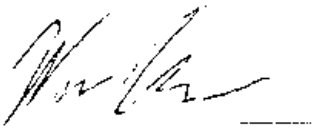
ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Kemess Underground Hydrogeological Drill Program

TOTAL COST: $660,407

AUTHOR(S): J.W. Barnes P.Geo, R. A. Konst
SIGNATURE(S):



NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): 1300244-201101 Aug. 12, 2011 to Dec. 31, 2011
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S):

YEAR OF WORK: 2011

PROPERTY NAME: Kemess Property

CLAIM NAME(S) (on which work was done): Kemess Property

241960, 543638, 543635

COMMODITIES SOUGHT: Gold, Copper

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN:

MINING DIVISION: Omineca Mining Division
NTS / BCGS: 94E 007
LATITUDE: 57° 02' North
LONGITUDE: 126° 47 ' West
UTM Zone: NAD 83 Zone 9 EASTING: NORTHING:

OWNER(S): AuRico Gold Inc./ or AuRico Inc.

MAILING ADDRESS: 805-535 Thurlow Street, Vancouver, B.C., Canada, V6E 3L2

OPERATOR(S): AuRico Gold Inc./ or AuRico Inc.

MAILING ADDRESS: 805-535 Thurlow Street, Vancouver, B.C., Canada, V6E 3L2

REPORT KEYWORDS Regional Startigraphy starts with the oldest Asitka Group of Mid Pennsylvanian to Permian age and inlcude basalts, andesites, rhyolites, argillite, chert and limestone. Next is the Takla Group of Upper Triassic in age and includes andesites and basalts. Next is the youngest startigraphic unit the Hazelton Group mostly volcanoclastic rocks. These units are later intruded and cross cut by the Black Lake Quartz Monzonite and Quartz Granodiorites ranging in age from 194.5 +/- 1.9 Ma to 199.6 +/- Ma.

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Rebagliati, C.M., Kemess North Project, An Exploration Proposal to Increase the Mineable Reserves at the Kemess North Deposit by Diamond Drilling, March 1993

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			
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, storage location)			
Core; 4 drill holes for 597 meters total, 3 were HQ and 1 NQ diameter drillholes, stored at our core storage area on the property .		Kemess Property, 241960, 543638, 543635	441,685
Non-core			
RELATED TECHNICAL			
Sampling / Assaying 208 samples sent		Kemess Property, 241960, 543638, 543635	11,001
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale/area)			
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			

Legal Surveys (scale, area)		
Road, local access (km)/trail		
Trench (number/metres)		
Underground development (metres)		
Other Hydrogeologic al Work Management fee Report preparation	Kemess Property	207,727
	TOTAL COST	660,413

ASSESSMENT REPORT – 2011 EXPLORATION PROGRAM

KEMESS PROPERTY:

Kemess Underground Hydrogeological Drilling Program
Mineral Claims Worked On: 241960, 543638, 543635

OMINECA MINING DIVISION
BRITISH COLUMBIA

CENTERED ON:

LATITUDE: 57^{o} 02' North
LONGITUDE: 126^{o} 47' West

NTS: 094E007
UTM: NAD 83 Zone 9

- Owned and Operated By-

AuRico Gold Inc./ or AuRico Inc.
535 Thurlow Street, Suite 803
Vancouver, British Columbia
V6E 3L2, Canada

J.W. Barnes B.Sc. P.Geo.
R. A Konst B.Sc.

August 2012

1.0 EXECUTIVE SUMMARY

This report describes exploration work that was completed on the 241960, 543638 and 543635 claims at the Kemess Property during 2011. The property is located just north of the McConnell Ranges approximately 430 kilometres northwest of Prince George in the Toodoggone Mining camp.

The goal of the Kemess Underground Hydrogeological Program was to study the hydrogeological conditions around the proposed Kemess Underground Project in support of a pre-feasibility study. Specific sites for drilling were chosen following discussions with Lorax Environmental Services and were designed to encircle the proposed mine development area to gain baseline information of the groundwater quality. Sites were also chosen to minimize any surface disturbance by taking advantage of existing drill sites.

The 2011 exploration work consisted of one NQ size drill hole and three HQ size drill holes totaling 597 metres. After each drill hole was completed, Lorax Environmental Services along with Hytech Drilling installed well monitoring equipment within these drill holes. The wells will serve to collect water samples and monitor hydrogeologcial conditions during the life of the Kemess Underground Mine if implemented. Field work for the Program was carried out from September 5, 2011 to November 21, 2011.

Table of Contents

List of Figures

List of Tables

2.0 INTRODUCTION

The Kemess Property is in the mountains of north-central British Columbia, 430 kilometres northwest of Prince George, British Columbia at 57°02' north latitude and 126°47' west longitude. The property comprises four mining leases and 57 mineral claims, which together cover nearly 33,000 hectares. The Kemess South deposit ceased production in February 2011 and is currently in the process of reclamation. The production facility is currently on care and maintenance with approximately half the productive capacity remaining intact. On October 31, 2011 AuRico Gold Inc. and Northgate Minerals Corporation amalgamated to form the corporation AuRico Gold Inc. **/** or AuRico Inc. and all of Northgate's assets including the Kemess Property were transferred to AuRico Gold Inc. **/** or AuRico Inc.

During 2000 through 2004, Northgate discovered and delineated a significant deposit at Kemess North and in 2005 discovered its extension at Kemess East. During 2005 Northgate completed a Feasibility Study for the Kemess North deposit which envisaged mining the deposit via open pit methods, and in 2006 began the public review stage for environmental permitting. The permit application to develop the Kemess North Open Pit project was ultimately rejected by both Federal and Provincial regulatory agencies following negative recommendations from a joint panel review in October 2007.

In 2010, following improved metal prices, the Kemess North Project was investigated for its potential to support a block cave underground mining operation. Scoping studies showed that a viable operation may be present providing more geotechnical and grade information were collected. This study resulted in a significant drill program in 2010, which defined the current Kemess Underground resource of 136.5 million tonnes of Indicated Resources containing 2.6 million ounces of gold at an average grade of 0.56 grams per tonne and 860.6 million pounds of copper at an average grade of 0.29%.

The Kemess Property is owned and operated by AuRico Gold Inc. **/** or AuRico Inc. Infrastructure consists of an office and maintenance building, a 400-person camp, a mill building, access and service roads and an airstrip. Most supplies are trucked into the property via all-season road access from Mackenzie British Columbia, while power is available directly from BC Hydro over a 380 kilometre power line.

Kemess occurs at the southern end of the Toodoggone Mining camp, which describes a collection of occurrences and deposits found in Mesozoic volcanic rocks of the eastern Stikine Arch. Large-scale structures are present in the area, with a major terrain boundary present just 25 kilometres east of the project area. The area is known for its Cu-Au porphyry deposits and low sulphidation epithermal Au-Ag vein deposits. Potential also exists for mesothermal vein

deposits, skarn deposits, volcanic-associated massive sulphide deposits and red-bed Cu deposits.

The 2011 exploration work supports a prefeasibility study for the Kemess Underground Project. Objectives include further geotechnical data collection at the Kemess Underground Project and along the proposed access decline route. Another significant portion of the work is directed towards developing an accurate hydrogeological model for the region surrounding the Kemess Underground Project. This entailed drilling several holes, testing the porosity permeability characteristics and ultimately installing water quality monitoring hardware in these specific drill holes.

3.0 LOCATION AND ACCESS

The Kemess Property is located in the mountainous area east of the Spatsizi Plateau and west of the Swannell Ranges near Thutade Lake approximately 250 kilometres north-northeast of Smithers and 430 kilometres northwest of Prince George at 57^{o}02' north latitude and 126^{o}47' west longitude. The property, shown in Figure 1, spans the boundary between the 94E and 94D NTS sheets and lies in the Omineca Mining Division.

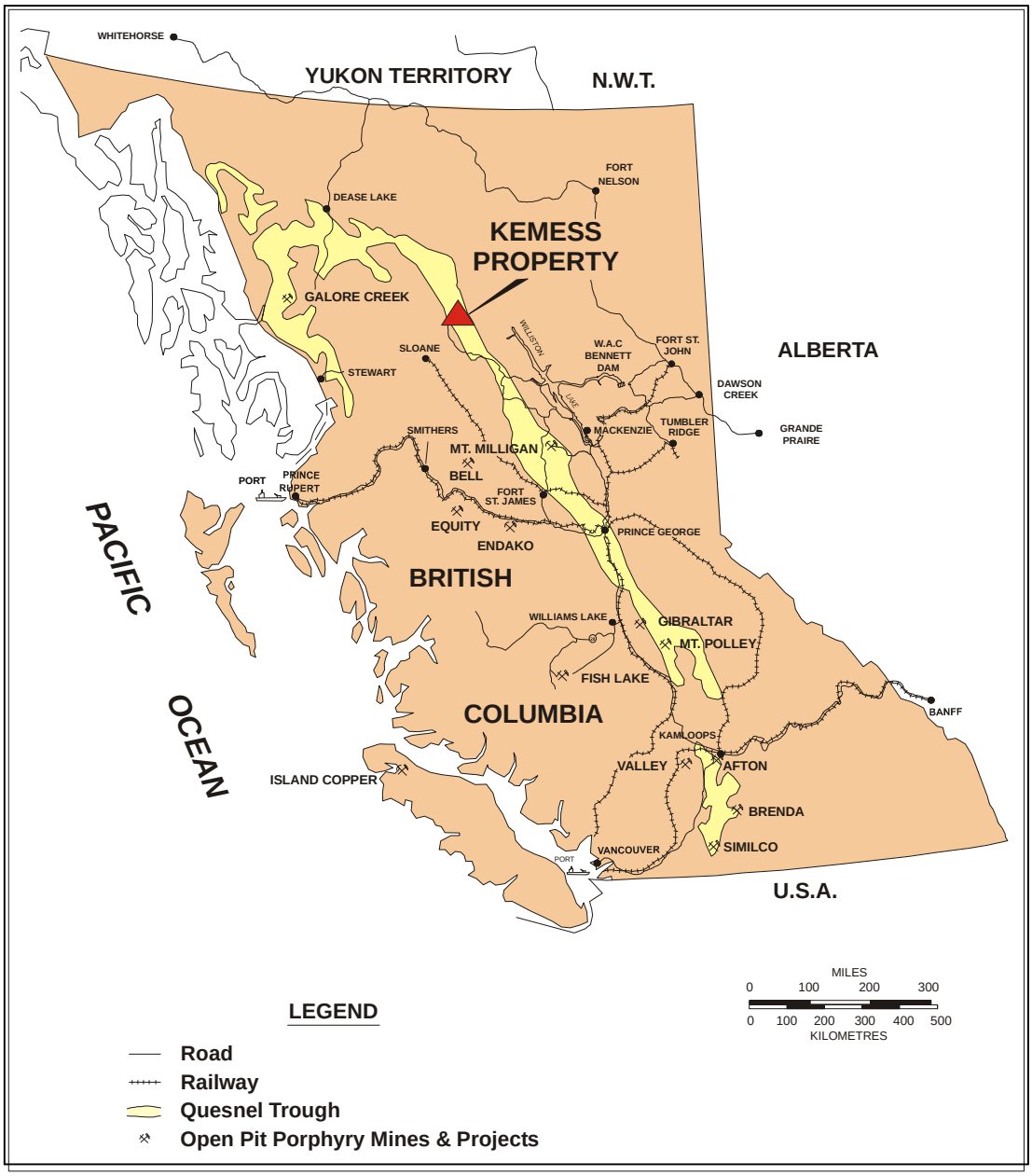


Figure 1 Kemess Property Location Map

Access to the project when operational is provided by both air and road, as there are regularly scheduled year-round flights from Smithers, and Prince George to Kemess. All season road access is available from the town of Mackenzie or Ft. St. James via the Omineca Resources Access road.

Broad, open, drift and moraine covered valleys characterize the area, yielding to sub-alpine plateaus and rugged incised peaks and cirques. Elevations range from 1200 m to 1800 m, with the tree line occurring at 1500 m. The Kemess area climate is generally moderate, although snow can occur during any month.

Temperatures range from -35^{oC} to 30^{oC} and average annual precipitation amounts to 890 mm. Commonly, snow does not leave the higher elevations until late June.

The Kemess Underground Hydrogeological program was conducted on a rugged alpine to sub-alpine area a few kilometres east and west of the Kemess Underground Deposit. Program access was by helicopter and road using a 4x4 vehicle.

4.0 CLAIM DATA

The Kemess property is comprised of four mining leases (354991, 410732, 410741, 524240) and 57 surrounding and contiguous mineral claims which together cover nearly 33,000 hectares. All property mineral tenures are held by AuRico Gold Inc. ***/*** or AuRico Inc. The claims fall under the jurisdiction of the Omineca Mining Division of British Columbia located on NTS map sheets 94D15E&W, 94E006, 007,016 and 017.

Table 1 outlines the relevant claim information for the property as listed with BC Ministry of Energy and Mines as of August, 2012. Figure 2 shows the individual claims comprising the contiguous block surrounding the Kemess South and Kemess North deposits. Figure 3 presents the individual claims worked on in the 2011 program. Work performed for this program was conducted on tenures 241960, 543638 and 543635 from September 5 to November 21, 2011

TABLE 1: AuRico Gold Inc. - Kemess Mine Property, BC

Summary		No.	Hectares	Acres
	A. Mining Leases	4	3,483.330	8,607.308
	B. Mineral Claims	57	29,285.096	72,363.473
		61	**32,768.426**	**80,970.781**

AuRico Gold Inc./ or AuRico Inc. - Client No. 261048

A. Mining Leases

Tenure No.	Name/District Lot	Owner	Map No.	Lease Term Date	Good To Date	Area (ha)
354991	Kemess South Lease: DL's 7198, 7199, 7200, 7201,7204, 7207	261048 (100%)	094E007	2027/sep/15	2016/sep/15	862.330
410732	Kemess North Lease: DL's 7032, 7328	261048 (100%)	094E007	2034/sep/29	2016/sep/29	950.000
410741	Kemess North Lease: DL.7329	261048 (100%)	094E007	2034/sep/29	2016/sep/29	106.000
524240	Midway Lease: DL.7342	261048 (100%)	094E	2035/dec/22	2016/dec/22	1,565.000
4 Mining Leases					**Hectares:**	**3,483.330**

B. Mineral Claims

Tenure No.	Claim Name	Owner	Map No.	Issue Date	Good To Date	Area (ha)
241014	SEM #1	261048 (100%)	094E007	1989/jul/18	2022/dec/14	400.000
241959	NEK 3	261048 (100%)	094E007	1990/may/03	2022/dec/14	500.000
241960	NEW KEMESS 3	261048 (100%)	094E007	1990/may/03	2022/dec/14	375.000
242573	DU 2	261048 (100%)	094E007	1990/aug/02	2022/dec/14	500.000
242574	NEK 4	261048 (100%)	094E007	1990/aug/01	2022/dec/14	350.000
243063	CAN 1	261048 (100%)	094E007	1991/feb/02	2022/dec/14	500.000
243064	DUNC 1	261048 (100%)	094E007	1991/feb/01	2022/dec/14	100.000
243065	DUNC 2	261048 (100%)	094E007	1991/feb/01	2022/dec/14	100.000
243066	DUNC 3	261048 (100%)	094E007	1991/feb/01	2022/dec/14	150.000
243067	CREEK	261048 (100%)	094E007	1991/feb/02	2022/dec/14	300.000
243440	ALISON 1	261048 (100%)	094E007	1991/may/14	2022/dec/14	500.000
304706	GOZ 1	261048 (100%)	094E007	1991/sep/21	2022/dec/14	25.000
304707	GOZ 2	261048 (100%)	094E007	1991/sep/21	2022/dec/14	25.000
310076	DUN 1	261048 (100%)	094E007	1992/may/31	2022/dec/14	225.000
310077	DUN 2	261048 (100%)	094E007	1992/may/31	2022/dec/14	225.000
310078	DUN 3	261048 (100%)	094E007	1992/may/31	2022/dec/14	225.000
355408	MILL CREEK 4	261048 (100%)	094E007	1997/apr/23	2022/dec/14	25.000
401957	UN 1	261048 (100%)	094E007	2003/apr/29	2022/dec/14	50.000
403629	BEAR 6	261048 (100%)	094D097	2003/jul/09	2022/dec/14	500.000
403631	BEAR 8	261048 (100%)	094D097	2003/jul/09	2022/dec/14	500.000
403633	BEAR 12	261048 (100%)	094D097	2003/jul/09	2022/dec/14	500.000
403635	BEAR 16	261048 (100%)	094D097	2003/jul/09	2022/dec/14	375.000
405949	LAT 1	261048 (100%)	094E007	2003/oct/05	2022/dec/14	25.000
414229	DUNC 4	261048 (100%)	094E007	2004/sep/15	2022/dec/14	25.000
414230	DUNC 5	261048 (100%)	094E007	2004/sep/15	2022/dec/14	25.000
414231	UN 2	261048 (100%)	094E007	2004/sep/16	2022/dec/14	25.000
414232	UN 3	261048 (100%)	094E007	2004/sep/16	2022/dec/14	25.000
506817	TLK 1	261048 (100%)	094D	2005/feb/11	2022/dec/14	423.346
506822	TLK 2	261048 (100%)	094D	2005/feb/11	2022/dec/14	423.244
506824	TLK 3	261048 (100%)	094D	2005/feb/11	2022/dec/14	387.724
506825	TLK 4	261048 (100%)	094E	2005/feb/11	2022/dec/14	281.830
515677		261048 (100%)	094E	2005/jun/30	2022/dec/14	1,108.035
515678		261048 (100%)	094E	2005/jun/30	2022/dec/14	1,443.310
515683		261048 (100%)	094E	2005/jun/30	2022/dec/14	669.335
515686		261048 (100%)	094D	2005/jun/30	2022/dec/14	1,427.856

515693		261048 (100%)	094D	2005/jun/30	2022/dec/14	1,534.100
515694		261048 (100%)	094E	2005/jun/30	2022/dec/14	1,353.164
516786		261048 (100%)	094E	2005/jul/11	2022/dec/14	1,391.637
516814		261048 (100%)	094D	2005/jul/11	2022/dec/14	863.906
516817		261048 (100%)	094D	2005/jul/11	2022/dec/14	440.555
516848		261048 (100%)	094E	2005/jul/11	2022/dec/14	105.661
516854		261048 (100%)	094E	2005/jul/11	2022/dec/14	1,197.161
516860		261048 (100%)	094D	2005/jul/11	2022/dec/14	1,075.379
543635		261048 (100%)	094E	2006/oct/19	2022/dec/14	897.552
543638		261048 (100%)	094E	2006/oct/19	2022/dec/14	861.624
543646		261048 (100%)	094E	2006/oct/19	2022/dec/14	439.571
543648		261048 (100%)	094E	2006/oct/19	2022/dec/14	105.501
543654		261048 (100%)	094E	2006/oct/19	2022/dec/14	175.891
543659		261048 (100%)	094E	2006/oct/19	2022/dec/14	421.784
543660		261048 (100%)	094E	2006/oct/19	2022/dec/14	351.483
544419		261048 (100%)	094E	2006/oct/25	2022/dec/14	70.351
571954		261048 (100%)	094D	2007/dec/14	2022/dec/14	1,340.848
571956		261048 (100%)	094D	2007/dec/14	2022/dec/14	988.435
571957		261048 (100%)	094D	2007/dec/14	2022/dec/14	988.868
571958		261048 (100%)	094D	2007/dec/14	2022/dec/14	847.371
571959		261048 (100%)	094D	2007/dec/14	2022/dec/14	830.261
853372	Kemess Creek 1	261048 (100%)	093D & 094E	2011/may/03	2022/august/31	264.315
57 Mineral Claims					**Hectares:**	**29,285.096**

Note: **Good to mineral claim expiry dates listed above are subject to BC Ministry of Energy and Mines approval of Assessment Report submitted under Event No. 5400165.**

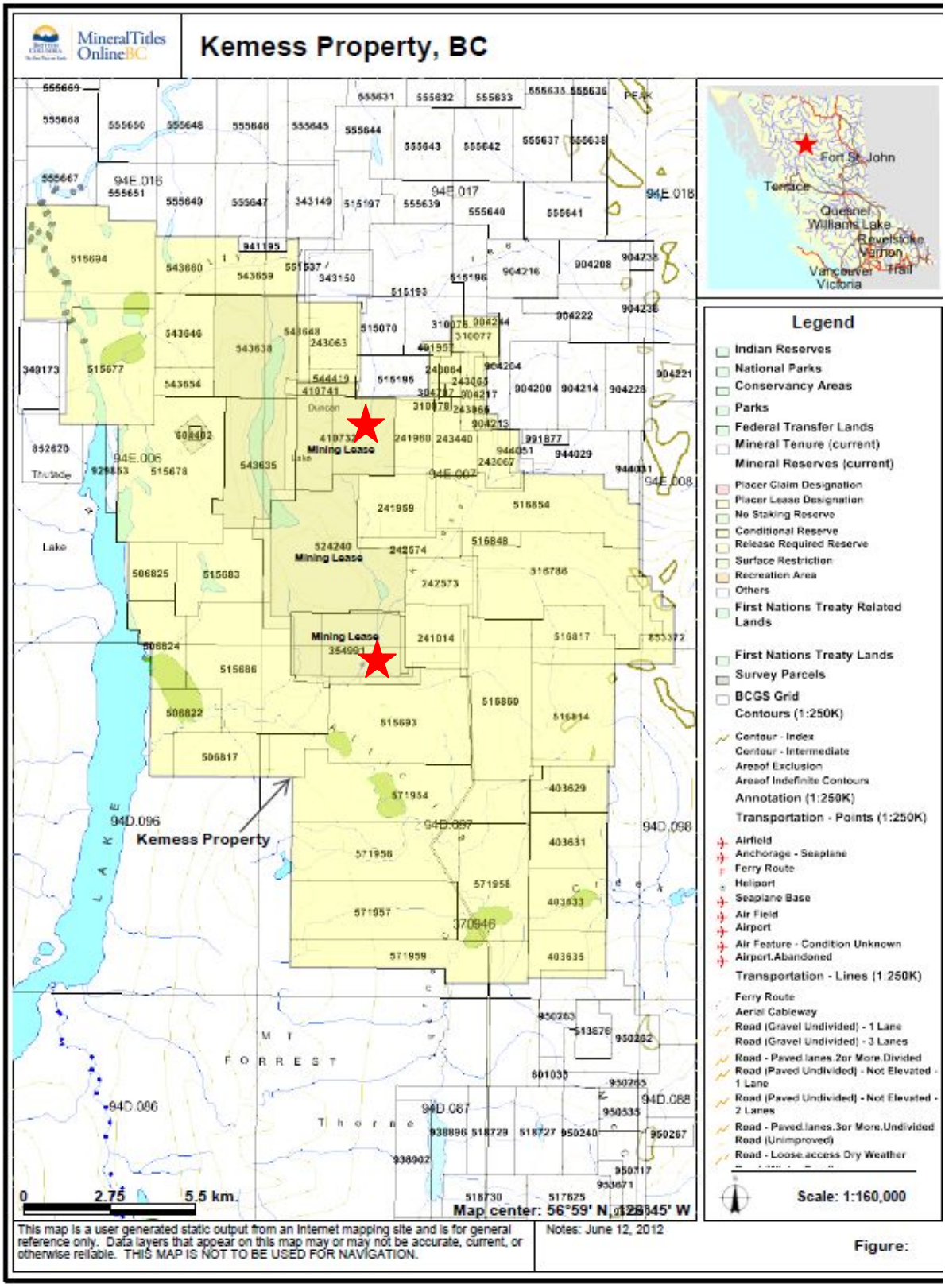


Figure 2 Kemess Property Claim Block and Deposits.

