07	<0.1	18.5	<0.02	1.53	432	0.5	<0.02	17.8	0.80	0.2
RF 217	Rock	0.120	2.1	9.2	1.01	4.7	0.304	<20	1.95	0.057	0.02	0.3	5.0	<0.02	2.26	606	0.5	<0.02	8.3	0.86	0.3
RF 218	Rock	0.307	10.6	20.4	2.06	13.4	0.015	<20	2.97	0.055	<0.01	<0.1	15.5	<0.02	0.55	23	0.3	<0.02	15.1	0.30	0.3
RF 219	Rock	0.066	5.2	26.8	2.18	28.7	<0.001	<20	0.40	0.026	0.16	<0.1	17.9	<0.02	0.19	211	0.3	0.02	0.8	1.55	<0.1

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: **North Island Exploration**
 1508 Marina Way
 Nanoose Bay BC V9P 9B6 Canada

Project: KM 2010
 Report Date: July 07, 2010

Page: 3 of 3 Part 3

CERTIFICATE OF ANALYSIS

VAN10002917.1

Method	Analyte	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	
		Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
MDL		0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
RF 211	Rock	0.04	0.03	0.1	0.2	<0.05	3.0	2.32	1.0	<0.02	8	<0.1	9.8	<10	<2
RF 212	Rock	0.03	0.03	0.2	<0.1	<0.05	1.4	3.23	1.3	<0.02	4	0.1	11.9	<10	<2
RF 213	Rock	0.23	0.04	0.1	0.3	<0.05	6.6	5.20	4.4	<0.02	3	0.1	13.1	<10	2
RF 214	Rock	0.14	0.05	3.2	0.1	<0.05	3.0	3.43	2.2	<0.02	<1	<0.1	3.7	<10	<2
RF 215	Rock	<0.02	<0.02	1.8	0.2	<0.05	0.4	10.16	11.4	0.05	<1	0.2	16.0	<10	2
RF 216	Rock	<0.02	<0.02	2.1	0.1	<0.05	0.3	13.37	9.8	0.10	3	0.2	16.9	<10	<2
RF 217	Rock	0.27	0.04	0.6	0.3	<0.05	7.1	10.38	5.0	<0.02	<1	0.4	7.5	<10	3
RF 218	Rock	0.03	<0.02	0.3	0.2	<0.05	1.2	23.09	25.0	0.07	<1	<0.1	17.6	<10	<2
RF 219	Rock	<0.02	<0.02	4.2	<0.1	<0.05	0.3	17.12	11.7	0.06	1	0.2	0.8	<10	<2

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.

1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: North Island Exploration
 1508 Marina Way
 NanOOSE Bay BC V9P 9B6 Canada