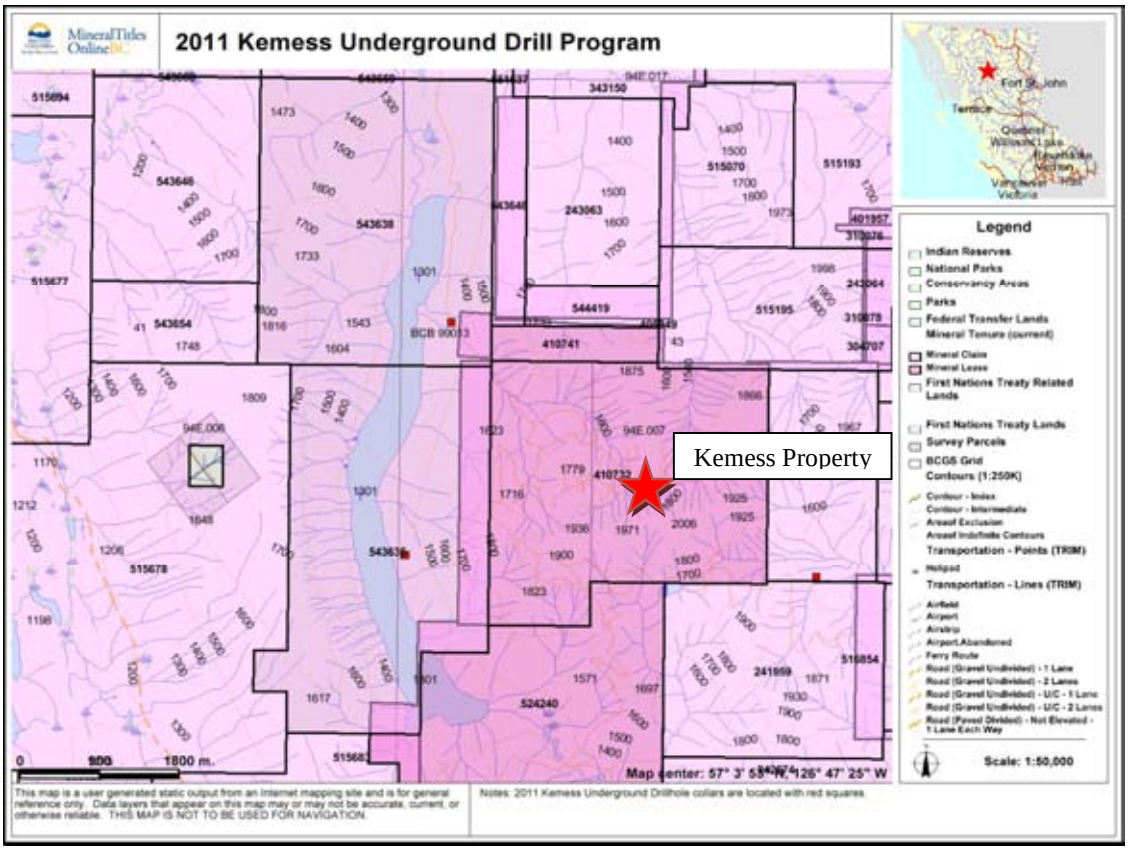


Figure 3 Detailed Work Area Claim Map, red squares represent drill hole locations, note two holes drilled from the same location (as of June 2012).

5.0 DISTRICT EXPLORATION AND MINING HISTORY

The earliest reports of exploration activity in the area date back to the discovery of placer gold at the mouth of McConnell Creek in 1889. Several years later there was a brief staking rush in 1907 and prospecting remained active in the area through the early 1920's resulting in a placer discovery at McClair Creek. Cominco Ltd. was active in the area in the 1930's exploring for base metals. During this period Emile Bronlund discovered and staked several skarn showings; the Cairn showing is a nearby occurrence from this era that is located on Duncan Ridge, 4 kilometres west of Kemess North.

In 1966 Kennecott focused on the area searching for Cu-porphyry systems using stream geochemical techniques and prospecting; this work resulted in claim staking and field work on several prospects including Kemess North, Pine, Fin, Chapelle (aka Baker), Shasta and Lawyers. The latter three deposits are gold-silver epithermal vein systems that eventually produced during the early 1980's.

In 2003 Fugro Airborne Surveys carried out a regional airborne multi-parameter survey over the Toodoggone region, under a funding agreement with the Geological Survey of Canada, BC Geological Survey and local exploration companies including Northgate Minerals.

Property and Regional scale mapping was completed by Diakow in 2001 and compiled by Massey et.al. in 2003.

6.0 REGIONAL GEOLOGY

Mesozoic arc-related volcanic rocks that comprise the eastern margin of the Intermontane Belt underlie the district over an area measuring 100 by 40 kms. The oldest rocks in the belt are Permian Asitka Group, which are disconformably overlain by upper Triassic Takla Group, which are in turn unconformably overlain by lower-middle Jurassic Hazelton Group. Overlapping all these assemblages to the west are upper Cretaceous Sustut Group sediments. The lithologic units comprising the stratigraphic succession are described in Table 2 below.

Table 2. Regional Stratigraphy (Cope 1992)

Age	Lithostratigraphic Unit	Description
Cretaceous	Sustut Group	Sustut rocks grade from Brothers Peak Formation conglomerate, sandstone, mudstone with minor tuffaceous units down to the basal Tango Creek Formation polymictic conglomerate, sandstone, mudstone with minor lignite seams.
L-M Jurassic	Hazelton Group	Uppermost unit, Smithers Formation is dominated by greywacke, lithic sandstone, siltstone, tuffaceous shale, volcanic breccia, conglomerate and limestone. Below lies the Nilkitkwa Formation, which is mainly shale, greywacke, andesitic-rhyolitic tuff with minor limestone. In the Kemess area the quartz phyric volcaniclastic rocks of the Toodoggone Formation are believed to be correlative to the Nilkitkwa. The basal assemblage, Telkwa Formation comprises basaltic to rhyolitic pyroclastic and flow rocks.
U. Triassic	Takla Group	Highest units are Moosevale Formation augite porphyry, breccia, sandstone and mudstone. Central assemblage is Savage Mtn. Formation comprised of flows and pyroclastic augite porphyritic volcanic rocks. Base of the exposed sequence is Dewar Formation argillite, limestone and siltstone.
Mid Pennsylvanian Permian	Asitka Group	Uppermost units are dominated by limestone and tuff, which give way to a middle assemblage of basaltic flows and rhyolite. The lowermost units are basalt, argillite,chert and limestone.

Intrusive rocks are prevalent in the area and have been categorized as late Triassic Alaskan-type ultramafics such as pyroxene diorite, hornblende gabbro

and pyroxenite. Economically more significant are the early Jurassic intrusives of the Black Lake suite, which are granodiorite, hornblende diorite, pyroxene quartz-diorite, quartz-monzonite and quartz monzodiorite. Age dates of important plutonic masses are shown in Table 3.

Table 3. Pluton Age Dates (Diakow 2001- 2004)

UTM (E)	UTM (N)	Pluton	U-Pb (zircon)	Notes
639009	6327545	Atty	205.1+/-0.7(z)	Sample from Northgate; pluton adjacent to Cu-Au mineralization on Atty property; intrusion probable sinistral offset of ca 194.5 granodiorite (96LDi25.1)
		Sovereign	202.7+1.9/-1.6(z)	Porphyritic quartz monzonite (Reference Mortensen et.al., 1995; CIM Special Vol. 46, pg154-156.)
		Maple Leaf	199.6 +/- 0.6(z)	Hosts The Kemess South Cu-Au Deposit
		Kemess North Monzonite	202 +/-?(z)	Hosts The Kemess North Cu-Au Deposit*
636408	6326349	Kemess North Syenite	198.3+/-0.8(z)	Corresponds with Northgate DDH KN02-03, 508-514m; post-mineral dike cutting porphyry Cu-Au mineralization
		Duncan Lake	197.3 +1.7/-0.9(z)	
634445	6321726	Kemess Centre	196.3+1.3/-2.9(z)	Sample from drill core DDH KC03-01 346 to 352m
631152	6325806	Cairn	190.3+0.6/-1.8(z)	Sample from Northgate; pluton on Duncan Ridge, spatially associated with Cu-Magnetite skarn

The map shown in Figure 4 from Massey et. al. 2003 shows the district geology, major intrusive masses, and deposits. **BCGS Map Place*

7.0 STRUCTURAL SETTING

For the most part the volcanic Mesozoic assemblages are upright shallowly dipping flat-lying sequences crosscut by high angle north to northwest trending faults. Significant structures are the Finlay-Ingenika and Moosevale fault systems, which bound the eastern margin of the belt. These structures are

dextral strike-slip features that are related to the terrain bounding faults between the Intermontane and Omineca belts.

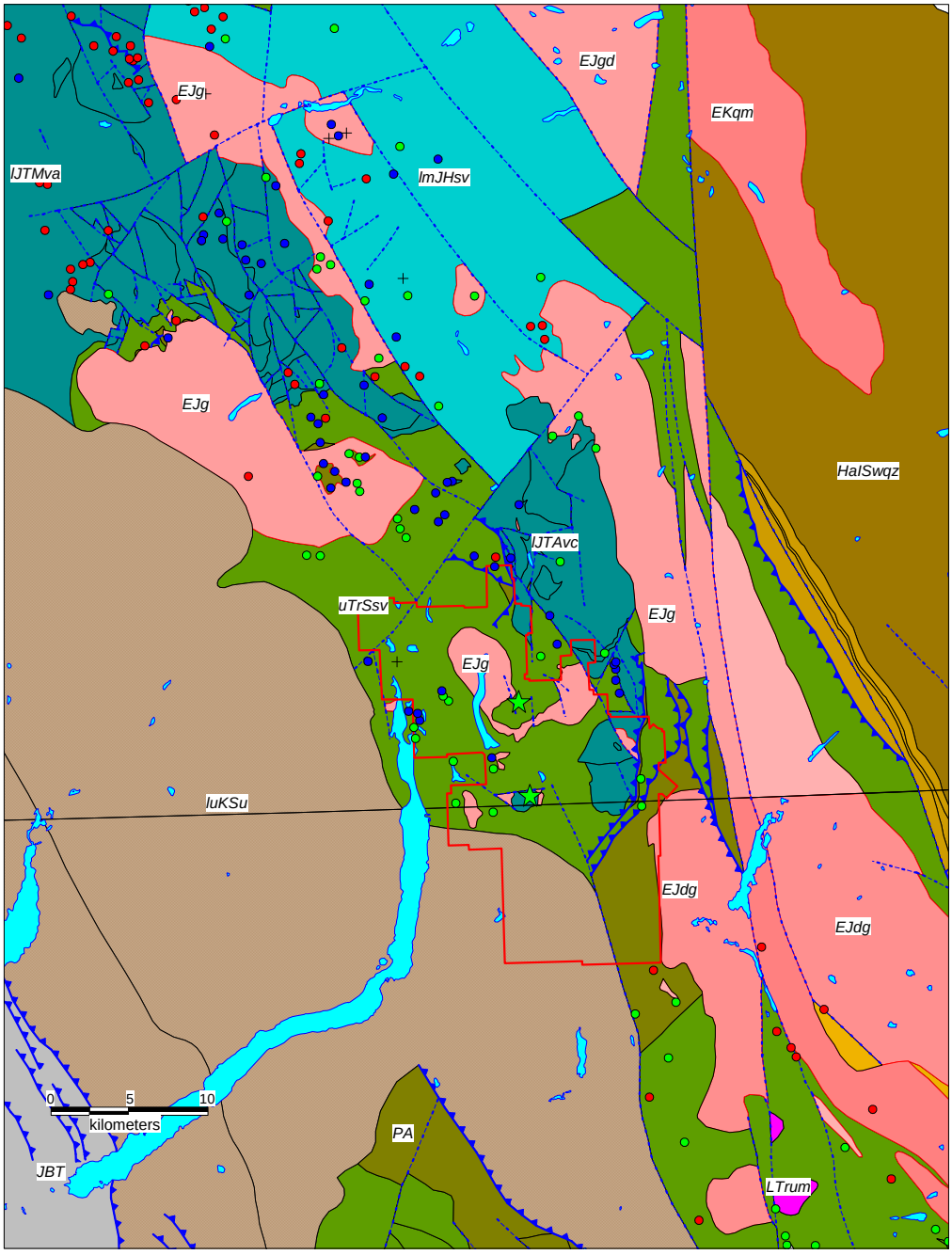


Figure 4 Regional Geology (after Massey et.al. 2003).

Minfile Occurrences plotted by colour showing principal commodities as follows: gold – red, silver – blue, and copper – green. Geologic units as follows: PA – Late Pennsylvanian -Permian Asitka Group, LTum – Late Triassic Ultra mafic intrusions, uTrSsv – Upper Triassic Takla Group, lJT – Lower Jurassic Hazleton Group, luKSu – Upper Cretaceous Sustut Group, EJ – Early Jurassic Black Lake Intrusives,

Local to Kemess are the Duncan and Saunders Faults, which are north-northwest normal block fault structures. Thrust faulting is present in the district and is interpreted as Eocene or younger; displacement believed to be towards the northeast and effects rocks from the Asitka up to Sustut sediments.

The district represents the results of three superimposed volcanic arc building stages that began in the upper Paleozoic with the Asitka Group. Unconformably overlying the Asitka, Takla Group marine volcanic and sedimentary successions dominated until the lower-middle Jurassic, when continental, quartz- normative volcanism began with the deposition of the Hazelton Group-Toodoggone Formation sequences. The plutonic rocks of the Black Lake suite are coeval with the Toodoggone sequence and are likely co-magmatic. Block faulting has juxtaposed and exposed panels of varying depth from the magmatic and volcanic systems. The structures and intrusives likely had a strong influence on the eventual positioning of volcanic centers.

8.0 PROPERTY GEOLOGY

8.1 INTRODUCTION

The Kemess property is underlain by upper Triassic (Takla Group) andesitic to basaltic volcanics, which are unconformably overlain by lower Jurassic (Toodoggone Formation) dacitic fragmental volcanics. To the south the Lower Permian (Asitka Group) basaltic rocks are present within an uplifted block. Stocks, dykes and possible sills of quartz monzonite/quartz diorite composition have intruded the Takla succession and are also lower Jurassic in age. Structurally the area is transected by steeply dipping north to northwest trending normal faults. Significant faulting has occurred prior to Toodoggone deposition as represented by facies changes within the basal sequence. A local coarse conglomerate occupies the lowest portions while finer, more angular epiclastic deposits mark the unconformity in higher blocks.

The 2011 work area was already well known due to the abundance of information provided by past drill holes. To the west the area is underlain mainly by the Upper Triassic Takla Group Volcanics and Basalts of the Lower Permian Asitka Group, with the Post-Mineral Black Lake Quartz Monzonite intruding through these groups and some to surface. To the east the area is mostly underlain by the Upper Triassic Takla Group with the Post-Mineral Black Lake Quartz Monzonite intruding through. (figure 5).

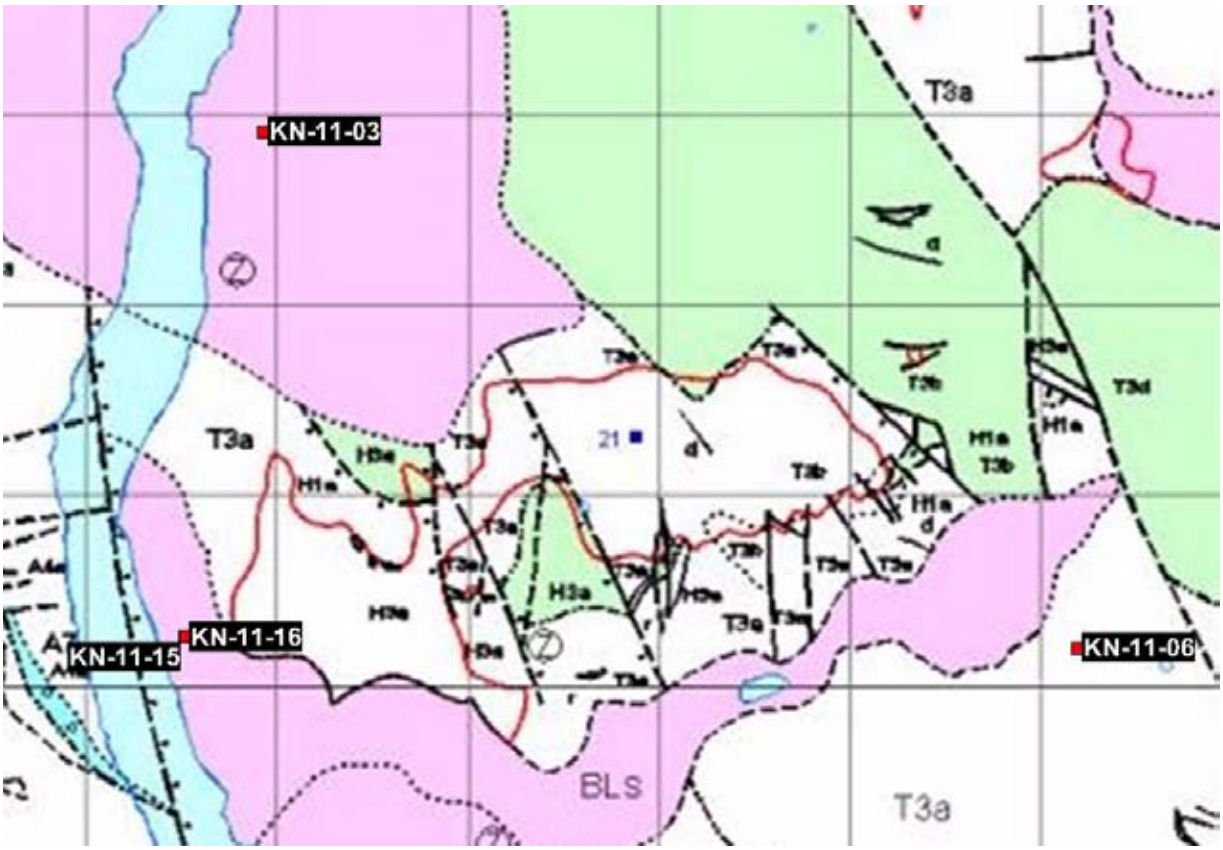


Figure 5 Geology Underlying Work Area – (Diakow 2001) Note: 1km grid

Geology Legend

Early Jurassic
BL - Black Lake Intrusives
Lower Jurassic
H,- Hazelton Group -Subaerial andesite to dacite flows and tuffs, rare basalt and rhyolite flows: subordinate volcanic siltstone to conglomerate.
Upper Triassic
T - Takla Group - Submarine basalt to andesite flows and tuffs, minor limestone
Lower Permian
A -Asitka Group- Limestone, chert, argillite, basalts

8.2 LITHOLOGY

Basalt (Asitka Group - A1a)

Basalt flows of the Asitka Group occur mainly to the south as an uplifted block. The basalt also appears to the east as a thin layer above the Black Lake

Sovereign Quartz Monzonite. These basalt flows are dark green, massive and strongly fractured; generally aphanitic but may contain sparse, chloritized pyroxene phenocrysts; locally deformed to chlorite schist adjacent to the Ingenika Fault.

Andesitic Volcanics (Takla Group -T3a, T3c,T3d, T4)

The property is predominantly underlain by a thick (>1000m) succession of andesitic flows and volcanic breccias. Takla volcanic rocks host a significant portion of the Au-Cu mineralization in the Kemess South and North deposits.

The andesite and basalt flows exhibit textures ranging from fine grained and massive to porphyritic with medium grained and mostly phyric, subhedral augite phenocrysts. Less common are phenocrysts of plagioclase. The fine-grained matrix is mostly comprised of plagioclase, quartz, and chlorite. The plagioclase is usually sericitized. Less common intersections of auto-brecciated flows occur as coarse sub-rounded andesitic clasts within both phyric and finer grained flows.

On surface, exposed in the North Kemess cirque headwalls and some upper intersections of drill intercepts is a bladed feldspar porphyritic unit. It exhibits a very well developed porphyritic texture with bladed felted laths of plagioclase up to 1.5 cm long within a finer grained dark gray matrix. Its texture suggests a hypabyssal origin or possibly an extrusive dome type emplacement.

Takla Group flows and tuffs characterized by augite and plagioclase phenocrysts dominate the peaks on the eastern portion of the North Dam Grid area. The Northern part of the grid area is covered by vegetation, alluvium, and glacial drift that are probably underlain by Takla Group volcanics.

Dacitic Polylithic Fragmental (Hazelton Gp,Toodoggone Fmn – H3a, H3b, H8, H9, H10)

Local Toodoggone volcanics overlying the Kemess South area have been dated at 194+/-0.4 Ma. In contrast, mantling the northern and eastern limits of the Kemess North, area is a matrix supported polylithic fragmental volcanic unit dated at 199.0 +/-0.3 Ma. Sub-rounded angular coarse fragments of granitic intrusive, andesite, and chert occur within a siliceous (dacite) matrix. Lithic proportion to matrix is inconsistent ranging from 1-30% volumetrically, with clast size varying from lapilli to blocks. The matrix is fine-grained, comprised of 10-30% medium grained feldspar and diagnostic (5%) quartz phenocrysts. Magnetite is common as an accessory mineral occurring as very fine-grained disseminations as are distinctive zeolite-calcite veinlets. Propyllitic (epidote-calcite-pyrite) alteration is dominant within the, fragmental; however narrow (10-20m) zones of phyllic (quartz-sericite-pyrite) alteration are present near discordant contacts with the Takla Group. The phyllic sections can carry anomalous gold concentrations.

The Polylithic Fragmental Dacite is an enigmatic unit as it shows field relations suggestive of both an extrusive and intrusive emplacement mechanism. Diamond drill sections in East Cirque show a WNW striking steeply south dipping irregular contact between mineralized Takla andesite and the dacitic fragmental, and in one instance quartz-phyric polylithic fragmental occurs within monzonite. In Central Cirque an unaltered flat lying dacitic fragmental unit overlies quartz-sericite altered mineralized Takla Group. At the Nugget Zone a thin (5 metre) zone of the dacitic fragmental crosscuts Takla Group andesite. Commonly present within the dacitic fragmental are inclusion-rich irregular granitoid masses typically logged as crowded feldspar porphyry or monzonite. These masses are interpreted to be younger sub-volcanic intrusives related genetically to the Toodoggone Formation.

Quartz Monzonite/Quartz Granodiorite (Black Lake Intrusives – BLqm, BLgd)

These intermediate intrusive units are comprised of subhedral phenocrysts of 50% plagioclase and <10% quartz set in a groundmass of quartz-feldspar-chlorite +/- biotite with accessory minerals including; magnetite, apatite, carbonate, rutile, ilmenite, sphene. The main quartz monzonite mass beneath East Cirque hosts the bulk of the Au/Cu mineralization at Kemess North. The Kemess South deposit is mainly comprised of the 199.6 +/- 0.6Ma Maple Leaf intrusion.

Quartz Monzonite Porphyry (Black Lake Intrusives – BLs)

The feldspar porphyry dykes cross cut the Asitka Basalts, Takla Volcanics and Jurassic-Toodoggone fragmental unit. The feldspar dykes commonly exhibit pervasive dark pink hematite within the matrix and as staining of the medium grained feldspar phenocrysts. Due to the pink colour of the feldspars, these dykes take the field term syenite and are generally barren and unaltered. Unit contains unaltered green hornblende. The relationship of the feldspar dykes with the larger quartz diorite stocks is not clear, however they appear temporally late in the sequence of events.

Post-Mineral Dykes

Mafic dykes are generally thin at < 1 to 4 metres wide, dark green, commonly amygdaloidal, and barren of sulphides and veining. Observations from regional mapping suggest they are related to the volcanic strata interbedded within Sustut Group sedimentary rocks and are interpreted as Cretaceous.

Also found on the property, cross-cutting Takla volcanics but not encountered cross-cutting porphyry mineralization are megacrystic quartz rhyolite porphyry dykes. These dykes have conspicuous quartz phenocryst up to 2 centimeters in an off white to pale green groundmass.

8.3 STRUCTURE

Due to the lack of bedding and/or marker horizons, the inclination of the massive thick succession of volcanics is difficult to ascertain but probably reflects the regional trend of flat lying Mesozoic assemblages.

At least three steeply dipping, northwest trending normal faults have been inferred from surface mapping and drilling to transect the Kemess property. Fault spacing ranges from 500 and 1500 metres and they are generally parallel to the regional scale Duncan and Saunders Faults. Depth to the Hazleton/Takla unconformity appears to step down southwest across these structures. Both the Kemess North and South deposits are bound at their northern extents by steep east-west faults; a normal fault at Kemess North and a reverse fault at Kemess south.

9.0 EXPLORATION WORK

9.1 DRILLING

The combined 2011 Drilling Program was carried out as a single phase, 5 hole, diamond drill program totaling 648 metres. A further 14 drillholes were completed on the Kemess Property mining leases so are not reported here. The 2011 work program was helicopter supported active from Sep 5 - Nov 21 2011. A B407 helicopter was supplied by Valley Helicopters based out of Hope B.C. Roads around the drill pad locations were maintained to provide secondary access. Drill hole collar locations are shown in Figure 8 and are tabulated with orientation and hole length data in Table 5.

Hytech Diamond Drilling of Smithers B.C. performed the drilling. Each hole had well monitoring equipment placed in them installed by HyTech Drilling and Lorax Environmental personnel.

Hydrogeological hole were targeted placement was based on consultation with and direction from Lorax Environmental Services All drill hole locations minimized disturbance by using previous drill pad locations. Lorax Environmental Personnel were on site to monitor and aid in the installation of well monitoring equipment, as well as conduct groundwater tests during the drilling process. After the well monitoring equipment was installed Lorax Personnel took water samples at various depths as part of the feasibility study. Lorax Personnel also inspected other water monitoring wells to gather further water samples as part of the feasibility study.

Table 4. 2011 Drill Collar Location and Orientation Data

Hole_ID	Nad83E	Nad83N	Elevation	Azimuth	Dip	Depth (m)
KN-11-16	633521	6325262	1542	0	-90	150
KN-11-15	633526	6325262	1382	0	-90	123
KN-11-06	638201	6325209	1381	0	-90	150
KN-11-03	633932	6327912	1358	0	-90	174
Total	4					597 metres

All completed drill hole collar locations and orientations were surveyed by Kemess Mine Employees and tied into Kemess South mine survey controls. Survey control for the program was provided by GPS using a base station that provided real-time correction such that sub-centimetre accuracy was achieved.

Down hole surveys were deemed unnecessary.

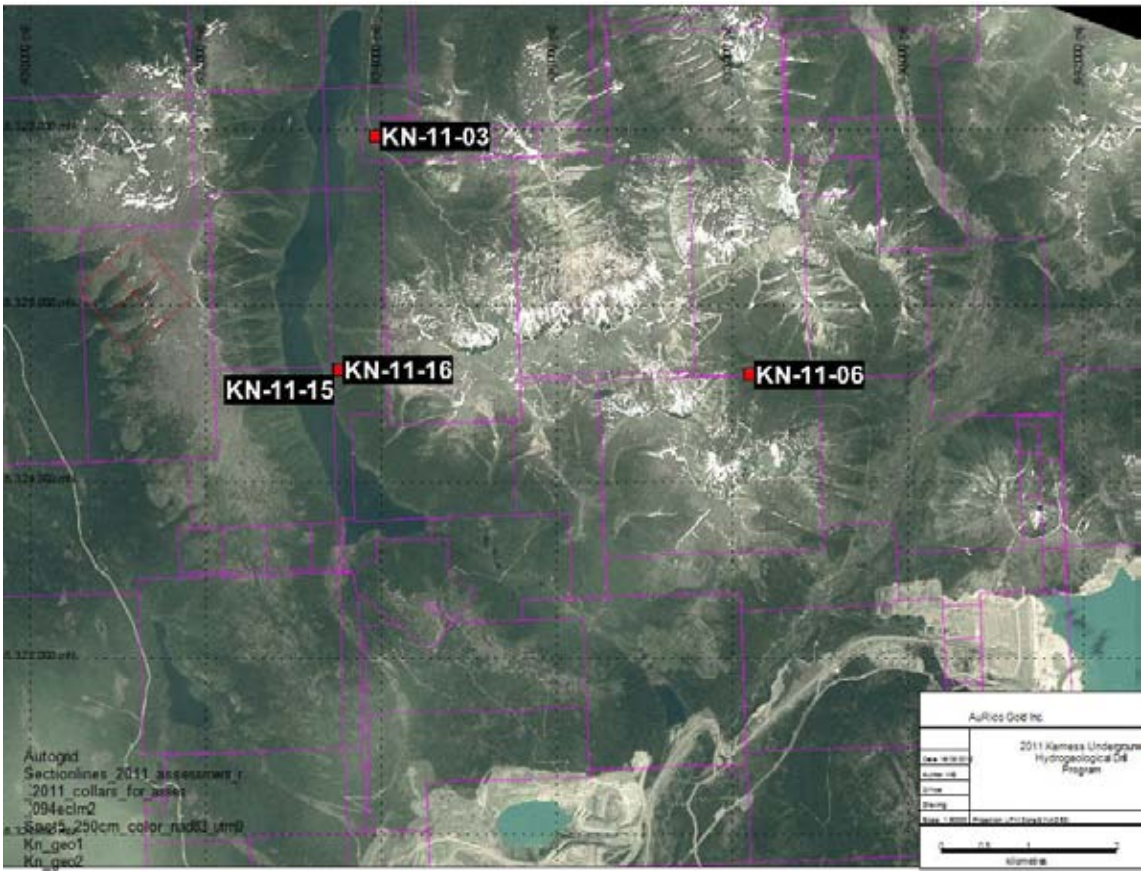


Figure 6 2011 Kemess Underground Hydrogeological Drill Hole Locations

9.2 DRILL CORE PROCESSING

Contiguous core samples were logged by geologists, then split or sawn, and crushed on site. Half core is retained at site in core racks. A total of 183 prepared samples and 10 quality control samples were submitted for analysis.

All drill holes were logged for both geologic and geotechnical properties. All drill core was digitally photographed and the magnetic susceptibility of each sample was measured. Sample intervals were determined by a geologist and usually ranged from 0.3 up to 2.0 metres for NQ and up to1.5 metres for HQ size core. Sample intervals do not straddle lithologic boundaries.

An on-site sample preparation laboratory was established to complete the primary crushing (80% minus 10-mesh) of cut or split diamond drill core. Operation of the sample preparation laboratory and the quality control procedures were implemented under the supervision of Wade Barnes, Project Geologist for the Kemess Underground Project.

For 2011, 183 prepared samples weighing approximately 250 grams each, were submitted to ALS Minerals North Vancouver laboratory for analysis. Quality control samples (blanks, duplicates, and standards) were inserted into the sample stream at regular intervals such that 1 in 26 samples were submitted for quality control purposes. A total of 9 quality control samples were submitted during the 2011 program. This amounted to 4.9% of the entire population of samples submitted to ALS Minerals.

At ASL Minerals these samples were pulverized to 90% minus 150-mesh and submitted for 34-element ICP analysis, Copper assay by triple acid digestion with an atomic absorption finish, and one assay-tonne gold fire assay with an atomic absorption finish.

9.3 DRILLING RESULTS

Diamond Drilling on the Kemess property did not provide any new geological information about the Kemess Property due to the drill holes being done on the exact same location as previous drill holes. Mineralization was encountered in drill holes KN-11-15 and 16, as expected, based on the previous hole information that location. The other drill holes did not intersect significant results. KN-11-03 was not sampled at all due to its intersection of post mineral Quartz Monzonite. All significant results are tabulated in Table 6.

Hole	From(m)	To (m)	Interval (m)	Au g/t	Cu %	*Mo %
KN-11-15	16.5	27.2	10.7	0.097	0.09	0.001
KN-11-15	85.4	93.9	8.5	0.195	0.012	0.001
KN-11-15	100.5	121.3	20.8	0.224	0.028	0.003
KN-11-15	103.9	106.8	3	0.689	0.004	0.002
KN-11-16	10.1	27.8	17.7	0.089	0.068	0
KN-11-16	102.6	109.6	7	0.241	0.037	0.002

Table 5. Significant Results from the 2011 drilling.

9.4 QAQC REPORT

The Kemess Underground Hyrdrogeological 2011 Sample Preparation and Analytical Quality Assurance program follows protocols established for the Kemess North 2002 drilling program. The objective of this program is to provide sound and accurate gold and copper analytical results for use in resource/reserve estimates of Kemess Property deposits and for evaluation of other target areas on the property being investigated by AuRico Gold Inc. This objective was achieved through the implementation of quality control procedures that include the insertion on blanks, standards, and duplicates into the sample stream and then monitoring and evaluating the quality control analytical results.

An on-site sample preparation laboratory was established to complete the primary crushing (80 % minus 10-mesh) of cut or split diamond drill core. Samples ranged from 30 cm up to 2 m for NQ and 1.5 m for HQ. Operation of the sample preparation laboratory and the quality control procedures were implemented under the supervision of Bill Smith, Chief Assayer at Kemess Mine.

Not enough QAQC samples were submitted from the 4 drillholes as part of this program. The QAQC Report will include all the 2011 drillholes to get an accurate QAQC study. Diamond drill core sample submitted during the 2011 program were collected from over 6 kilometres of core drilled in 19 holes from various target areas on the Kemess Property. A total of 3,057 prepared samples, weighing approximately 250 grams, were submitted to ALS Chemex's Vancouver laboratory during the 2011 program. Quality control samples (blanks, duplicates, and standards) were inserted into the sample stream at regular intervals such that 1 in 25 samples were submitted for quality control purposes. A total of 128 quality control samples were submitted during the 2011 program. This amounted to 4.1 % of the entire population of samples submitted to ALS Chemex, including 33 blanks, 51 standards, and 44 duplicates

Evaluation of the 33 gold and copper analyses of blanks indicates that no significant or systematic contamination or laboratory error occurred during the course of the program.

ALS Chemex results for the 51 quality control standards, analyzed throughout the program, reported within industry accepted +/- 3 standard deviation error limits.

Evaluation of 44 reject duplicate matched-pair analyses indicates that, for the vast majority of samples, results are precise at grades of interest.

Evaluation of the quality control results indicates that the preparatory work performed by AuRico/Kemess staff and the analytical work performed by ALS Chemex provided sound and accurate gold and copper results for the Kemess Hydrogeological 2011 Drilling program.

10.0 CONCLUSIONS AND RECOMMENDATIONS

The 2011 Kemess Property Hydrogeological Drill Program was successful in completing its objectives. Water monitoring wells and sampling equipment were installed at all holes and porosity-permeability data was collected during drilling. Further drilling investigation should be completed to test the mineralization encountered in drill hole KN-11-15 and 16.

11.0 STATEMENT OF COSTS

Exploration costs for 2011 totaled $ 660,413 as outlined in Table 6 below.

Table 6. 2011 Kemess Underground Hydrogeological Program Drill Program Expenditures
Period: September 5, 2011 to November 21, 2011
Work Claims: 241960, 543635, 543638

Item	Metres, days, samples		Rate	Cost
Drilling (HyTech Diamond Drilling)	Core (NQ/HQ) 597 m			$102,552
Drill Mob in/out				$7,370
Sample Prep and Analysis	193	sample @	$57	$11,001
Camp Costs	402	man days @	$100	$40,200
Salary (Exploration Personnel)	175	man days @	$284	$49,700
Geological Services	25	man days @	$505	$12,625
Flights	23	flights	$94	$2,162

Helicopter (Valley Helicopters B407)	73.6	hrs @	$1,834	$134,982
Helicopter Fuel	11,041L	per L	$1.49	$16,451
Lorax Environmental				$151,116
Pad Building/Reclaim	3	per pad	$750	$2,250
Core Boxes and Core Storage	172	per box	$11	$1,892
Avalanche Control (Storm Mountain)	16	per day	$1,250	$20,000
Road Maintenance	18	per day	$2,250	$40,500
Report Preparation	15	per day	$505	$7,575
Subtotal				$600,370
Project Management Fee			10%	$60,037
Total				**$660,413**

Total Assessment Work Applied to Mineral Claims: $617,419.68
under Event Number: 5400165
Balance of Assessment Work Applied to AuRico Gold Inc. PAC: $42,580.32

Table 7. 2011 Kemess Underground Hydrogeological Drill Program Personnel

Staff Name	Position
Wade Barnes	Project Geologist
Kent MacWilliam	Geologist
Jacqueline Quan	Geotechnologist
Maryam Toudeh	Geotechnologist
Luke Thompson	Geological Assistant
Tiernan McKenna	Geological Assistant
Cameron McKenna	Geological Assistant
Larry Seymour	Geological Assistant
Mike McCook	Geological Assistant
Ben Mackay	Geological Assistant
David Abraham	Geological Assistant
Rudi Poeschek	Geological Assistant
Daphne Hall	Geological Assistant

Table 8. 2011 Camp Cost Breakdown for the Kemess Underground Hydrogeological Drill Program

Exploration Personnel	Number of Personnel	Days Each	Days in Camp
AuRico/Kemess	8	25	200
Hy-Tech Drilling	6	16	96
Lorax Environmental	2	18	36
Valley Helicopters	2	18	36
Storm Mountain	1	16	16
Road Maintenance Crew	1	18	18
Total			**402**

12.0 STATEMENT OF QUALIFICATIONS

I, James Wade Barnes, of 1572 Bramble Lane, Coquitlam, British Columbia, Canada, do hereby certify that:

1. I have supervised the 2011 exploration program completed at the Kemess Property, reviewed all the data contained herein, and contributed to the preparation of this report.

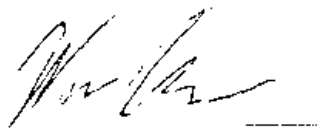
2. I graduated from the Simon Fraser University in 2001 with a B.Sc. in Earth Sciences.

3. I graduated from British Columbia Institute of Technology in 2004 with a Mining Technology Diploma (Honours).

4. I am a Professional Geoscientist (P.Geo.) registered with the Association of Professional Engineers and Geoscientists of British Columbia, member # 32265, and have been a member in good standing since 2008.

5. From 2003 until present I have been continuously employed as a Geologist in mineral exploration.

Dated at,_____Vancouver_____the _13th__ day of ____July__ 2012.



J. W. Barnes

STATEMENT OF QUALIFICATIONS

I, Ronnald A. Konst, of 1691 Broadlands Road, Errington, British Columbia, Canada, do hereby certify that:

1. I have supervised the 2008 exploration program completed at Kemess and contributed to the preparation of this report.

2. I have studied Geology at the University British Columbia in Vancouver, British Columbia and have received a Bachelor of Sciences degree in 1984.

3. I have continuously practiced my profession as an exploration geologist since graduation until 1998 in Canada, U.S.A., and Mexico. For the period of 1998 through 2002 I was employed as a Quality Assurance Specialist and Database Analyst in the Information Technologies sector. I resumed practice of my profession as an exploration geologist in 2003. Since then I have been continuously employed as a Geologist in mineral exploration.

Dated at Errington, British Columbia, the 2nd day of March 2009.

Ronnald A. Konst, B.Sc.

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14.0 LIST OF APPENDICES

Appendix 1: Diamond Drilling Logs with Results

Appendix 2: ALS Chemex Assay and ICP Certificates

Appendix 3: Plan Map – 1:50,000 Grid, Claims, DDH Locations

Plan Map - 1:10,000 Grid, Claims, DDH Locations

Appendix 4: Sections – 1:1,000 DDH Au,Cu

Appendix 1:
Diamond Drilling Logs with Assay Results

Kemess UG 2011 Diamond Drill Log

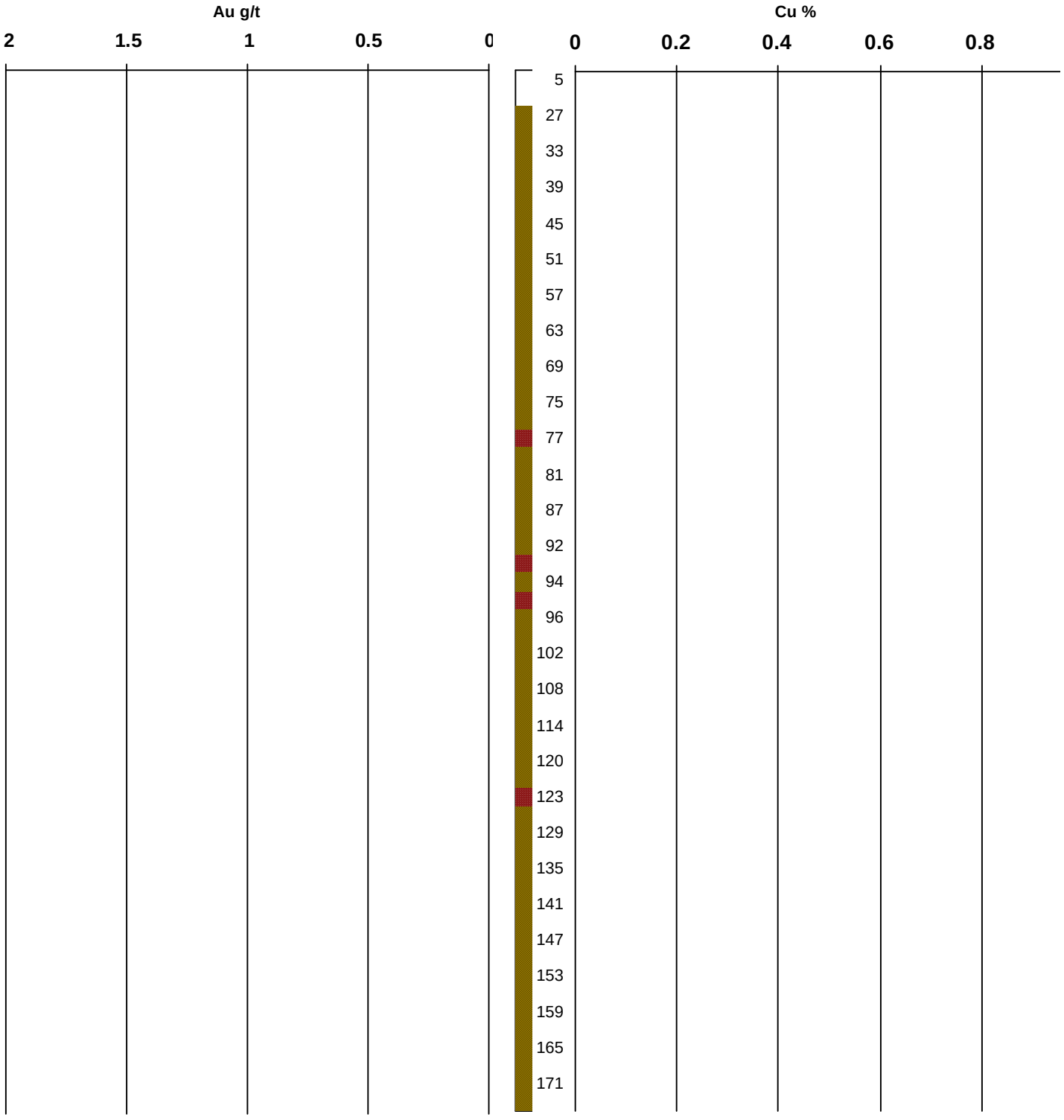
Hole Number: ***KN-11-03***

UTM Northing:	6327904	**Northing:**	17668	**Total Depth:**	174 **m**	Hydrogeological Study	**Geologist:** Wade Barnes
UTM Easting:	633926	**Easting:**	8030	**Azimuth:**	0°		
		Elevation:	1356	**Dip:**	-90°		**Drilled:** 10/5/2011

Survey Depth	Azimuth	Dip
11.1 m	0°	-90°

Kemess UG 2011

Hole Number: ***KN-11-03***



Cretaceous Dykes
Takla
Syn-Min Black Lake
Hazelton(Toodoggone)
Asitka
Post-Min Black Lake
Late Triassic Intrusives

Kemess UG 2011 Diamond Drill Log

AuRico Gold

Hole Number: KN-11-03

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
0	5.36	**CASING**									
0.0	5.4										
5.36	24	**OVERBURDEN**									
5.4	24.0	Coarse grained light grey orange						Black Lake Sovereigne Quartz Monzonite mixed with minor Asitka units. Sections appears to be large sections of rock with minor oveburden mixture with some coarse grained soil C horizon material that is oxidized.			
24	76.65	**PORPHYRITIC QUARTZ MONZODIORITE INTRUSIVE**									
24.0	27.0	Coarse grained light grey orange weakly oxidized		*67.2*				Black Lake Sovereigne Quartz Monzonite. Unit is coarse grained and composed mainly of plagioclase feldspar with 20% mafics of hornblende biotite and possible augite. Minor quartz present. Unit is porphyritic with phenocrysts of of hornblende and biotite. Some mafics are altered to chlorite. Unit is magnetic with magnetite throughout. Interval is fairly broken due to being at surface. Minor oxidation present with limonite coating some fractures. Rare V6 zeolite and carbonate veins present.			
27.0	30.0			*51.5*				About 65% lost core.			
30.0	33.0	Coarse grained light grey pink weakly oxidized		*45.6*				About 30% lost core. Minor kaolinite alteration of some feldspars increasing. Minor hematite staining of some feldspars.			
33.0	36.0	Coarse grained light grey pink weakly propyllitic		*59.1*	V6	55	1	Core has become more competant. Small epidote vein present.			
36.0	39.0	Coarse grained pink green moderately propyllitic	0.0	*23.5*	V6	55	1	Hematite staining, kaolinite alteration of feldspars and chlorite alteration of mafics has increased.			
39.0	42.0		0.0	*50.3*	HSTR	50	1				
42.0	45.0		0.0	*32.4*	HJN	10	2	Few hematite filled joints.			
45.0	48.0			*32.4*	HJN	10	1				
48.0	51.0			*51.9*	V6	25	2				

Hole Number: KN-11-03

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca	-%)	Comments	Sample#	Cu %	Au ppm
51.0	54.0	Coarse grained pink green weakly propyllitic		*56.3*	QEHV	30	2	Hematite staining decreased and kaolinite alteration of the feldspars has decreased. A quartz vein present with epidote and hematite.			
54.0	57.0	Coarse grained pink green moderately propyllitic			V6	30	2	Hematite staining and kaolinite alteration of feldspars have increased.			
57.0	60.0				HSTR	5	1	Core is broken but looks mechanical.			
60.0	63.0			*48.3*	HJN	5	2	Couple of Hazelton xenoliths present. A couple of quartz veins present with hematite.			
63.0	66.0			*45.7*	HJN	40	2	Quartz vein present with hematite oriented 40 deg tca.			
66.0	69.0			*54.1*	V6	20	2	A couple of quartz veins with sericite and calcite present oriented 20 deg tca and 60 deg tca.			
69.0	72.0			*44.8*	V6	40	1	Quartz vein present oriented 60 deg tca.			
72.0	75.0			*18.8*	HSTR	40	4	Interval contains several hematite stringers and joints that are randomly oriented. Host rock has become slightly mottled.			
75.0	76.7			*25.3*	HSTR	55	1				
76.65	77.15	**PORPHYRITIC BASALT DYKE**									
76.7	77.2	Fine grained dark green moderately chloritic		*39.2*	CNT	35		Small Cretaceous basalt dike. Unit is fine grained and altered to chlorite. Unit contains 5% possible augite phenocrysts 1-2mm in size and altered to chlorite. Unit is moderately magnetic. Trace of disseminated pyrite present. A couple of carbonate filled fractures presnt. Contacts are sharp.			
77.15	92.34	**PORPHYRITIC QUARTZ MONZONITE INTRUSIVE**									

Hole Number: KN-11-03

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
77.2	78.0	Coarse grained pink green moderately propyllitic		*26.6*				Back into a similar Black Lake Sovereign Quartz Monzonite as before the above basalt dike. Unit is coarse grained and mostly composed of plagioclase feldspars with 20% mafics (hornblende and biotite) and minor quartz. Some feldspars have been altered to kaolinite. Some mafics have been altered to chlorite. Unit is porphyritic with phenocrysts of hornblende and have been altered to chlorite. Unit is hematite stained. Unit contains 2-3% V6 zeolite and carbonate veins. Unit contains 1-2% hematite filled stringers, fractures and joints.			
78.0	81.0			*62.1*	HJN	5	1				
81.0	84.0			*58.8*	V6	5	2				
84.0	87.0			*36.5*	V6	20	2				
87.0	90.0				FLT	25	2	A few small faults present oriented 25 deg tca. Increase in chlorite alteration around the faults.			
90.0	92.3			*39.2*	BASD	60	2	Small Cretaceous Basalt dike from 90.39m to 90.44m. Fine grained basalt and weak chlorite alteration.			
92.34	92.65	**HOMOGENEOUS BASALT DYKE**									
92.3	92.7	Fine grained dark green black			CNT	25		Small Cretaceous basalt dike. Unit is fine grained with weak chlorite alteration mainly along fractures and contacts. Minor carbonated filled fractures present. Minor hematite alteration present mainly around contacts. Unit is magnetic. Contacts are sharp.			
92.65	93.5	**PORPHYRITIC QUARTZ MONZONITE INTRUSIVE**									

Hole Number: KN-11-03

From	To		Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
	92.7	93.5	Coarse grained pink green moderately propyllitic			V6	40	2	Back into a similar Black Lake Sovereign Quartz Monzonite as before the above basalt dike. Unit is coarse grained and mostly composed of plagioclase feldspars with 20% mafics (hornblende and biotite) and minor quartz. Some feldspars have been altered to kaolinite. Some mafics have been altered to chlorite. Unit is porphyritic with phenocrysts of hornblende and have been altered to chlorite. Unit is hematite stained. Unit contains 2-3% V6 zeolite and carbonate veins. Unit contains <1%% hematite filled stringers, fractures and joints.			
93.5	93.82		**HOMOGENEOUS BASALT DYKE**									
	93.5	93.8	Fine grained dark green black weakly chloritic	0.0	*55.2*	CNT	20		Small Cretaceous basalt dike. Unit is fine grained with weak chlorite alteration mainly along fractures and contacts. Unit is minorly porphyritic with 1-2% 1mm augite phenocrysts altered to chlorite. Minor carbonated filled fractures present. Minor hematite alteration present mainly around contacts. Unit is magnetic. Contacts are sharp.			
93.82	122.73		**PORPHYRITIC QUARTZ MONZONITE INTRUSIVE**									
	93.8	96.0	Coarse grained light grey pink weakly propyllitic			FRK	50	2	Back into a similar Black Lake Sovereign Quartz Monzonite as before the above basalt dike. Unit is coarse grained and mostly composed of plagioclase feldspars with 20% mafics (hornblende and biotite) and minor quartz. Some feldspars have been altered to kaolinite. Some mafics have been altered to chlorite. Unit is porphyritic with phenocrysts of hornblende and have been altered to chlorite. Unit starts hematite stained but decreases down hole. Unit contains 2-3% V6 zeolite and carbonate veins. Unit contains <1%% hematite filled stringers, fractures and joints. Unit is magnetic. Minor basalt xenolith present.			
	96.0	99.0			*81.9*	CFRK	45	1	Chlorite and kaolinite alteration have decreased, fresh looking rock.			