Project: Klaskino
 Report Date: September 05, 2012

Page: 2 of 2

Part: 2 of 2

CERTIFICATE OF ANALYSIS

VAN12004058.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
		La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
G1	Prep Blank	8	7	0.57	218	0.114	3	0.93	0.071	0.48	<0.1	<0.01	1.9	0.3	<0.05	5	<0.5	<0.2
G1	Prep Blank	9	8	0.57	225	0.112	3	0.98	0.089	0.51	<0.1	<0.01	2.4	0.3	<0.05	5	0.7	<0.2
RF301	Rock	5	3	0.57	6	0.096	2	0.78	0.103	0.02	<0.1	0.01	4.4	<0.1	0.05	5	<0.5	<0.2
RF302	Rock	<1	151	2.66	5	0.099	8	3.44	0.040	0.03	<0.1	0.02	8.4	<0.1	0.07	7	0.8	<0.2
RF303	Rock	<1	17	0.80	<1	0.051	2	1.42	0.008	<0.01	<0.1	0.03	2.0	<0.1	0.11	3	1.1	<0.2
RF304	Rock	1	3	0.37	103	0.095	5	0.74	0.073	0.06	0.1	0.13	3.1	<0.1	0.11	2	1.0	<0.2
RF305	Rock	1	7	0.12	<1	0.024	4	3.32	<0.001	<0.01	<0.1	1.72	1.4	<0.1	0.82	2	4.9	<0.2
RF306	Rock	<1	40	0.44	5	0.076	2	0.39	0.052	<0.01	<0.1	0.03	1.6	<0.1	<0.05	2	0.9	<0.2
RF307	Rock	2	1	1.03	9	0.425	5	1.48	0.069	0.03	0.3	0.78	7.6	0.3	1.75	9	0.6	<0.2
RF308	Rock	<1	36	1.20	1	0.021	3	1.43	0.002	<0.01	<0.1	0.69	3.4	<0.1	8.45	4	9.8	0.5
RF309	Rock	2	15	1.94	4	0.312	6	2.30	0.058	0.03	0.2	0.09	7.4	<0.1	0.84	11	0.8	<0.2
RF310	Rock	<1	78	0.82	15	0.054	2	1.77	0.103	0.07	<0.1	1.28	2.5	<0.1	>10	9	80.0	0.4
RF311	Rock	2	7	4.33	4	0.011	5	0.40	0.005	0.61	0.4	1.63	23.9	<0.1	0.49	1	<0.5	<0.2
RF312	Rock	5	49	0.96	36	0.001	4	1.26	0.042	0.09	<0.1	0.97	9.8	<0.1	1.78	4	8.0	<0.2
RF313	Rock	<1	16	0.02	<1	0.009	2	0.10	0.005	<0.01	0.2	0.02	0.2	<0.1	<0.05	<1	<0.5	<0.2
RF314	Rock	2	34	1.97	2	0.128	2	2.50	0.001	<0.01	<0.1	0.02	6.1	<0.1	2.12	7	23.0	0.4
RF315	Rock	16	5	1.30	12	0.411	9	2.10	0.110	0.03	<0.1	0.02	6.3	<0.1	<0.05	13	0.5	<0.2
RF316	Rock	7	13	0.82	23	0.005	5	0.78	0.002	0.06	0.1	0.12	2.6	<0.1	0.24	1	2.0	<0.2
RF317	Rock	<1	7	0.03	<1	0.015	2	0.11	0.006	<0.01	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2
RF318	Rock	1	50	0.86	<1	0.080	3	3.67	<0.001	<0.01	0.2	1.62	6.3	0.1	9.90	8	99.9	2.4
RF319	Rock	<1	3	0.23	3	0.002	3	1.36	0.001	<0.01	<0.1	0.17	<0.1	<0.1	8.50	4	>100	1.5
RF320	Rock	7	21	1.85	<1	0.071	3	3.19	<0.001	<0.01	<0.1	0.31	3.4	<0.1	0.96	8	9.0	<0.2
RF321	Rock	3	19	0.45	<1	0.109	4	1.10	0.001	<0.01	0.2	0.07	3.0	<0.1	1.30	5	25.3	<0.2

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: **North Island Exploration**
 1508 Marina Way
 Nanoose Bay BC V9P 9B6 Canada