Hole Number: KN-11-03

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
99.0	102.0	Coarse grained light grey pink		*80.3*	V6	15	1	Basalt xenolith present.			
102.0	105.0			*88.9*	V6	30	1				
105.0	108.0			*73.6*	V6	35	1				
108.0	111.0	Coarse grained light grey pink weakly propyllitic		*85.2*	V6	10	2	A couple of basalt xenoliths present. Few vuggy V6 zeolite and carbonate veins present.			
111.0	114.0	Coarse grained pink green moderately propyllitic		*52.8*	V6	40	2	Hematite staining, chlorite and kaolinite alteration have increased.			
114.0	117.0			*66.2*	V6	40	3				
117.0	120.0			*49.1*	V6	40	2				
120.0	122.7			*22.9*	FLT	65	2	Small 5 cm fault at 120.35m.			
122.73	123.2	**PORPHYRITIC BASALT DYKE**									
122.7	123.2	Fine grained dark green moderately chloritic		*59.1*	CNT	50		Another fine grained Cretaceous Basalt dike. Unit is altered to chlorite. Unit contains 2-3% Augite phenocrysts 1mm in size and altered to chlorite. Unit is magnetic. Unit contains a few stringers filled with zeolite and calcite. Contacts are sharp.			
123.2	174	**PORPHYRITIC QUARTZ MONZONITE INTRUSIVE**									
123.2	126.0	Coarse grained light grey pink weakly propyllitic		*57.5*	V6	25	2	Back into a similar Black Lake Sovereign Quartz Monzonite as before the above basalt dike. Unit is coarse grained and mostly composed of plagioclase feldspars with 20% mafics (hornblende and biotite) and minor quartz. Some feldspars have been altered to kaolinite. Some mafics have been altered to chlorite. Unit is porphyritic with phenocrysts of hornblende and have been altered to chlorite and some phenocrysts of feldspar. Unit starts hematite stained but decreases down hole. Unit contains 2-3% V6 zeolite and carbonate veins. Unit contains <1%% hematite filled stringers, fractures and joints. Unit is magnetic.			
126.0	129.0			*87.6*	V6	15	1	1cm undulating epidote and calcite vein present.			

Hole Number: KN-11-03

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
129.0	132.0	Coarse grained pink green moderately propyllitic		*47.3*	BRX	5	3	Small brecciated vein present from 129.40m to 129.75m with intrusive material, carbonate, hematite and epidote. Few basalt xenoliths present. Hematite staining and kaolinite and chorite alteration have increased.			
132.0	135.0			*43.8*	FLT	35	1	Hemtite and chlorite filled joints have increased. Small fault at 134.00m.			
135.0	138.0			*60.3*	V6	40	2	1cm quartz and minor epidote vein present.			
138.0	141.0	Coarse grained light grey pink weakly propyllitic		*72*	V6	20	2	Kaolinite and chlorite alteration have decreased. Hematite staining has decreased.			
141.0	144.0			*60.4*	CALEV	10	1				
144.0	147.0	Coarse grained pink green moderately propyllitic		*52.5*	HEJN	10	1	Kaolinite and and chlorite alteration have increased. Hematite staining has increased. Few joints present with hematite and epidote fill and alteration halos.			
147.0	150.0	Coarse grained light grey pink weakly propyllitic		*98.3*	V6	50	1	Kaolinite and chlorite alteration have decreased. Hematite staining has decreased. A couple of basalt or tuffaceous looking xenoliths present.			
150.0	153.0			*62.5*	CALEH	25	2	A few calcite, epidote and hematite veins present.			
153.0	156.0			*72.3*	V6	55	4	A few basalt or tuffaceous xenoliths present.			
156.0	159.0			*84.5*	V6	50	2	A basalt xenolith present with a quartz vein containing magnetite.			
159.0	162.0	Coarse grained light grey pink		*107*	V6	5	1	Further decrease in chlorite and kaolinite alteration and hematite staining, near fresh rock. Hematite staining and kaolinite alteration mainly around V6 veins.			
162.0	165.0			*114*	V6	30	2				
165.0	168.0			*62.4*	V6	30	1				
168.0	171.0			*79.1*	CALCJ	65	1				
171.0	174.0			*105*	V6	20	1	A couple of tuffaceous xenoliths present. EOH			

174 EOH

Kemess UG 2011 Diamond Drill Log

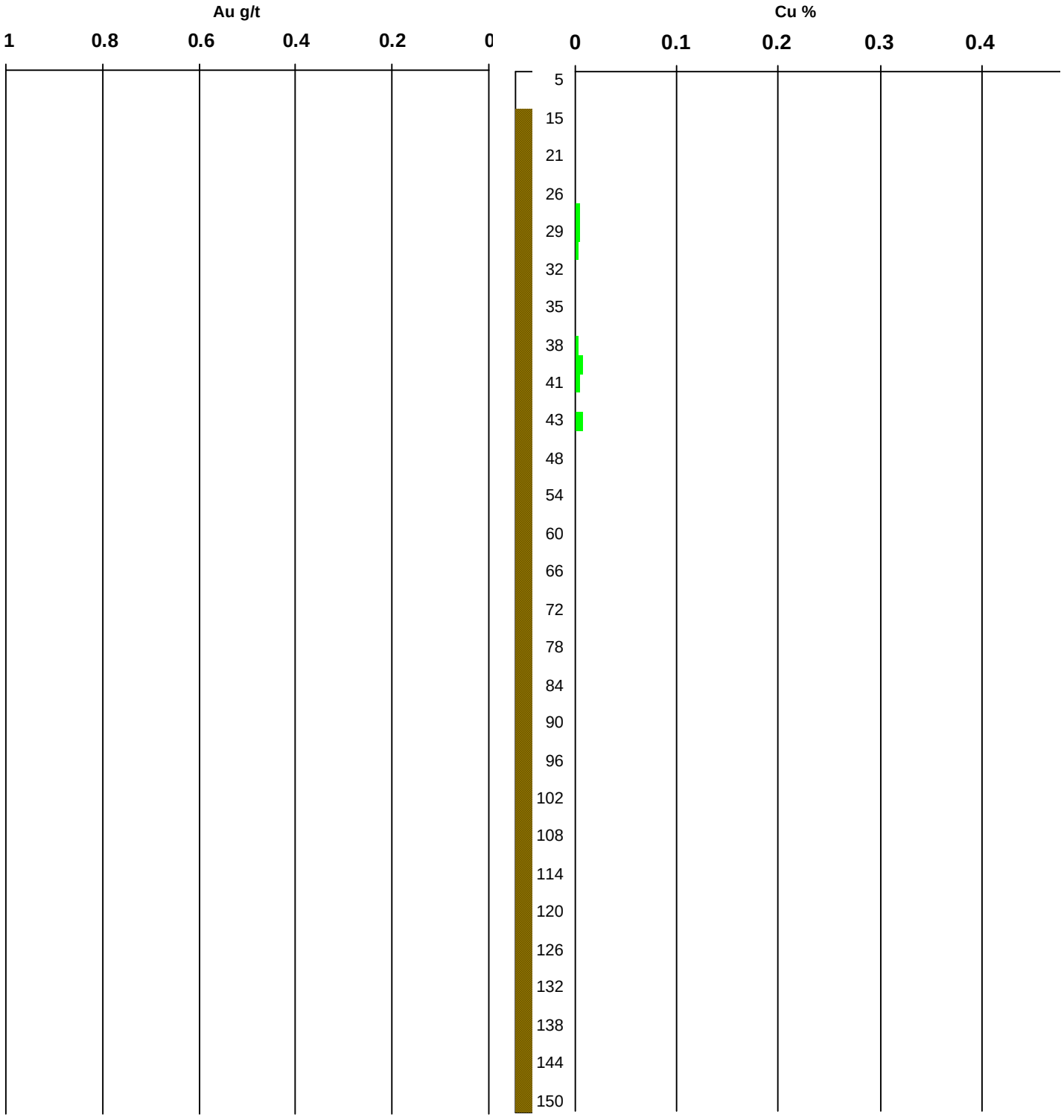
Hole Number: ***KN-11-06***

UTM Northing:	6325209	**Northing:**	14834	**Total Depth:**	150 **m**	Hydrogeological Study	**Geologist:** Wade Barnes
UTM Easting:	638201	**Easting:**	12215	**Azimuth:**	0°		**Drilled:** 10/8/2011
		Elevation:	1531	**Dip:**	-90°		

Survey Depth	Azimuth	Dip
11.1 m	0°	-90°

Kemess UG 2011

Hole Number: ***KN-11-06***



Cretaceous Dykes
Takla
Syn-Min Black Lake
Hazelton(Toodoggone)
Asitka
Post-Min Black Lake
Late Triassic Intrusives

Kemess UG 2011 Diamond Drill Log

AuRico Gold

Hole Number: KN-11-06

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
0	4.5	**CASING**									
0.0	4.5										
4.5	12.1	**RUBBLY OVERBURDEN SEDIMENTS**									
4.5	12.1	Fine to coarse grained green brown									
12.1	150	**PORPHYRITIC QUARTZ MONZONITE INTRUSIVE**									
12.1	15.0	Coarse grained pink weakly propyllitic	0.0	*29.2*	FRK	55	1	Post Mineral Black Lake Sovereign. Unit is coarse grained composed mainly of feldspars with 10% mafics (biotite, hornblende) and 10% quartz. Some feldspars have been altered to kaolinite. Most mafics have been altered to chlorite. Hematite staining throughout. Unit contains 3% phenocrysts of hornblende and biotite which are altered to chlorite. Magnetite is present throughout. Unit contains 2-4% V6 zeolite and carbonate veins. Some V6 veins contain pyrite. Minor pyrite within the host rock, especially around the V6 veins.			
15.0	18.0		0.2	*1.3*	V6	40	2	Some hematite stringers present. Pyrite seems to be replacing some mafic minerals.			
18.0	21.0		0.4	*5.2*	PYSTR	35	1	Few pyrite filled stringers present.			
21.0	24.0		0.1	*34.8*	FLT	40	3	Broken zone from 21.27m to 21.79m with increased chlorite alteration and minor clay and gouge along fracture surfaces.			
24.0	25.5	Coarse grained green weakly propyllitic	0.6		V6	15	2	Broken zone throughout the entire interval with chlorite alteration increasing. Decided to sample due to alteration and pyrite content.	431221	0.000	0.001
25.5	27.0	Coarse grained pink weakly propyllitic	1.5 **0.0**		V6	55	1	Back into competant ground with a decrease in chlorite alteration. Few hematite blebs 2mm to 4mm in size with pyrite and trace of chalcopyrite.	431222	0.004	0.001
27.0	28.5		0.2		V6	20	1		431223	0.005	0.001
28.5	30.0		0.2		V6	40	1		431224	0.003	0.001
30.0	31.5		0.1		V6	40	2		431225	0.002	0.001

Kemess UG 2011 Diamond Drill Log

AuRico Gold

Hole Number: KN-11-06

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
31.5	33.0	Coarse grained pink weakly propyllitic	0.1		V6	30	1		431226	0.001	0.001
33.0	34.5		0.1		V6	30	1	Few hematite stringers present.	431227	0.002	0.001
34.5	36.0		0.1		SHR	45	2	A couple of 2cm shear zones present at 35.25m and 35.50m.	431228	0.002	0.001
36.0	37.5		0.1		V6	20	2		431229	0.003	0.001
37.5	39.0	Coarse grained green weakly propyllitic	0.1 **0.0**		SHR	25	2	Chlorite altered zone from 38.00m to 38.62m with a trace of chalcopyrite within the host rock along a joint with hematite and chlorite.	431230	0.008	0.001
39.0	40.5		0.1		JN	60	1		431231	0.004	0.001
40.5	41.6		0.4		PYSTR	30	1	A couple of pyrite rich stringers present.	431232	0.002	0.001
41.6	43.0	Coarse grained pink weakly propyllitic	0.2		V6	50	2	Chlorite alteration has decreased and hematite staining has increased.	431233	0.007	0.001
43.0	45.0	Coarse grained dark green moderately chloritic	0.1		V6	30	2	Chlorite alteration has increased with a dropoff of hematite staining.	431234	0.001	0.001
45.0	48.0	Coarse grained pink weakly propyllitic	0.4	*38.5*	PYSTR	70	1	Stopped sampling. Couple of quartz veins present with pyrite. A couple of pyrite rich stringers present.			
48.0	51.0		0.1	*47.2*	V6	40	2				
51.0	54.0		0.5	*36*	PYSTR	30	1	Few more pyrite stringers present. Large 3cm by 2cm pyrite bleb towards the end of the interval.			
54.0	57.0		0.2	*17.2*	V6	40	2	3mm quartz vein with pyrite present oriented 45 deg tca.			
57.0	60.0		0.7	*46.8*	V6	50	2	A few 2mm to 1cm wisps or microfractures filled with pyrite. Pyrite also occuring with V6 veins.			
60.0	63.0		0.2	*27.2*	V6	35	2				
63.0	66.0	Coarse grained green weakly propyllitic	0.1	*38.7*	V6	40	2	Chlorite altered section from 64.53m to 64.95m.			
66.0	69.0	Coarse grained pink weakly propyllitic	0.1	*31.4*	V6	40	2				
69.0	72.0	Coarse grained green weakly propyllitic	0.1	*36.1*	FLT	60	2	Small 4cm fault at 70.18m. Chlorite altered section from 69.70m to 70.10m.			
72.0	75.0	Coarse grained pink weakly propyllitic	0.3 **0.0**	*8.9*	QPYV	55	1	Quartz vein present with pyrite. A 1cm bleb of pyrite present within the host rock with a trace of chalcopyrite.			

Hole Number: KN-11-06

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca	-%)	Comments	Sample#	Cu %	Au ppm
75.0	78.0	Coarse grained pink weakly propyllitic	0.0	*39.5*	V6	45	3				
78.0	81.0		0.3	*18.5*	QPYV	45	2	3cm quartz vein present with pyrite.			
81.0	84.0		0.1	*22.6*	FLT	35	30	Healed fault zone from 81.59m to 82.14m. Zone is composed of fragments of BLS within a carbonate, zeolite and hematite matrix.			
84.0	87.0		0.1	*41.5*	V6	40	2				
87.0	90.0		0.2	*38.9*	V6	25	2				
90.0	93.0		0.2	*48.1*	V6	25	3	Quartz vein present with pyrite, oriented 25 deg tca.			
93.0	96.0		0.1	*53.8*	V6	60	2				
96.0	99.0		0.1	*60.3*	V6	25	2				
99.0	102.0		0.0	*47.8*	V6	10	2				
102.0	105.0		0.0	*50.3*	V6	25	2				
105.0	108.0	Coarse grained pink grey weakly propyllitic		*85.5*	V6	10	2	Hematite staining has decreased. Minor epidote present along a V6 vein.			
108.0	111.0	Coarse grained grey pink weakly propyllitic		*80.3*	V6	25	2				
111.0	114.0			*62.8*	V6	50	2				
114.0	117.0			*40.3*	V6	40	1				
117.0	120.0			*44*	V6	10	2	Strong chlorite alteration halo around some V6 veins.			
120.0	123.0	Coarse grained green weakly propyllitic	0.1	*42.8*	SHR	20	6	Chlorite alteration has increased. Few shear zones present.			
123.0	126.0		0.1	*27.6*	SHR	5	5	Small shear zone running near parallel tca causing a chlorite altered halo within the host rock.			
126.0	129.0		0.1	*62.2*	SHR	25	5	Patchy chlorite alteration present due to shear zone.			
129.0	132.0		0.1	*72.7*	SHR	10	5	More shearing causing the increased chlorite alteration.			
132.0	135.0	Coarse grained pink weakly propyllitic	0.1	*4.2*	V6	20	2				
135.0	138.0		0.0	*18.1*	SHR	10	1				
138.0	141.0		0.1	*29.7*	SHR	25	1				

Kemess UG 2011 Diamond Drill Log

Hole Number: KN-11-06

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
141.0	144.0	Coarse grained green weakly propyllitic	0.1	*89.6*	SHR	5	5	Increase in chlorite alteration due to shearing.			
144.0	147.0	Coarse grained pink weakly propyllitic	0.0	*47.9*	V6	50	1				
147.0	150.0		0.2 **0.0**	*69.8*	SHR	25	2	Trace of chalcopyrite within a couple of V6 veins with pyrite. EOH			

150 EOH

Kemess UG 2011 Diamond Drill Log

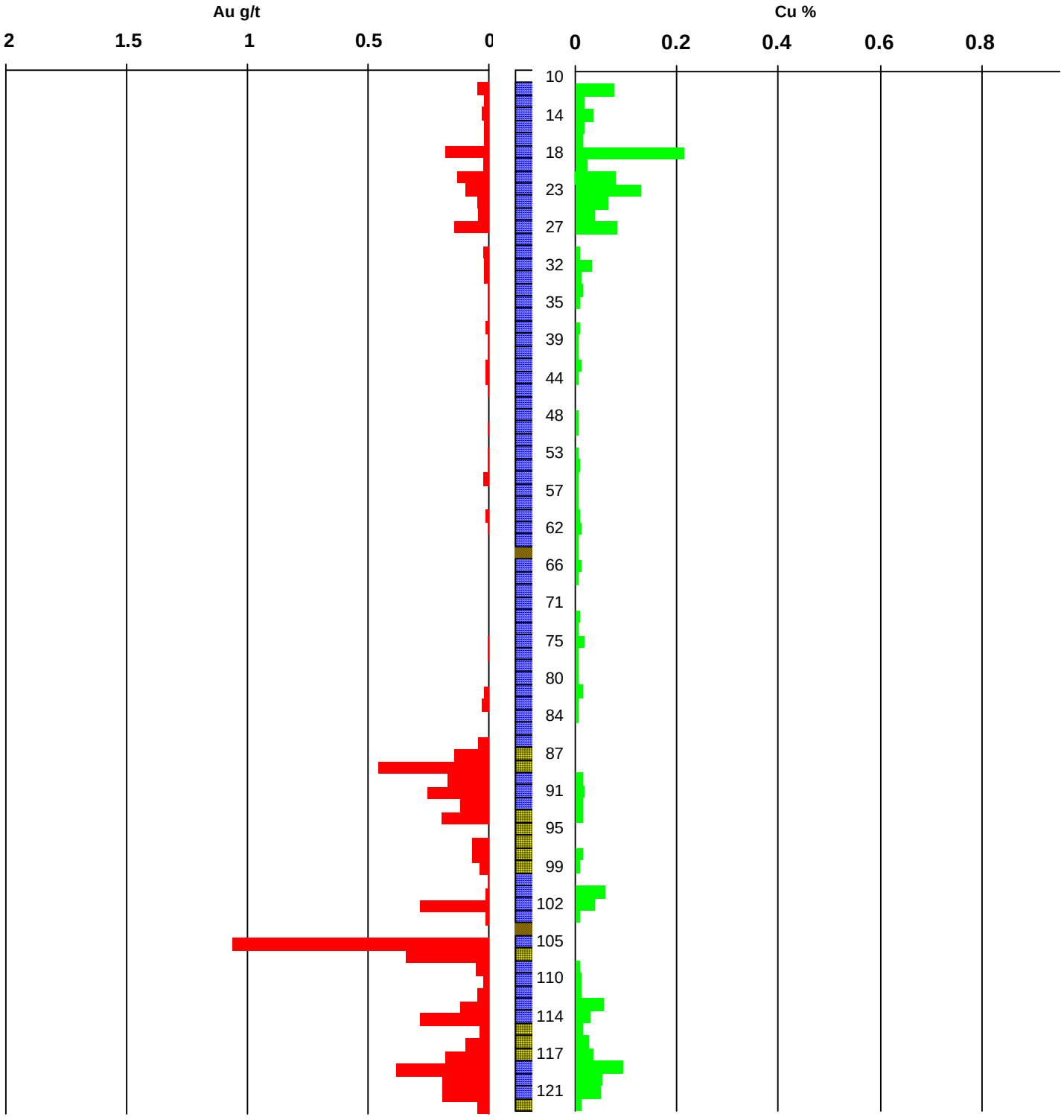
Hole Number: ***KN-11-15***

UTM Northing:	6325262	**Northing:**	15040	**Total Depth:**	123 **m**	Hydrogeological Study	**Geologist:** Wade Barnes
UTM Easting:	633521	**Easting:**	7538	**Azimuth:**	0°		**Drilled:** 10/23/2011
		Elevation:	1308	**Dip:**	-90°		

Survey Depth	Azimuth	Dip
11.1 m	0°	-90°

Kemess UG 2011

Hole Number: ***KN-11-15***



Cretaceous Dykes
Takla
Syn-Min Black Lake
Hazelton(Toodoggone)
Asitka
Post-Min Black Lake
Late Triassic Intrusives

Kemess UG 2011 Diamond Drill Log

AuRico Gold

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy		Ms	Veins (°tca-%)			Comments	Sample#	Cu %	Au ppm
0	10.4	**CASING**										
0.0	10.4											
10.4	27.17	**MASSIVE BASALT FLOW**										
10.4	12.0	Fine grained dark green strongly chloritic	0.1		*0.5*	CALV	10	3	Alteration has obliterated most of the original characteristics of the rock. Unit is fine grained and altered to chlorite. Unit is weakly magnetic and contains spotty disseminated pyrite. Limonite and hematite are present along the fractures and within a few stringers. Unit contains 7% calcite veins and stringers, some discontinuous and at random orientations. Minor epidote alteration present.	431851	0.076	0.052
12.0	13.3		0.4		*0.7*	CALV	60	2		431852	0.019	0.020
13.3	14.0	Fine grained dark green grey strongly silicated	1.0		*0.4*	FRK	40	2	Alteration has obliterated most of the original characteristics of the rock. Unit is still Asitka Basalt. Unit has is fine grained and altered to chlorite and possible tremolite and actinolite. Patchy silica alteration present. Patchy epidote alteration present. Blebs of hematite and specular hematite present. Some hematite and limonite present along some fractures and within some stringers. Minor disseminated and blebby pyrite present as well veins pyrite. Spotty chalcopyrite and malachite present.Unit contains a few carbonate veins and stringers.	431853	0.034	0.029
14.0	15.0		0.5		*2.2*	FRK	15	2		431854	0.017	0.019
15.0	16.5		2.0		*0.1*	CALV	40	2	Increase in specular hematite.	431855	0.014	0.017
16.5	18.0		1.0	**0.3**	*0*	CALV	45	2	Increase in epidote alteration. Patchy blebs and disseminated chalcopyrite present.	431856	0.215	0.182
18.0	19.5	Fine grained light green grey strongly silicated	0.3		*0*	V6	50	1	Oxidation has ended, no limonite present. Hematite content has decreased, but still present.	431857	0.023	0.025
19.5	21.0		1.0	**0.5**	*1.1*	CALV	45	2	Silica alteration has increased. Blebby chalcopyrite present especially within the silica altered sections. Hematite content has increased.	431858	0.080	0.132
21.0	22.5		1.5	**0.8**	*1.3*	CALV	20	1	Further blebby chalcopyrite present.	431859	0.128	0.099

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)			Comments	Sample#	Cu %	Au ppm
22.5	24.0	Fine grained light green grey strongly silicated	0.7 **0.1**	*0.1*				Interval is fairly broken/mechanical.	431860	0.064	0.049
24.0	25.5		1.2 **0.3**	*0*					431861	0.037	0.046
25.5	27.2		1.2 **0.2**	*0*				Towards the end of the interval unit becomes more competant. At the end looks to have some feldspar phenocrysts.	431862	0.082	0.139
27.17	28.7	**MOTTLED INTERMEDIATE FLOW**									
27.2	28.7	Fine grained green strongly silicated		*0*				Intensely altered section, could be basalt. Unit is fine grained and mostly altered to silica and kaolinite or talc. Minor chlorite present. Minor carbonate veins present.	431863	0.001	0.001
28.7	63	**MOTTLED BASALT FLOW**									
28.7	30.0	Fine grained light green grey strongly silicated	1.2 **0.2**	*0*	CALV	50	2	Back into a similar skarn altered basalt unit as before the above highly altered section. Unit is fine grained and altered to silica, chlorite and minor epidote and possible tremolite or actinolite. Minor hematite blebs present and hematite along some fractures and within some stringers. Many healed fractures present with hematite, chlorite and epidote and carbonate. Few carbonate veins and stringers present. Interval is broken mainly due to mechanical.	431864	0.010	0.025
30.0	31.5		0.2 **0.3**	*0.5*	CALV	70	2	Few blebs of pyrite and chalcopyrite present.	431865	0.032	0.016
31.5	33.0		0.3 **0.1**	*0.4*	CALV	20	2		431866	0.012	0.021
33.0	33.5		0.5	*0.1*				Some minor kspar alteration present possibly.	431867	0.015	0.009
33.5	34.5	Fine grained dark green grey moderately propyllitic	0.2	*0*				Back into a propylitic altered basalt flow. Unit is fine grained and altered to chlorite, silica, patchy epidote, and minor hematite staining or kspar alteration around some veins. Unit is weakly magnetic. Unit contains Minor disseminated pyrite mainly around some veins. Unit contains a few pyrite stringers. Unit contains 3-5% V6 zeolite and carbonate veins.	431868	0.008	0.005
34.5	36.0		0.2	*0*	V6	40	2		431869	0.003	0.005

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)			Comments	Sample#	Cu %	Au ppm
36.0	37.5	Fine grained dark green grey moderately propyllitic	0.4	*0*	V6	40	3	Few magnetite blebs or lenses present. Minor hematite blebs present.	431870	0.009	0.010
37.5	39.0		0.2	*0*	V6	45	6		431871	0.007	0.009
39.0	40.5		0.1	*35.1*	V6	55	15	Stockwork breccia section from 39.57m to 39.91m with zeolite and carbonate stringers, veins and fractures.	431872	0.007	0.009
40.5	42.0		0.3	*30.8*	CALV	30	3	Increase in epidote alteration. Minor kaolinite alteration present. Few magnetite stringers present.	431873	0.012	0.010
42.0	43.5		0.1	*55.4*	V6	55	1	Silica alteration has increased.	431874	0.007	0.014
43.5	45.0		0.2	*0.3*	FLT	30	1		431876	0.003	0.006
45.0	46.5		0.2	*0.1*	V6	65	2	silica alteration has decreased.	431877	0.002	0.001
46.5	48.0		0.3	*146*	V6	40	3		431878	0.005	0.001
48.0	49.5		0.1	*8.2*	V6	45	2		431879	0.007	0.005
49.5	51.0		0.1	*121*	V6	55	2		431880	0.004	0.001
51.0	52.5	Fine grained dark green grey weakly propyllitic	0.2	*111*	V6	60	1	Epidote and hematite altertion have decreased.	431881	0.006	0.006
52.5	54.0		0.4	*125*	V6	25	2		431882	0.010	0.006
54.0	55.5		0.4	*76.8*	V6	40	2		431883	0.006	0.022
55.5	57.0		0.3	*73.6*	V6	50	2		431884	0.005	0.001
57.0	58.5		0.3	*52.4*	EPYMS	30	1	V6 veins have decreased.	431885	0.005	0.001
58.5	60.0	Fine grained dark green grey moderately propyllitic	2.5	*69.5*	FLT	45	1	Epidote alteration increase.	431886	0.010	0.012
60.0	61.5		0.5	*75.9*	PYCAL	30	2	Core has become fairly broken mainly due to mechanical breaks.	431887	0.011	0.005
61.5	63.0		0.3	*39.2*	QV	50	1	Minor quartz veining now present.	431888	0.005	0.001
63	64.5	**MASSIVE QUARTZ MONZONITE DYKE**									

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca)	(%)	Comments	Sample#	Cu %	Au ppm
63.0	64.5	Coarse grained grey moderately propyllitic	0.4	*0.5*	QCALS	40	2	Alteration has obliterated most of the original characteristics of the rock. Unit looks coarsely crystalline but could be a highly altered BAS. Unit look to mostly composed of feldspars with lesser mafics altered to chlorite and minor quartz. Unit has been altered to silica and patchy epidote and hematite. Unit contains minor disseminated pyrite. Unit contains a few stringers with pyrite, zeolite, carbonate and epidote. Minor quartz stringers present. Contacts not evident due to broken nature of core. Some mixing with the basalt.	431889	0.006	0.001
64.5	84.8	**MASSIVE BASALT FLOW**									
64.5	66.0	Fine grained dark green grey moderately propyllitic	0.6	*70.5*	PYSTR	45	1	Back into similar Basalt as before the above dike. Unit is fine grained and partially altered to chlorite. Minor epidote and hematite alteration present especially around some veins. Spotty carbonate alteration present. Unit contains minor disseminated pyrite. Minor disseminated magnetite present. Patchy silica alteration present. Unit contains 3-5% V6 zeolite and carbonate veins and stringers and frature filled. Some V6 veins contain pyrite. Unit contains 1-2% quartz veins some with epidote and rare pyrite. A few pyrite stringers present.	431890	0.012	0.001
66.0	67.5		1.0	*21.3*	QEPYV	10	3	Core has become more competant.	431891	0.006	0.001
67.5	69.0		0.2	*23.7*	V6	20	1	Minor hematite present along a few fractures and within a few V6 veins.	431892	0.004	0.001
69.0	70.5	Fine grained dark green weakly chloritic	0.1	*37*	QCV	25	2	Epidote alteration has decreased and chlorite alteration has increased.	431893	0.004	0.001
70.5	72.0	Fine grained green weakly chloritic	0.4	*121*	SHR	55	7	Minor biotite alteration present. Silicified shear zone from 71.60m to 71.72m with brecciated wall rock around it.	431894	0.008	0.001
72.0	73.5		0.4	*34.7*	CALHV	25	2		431895	0.007	0.001
73.5	75.0		0.1	*29*	CALV	25	6	Interval is slightly sheared and contains several calcite filled veins and fractures.	431896	0.017	0.007
75.0	76.5	Fine grained dark green weakly chloritic	0.2	*27.1*	CALV	25	7	Interval contains several calcite filled veins and fractures, some discontinuous. Biotite alteration has decreased.	431897	0.007	0.005

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca	-%)	Comments	Sample#	Cu %	Au ppm
76.5	78.0	Fine grained dark green weakly chloritic	0.1	*116*	CALV	25	2	Calcite veins and fractures have decreased. Interval is fairly broken, mainly mechanical.	431898	0.005	0.001
78.0	79.5	Fine grained dark green weakly propyllitic	0.1	*84.3*	CALST	20	2	Spotty epidote alteration increase. Minor hematite increase within some veins and fractures. Interval is fairly broken, mainly mechanical.	431899	0.006	0.001
79.5	81.0		0.3	*4*	CALV	25	5	Several calcite filled veins, stringers and fractures with some discontinuous. Some hematite, epidote and pyrite present with the calcite.	431901	0.014	0.016
81.0	82.5		0.2	*1.2*	FLT		10	Interval becomes ground down towards the end of the interval into clay, chlorite and gouge, possible fault zone from 82.34m to 82.50m. Orinetation is lost in the broken core. V6 zeolite and carbonate veins have increased.	431902	0.006	0.030
82.5	84.0	Fine grained dark green weakly chloritic	0.1	*1.3*	V6	45	15	Intense zeolite and carbonate filled veins and fractures about 30% of the unit. Epidote alteration has decreased and chlorite alteration has increased.	431903	0.005	0.001
84.0	84.8		0.1	*3.6*				Many randomly oriented zeolite filled veins and fractures.	431904	0.004	0.001
84.8	85.44	**MASSIVE BASALT FAULT ZONE**									
84.8	85.4	Fine grained dark green weakly chloritic	0.1	*0*	FLT	10		Broken and sheared section of the basalt with core fragments with gougy clay and chlorite sections. Fault orientation is difficult to determine due to broken nature of the core, but few planes appear to be 10 deg tca.	431905	0.003	0.046
85.44	87.57	**PORPHYRITIC QUARTZ FELDSPAR PORPHYRY DYKE**									

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)			Comments	Sample#	Cu %	Au ppm
85.4	87.0	Fine grained grey weakly chloritic	15.0	*0.4*	FRK	20	2	Alteration has obliterated most of the characteristics of the rock. Unit is fine grained and mostly composed of feldspars and mafics. Most feldspars and mafics have been altered to chlorite and sericite? Unit contains 65% feldspar phenocrysts 2mm to 11mm in size and euhedral in shape. Rare feldspar phenocrysts are altered to kaolinite. Unit looks to contain 1-2% quartz phenocrysts 5-10mm in size. Spotty disseminated pyrite present. Unit contains minor V6 zeolite and carbonate veins. Unit contains minor fractures filled with chlorite and carbonate and zeolite. Massive pyrite flooding from 86.65m to 87.00m. Pyrite flooded section is next to some fracturing and some silica altered host rock.	431906	0.001	0.139
87.0	87.6		40.0	*0.1*				Massive pyrite flooding continues into this interval. At the end of the interval is about 5cm gouge. Lower contact is lost due to broken lower contact.	431907	0.003	0.456
87.57	91.46	**MASSIVE BASALT FLOW**									
87.6	90.0	Fine grained dark green grey weakly chloritic	1.0	*0.1*	FLT	50	17	Alteration has obliterated most of the original characteristics of rock. Unit is fine grained and altered to chlorite an patchy quartz. Minor sericite alteration present. Spotty disseminated pyrite present. Unit contains several V6 zeolite and carbonate filled veins and fractures. Some are discontinuous with most being at random orientations. Some minor V6 veins contains pyrite. Faulted section from 89.52m to 89.77m with subangular basalt fragments within a gougy matrix.	431909	0.015	0.171
90.0	91.5		1.5	*0.1*	JN	45	2		431910	0.019	0.253
91.46	92.62	**MASSIVE BASALT FAULT ZONE**									

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
91.5	92.6	Fine grained dark green grey weakly chloritic	3.0 **0.1**	*0.4*	FLT	35	100	Faulted section of the basalt unit above. Unit contains sections of competant basalt with sections of sheared basalt. Competant sections are similar to above. Sheared sections contains basalt material stretched and some fragment within a gougy chlorite matrix. Pyrite is present within the matrix and fragments. Minor brecciation within the competant core section. Quartz fragments present within the faulted section with pyrite and minor chalcopyrite. Fault contacts are sharp.	431911	0.014	0.115
92.62	98.76	**PORPHYRITIC QUARTZ FELDSPAR PORPHYRY DYKE**									
92.6	93.9	Fine grained dark green grey strongly chloritic	1.0	*0.5*	QV	45	3	Alteration has obliterated most of the original characteristics of the rock. Unit is fine grained and altered to chlorite and minor sericite. Unit contains 75% feldspar phenocrysts 2mm to 10mm in size and euhedral in shape with some altered to chlorite and sericite. Unit contains 2-3% quartz phenocrysts 3mm to 12mm in size. Minor disseminated pyrite present. Start of the unit is brecciated due to the contact. Unit contains 3-4% quartz veins some with pyrite. Unit contains 3-5% calcite veins with minor zeolite. Upper contact is faulted. Minor possible sphalerite within a couple of quartz veins.	431912	0.014	0.200
93.9	95.0	Fine grained dun green moderately silicified (non-K)	0.2	*0*	CALST	40	1	Chlorite alteration has decreased and silica alteration has increased. Quartz veining has decreased. Minor pyrite within some fractures with calcite.	431913	0.002	0.001
95.0	96.0	Fine grained dark green grey moderately chloritic	0.4	*0*	PYCJN	3	1	Chlorite alteration has increased and silica alteration has decreased. Unit becomes brecciated half way through the interval.	431914	0.002	0.066
96.0	97.5	Fine grained dun green weakly silicified (non-K)	1.2	*0*	CPYJN	5	2	Chlorite alteration has decreased and silica alteration has increased. Chlorite alteration still present in patches.	431915	0.014	0.065
97.5	98.8		0.7	*0*	CPYJN	20	2	Lower contact is gradational and brecciated with mixed fragments of QFP and BAS material.	431916	0.009	0.037
98.76	100.51	**BRECCIATED BASALT FLOW**									

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)			Comments	Sample#	Cu %	Au ppm
98.8	100.0	Fine grained dark green strongly chloritic	1.0	*0.5*	V6	10	1	Back into an Asitka Basalt. Alteration and brecciation has obliterated most of the original characteristics of the rock. Unit is fine grained and altered to chlorite. Minor silica alteration present. Spotty epidote alteration present. Unit is slightly brecciated with large basalt fragments within a chlorite altered matrix. Pyrite is present within the matrix and minorly within the fragments. Minor calcite filled fractures present that are discontinuous and randomly oriented. <1% V6 zeolite and carbonate veins present.	431917	0.004	0.009
100.0	100.5		2.0	*0.8*				Blebs of pyrite present.	431918	0.058	0.014
100.51	103.26	**MASSIVE BASALT VOLCANIC BRECCIA**									
100.5	102.0	Fine grained dark green grey moderately chloritic	4.0 **0.2**	*5.1*	FLT	25	8	Brecciation has decreased. Back into a more massive basalt with a slight VBX texture. Unit is fine grained and altered to chlorite and minor sericite. Patchy quartz alteration present. Unit contains minor disseminated pyrite. Unit contains a few minor faults and joints with chlorite, gouge and carbonate infill. Unit contains 5-10% V6 zeolite veins and stringers and fracture fill. Orientation of the V6 are somewhat random some at 55 deg tca. Some are discontinuous. Minor blebs of chalcopyrite near some faults.	431919	0.038	0.281
102.0	103.3		1.0	*0.1*	FLT	20	2		431920	0.008	0.012
103.26	103.86	**PORPHYRITIC QUARTZ MONZONITE DYKE**									
103.3	103.9	Coarse grained dark grey green weakly chloritic	0.0	*0.2*	CNT	65		Alteration has obliterated most of the original characteristics of the rock. Unit is coarse grained and mostly composed of feldspars with lesser mafics and minor quartz. Mafics look to include biotite and hornblende. Some feldspars and mafics have been silicified, some have been altered to chlorite. Minor hematite staining. Unit contains phenocrysts of feldspar and the mafics 3-5mm in size and some altered to chlorite. Unit contains 4-5% fractures filled with carbonate. Contacts are faint but sharp.	431921	0.001	0.001

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
103.86	105.29	**MASSIVE BASALT VOLCANIC BRECCIA**									
103.9	105.3	Fine grained green moderately chloritic	0.1	*0*	V6	20	1	Back into a more massive basalt with a slight VBX texture. Unit is fine grained and altered to patchy chlorite and quartz and minor sericite. Unit contains minor disseminated pyrite. Unit contains 3-4% V6 zeolite and carbonate veins and stringers and fracture fill.	431922	0.003	1.060
105.29	106.82	**BRECCIATED QUARTZ FELDSPAR PORPHYRY DYKE**									
105.3	106.8	Fine grained dark green grey moderately chloritic	25.0	*0.2*	FLT	20	5	Alteration and breccation has obliterated most of the original characteristics of the rock. Unit is fine grained and altered to chlorite with minor sericite. Unit contains 75% feldspar phenocrsyts 3-8mm in size and euhedral in shape, some altered to chlorite and sericite. Unit contains 2-3% 4-9mm quartz phenocrysts. Unit is fairly brecciated and clast supported with QFP fragments within a chlorite clay matrix with pyrite. Massive pyrite present within the matrix and fragments. Hematite present within the matrix. Contact not visible due to the alteration.	431923	0.004	0.343
106.82	111.9	**CRACKLE BRECCIATED BASALT VOLCANIC BRECCIA**									
106.8	108.0	Fine grained dark green moderately chloritic	1.0	*39*	FLT	20	4	Back into a more massive basalt with a slight VBX texture. Unit is fine grained and altered to chlorite and patchy quartz and minor sericite. Minor epidote alteration present around fractures and joints. Unit is crackle brecciated/clast supported with fragments of basalt within a clay, chlorite and epidote matrix. Minor pyrite is present within the matrix. Unit contains minor disseminated pyrite. Unit contains 3-4% V6 zeolite and carbonate veins and stringers and fracture fill. Spotty hematite present.	431924	0.010	0.057
108.0	109.7		1.0	*0.9*					431926	0.011	0.026
109.7	111.0		4.0	*0.3*	FRK	30	2	Increase in fracturing and brecciation with calcite, chlorite, clay, pyrite filled fractures. Siliceous alteration has increased of the fragments.	431927	0.012	0.048
111.0	111.9		0.2	*1.1*	FRK	30	1		431928	0.055	0.117

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)	Comments	Sample#	Cu %	Au ppm
111.9	113.79	**BRECCIATED BASALT FAULT ZONE**							
111.9	113.8	Fine grained dark green strongly chloritic	25.0	*1.7*	FLT 5 100	Fault zone of the Asitka Basalt unit above. Unit is brecciated and faulted. Gougy sections present with basalt fragments mixed in. Some sections are more brecciated with only minor gouge between the fragments. Massive pyrite present within the more brecciated section. Disseminated pyrite present within the more gougy sections. Patchy hematite present.	431929	0.028	0.283
113.79	117.31	**BRECCIATED QUARTZ FELDSPAR PORPHYRY DYKE**							
113.8	115.0	Fine grained light grey brown strongly silicated	1.0	*0.4*		Alteration has obliterated all of the characteristics of the rock. Unit is intensely clay alterated with possible kaolinite and tremolite and others. Hematite is present throughout. Few sections look like QFP and few sections contain quartz that look like phenocrysts. Specular hematite blebs present. Minor pyrite blebs present.	431930	0.015	0.038
115.0	116.0		1.0	*3.3*			431931	0.027	0.101
116.0	117.3		1.0	*2.8*			431932	0.035	0.177
117.31	121.34	**BRECCIATED BASALT VOLCANIC BRECCIA**							
117.3	118.5	Fine grained light grey brown strongly silicated	0.4 **0.2**	*3*		Alteration and breccation has obliterated all characteristics of the rock. Like above unit is intensely clay alterated with possible kaolinite and tremolite and others. Hematite is present throughout. Quartz looking phenocrysts not present. Quartz fragments present look to remnant quartz veins or silicified basalt. Minor chalcopyrite blebs within the quartz fragments. Specular hematite blebs present. Minor pyrite blebs present.	431933	0.095	0.380
118.5	120.0	Fine grained dark green grey strongly chloritic	14.0	*0.7*		Clay alteration has decreased and chlorite alteration has increased and unit looks like a basalt. Intense carbonate veining present. Some massive pyrite present and hematite alteration at the start of the interval.	431934	0.052	0.194

Hole Number: KN-11-15

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)	Comments	Sample#	Cu %	Au ppm
120.0	121.3	Fine grained light green brown strongly silicated	2.0 **0.5**	*2.2*		Alteration and breccation has obliterated all characteristics of the rock. Like above unit is intensely clay alterated with possible kaolinite and tremolite and others. Hematite is present throughout. Quartz looking phenocrysts not present. Quartz fragments present look to remnant quartz veins or silicified basalt. Minor chalcopyrite blebs within the quartz fragments. Specular hematite blebs present. Minor pyrite blebs present.	431935	0.049	0.189
121.34	123	**PORPHYRITIC QUARTZ FELDSPAR PORPHYRY DYKE**							
121.3	123.0	Fine grained red green moderately silicated	0.3	*1.2*	CNT 55	Alteration has obliterated most of the original characteristics of the rock. Unit is fine grained and altered to kaolinite and chlorite. Unit looks to contain abundant feldspar phenocrysts but most altered to kaolinite and other clays and chlorite. Rare quartz phenocrysts visible. Sections look like a QMZ due to chlorite altered mafics like a QMZ, but very difficult to tell. Patchy hematite present. Unit contains moderate fractures and veins filled with zeolite and carbonate. Contact is sharp. EOH.	431936	0.011	0.047
123 EOH									

Kemess UG 2011 Diamond Drill Log

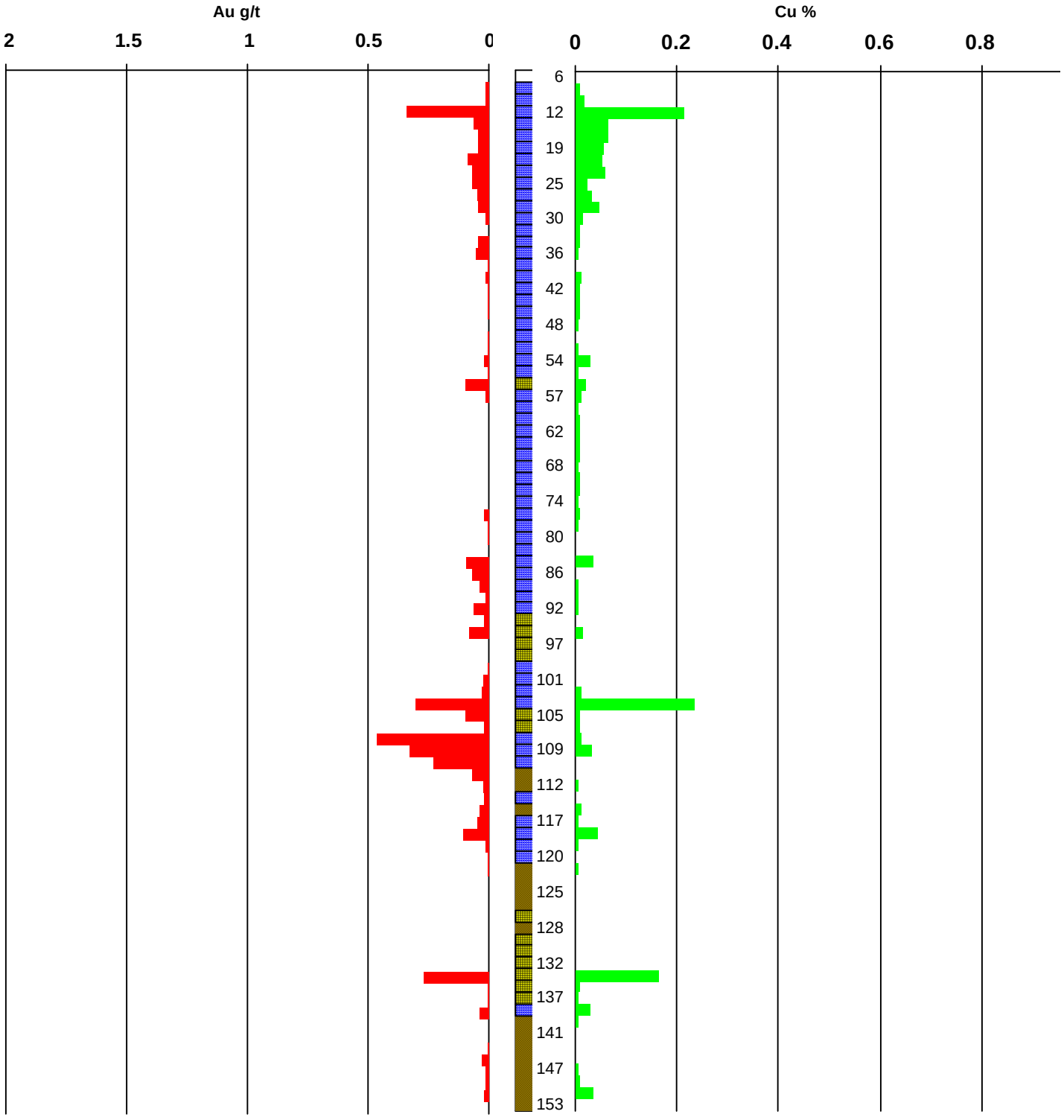
Hole Number: ***KN-11-16***

UTM Northing:	6325262	**Northing:**	15040	**Total Depth:**	153 **m**	Hydrogeological Study	**Geologist:** Wade Barnes
UTM Easting:	633521	**Easting:**	7538	**Azimuth:**	0°		**Drilled:** 10/25/2011
		Elevation:	1308	**Dip:**	-90°		

Survey Depth	Azimuth	Dip
11.1 m	0°	-90°

Kemess UG 2011

Hole Number: ***KN-11-16***



Cretaceous Dykes
Takla
Syn-Min Black Lake
Hazelton(Toodoggone)
Asitka
Post-Min Black Lake
Late Triassic Intrusives