Project: **Klaaskino**
 Report Date: **September 05, 2012**

Page: 2 of 2

Part: 1 of 2

CERTIFICATE OF ANALYSIS

VAN12004058.1

Method	Analyte	Unit	MDL	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
				kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	
G1	Prep Blank			<0.01	<0.1	20.7	4.0	50	<0.1	3.2	4.5	566	1.96	1.8	2.4	4.5	58	<0.1	0.2	<0.1	36	0.41	0.076
G1	Prep Blank			<0.01	<0.1	27.8	4.2	49	<0.1	3.4	4.7	560	1.94	1.3	2.0	4.7	60	0.1	<0.1	<0.1	35	0.41	0.076
RF301	Rock			0.67	0.4	50.5	1.6	14	<0.1	2.0	8.3	278	1.56	4.7	<0.5	0.6	10	<0.1	<0.1	<0.1	16	1.72	0.073
RF302	Rock			0.98	0.2	225.0	3.0	46	<0.1	109.3	46.6	958	4.19	7.9	<0.5	<0.1	47	<0.1	0.1	<0.1	91	3.06	0.032
RF303	Rock			0.94	<0.1	1199	3.0	14	0.5	37.7	9.8	311	1.77	1.2	2.8	<0.1	74	<0.1	<0.1	<0.1	28	2.68	0.005
RF304	Rock			0.95	5.8	47.3	23.5	138	<0.1	12.8	5.1	465	1.07	5.4	1.5	0.4	21	0.8	0.3	<0.1	7	1.88	0.029
RF305	Rock			0.83	2.1	7004	1.2	675	7.1	14.0	10.2	384	1.29	16.5	1.9	0.1	24	2.9	<0.1	<0.1	20	6.62	0.055
RF306	Rock			0.72	0.1	14.3	0.9	11	<0.1	13.5	3.9	153	1.17	2.2	<0.5	0.1	5	<0.1	0.2	<0.1	27	0.22	0.019
RF307	Rock			0.72	0.9	54.0	1.4	22	<0.1	4.2	21.4	492	6.48	19.5	2.5	0.2	27	<0.1	3.5	<0.1	162	0.88	0.175
RF308	Rock			0.98	0.4	>10000	5.0	55	6.1	365.2	835.8	672	10.99	195.0	41.9	<0.1	72	4.7	1.0	1.1	41	13.85	0.013
RF309	Rock			0.92	0.5	179.2	2.0	32	<0.1	20.0	31.4	777	6.18	7.7	0.8	<0.1	30	<0.1	0.4	<0.1	206	2.85	0.143
RF310	Rock			0.98	0.1	1448	2.2	25	0.9	626.6	1678	418	24.63	211.2	56.9	<0.1	7	<0.1	<0.1	1.8	94	0.75	0.040
RF311	Rock			0.84	0.2	52.4	2.7	31	<0.1	19.9	23.4	1063	4.32	1162	3.6	0.3	146	0.1	27.4	<0.1	144	12.39	0.027
RF312	Rock			0.85	2.2	84.6	6.0	876	0.5	33.8	11.4	505	3.52	67.7	<0.5	0.3	144	3.3	1.6	<0.1	89	9.86	0.075
RF313	Rock			0.98	3.2	13.9	1.6	9	<0.1	1.6	2.7	55	0.35	4.9	0.9	0.1	6	<0.1	<0.1	<0.1	6	0.73	0.177
RF314	Rock			0.85	6.5	134.9	6.4	65	0.3	56.9	113.5	1058	6.61	179.7	9.3	0.5	11	<0.1	0.3	0.7	67	0.96	0.105
RF315	Rock			0.86	1.5	23.7	3.2	107	<0.1	6.8	22.3	855	6.13	1.4	<0.5	0.8	37	0.8	0.1	<0.1	111	1.88	0.190
RF316	Rock			0.51	1.5	24.8	2.4	215	<0.1	24.0	4.7	548	1.15	51.7	<0.5	0.2	399	0.6	0.4	<0.1	18	25.85	0.193
RF317	Rock			0.81	9.7	16.2	0.8	6	<0.1	2.5	9.1	81	0.67	14.1	12.8	0.1	3	<0.1	0.2	<0.1	8	0.33	0.068
RF318	Rock			0.83	16.9	>10000	22.7	728	44.1	198.9	926.4	437	12.75	1914	56.2	0.1	24	3.0	3.4	4.6	119	3.55	0.178
RF319	Rock			0.94	2.9	2528	5.7	17	3.0	861.7	674.1	343	>40	156.3	22.4	<0.1	<1	<0.1	0.3	2.0	20	0.02	0.003
RF320	Rock			0.87	59.3	3217	3.4	343	5.1	71.9	322.7	928	4.93	474.1	19.8	0.2	14	1.3	0.3	0.5	66	2.27	0.079
RF321	Rock			0.94	7.9	93.0	3.3	27	0.3	35.9	12.2	324	3.04	30.1	<0.5	0.3	94	0.2	0.8	0.9	37	1.41	0.157

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.