Kemess UG 2011 Diamond Drill Log

AuRico Gold

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)			Comments	Sample#	Cu %	Au ppm
0	6	**CASING**									
	0.0	6.0									
6	54.88	**MASSIVE BASALT FLOW**									
	6.0	8.0 Fine grained dark green orange moderately propyllitic	0.1	*2.5*				Alteration has obliterated some of the characteristics of the rock. Unit is fine grained and altered to chlorite and patchy epidote, silica and hematite. Limonite and hematite are present along all fractures and within some stringers. Spotty disseminated pyrite present. Carbonate filled stringers present. Rare quartz veins present.	431938	0.008	0.013
	8.0	10.1	0.1	*1.1*	CALV	35	2		431939	0.018	0.011
	10.1	12.0 Fine grained dark green grey moderately silicated	2.0 **0.7**	*0.5*	CALV	25	2	Possible skarn altered basalt. Alteration has masked most of the original characteristics of the rock. Unit is fine grained and altered to quartz, chlorite, minor epidote, hematite and possible tremolite. Spotty magnetic spots present. Blebby pyrite and chalcopyrite present. Other clay alteration minerals present. Carbonate alteration present. Unit contains 3-4% V6 veins with zeolite and carbonate with some containing hematite and epidote. Limonite and hematite present along all fractures.	431940	0.215	0.337
	12.0	15.0	1.0 **0.1**	*0.5*	V6	30	2	About 30% lost core.	431941	0.065	0.059
	15.0	17.0	1.3 **0.2**	*1.1*				Minor malachite along a few fractures with limonite. Siliceous altered patches have increased.	431942	0.065	0.046
	17.0	19.0	4.0 **0.6**	*2.3*	CALV	30	2	Few blebs of specular hematite and chalcopyrite have increased.	431943	0.055	0.042
	19.0	21.0	2.5 **0.9**	*0.9*	CALV	25	2	Hematite is strong within the interval.	431944	0.052	0.087
	21.0	23.0	1.6 **0.5**	*1.3*					431945	0.058	0.067
	23.0	25.0	1.0 **0.3**	*2*				Blebby chalcopyrite and hematite have decreased.	431946	0.023	0.069
	25.0	27.0	0.5 **0.1**	*1.8*	CALV	20	2		431947	0.033	0.051
	27.0	27.8	0.5	*3.1*	CALV	10	2		431948	0.047	0.044

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy		Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
27.8	30.0	Fine grained dark green moderately propyllitic	0.5		*6.3*	V6	20	2	Skarn alteration has decreased. More massive basalt flow. Unit is fine grained and altered to chlorite and spotty quartz alteration and possible tremolite alteration. Spotty magnetite present. Minor disseminated pyrite present. Spotty epidote alteration present. Minor limonite and hematite present along a few fractures. Unit contains 3-4% V6 zeolite and carbonate veins and stringers some with hematite and pyrite. Few pyrite stringers present with chlorite altered halos.	431949	0.014	0.012
30.0	32.0		0.3		*1.6*	V6	55	2		431951	0.008	0.001
32.0	34.0		0.5		*2.2*	V6	55	2		431952	0.010	0.044
34.0	36.0		0.4	**0.1**	*3.4*	CALEH	40	2	Minor chalcopyrite present within a couple of calcite, epidote, hematite, zeolite and pyrite veins.	431953	0.007	0.058
36.0	37.8		0.6		*24.4*	V6	45	2		431954	0.004	0.005
37.8	39.9	Fine grained dark green grey weakly silicated	0.8		*1.4*	V6	65	3	Slight increase in skarn alteration. Unit is still fine grained and altered to chlorite, epidote and possible tremolite. Limonite and hematite not present along fractures anymore. Minor disseminated and veined pyrite. Unit contains 5-7% V6 zeolite and carbonate veins some with hematite and pyrite. Spotty carbonate alteration.	431955	0.012	0.011
39.9	42.0	Fine grained dark green weakly propyllitic	0.2		*3.1*	FLT	30	3	More massive basalt flow. Unit is fine grained and altered to chlorite and spotty quartz alteration. Spotty epidote alteration and possible tremolite alteration present along some veins. Spotty magnetite present. Minor disseminated pyrite present. Minor limonite and hematite present along a few fractures. Unit contains 5-7% V6 zeolite and carbonate veins and stringers some with hematite and pyrite. Few pyrite stringers present with chlorite altered halos.	431956	0.010	0.006
42.0	44.0		0.1		*1.1*	V6	60	3	Interval contains several microfractures filled with zeolite, carbonate and hematite, most randomly oriented. Limonite along the fractures has ended, minor hematite still present.	431957	0.010	0.005
44.0	46.0		0.2		*51.8*	V6	50	2	V6 veins have decreased.	431958	0.009	0.006

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
46.0	48.0	Fine grained dark green weakly propyllitic	0.1	*38.9*	V6	30	2		431959	0.006	0.001
48.0	50.0		0.1	*75.3*	FRK	5	1	Core is broken, but mostly mechanical breaks.	431960	0.004	0.005
50.0	52.0		0.1	*99*	CALST	65	2		431961	0.006	0.006
52.0	54.0		0.1	*1.6*	CALST	60	2	Patchy broken core mainly due to mechanical breaks.	431962	0.028	0.019
54.0	54.9		0.3	*5.1*	V6	50	2		431963	0.005	0.005
54.88	55.88	**PORPHYRITIC QUARTZ FELDSPAR PORPHYRY DYKE**									
54.9	55.9	Fine grained grey weakly propyllitic	15.0	*1.6*	FLT	30	3	Alteration has obliterated most of the original characteristics. Unit is fne grained and composed of feldspars, minor quartz, with most of the feldspars altered to kspar or kaolinite. Sections look to contain feldspar and quartz phenocrysts 4-10mm in size, some feldspar phenocrysts have been altered to kaolinite and chlorite. Massive flooded and blebby pyrite present. Contacts are vague due to the chill margins of the surrounding rocks. Few faults in place could mark contacts.	431964	0.020	0.096
55.88	91.7	**MASSIVE BASALT FLOW**									
55.9	56.9	Fine grained dark green weakly propyllitic	0.3	*45.5*	V6	35	2	Back into a similar propylitic basalt flow as before the above dike.	431965	0.012	0.011
56.9	59.0	Fine to coarse grained dark green grey moderately chloritic	0.4	*30.9*	V6	20	3	Alteration has obliterated most of the characteristics of the unit. Very difficult to identify the lithology. Unit looks somewhat like a highly altered crystalline intrusive unit. Unit is fine to coarse grained and composed of feldspars and lesser mafics and quartz. Feldspars are altered to kaolinite and chlorite. Mafics are all altered to chlorite. Unit is magnetic. Pyrite is disseminated within the matrix. Minor brecciated sections around possible contacts. Unit contains minor pyrite stringers. Unit contains 4-6% V6 zeolite and carbonate veins and stringers, some with hematite and pyrite. After reviewing the photos and geochemistry, unit was determined to be an Asitka Basalt, WB 2011.	431966	0.006	0.001

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)			Comments	Sample#	Cu %	Au ppm
59.0	60.6	Fine to coarse grained dark green grey moderately chloritic	0.6	*91.9*	V6	25	2	Spotty epidote alteration present. Interval looks mixed with basalt with a basalt section in between 2 dikes.	431967	0.010	0.001
60.6	62.0	Fine grained dark green weakly propyllitic	0.5	*24.8*	PYSTR	60	1	Back into a massive basalt flow. Unit is fine grained and altered to chlorite and minor biotite. Minor siliceous patches present. Minor epidote alteration present around some fractures and veins. Magnetite is disseminated within the matrix. Spotty disseminated pyrite present. 2-3% V6 zeolite and carbonate veins and stringers present some with hematite and pyrite. Few pyrite stringers present some with epidote and calcite and with a chlorite halo. Rare quartz veins present with epidote and pyrite. Minor hematite along some fractures.	431968	0.010	0.001
62.0	64.0		0.6	*87.6*	PYSTR	60	1		431969	0.008	0.001
64.0	66.0		0.3	*53.7*	V6	45	1	Interval is moderately broken, mostly mechanical.	431970	0.010	0.001
66.0	68.0		0.2	*11*	BRX	45	5	Healed breccia zone from 67.15m to 67.25m with basalt fragments within a clay and chlorite matrix.	431971	0.005	0.001
68.0	70.0		0.2	*125*	CALV	40	2		431972	0.008	0.001
70.0	72.0		0.2	*2*	CALV	15	8	Unit contains several veins, fractures and stringers filled with calcite that are randomly oriented and some discontinuous.	431973	0.009	0.001
72.0	74.0		0.1	*1.2*	CALV	20	4	Pyrite stringers have decreased.	431974	0.006	0.001
74.0	76.0		0.1	*75.7*	CALV	25	8	Interval is fairly broken due to the calcite filled veins causing mechanical breaks.	431976	0.009	0.018
76.0	78.0		0.1	*65.1*	CALV	15	5		431977	0.007	0.007
78.0	80.0		0.1	*6.4*	CALV	15	4	Patchy broken zones due to mechanical breaks.	431978	0.004	0.008
80.0	82.0		0.1	*0.2*	FLT	30	7	Siliceous alteration has increased with a decrease in chlorite alteration. Fault zone from 81.85m to 82.00m. Zeolite content within the calcite veins has increased.	431979	0.004	0.001
82.0	84.0		0.7	*19.6*	CALV	30	5	Interval is fairly brecciated in contact with the above fault. Blebby pyrite and hematite present. Zeolite content has decreased.	431980	0.035	0.091

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
84.0	86.0	Fine grained dark green grey weakly propyllitic	0.1	*0.3*	FLT	55	8	Brecciation has decreased. Small fault zone from 85.30m to 85.47m with basalt fragments within a clay matrix. Patchy siliceous alteration increase.	431981	0.004	0.069
86.0	88.0		0.1	*0.6*	FLT	60	3	Zeolite content has increased.	431982	0.005	0.034
88.0	90.0		0.1	*0.2*	FLT	30	17	Fault zone present from 89.14m 89.48m with basalt fragments within a clay matrix.	431983	0.007	0.014
90.0	91.7		0.2	*0*	JN	30	1	Basalt has become brecciated due to the contact with the lower QFP unit.	431984	0.006	0.060
91.7	97.36	**PORPHYRITIC QUARTZ FELDSPAR PORPHYRY DYKE**									
91.7	93.0	Fine grained grey green weakly chloritic	0.1	*0*	FRK	30	1	Entered a QFP dike. Matrix is fine grained and composed mainly of feldspars and minor possible mafics and quartz. Feldspar and possible mafics are partially altered to chlorite and kaolinite. Unit contain abundant feldspar phenocrysts 3-12mm in size with some altered to kaolinite and minor chlorite and possible sericite. Unit contains 2-3% quartz phenocrysts 4-10mm in size. Minor disseminated pyrite present. Unit contains 2-3% calcite veins and stringers with minor zeolite. Upper contact is lost due to core being broken	431985	0.002	0.018
93.0	95.0	Fine grained dun green weakly chloritic	0.1	*0*	FLT	45	19	Patchy siliceous alteration present. Fault zone from 93.72m to 94.01m.	431986	0.014	0.079
95.0	96.5	Fine grained dun pink weakly silicified (non-K)	0.1	*0*	CALV	30	1	Siliceous alteration has increased with a decrease in chlorite alteration.	431987	0.001	0.001
96.5	97.4	Fine grained dun green weakly chloritic	0.1	*0*	CNT	55		Chlorite alteration has slightly increased and silica alteration has decreased. Lower contact is brecciated.	431988	0.001	0.001
97.36	102.62	**BRECCIATED BASALT FLOW**									

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
97.4	99.0	Fine grained dark green grey moderately chloritic	0.1	*1.7*	CALV	30	2	Back into an Asitka Basalt. Unit is fine grained and altered to chlorite. Unit is highly deformed and brecciated in patches due to a dike being above and below. Minor sericite alteration present. Spotty disseminated pyrite. Minor pyrite stringers present. 3-5% calcite filled veins, stringers and fractures present with minor zeolite. Some fractures filled with chlorite. Brecciated sections between the fragments is chlorite and carbonate and minor pyrite.	431989	0.001	0.006
99.0	101.0		0.1	*7.5*	CALV	30	2		431990	0.004	0.024
101.0	102.6		0.4 **0.2**	*1.4*	CALV	25	3	Brecciation has increased and silicified fragments have increased. Blebby hematite and chalcopyrite present.	431991	0.011	0.029
102.62	103.4	**BRECCIATED BASALT FAULT ZONE**									
102.6	103.4	Fine grained dark green yellow moderately silicated	65.0 **1.0**	*0.5*	SHR	30		Contact zone between the above basalt and QFP below. Unt looks sheared and is highly altered to chlorite with some quartz veining present. Shear direction evident. At contact is some minor gouge. Massive pyrite replacement/flooding throughout. Minor chalcopyrite associated with the pyrite.	431992	0.235	0.301
103.4	106.42	**PORPHYRITIC QUARTZ FELDSPAR PORPHYRY DYKE**									
103.4	105.0	Fine grained green moderately chloritic	2.0	*0.6*	CNT	30		Unit starts of brecciated and becomes more massive down hole. Unit is fine grained and altered to chlorte and become more siliceous towards the end of the interval. Unit contains abundant feldspar phenocrysts 3-10mm in size and altered to sericite, chlorite and quartz. Unit contains 2-3% 5-10mm quartz phenocrysts. Disseminated pyrite is present throughout. Few calcite filled stringers and fractures present. Minor pyrite filled stringers present.	431993	0.010	0.097
105.0	106.4	Fine grained dark green grey strongly chloritic	0.5	*0.4*	CNT	30		Chlorite and sericite alteration have increased. Lower contact is sharp.	431994	0.008	0.021
106.42	108.4	**MASSIVE BASALT FAULT ZONE**									

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)	Comments	Sample#	Cu %	Au ppm
106.4	108.4	Fine grained dark green yellow strongly silicated	50.0 **0.9**	*0.7*		Back into another contact zone between the above QFP and Asitka Basalt (assumed Asitka Basalt). Section could be termed contact skarn. Unit is intensely altered to chlorite and could have been actinolite and tremolite before. Patchy possible secondary feldspar present now altered to kaolinite. Massive and blebby pyrite throughout. Minor chalcopyrite present. Patchy hematite present.	431995	0.012	0.466
108.4	109.58	**MOTTLED BASALT ALTERED ZONE**							
108.4	109.1	Fine grained dun maroon strongly silicated	20.0	*0.7*		Another section of the skarn. Unit is fine grained still but highly altered to silicate?, kaolinite and minor chlorite. Possible tremolite present. Less massive pyrite and more hematite present. Massive pyrite present towards the end of the interval.	431996	0.032	0.325
109.1	109.6		65.0	*0.7*		Similar to above but the hematite has decreased and the massive and blebby pyrite has increased.	431997	0.003	0.226
109.58	112.3	**MOTTLED QUARTZ MONZONITE ALTERED ZONE**							
109.6	111.0	Fine to coarse grained dark green maroon moderately silicated	1.0	*1.2*	CALV 20 1	Alteration has obliterated most of the original characteristics of the rock. Unit looks to be a crystalline intrusive unit in places, but could be a highly altered Asitka unit. Chlorite alteration is strong. Some sericite alteration present. Unit contains possible tremolite. Minor kaolinite alteration present. Strong hematite alteration at the start of the unit and patchy down hole. 3-4% randomly oriented carbonate and minor zeolite veins present. Minor disseminated pyrite present.	431998	0.001	0.066
111.0	112.3		0.4	*1.4*	CALV 20 2	Minor hematite blebs present.	431999	0.005	0.023
112.3	113.23	**MOTTLED BASALT ALTERED ZONE**							

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)			Comments	Sample#	Cu %	Au ppm
112.3	113.2	Fine grained maroon brown strongly silicated	0.2	*2.6*	CALV	40	2	Possibly entered the Asitka Basalt. Alteration has obliterated most of the original characteristics of the rock. Unit is fine grained and altered to silicates? Tremolite and minor chlorite and some other clays. Hematite is present throughout. Minor disseminated pyrite present. Few carbonate veins present. Minor chlorite filled joints present. Towards the end of the unit for the last 20cm unit is intensely chlorite altered and looks like a basalt.	428401	0.003	0.018
113.23	115.17	**MASSIVE QUARTZ MONZONITE DYKE**									
113.2	115.2	Fine to coarse grained dark green grey moderately chloritic	0.7	*0.5*	CNT	30		Alteration has obliterated most of the characteristics of the unit. Unit looks to be mixed with QMZ sections and QFP sections. QMZ sections are coarse grained and composed mainly of feldspars with lesser mafics and minor quartz. QFP sections are fine grained and composed abundant 3-8mm feldspar phenocrysts and 3-5% 5-10mm quartz phenocrsyts. Some feldspars in both have been altered to chlorite and sericite. QMZ sections mafics have been altered to chlorite. Minor disseminated pyrite present.2-3% V6 zeolite and carbonate veins present with hematite. Patchy hematite present. Quartz vein present with possible molybdenum. Contacts are sharp.	428402	0.011	0.035
115.17	120.36	**MOTTLED BASALT FLOW**									
115.2	116.5	Fine to coarse grained brown maroon strongly silicated	0.5 **0.1**	*3.1*	V6	30	1	Alteration has obliterated most of the original characteristics of the rock. Unit looks to be in Asitka Basalt could be mixed with QMZ with faint crystalline texture seen with some quartz and feldspar grains evident. Other than that most of the feldspars and all the mafics have been altered to clays, silicates, minor possible tremolite, minor chlorite and epidote. Hematite is present throughout. Minor blebs of specular hematite present. Minor disseminated pyrite present. Few V6 carbonate and zeolite veins present. Few carbonate filled fractures present. Minor blebs of chalcopyrite at the start of the interval.	428403	0.006	0.049

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
116.5	117.5	Fine to coarse grained brown maroon strongly silicated	0.7 **0.1**	*2.3*					428404	0.044	0.107
117.5	119.1	Fine grained dark green grey strongly chloritic	0.1	*0.9*	BRX	25	40	Back into a true Asitka Basalt unit. Unit is fine grained and altered to chlorite and sericite. Spotty carbonate alteration present. Minor disseminated pyrite present. Unit is brecciated in sections with Basalt fragments within a carbonate and zeolite matrix. Minor hematite stringers present. Unit contains 10% carbonate veins and stringers.	428405	0.005	0.012
119.1	120.4	Fine grained brown maroon strongly silicated	0.1	*3.4*				Alteration has obliterated most of the original characteristics of the rock. Unit looks to be in the Asitka basalt still as similar brecciated texture is present similar to above. Unit is fine grained and altered to silicates, tremolite?, chlorite, kaolinite and spotty carbonate. Minor epidote present. Hematite is present throughout. Minor blebs of specular hematite present. Minor pyrite present. Some sections do look like possible QMZ material with a slight crystalline texture. Unit contains a few carbonate stringers. Brecciated zones contains basalt fragments within a hematite, clay and carbonate matrix.	428406	0.003	0.006
120.36	126.84	**MASSIVE QUARTZ MONZONITE DYKE**									
120.4	121.6	Medium to coarse grained dun green moderately chloritic	0.0	*2.2*	CNT	60		Alteration has obliterated some of the characteristics of th rock. Unit is medium to coarse grained and composed mainly of feldspars with minor mafics and lesser quartz. Most feldspars have been altered to kaolinite and other clay minerals. All mafics have been altered to chlorite. Some feldspars have been altered to sericite and chlorite. Spotty disseminated pyrite present. Unit contains 3-4% V6 zeolite and carbonate veins, some with hematite. Upper contact is brecciated.	428407	0.005	0.007
121.6	123.0	Medium to coarse grained dun weakly propyllitic	0.0	*1.4*	V6	35	2	Chlorite alteration has decreased and hematite staining has increased.	428408	0.003	0.001
123.0	125.0		0.0	*1.5*	V6	30	2		428409	0.001	0.001
125.0	126.8		0.0	*1.6*	V6	40	2		428410	0.001	0.001

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins (°tca-%)		Comments	Sample#	Cu %	Au ppm
126.84	127.45	**PORPHYRITIC FELDSPAR PORPHYRY DYKE**								
126.8	127.5	Fine grained green pink weakly propyllitic	0.0	*1.8*	V6 20	4	Alteration has masked some of the characteristics of the rock. Unit is fine grained and was composed mainly of feldspars and possible mafics. The matrix is now altered to kaolinite, chlorite and minor sericite. Unit contains 10% 3-12mm feldspar phenocrysts euhedral in shape. Some phenocrysts could be quartz or silicified feldspars. Minor hematite staining present. Minor disseminated pyrite present. Unit contains 8% V6 zeolite and carbonate veins. Contacts are faint, possibly 50 deg tca.	428411	0.001	0.001
127.45	128.06	**MASSIVE QUARTZ MONZONITE DYKE**								
127.5	128.1	Medium to coarse grained pink weakly propyllitic	0.0	*1.9*	V6 20	1	Alteration has obliterated some of the characteristics of th rock. Unit is medium to coarse grained and composed mainly of feldspars with minor mafics and lesser quartz. Most feldspars have been altered to kaolinite and other clay minerals. All mafics have been altered to chlorite. Some feldspars have been altered to sericite and chlorite. Minor epidote present. Spotty disseminated pyrite present. Unit contains 2-3% V6 zeolite and carbonate veins, some with hematite. Patchy hematite staining present.	428412	0.002	0.001
128.06	132.43	**PORPHYRITIC FELDSPAR PORPHYRY DYKE**								
128.1	129.0	Fine grained green pink weakly propyllitic	0.0	*2.3*	V6 60	2	Alteration has masked some of the characteristics of the rock. Unit is fine grained and was composed mainly of feldspars and possible mafics. The matrix is now altered to kaolinite, chlorite and minor sericite. Unit contains 15% 3-12mm feldspar phenocrysts euhedral in shape. Some phenocrysts could be quartz or silicified feldspars. Unit has been slightly silicified. Minor hematite staining present. Minor disseminated pyrite present. Unit contains 5-7% V6 zeolite and carbonate veins. Contacts are faint, possibly 60 deg tca.	428413	0.001	0.001
129.0	131.0		0.0	*2.3*	V6 45	3		428414	0.002	0.001

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
131.0	132.4	Fine grained green pink weakly propyllitic	0.0	*0.8*	V6	40	3		428415	0.004	0.001
132.43	133.05	**PORPHYRITIC FELDSPAR PORPHYRY FAULT ZONE**									
132.4	133.1	Fine to coarse grained green pink weakly propyllitic	0.2	*0.7*	SHR	50	100	Sheared section of the FP unit. Unit looks to be a mix of sheared FP and QMZ material. Unit contains about 15% quartz veins within the shear, following the same orientation. Unit is altered top chlorite and sericite within minor hematite staining. Few blebs of pyrite present.	428416	0.164	0.270
133.05	136.58	**PORPHYRITIC FELDSPAR PORPHYRY DYKE**									
133.1	135.0	Fine grained green pink weakly propyllitic	0.0	*2.5*	V6	60	1	Back into the similar FP unit as before the above shear zone. Alteration has masked some of the characteristics of the rock. Unit is fine grained and was composed mainly of feldspars and possible mafics. The matrix is now altered to kaolinite, chlorite and minor sericite. Unit contains 15% 3-12mm feldspar phenocrysts euhedral in shape. Some phenocrysts could be quartz or silicified feldspars. Unit has been slightly silicified. Minor hematite staining present. Minor disseminated pyrite present. Unit contains 5-7% V6 zeolite and carbonate veins. A lot of the veining is at random orientations.	428417	0.009	0.009
135.0	136.6		0.0	*0.9*	CNT	60		Lower contact is brecciated.	428418	0.007	0.008
136.58	138.23	**MOTTLED BASALT FLOW**									
136.6	138.2	Fine grained brown maroon strongly silicated	0.1	*3.3*	HSTR	35	1	Alteration has obliterated most of the original characteristics of the rock. Unit has a brecciated texture for the most part. Unit is fine grained and altered to kaolinite, silicates, tremolite?, quartz and minor chlorite and epidote. Quartz altered sections not to be confused with quartz fragments and veins that have been stretched and brecciated. Hematite is present throughout. Minor blebs of hematite present. Minor pyrite present. Trace of molybdenum present within a quartz section. Unit could be a altered QMZ, alteration has made it difficult to tell. Few hematite stringers present. Few carbonate filled veins and stringers present.	428419	0.030	0.034

Hole Number: KN-11-16

From	To	Rock Type	Py-Cpy	Ms	Veins	(°tca-%)		Comments	Sample#	Cu %	Au ppm
138.23	153	**MASSIVE QUARTZ MONZONITE DYKE**									
138.2	140.0	Medium to coarse grained grey green weakly propyllitic	0.0	*1*	FLT	20	1	Unit is medium to coarse grained and composed oif 80% feldspars, 15% mafics and 5% quartz. Some feldspars have been altered to kaolinite and sericite. Most mafics have been altered to chlorite. Spotty disseminated pyrite present. Minor hematite staining present. Unit contains 3-4% V6 zeolite and carbonate veins some with hematite.	428420	0.005	0.001
140.0	141.5		0.0	*1*	V6	20	2		428421	0.002	0.001
141.5	143.0	Fine to coarse grained maroon grey strongly silicated	0.0	*2.7*	HSTR	25	1	Alterration has obliterated most of the characteristics of the rock. Unit still has the crystallkine texture with the quartz grains remaining. Clay alteration of the feldspars is intense with kaolinite, silicates, tremolite?, and minor chlorite. Hematite is present throughout. Minor blebby hematite present. Alteration changes gradually. Few Hematite stringers. Minor disseminated pyrite.	428422	0.001	0.007
143.0	145.0		0.0	*3.4*	FLT	25	4		428423	0.002	0.032
145.0	147.0	Medium to coarse grained grey green moderately silicified (non-K)	0.0	*0.8*	V6	40	2	Back into a similar Post Mineral QMZ unit as before the above skarn altered sections. Alteration has become more siliceous. Many microfractures filled with carbonate present now.	428424	0.006	0.012
147.0	149.0		0.0	*0.3*	V6	50	1	Chlorite alteration has increased slightly.	428425	0.009	0.013
149.0	151.0	Medium to coarse grained dark green grey moderately chloritic	0.2	*19.6*	FLT	30	14	Fault zone from 149.75m to 150.02m with gouge and fragments of QMZ. After the fault the chlorite alteration increases and siliceous alteration decreases. Magnetite present again.	428426	0.035	0.017
151.0	153.0	Medium to coarse grained dark green grey weakly propyllitic	0.0	*42.4*	V6	20	1	Chlorite alteration has decreased and minor hematite staining and epidote alteration have increased. EOH.	428427	0.001	0.001
153 EOH											

Appendix 2:
ALS Chemex Assay and ICP Certificates

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC VOJ 2N0**

Finalized Date: 7- DEC- 2011
Account: PB.

CERTIFICATE VA11240477

Project: 4020
P.O. No.: 293

This report is for 65 Pulp samples submitted to our lab in Vancouver, BC, Canada on 15-NOV- 2011.

The following have access to data associated with this certificate:

WADE BARNES	CARL EDMUNDS	RON KONST

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 24	Pulp Login - Rcd w/o Barcode
LOG-QC	QC Test on Received Samples

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
Cu-AA49	Assay Cu - HBr Digestion	AAS
ME-ICP61	33 element four acid ICP-AES	ICP- AES

To: **NORTHGATE MINERALS - KEMESS MINE**
ATTN: RON KONST
KEMESS MINE
PO BOX 3519
SMITHERS BC V03 2N0

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

ALS Canada Ltd.
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North Vancouver BC V7H 0A7
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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V03 2N0**

MIN 1=1 C111.=P

Project: **4020**

CERTIFICATE OF ANALYSIS VA11240477

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu- AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
429576		0.24	0.007	<0.5	8.05	12	210	0.9	<2	6.36	<0.5	30	161	70	6.69	20
429577		0.22	0.008	<0.5	6.66	14	360	0.8	<2	5.48	<0.5	57	186	82	7.97	20
429578		0.24	0.014	<0.5	7.95	14	650	0.7	<2	6.87	0.6	22	122	128	6.58	20
429579		0.24	0.017	<0.5	7.50	7	190	0.8	2	6.10	<0.5	28	136	159	10.65	20
429580		0.24	0.009	<0.5	7.60	8	190	0.7	<2	5.33	0.6	21	121	83	8.13	20
429581		0.22	0.012	<0.5	7.67	10	240	0.7	<2	6.53	0.5	19	127	107	6.82	20
429582		0.22	0.027	0.5	7.37	17	350	0.7	<2	6.52	0.6	28	158	246	7.25	20
429583		0.24	0.034	<0.5	7.58	16	610	0.6	<2	7.13	<0.5	29	190	310	7.62	20
429584		0.24	0.023	0.5	7.98	15	170	0.7	<2	8.04	<0.5	34	157	209	8.14	20
429585		0.22	0.025	0.6	7.95	15	240	0.7	<2	7.94	<0.5	30	162	237	7.74	20
429586		0.22	0.010	<0.5	7.88	8	340	0.7	<2	6.97	<0.5	25	169	97	7.02	20
429587		0.22	0.021	<0.5	8.15	19	150	0.7	<2	6.59	<0.5	18	179	195	6.73	20
429588		0.24	0.004	<0.5	8.37	7	120	0.7	<2	7.14	<0.5	16	158	34	7.10	20
429589		0.22	0.032	<0.5	7.93	17	330	0.6	<2	7.53	<0.5	36	169	306	7.94	20
429590		0.22	0.015	<0.5	7.75	6	240	0.7	<2	6.37	<0.5	31	144	138	7.94	20
429591		0.24	0.008	<0.5	7.74	9	330	0.7	<2	6.28	0.5	23	156	77	8.21	20
429592		0.24	0.016	<0.5	7.77	9	370	0.7	<2	6.79	<0.5	17	140	149	7.28	20
429593		0.22	0.012	<0.5	8.04	19	430	0.6	<2	7.60	<0.5	21	169	137	7.86	20
429594		0.22	0.006	<0.5	7.24	10	150	0.8	2	7.06	2.0	21	176	64	7.21	20
429595		0.20	0.005	0.5	7.16	15	150	0.8	<2	7.57	1.9	20	208	43	7.58	20
429596		0.22	0.017	0.5	7.29	21	140	0.8	<2	7.97	2.2	40	166	155	7.83	20
429597		0.20	0.135	2.4	6.60	11	990	0.6	3	6.63	2.2	84	217	1250	8.12	20
429598		0.24	0.163	2.9	6.69	11	820	0.6	7	6.29	2.6	135	220	1555	8.56	10
429599		0.26	0.042	1.0	7.13	8	210	0.8	4	6.96	1.9	44	236	425	7.23	20
429600		0.22	0.004	0.6	7.84	<5	960	1.4	<2	3.27	0.8	12	120	25	3.95	20
429601		0.22	0.005	0.6	6.89	12	510	0.8	18	6.32	2.4	33	188	44	8.87	20
429602		0.24	0.012	0.5	7.43	17	400	0.8	2	8.28	2.1	39	168	109	7.42	20
429603		0.20	0.015	0.5	7.16	14	380	0.8	<2	7.56	1.7	42	208	134	7.07	20
429604		0.22	0.009	0.6	7.26	18	200	0.8	<2	7.95	1.8	33	184	72	7.34	20
429605		0.20	0.011	0.6	7.44	17	170	0.8	<2	7.77	2.1	40	219	92	7.88	20
429606		0.22	0.018	0.6	7.21	17	190	0.8	<2	7.66	1.8	37	192	161	7.55	20
429607		0.24	0.022	0.8	7.37	15	310	0.8	2	8.03	2.1	47	157	191	7.50	20
429608		0.22	0.014	0.8	7.58	17	140	0.9	<2	7.65	2.0	33	193	123	7.82	20
429609		0.20	0.045	0.8	7.52	13	130	0.8	6	7.80	2.3	60	217	419	8.32	20
429610		0.22	0.040	0.8	7.41	24	270	0.8	3	6.95	2.1	50	191	367	7.74	20
429611		0.22	0.016	0.5	7.86	16	680	1.1	<2	4.91	0.9	21	113	138	4.04	20
429612		0.22	0.006	0.8	7.77	7	670	1.1	2	5.36	1.0	22	85	59	3.88	20
429613		0.22	0.013	0.7	7.63	7	1090	1.1	2	4.89	1.0	14	100	118	4.23	20
429614		0.22	0.012	0.6	7.90	6	810	1.1	2	5.09	0.9	13	74	106	4.31	20
429615		0.22	0.004	<0.5	8.20	9	560	1.1	4	5.21	0.8	15	84	37	3.79	20

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Project: **4020**

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CERTIFICATE OF ANALYSIS VA11240477

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
429576		0.93	10	4.59	1545	1	2.76	44	1190	3	1.02	6	29	372	<20	0.59
429577		1.27	10	3.91	1375	2	1.63	42	940	13	3.84	8	26	293	<20	0.49
429578		1.63	10	3.83	1675	1	2.24	34	1220	10	0.80	5	29	413	<20	0.58
429579		0.57	10	3.64	2030	3	1.91	33	1100	13	1.16	6	27	348	<20	0.54
429580		0.65	10	3.61	2620	3	1.97	27	1140	23	0.60	6	24	330	<20	0.57
429581		0.65	10	3.45	1660	2	2.31	26	1080	13	0.63	7	26	407	<20	0.56
429582		1.11	10	3.17	1605	3	2.06	32	1170	23	1.48	7	27	348	<20	0.54
429583		1.58	10	3.34	1495	2	1.95	34	1130	9	2.04	6	28	375	<20	0.55
429584		0.95	10	3.76	1440	4	1.77	37	1200	5	1.79	12	29	444	<20	0.58
429585		0.93	10	3.58	1520	2	1.99	32	1220	10	1.63	10	29	419	<20	0.59
429586		1.38	10	3.43	1205	1	2.17	34	1110	6	1.26	<5	27	420	<20	0.54
429587		0.95	10	4.04	1180	2	2.28	39	1060	5	0.86	6	30	384	<20	0.62
429588		0.74	10	4.04	1240	2	2.32	37	1110	<2	0.50	7	30	403	<20	0.62
429589		1.06	10	3.61	1395	2	2.11	34	1170	11	1.85	8	28	480	<20	0.56
429590		0.74	10	3.73	1600	2	2.29	30	1150	15	1.01	8	28	444	<20	0.58
429591		1.02	10	3.45	2090	2	2.52	32	1210	5	1.00	6	29	392	<20	0.58
429592		1.22	10	3.47	1450	3	2.37	32	1210	10	0.60	5	29	445	<20	0.58
429593		1.40	10	3.38	1415	2	2.05	35	1240	10	1.25	9	29	432	<20	0.58
429594		0.78	20	4.14	1400	2	2.24	49	1060	7	0.24	7	30	370	<20	0.54
429595		0.92	20	4.37	1520	2	1.88	51	1000	<2	0.12	6	31	446	<20	0.53
429596		0.82	20	3.97	1405	2	1.73	46	1040	6	1.09	9	26	382	<20	0.52
429597		2.40	20	3.21	1265	2	1.27	52	890	<2	3.71	<5	30	307	<20	0.49
429598		2.86	20	2.97	1170	13	1.41	49	990	<2	4.64	5	27	294	<20	0.48
429599		0.88	20	4.38	1425	3	2.13	42	1090	<2	0.86	7	32	267	<20	0.52
429600		1.89	20	1.12	967	3	3.24	3	1070	2	<0.01	<5	11	408	<20	0.31
429601		1.51	20	3.98	1590	1	1.74	38	1040	16	0.94	<5	31	299	<20	0.51
429602		1.16	20	3.67	1595	<1	1.56	39	1070	7	0.99	9	31	395	<20	0.51
429603		1.24	20	3.71	1470	9	1.79	40	1090	3	0.96	7	31	328	<20	0.52
429604		0.79	20	3.95	1565	<1	1.73	43	1050	3	0.54	7	31	371	<20	0.51
429605		0.71	20	4.20	1575	<1	1.78	51	1110	2	0.73	6	34	358	<20	0.57
429606		0.83	20	3.94	1515	1	1.67	49	1060	<2	0.46	6	32	371	<20	0.54
429607		1.14	20	3.84	1490	<1	1.97	44	1080	5	0.80	<5	31	351	<20	0.53
429608		0.68	20	4.16	1635	1	2.02	47	1100	4	0.48	9	33	392	<20	0.55
429609		0.79	20	4.25	1500	<1	1.83	53	1050	3	1.23	<5	32	361	<20	0.53
429610		1.19	20	3.96	1475	<1	2.04	40	1060	<2	0.87	6	29	353	<20	0.50
429611		1.52	20	1.83	668	1	3.59	10	1290	2	0.26	<5	12	492	<20	0.55
429612		1.60	20	1.77	706	2	3.47	8	1270	2	0.26	<5	12	511	<20	0.55
429613		2.26	20	1.83	741	2	3.19	12	1280	3	0.06	<5	12	494	<20	0.56
429614		1.77	20	1.92	764	<1	3.46	12	1280	<2	0.06	<5	12	468	<20	0.56
429615		1.30	20	1.94	711	1	3.86	13	1310	3	0.17	<5	13	490	<20	0.58

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MAI 1=1 CIII.=P

Project: **4020**

CERTIFICATE OF ANALYSIS VA11240477

Sample Description	Method	ME- ICP61	ME- ICP61	ME- ICP61	ME-	ME- ICP61	Au- AA23
	Analyte	Tl	U	V	ICP61	Zn	Au
	Units	ppm	ppm	ppm	W ppm	ppm	ppm
	LOR	10	10	1	10	2	0.005
429576		<10	<10	271	<10	95	0.013
429577		<10	<10	242	<10	109	0.035
429578		<10	<10	269	<10	148	0.027
429579		<10	<10	264	<10	152	0.021
429580		<10	<10	259	<10	226	0.018
429581		<10	<10	252	<10	135	0.033
429582		<10	<10	256	<10	152	0.046
429583		<10	<10	269	<10	95	0.044
429584		<10	<10	287	<10	102	0.072
429585		<10	<10	279	<10	98	0.059
429586		<10	<10	269	<10	82	0.026
429587		<10	<10	283	<10	90	0.040
429588		<10	<10	288	<10	87	0.008
429589		<10	<10	282	<10	91	0.056
429590		<10	<10	279	<10	130	0.015
429591		<10	<10	275	<10	182	0.012
429592		<10	<10	273	<10	105	0.013
429593		<10	<10	284	<10	110	0.019
429594		<10	<10	269	<10	111	0.006
429595		<10	<10	278	<10	109	0.007
429596		<10	<10	268	<10	88	0.024
429597		<10	<10	270	<10	87	0.250
429598		<10	<10	237	<10	97	0.335
429599		<10	<10	269	<10	92	0.078
429600		<10	<10	113	<10	66	<0.005
429601		<10	<10	267	10	130	0.095
429602		<10	<10	267	<10	114	0.073
429603		<10	<10	251	<10	105	0.118
429604		<10	<10	264	<10	111	0.041
429605		<10	<10	275	<10	109	0.048
429606		<10	<10	266	<10	100	0.052
429607		<10	<10	260	<10	106	0.075
429608		<10	<10	279	<10	117	0.095
429609		<10	<10	277	<10	116	0.503
429610		<10	<10	255	<10	100	0.173
429611		<10	<10	202	<10	49	0.038
429612		<10	<10	205	<10	50	0.018
429613		<10	<10	208	<10	50	0.028
429614		<10	<10	211	<10	53	0.018
429615		<10	<10	206	<10	51	0.031

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MIN 1=1 C111.=P

Project: **4020**

CERTIFICATE OF ANALYSIS VA11240477

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu-AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
429616		0.22	0.010	1.8	8.15	15	490	1.0	2	5.67	1.2	18	118	86	4.95	20
429617		0.24	0.005	0.6	7.46	10	320	0.9	3	7.17	2.5	32	193	33	7.55	20
429618		0.22	0.003	0.6	7.38	11	180	0.8	3	6.28	2.4	31	177	28	8.58	20
429619		0.22	0.004	0.6	7.77	7	360	1.0	5	4.79	2.1	23	139	25	7.73	20
429620		0.22	0.017	0.8	7.59	12	1140	1.0	<2	4.36	1.2	19	83	145	4.63	20
429621		0.22	0.013	0.6	7.52	15	320	0.8	5	8.27	2.2	35	185	121	7.97	20
429622		0.22	0.022	0.7	7.33	13	380	0.8	2	7.18	1.9	27	187	207	7.13	20
429623		0.24	0.012	0.5	7.39	11	340	0.8	11	7.40	1.9	45	181	112	7.48	20
429624		0.22	0.007	0.6	7.35	11	340	0.7	6	8.27	1.9	44	205	57	7.55	20
429625		0.22	0.009	0.7	7.32	16	340	0.7	4	8.32	2.1	45	202	69	7.68	20
431221		0.22	<0.001	0.5	7.19	<5	1170	1.1	<2	2.86	0.5	7	179	4	3.15	20
431222		0.22	0.004	<0.5	7.38	<5	1520	1.0	<2	1.96	0.7	4	193	30	3.32	20
431223		0.24	0.005	0.7	7.57	<5	1660	1.2	2	2.37	0.7	6	218	29	3.26	20
431224		0.22	0.003	<0.5	7.29	<5	1040	1.0	<2	2.95	0.6	8	167	32	3.12	10
431225		0.22	0.002	<0.5	8.37	<5	2250	1.1	<2	2.21	<0.5	5	181	12	3.37	20
431226		0.24	0.001	<0.5	8.41	6	1880	1.1	<2	2.16	<0.5	6	142	12	3.52	20
431227		0.24	0.002	<0.5	8.82	<5	2110	1.2	<2	2.35	<0.5	6	147	18	3.35	20
431228		0.24	0.002	<0.5	8.63	<5	1790	1.1	<2	2.42	<0.5	5	158	17	3.42	20
431229		0.22	0.003	<0.5	8.70	<5	1190	1.0	<2	2.93	<0.5	5	138	23	3.31	20
431230		0.22	0.008	<0.5	9.41	<5	1690	1.1	<2	2.75	<0.5	4	198	88	3.42	20
431231		0.22	0.004	<0.5	9.07	7	1870	1.1	<2	2.39	<0.5	6	192	40	3.49	20
431232		0.22	0.002	<0.5	8.95	<5	1760	1.1	<2	2.65	<0.5	6	148	25	3.68	20
431233		0.26	0.007	<0.5	8.23	6	1130	1.1	<2	2.63	<0.5	6	133	53	3.49	20
431234		0.22	0.001	<0.5	7.79	<5	1460	1.0	<2	3.04	<0.5	6	166	17	3.40	20
431235		0.24	0.002	<0.5	7.92	<5	1500	1.0	<2	3.10	<0.5	7	130	19	3.43	20

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Project: **4020**

CERTIFICATE OF ANALYSIS VA11240477

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
429616		1.46	20	2.43	868	<1	3.34	17	1280	<2	0.07	<5	16	490	<20	0.56
429617		1.11	20	3.96	1570	<1	1.95	41	1060	16	0.33	8	31	399	<20	0.53
429618		0.75	20	4.15	1900	2	1.88	42	1110	7	0.39	10	32	376	<20	0.54
429619		1.15	20	2.91	1520	1	2.84	26	1240	4	0.37	<5	22	393	<20	0.55
429620		2.33	20	1.96	797	<1	3.36	19	1260	4	0.24	<5	12	418	<20	0.56
429621		1.02	20	4.13	1590	<1	1.63	47	1120	4	0.49	8	33	433	<20	0.54
429622		1.25	20	3.95	1415	<1	1.97	42	1100	<2	0.14	6	32	374	<20	0.52
429623		1.06	20	3.94	1460	1	1.77	44	1090	<2	1.34	6	32	367	<20	0.53
429624		1.01	20	3.67	1520	<1	1.46	43	1090	<2	0.97	<5	31	420	<20	0.51
429625		1.00	20	3.70	1535	<1	1.45	44	1090	2	0.95	7	32	419	<20	0.52
431221		2.11	20	0.71	375	1	2.70	3	710	<2	0.10	<5	7	371	<20	0.22
431222		2.67	20	0.77	279	5	3.01	2	710	3	0.84	<5	7	240	<20	0.20
431223		2.49	20	0.74	404	2	2.77	3	750	4	0.29	<5	7	470	<20	0.22
431224		1.89	20	0.73	462	1	2.83	3	690	7	0.37	<5	7	269	<20	0.21
431225		2.73	10	0.77	515	4	3.04	2	790	9	0.12	<5	8	570	<20	0.22
431226		2.56	10	0.84	551	1	3.16	<1	790	8	0.09	<5	8	464	<20	0.23
431227		2.72	10	0.76	491	<1	3.30	2	810	8	0.10	<5	8	540	<20	0.23
431228		2.67	10	0.79	614	3	2.91	2	810	8	0.02	<5	9	382	<20	0.23
431229		2.07	10	0.80	588	2	2.94	1	790	7	0.08	<5	9	318	<20	0.23
431230		2.72	20	0.88	684	1	2.56	1	820	10	0.17	<5	9	483	<20	0.23
431231		2.80	20	0.90	616	4	2.82	2	830	12	0.29	<5	9	452	<20	0.23
431232		2.62	20	0.84	551	2	2.75	1	790	10	0.75	<5	9	508	<20	0.22
431233		2.73	10	0.98	667	2	2.09	1	800	9	0.16	<5	8	367	<20	0.22
431234		2.34	10	0.73	523	3	2.70	1	750	9	0.64	<5	8	397	<20	0.21
431235		2.41	10	0.74	532	2	2.79	1	770	7	0.66	<5	8	409	<20	0.22

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V03 2N0**

MAI 1=1 CIII.=P

Project: **4020**

CERTIFICATE OF ANALYSIS VA11240477

Sample Description	Method Analyte Units LOR	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2	Au- AA23 Au ppm 0.005
429616		<10	<10	219	<10	62	0.020
429617		<10	<10	266	<10	195	0.015
429618		<10	<10	272	<10	150	0.010
429619		<10	<10	236	<10	133	0.013
429620		<10	<10	206	<10	63	0.046
429621		<10	<10	283	<10	102	0.078
429622		<10	<10	260	<10	95	0.080
429623		<10	<10	268	<10	96	0.102
429624		<10	<10	270	<10	93	0.044
429625		<10	<10	272	<10	94	0.040
431221		<10	<10	63	<10	24	<0.005
431222		<10	<10	65	<10	25	<0.005
431223		<10	<10	66	<10	28	<0.005
431224		<10	<10	63	<10	43	<0.005
431225		<10	<10	66	<10	28	<0.005
431226		<10	<10	66	<10	28	<0.005
431227		<10	<10	67	<10	30	<0.005
431228		<10	<10	69	<10	33	<0.005
431229		<10	<10	66	<10	39	<0.005
431230		<10	<10	68	<10	73	<0.005
431231		<10	<10	70	<10	56	<0.005
431232		<10	<10	66	<10	41	<0.005
431233		<10	<10	70	<10	60	<0.005
431234		<10	<10	66	<10	36	<0.005
431235		<10	<10	67	<10	36	<0.005

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC VOJ 2N0**

Finalized Date: 12- DEC- 2011
Account: PB.

CERTIFICATE VA11244712

Project: 4020
P.O. No.: 324

This report is for 28 Pulp samples submitted to our lab in Vancouver, BC, Canada on 22-NOV- 2011.

The following have access to data associated with this certificate:

WADE BARNES	CARL EDMUNDS	RON KONST

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 24	Pulp Login - Rcd w/o Barcode
LOG-QC	QC Test on Received Samples

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
Cu-AA49	Assay Cu - HBr Digestion	AAS
ME-ICP61	33 element four acid ICP-AES	ICP- AES

To: **NORTHGATE MINERALS - KEMESS MINE**
ATTN: RON KONST
KEMESS MINE
PO BOX 3519
SMITHERS BC V03 2N0

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

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244712

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu- AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
428401		0.28	0.003	<0.5	5.59	8	630	0.7	4	14.8	<0.5	7	120	33	7.75	10
428402		0.26	0.011	0.5	6.23	12	630	0.9	<2	4.49	0.8	6	167	100	1.74	10
428403		0.24	0.006	0.6	3.62	13	100	<0.5	7	18.1	<0.5	3	177	50	13.05	20
428404		0.22	0.044	0.5	3.30	18	110	<0.5	7	18.3	<0.5	3	189	426	11.90	20
428405		0.20	0.005	<0.5	7.82	6	850	1.4	<2	6.66	<0.5	9	73	38	2.38	20
428406		0.18	0.003	<0.5	1.06	10	20	<0.5	7	19.5	<0.5	<1	156	26	15.75	10
428407		0.24	0.005	<0.5	6.78	15	580	0.7	2	16.1	<0.5	7	155	48	6.47	20
428408		0.20	0.003	<0.5	7.91	5	3810	1.4	<2	6.98	<0.5	6	65	25	2.28	10
428409		0.24	0.001	<0.5	6.85	<5	780	1.1	<2	4.99	<0.5	5	84	6	1.45	20
428410		0.26	0.001	<0.5	7.49	5	1030	1.2	<2	5.67	<0.5	6	67	4	1.87	20
428411		0.20	0.001	<0.5	7.90	6	1050	1.3	<2	5.73	<0.5	9	90	3	2.05	20
428412		0.28	0.002	<0.5	7.68	9	940	1.2	<2	4.44	<0.5	7	74	7	2.04	20
428413		0.28	0.001	<0.5	7.88	<5	1100	1.1	3	4.91	<0.5	8	80	13	2.07	20
428414		0.26	0.002	<0.5	7.68	<5	410	1.1	<2	5.76	<0.5	8	79	9	2.14	20
428415		0.26	0.004	<0.5	8.20	<5	330	1.4	<2	6.39	<0.5	8	72	30	2.43	20
428416		0.24	0.164	1.4	6.37	8	380	1.9	<2	6.00	<0.5	9	124	1640	2.76	20
428417		0.30	0.009	<0.5	7.98	6	740	1.3	2	5.41	<0.5	8	81	76	2.22	20
428418		0.22	0.007	<0.5	7.74	<5	1650	1.6	<2	8.94	<0.5	11	112	61	3.81	20
428419		0.24	0.030	0.7	3.12	33	40	<0.5	5	17.4	<0.5	5	179	298	10.40	20
428420		0.26	0.005	<0.5	7.34	7	750	1.4	2	4.46	<0.5	3	81	43	1.64	20
428421		0.22	0.002	<0.5	6.66	<5	350	1.2	2	3.94	<0.5	5	106	12	1.31	20
428422		0.20	0.001	<0.5	3.38	16	60	<0.5	4	14.1	<0.5	2	146	4	9.98	10
428423		0.24	0.002	<0.5	2.95	8	20	<0.5	5	19.0	<0.5	<1	164	17	12.65	20
428424		0.28	0.006	<0.5	7.09	13	280	1.1	<2	3.90	<0.5	2	112	55	0.88	20
428425		0.20	0.009	<0.5	6.55	7	760	1.2	<2	4.70	<0.5	3	112	75	0.88	20
428426		0.28	0.035	1.0	7.28	9	1250	1.1	4	3.28	<0.5	4	114	319	2.83	20
428427		0.24	0.001	<0.5	7.39	5	2230	1.1	2	3.34	0.8	5	194	6	3.12	20
428428		0.28	0.001	<0.5	7.40	8	2210	1.1	3	3.30	1.1	5	126	6	3.09	20

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Page: 2 - B Total # Pages: 2 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244712

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
428401		0.59	10	1.13	2970	23	1.29	10	690	7	0.15	<5	10	170	<20	0.27
428402		2.06	<10	0.64	1250	4	2.01	4	650	22	0.45	5	5	169	<20	0.19
428403		0.38	<10	0.41	3710	4	0.32	4	890	4	0.42	<5	3	59	<20	0.09
428404		0.36	<10	0.38	3110	4	0.48	9	2220	6	0.33	<5	5	62	<20	0.08
428405		0.54	20	2.92	1955	5	4.11	8	1190	6	0.04	<5	18	367	<20	0.34
428406		0.02	<10	0.24	3750	18	0.03	2	580	4	0.05	<5	1	30	<20	0.03
428407		0.59	20	1.23	4310	23	1.26	8	1240	41	<0.01	<5	12	145	<20	0.27
428408		2.49	10	1.28	1825	6	2.88	4	1070	18	0.01	5	10	315	<20	0.28
428409		0.92	10	1.05	1065	7	4.04	2	800	7	<0.01	<5	7	288	<20	0.23
428410		0.95	10	1.34	1350	7	4.13	3	1020	12	<0.01	<5	10	467	<20	0.29
428411		1.13	10	2.12	1480	6	4.27	11	1160	14	<0.01	5	14	524	<20	0.34
428412		1.42	10	1.81	1225	5	4.20	9	1260	11	<0.01	<5	14	331	<20	0.35
428413		1.27	10	2.33	1245	6	4.33	16	1120	10	0.01	5	15	549	<20	0.32
428414		0.67	10	2.46	1510	6	4.41	13	1120	10	<0.01	<5	15	330	<20	0.31
428415		0.54	10	2.74	1935	6	4.66	15	1160	17	0.03	<5	15	395	<20	0.31
428416		1.31	10	3.56	1820	230	2.09	28	1270	25	0.44	<5	59	179	20	0.28
428417		1.17	10	2.34	1335	21	4.46	15	1080	11	0.02	<5	17	427	<20	0.30
428418		1.32	10	2.33	2410	8	3.39	14	1010	16	0.01	<5	14	270	<20	0.29
428419		0.09	<10	0.87	3760	335	0.21	18	760	16	0.14	<5	20	42	<20	0.06
428420		0.82	10	1.26	1170	24	4.33	3	780	10	0.02	<5	8	356	<20	0.21
428421		0.57	<10	1.44	1065	7	4.09	2	730	10	0.04	<5	7	355	<20	0.21
428422		0.14	<10	0.84	4010	22	0.60	4	320	5	<0.01	<5	2	73	<20	0.08
428423		0.04	<10	0.39	3970	37	0.02	2	520	6	<0.01	<5	2	33	<20	0.07
428424		0.62	10	0.82	751	10	4.72	4	810	11	0.01	<5	7	401	<20	0.24
428425		0.63	<10	0.97	826	13	4.40	4	870	13	0.01	6	7	625	<20	0.25
428426		2.21	10	1.19	1670	4	2.22	2	930	13	0.36	<5	10	334	<20	0.27
428427		2.31	10	0.94	1130	3	2.33	4	870	42	0.05	<5	9	561	<20	0.25
428428		2.33	10	0.94	1110	4	2.33	2	880	40	0.04	<5	9	555	<20	0.25

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

MAI 1=1 CIII.=P

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244712

Sample Description	Method Analyte Units LOR	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2	Au- AA23 Au ppm 0.005
428401		<10	20	93	<10	66	0.018
428402		<10	10	55	<10	154	0.035
428403		<10	20	86	<10	41	0.049
428404		<10	10	122	10	27	0.107
428405		<10	30	106	<10	76	0.012
428406		<10	10	133	30	21	0.006
428407		<10	20	99	10	78	0.007
428408		<10	20	76	<10	71	<0.005
428409		<10	30	58	<10	63	<0.005
428410		<10	30	87	<10	77	<0.005
428411		<10	30	107	<10	78	<0.005
428412		<10	20	109	<10	69	<0.005
428413		<10	30	118	<10	68	<0.005
428414		<10	30	111	<10	113	<0.005
428415		<10	30	101	<10	143	<0.005
428416		<10	20	99	<10	171	0.270
428417		<10	30	104	<10	89	0.009
428418		<10	30	99	<10	111	0.008
428419		<10	10	199	30	94	0.034
428420		<10	30	55	<10	76	<0.005
428421		<10	30	49	<10	89	<0.005
428422		<10	20	106	20	61	0.007
428423		<10	10	59	10	32	0.032
428424		<10	30	66	<10	80	0.012
428425		<10	30	66	<10	127	0.013
428426		<10	10	83	<10	123	0.017
428427		<10	20	86	<10	100	<0.005
428428		<10	10	88	<10	101	<0.005

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC VOJ 2N0**

Finalized Date: 12- DEC- 2011
Account: PB.

CERTIFICATE VA11244714

Project: 4020

P.O. No.: 320

This report is for 63 Crushed Rock samples submitted to our lab in Vancouver, BC, Canada on 22- NOV-2011.

The following have access to data associated with this certificate:

WADE BARNES	CARL EDMUNDS	RON KONST

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 24	Pulp Login - Rcd w/o Barcode
PUL- QC	Pulverizing QC Test
LOG- 22	Sample login - Rcd w/o BarCode
PUL- 31	Pulverize split to 85%<75 urn

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
Cu-AA49	Assay Cu - HBr Digestion	AAS
ME-ICP61	33 element four acid ICP-AES	ICP- AES

To: **NORTHGATE MINERALS - KEMESS MINE**
ATTN: RON KONST
KEMESS MINE
PO BOX 3519
SMITHERS BC V03 2N0

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

ALS Canada Ltd.
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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244714

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu- AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
431701		0.24	0.007	<0.5	7.74	5	1450	1.0	<2	2.74	0.6	5	4	73	1.98	20
431702		0.20	0.006	<0.5	6.69	<5	1040	0.9	<2	3.22	0.6	7	32	55	2.29	10
431703		0.22	0.003	<0.5	7.32	<5	1320	1.0	<2	2.36	0.6	5	5	22	1.90	10
431704		0.22	0.018	<0.5	7.71	<5	1480	1.1	2	2.16	0.7	6	7	158	2.07	20
431705		0.20	0.002	<0.5	6.53	<5	1320	1.0	2	2.53	<0.5	5	5	18	2.08	20
431706		0.20	0.007	<0.5	7.31	<5	1300	1.1	3	2.46	0.5	4	4	63	1.98	10
431707		0.20	0.006	<0.5	6.98	<5	1310	1.0	<2	2.75	0.5	4	4	54	2.05	10
431708		0.20	0.007	<0.5	7.20	<5	1360	1.0	<2	2.36	0.5	3	5	59	2.02	20
431709		0.22	0.004	<0.5	7.18	5	1340	1.0	<2	2.45	0.5	4	6	37	2.01	10
431710		0.22	0.008	<0.5	7.56	<5	1440	1.0	<2	2.63	0.5	5	6	69	2.40	20
431711		0.22	0.011	<0.5	7.49	<5	1460	1.0	<2	2.43	0.5	5	6	108	2.40	20
431712		0.20	0.012	<0.5	7.28	<5	1410	1.0	2	2.40	0.7	5	4	117	2.17	20
431713		0.18	0.007	<0.5	7.18	<5	1390	1.1	<2	2.51	0.5	4	6	65	2.15	20
431714		0.22	0.005	<0.5	7.75	6	1380	1.1	<2	2.43	0.6	4	7	51	2.19	20
431715		0.20	0.003	<0.5	7.34	<5	1410	1.1	<2	2.54	0.5	4	6	46	2.25	20
431716		0.20	0.004	<0.5	7.79	<5	1490	1.1	<2	2.50	0.5	5	7	39	2.19	20
431717		0.22	0.007	<0.5	7.38	<5	1430	1.0	2	2.24	0.5	5	4	66	2.24	10
431718		0.20	0.007	<0.5	7.72	<5	1500	1.1	<2	2.68	0.6	4	6	57	2.19	20
431719		0.20	0.006	<0.5	7.47	<5	1430	1.1	<2	2.46	0.5	4	6	55	2.38	20
431720		0.20	0.008	<0.5	7.29	<5	1310	1.0	<2	2.51	0.5	5	6	73	2.21	20
431721		0.22	0.012	<0.5	7.19	<5	1370	0.9	<2	2.37	0.5	5	4	109	2.12	20
431722		0.20	0.008	<0.5	7.65	<5	1470	1.1	<2	2.65	0.6	5	6	77	2.37	20
431723		0.20	0.012	<0.5	6.83	<5	1400	1.0	<2	2.93	0.5	4	5	105	1.96	20
431724		0.20	0.006	<0.5	6.74	<5	1490	0.8	<2	4.93	0.6	3	3	59	1.27	10
431725		0.20	<0.001	<0.5	7.50	<5	1410	1.2	<2	2.39	0.5	5	6	2	2.68	20
431938		0.20	0.008	<0.5	5.35	12	90	0.7	<2	7.64	0.5	15	53	81	5.77	10
431939		0.20	0.018	0.5	5.22	19	130	0.6	<2	10.10	0.9	12	49	174	4.66	10
431940		0.20	0.215	9.2	2.83	34	160	0.5	5	10.95	4.7	11	34	2260	6.34	10
431941		0.22	0.065	1.0	3.51	32	210	0.6	<2	11.00	6.2	7	38	686	7.59	10
431942		0.20	0.065	1.0	4.10	28	60	0.6	<2	8.55	1.3	12	28	652	5.30	10
431943		0.20	0.055	1.0	2.35	55	30	<0.5	2	13.7	0.6	13	30	605	9.86	10
431944		0.22	0.052	0.6	1.95	31	20	<0.5	<2	11.50	1.2	5	26	522	8.26	10
431945		0.22	0.058	0.8	1.60	40	10	<0.5	<2	14.35	0.7	16	28	584	9.42	10
431946		0.20	0.023	<0.5	1.70	44	10	<0.5	<2	12.75	1.0	5	24	208	8.02	10
431947		0.22	0.033	<0.5	2.57	31	40	0.5	<2	13.0	0.7	6	35	343	7.97	10
431948		0.20	0.047	0.9	3.08	27	50	<0.5	<2	16.9	0.9	13	34	488	10.75	10
431949		0.22	0.014	<0.5	7.96	19	390	0.9	<2	7.92	<0.5	28	71	153	5.56	20
431950		0.22	0.015	<0.5	7.43	13	370	0.8	<2	7.29	<0.5	29	69	132	5.37	20
431951		0.20	0.008	<0.5	8.57	12	280	0.7	<2	7.28	<0.5	19	74	76	5.12	20
431952		0.22	0.010	0.8	8.01	6	300	0.8	<2	6.39	<0.5	31	74	92	5.73	20

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Page: 2 - B Total # Pages: 3 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

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CERTIFICATE OF ANALYSIS VA11244714

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
431701		2.17	10	0.56	347	2	3.00	6	580	13	0.10	<5	5	486	<20	0.18
431702		1.53	10	0.72	420	69	2.22	7	530	6	0.16	<5	6	417	<20	0.19
431703		2.08	10	0.51	301	3	2.84	2	550	7	0.04	<5	4	451	<20	0.17
431704		2.12	10	0.56	341	1	3.02	<1	580	7	0.22	<5	5	575	<20	0.18
431705		1.75	10	0.46	415	<1	2.72	<1	540	6	0.06	<5	5	461	<20	0.18
431706		1.69	10	0.53	361	1	2.77	<1	570	7	0.15	<5	5	450	<20	0.17
431707		1.55	10	0.46	351	<1	2.76	<1	550	7	0.18	<5	4	448	<20	0.17
431708		1.67	10	0.46	340	4	2.90	<1	570	6	0.18	<5	4	543	<20	0.18
431709		1.78	10	0.45	339	24	2.74	<1	560	7	0.10	<5	5	498	<20	0.18
431710		1.77	10	0.49	374	9	2.92	<1	590	8	0.28	<5	5	554	<20	0.19
431711		1.82	10	0.48	365	14	3.06	<1	600	6	0.29	<5	5	512	<20	0.19
431712		1.96	10	0.45	337	27	2.80	<1	570	5	0.53	<5	5	458	<20	0.18
431713		1.73	10	0.44	326	15	2.98	<1	570	7	0.24	<5	4	497	<20	0.18
431714		1.93	10	0.44	318	<1	2.99	<1	560	6	0.34	<5	5	513	<20	0.17
431715		1.84	10	0.51	350	<1	3.07	<1	590	8	0.24	<5	5	514	<20	0.19
431716		1.90	10	0.49	351	<1	3.11	<1	600	6	0.36	<5	5	594	<20	0.19
431717		1.99	10	0.46	295	1	2.97	1	560	6	0.88	<5	5	530	<20	0.17
431718		1.80	10	0.49	318	<1	3.04	<1	610	6	0.58	<5	5	556	<20	0.18
431719		1.90	10	0.47	344	<1	3.01	<1	590	5	0.47	<5	5	590	<20	0.18
431720		1.70	10	0.47	307	35	2.69	<1	550	6	0.56	<5	5	504	<20	0.17
431721		1.74	10	0.46	303	1	2.99	1	580	7	0.39	5	5	555	<20	0.18
431722		1.68	10	0.49	340	<1	2.89	<1	570	7	0.46	<5	5	592	<20	0.18
431723		1.77	10	0.44	314	2	2.73	<1	530	7	0.37	<5	4	546	<20	0.17
431724		2.55	10	0.33	216	2	2.14	<1	490	5	0.16	<5	3	441	<20	0.14
431725		2.16	10	0.88	683	70	3.03	<1	700	6	0.10	<5	6	458	<20	0.25
431938		0.22	<10	2.82	2360	<1	1.91	14	830	4	0.20	7	19	229	<20	0.71
431939		0.39	20	3.25	2880	4	1.29	16	850	11	0.15	8	19	184	<20	0.71
431940		0.44	10	1.27	2410	11	0.34	17	640	162	0.60	<5	9	91	<20	0.35
431941		0.43	20	1.55	3340	3	0.55	9	590	231	0.80	7	10	108	<20	0.40
431942		0.14	40	1.73	2190	1	1.38	14	1000	25	0.40	9	12	146	<20	0.57
431943		0.07	10	1.08	2830	1	0.37	9	620	10	0.61	<5	7	54	<20	0.29
431944		0.04	10	1.25	3260	<1	0.09	11	340	12	0.24	<5	4	51	<20	0.18
431945		0.01	<10	0.73	2890	<1	0.03	14	400	5	0.69	<5	4	30	<20	0.17
431946		0.02	<10	0.62	2960	2	0.05	7	390	5	0.06	<5	4	81	<20	0.16
431947		0.06	10	1.40	3140	<1	0.19	12	540	7	0.07	<5	7	76	<20	0.28
431948		0.08	<10	1.41	2870	<1	0.32	15	510	22	0.45	5	8	78	<20	0.31
431949		0.69	10	3.86	1545	4	2.29	42	1090	33	0.58	6	31	472	<20	1.18
431950		0.59	10	3.70	1435	3	2.14	25	1010	8	0.59	<5	30	448	<20	1.13
431951		0.52	10	3.82	1120	2	3.01	23	1190	<2	0.32	<5	34	625	<20	1.24
431952		0.71	10	3.73	1415	2	3.01	26	1080	<2	0.84	<5	33	413	<20	1.20

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Project: **4020**

CERTIFICATE OF ANALYSIS VA11244714

Sample Description	Method	ME- ICP61	ME- ICP61	ME- ICP61	ME-	ME- ICP61	Au- AA23
	Analyte	Tl	U	V	ICP61	Zn	Au
	Units	ppm	ppm	ppm	W ppm	ppm	ppm
	LOR	10	10	1	10	2	0.005
431701		<10	20	35	<10	32	<0.005
431702		<10	10	52	<10	31	<0.005
431703		<10	10	34	<10	26	<0.005
431704		<10	20	37	<10	26	0.018
431705		<10	20	39	<10	30	<0.005
431706		<10	10	35	<10	28	0.006
431707		<10	10	35	<10	25	<0.005
431708		<10	10	35	<10	28	0.005
431709		<10	10	36	<10	25	<0.005
431710		<10	20	39	<10	27	<0.005
431711		<10	20	41	<10	26	0.007
431712		<10	20	35	<10	27	0.008
431713		<10	20	35	<10	25	0.005
431714		<10	20	33	<10	23	<0.005
431715		<10	20	37	<10	27	<0.005
431716		<10	20	34	<10	25	<0.005
431717		<10	20	34	<10	21	0.012
431718		<10	20	37	<10	23	<0.005
431719		<10	20	36	<10	23	<0.005
431720		<10	10	34	<10	21	0.019
431721		<10	20	33	<10	21	0.015
431722		<10	20	34	<10	22	0.008
431723		<10	20	32	<10	22	0.020
431724		<10	10	24	<10	16	0.009
431725		<10	20	51	<10	49	<0.005
431938		<10	10	177	<10	77	0.013
431939		<10	10	196	<10	144	0.011
431940		<10	<10	120	50	289	0.337
431941		<10	<10	110	30	498	0.059
431942		<10	10	131	<10	138	0.046
431943		<10	<10	99	30	88	0.042
431944		<10	<10	38	20	180	0.087
431945		<10	<10	59	30	63	0.067
431946		<10	<10	32	30	92	0.069
431947		<10	<10	60	20	128	0.051
431948		<10	<10	124	10	97	0.044
431949		<10	10	331	10	147	0.012
431950		<10	10	320	<10	121	0.010
431951		<10	10	316	<10	67	<0.005
431952		<10	10	326	<10	116	0.044

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Page: 3 - A Total #
Pages: 3 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244714

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu- AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
431953		0.20	0.007	0.7	7.79	9	230	0.7	<2	6.77	<0.5	18	68	62	5.61	20
431954		0.22	0.004	<0.5	7.40	12	230	0.9	<2	8.02	<0.5	17	64	39	5.02	20
431955		0.22	0.012	<0.5	7.87	11	470	0.7	<2	8.37	<0.5	30	72	117	4.68	20
431956		0.22	0.010	<0.5	8.08	10	150	0.7	<2	6.65	<0.5	26	72	96	5.18	20
431957		0.20	0.010	<0.5	7.55	8	190	0.8	<2	5.21	0.6	26	71	85	5.58	20
431958		0.20	0.009	<0.5	7.63	7	300	0.7	<2	5.18	<0.5	25	79	86	6.29	20
431959		0.22	0.006	<0.5	8.52	8	180	0.8	<2	5.81	<0.5	20	79	59	5.83	20
431960		0.20	0.004	<0.5	8.37	12	220	0.7	<2	5.46	<0.5	21	78	42	5.36	20
431961		0.20	0.006	<0.5	8.19	9	310	0.8	<2	5.96	<0.5	23	73	63	6.01	20
431962		0.20	0.028	0.6	7.62	9	140	0.7	<2	6.86	<0.5	41	69	311	5.70	20
431963		0.20	0.005	<0.5	8.54	10	270	0.9	<2	6.84	<0.5	17	74	55	4.49	20
431964		0.22	0.020	4.1	6.54	6	220	0.7	3	6.19	7.4	75	14	197	5.87	20
431965		0.20	0.012	<0.5	6.81	8	330	0.6	<2	4.81	<0.5	28	64	120	5.90	20
431966		0.20	0.006	<0.5	8.39	<5	1700	0.9	<2	3.62	<0.5	19	9	58	4.48	20
431967		0.22	0.010	<0.5	8.28	8	1620	1.0	<2	4.29	<0.5	23	34	93	4.76	20
431968		0.20	0.010	<0.5	8.15	8	1040	1.0	<2	5.20	<0.5	23	88	92	5.79	20
431969		0.22	0.008	<0.5	8.14	<5	410	1.0	<2	5.17	<0.5	30	77	72	6.62	20
431970		0.22	0.010	<0.5	8.43	<5	830	0.9	<2	6.12	<0.5	28	87	103	6.39	20
431971		0.22	0.005	<0.5	7.82	12	1380	1.0	<2	6.29	<0.5	19	82	45	4.68	10
431972		0.22	0.008	<0.5	7.48	9	530	0.8	<2	5.36	<0.5	24	51	75	5.96	20
431973		0.22	0.009	<0.5	7.51	13	240	1.1	<2	4.67	0.5	21	26	92	6.15	20
431974		0.20	0.006	<0.5	7.55	17	270	1.2	<2	3.20	<0.5	20	94	52	5.21	20
431975		0.08	0.019	0.7	8.11	56	140	2.8	12	2.68	0.6	22	73	191	5.49	20

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Page: 3 - B Total # Pages: 3 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244714

Sample Description	Method / Analyte / Units / LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
431953		0.67	20	3.52	1930	2	2.64	24	1180	13	0.63	5	32	338	<20	1.16
431954		0.69	10	3.21	1880	2	2.23	19	1250	9	0.43	<5	30	308	<20	1.10
431955		0.93	10	3.39	898	4	2.02	23	1080	2	0.85	8	31	392	<20	1.19
431956		0.77	10	3.22	1455	2	2.56	26	1160	10	0.46	6	33	367	<20	1.23
431957		0.81	10	3.49	1320	2	2.82	24	1010	10	0.37	8	31	358	<20	1.15
431958		0.67	<10	3.16	946	5	3.05	23	1140	<2	0.41	<5	31	401	<20	1.19
431959		0.41	10	3.30	1145	2	3.64	22	1240	2	0.26	5	35	469	<20	1.23
431960		0.40	10	3.31	1250	2	3.79	21	1270	<2	0.33	5	34	488	<20	1.23
431961		0.42	10	3.57	1440	3	3.53	22	1220	4	0.45	6	33	673	<20	1.19
431962		0.27	10	3.42	1305	2	3.39	35	1050	7	1.22	<5	30	457	<20	1.12
431963		0.36	10	3.81	1420	1	3.36	21	1240	4	0.21	<5	35	580	<20	1.26
431964		1.42	<10	1.05	813	26	2.30	17	350	88	6.08	<5	7	192	<20	0.25
431965		0.57	10	4.12	1280	2	1.89	26	750	4	0.58	<5	26	266	<20	0.90
431966		1.79	10	1.92	753	5	3.62	2	860	4	0.42	5	19	535	<20	0.41
431967		1.64	10	2.19	767	4	3.70	8	950	4	0.65	5	21	554	<20	0.53
431968		1.16	10	3.22	919	3	2.71	23	1000	5	0.52	<5	24	516	<20	0.48
431969		0.84	10	3.73	1210	2	2.68	20	1160	2	0.45	6	33	453	<20	1.16
431970		0.93	10	3.57	1075	4	2.64	23	1210	4	0.61	<5	32	528	<20	1.08
431971		1.85	10	2.70	1300	2	1.86	25	1000	4	0.25	<5	23	370	<20	0.44
431972		0.57	10	2.62	1195	2	2.38	13	1250	4	0.39	6	26	362	<20	0.86
431973		1.26	10	2.45	1610	9	1.77	7	1210	25	0.51	7	27	175	<20	1.13
431974		0.74	10	3.61	1610	2	2.10	35	700	30	0.26	5	23	254	<20	0.74
431975		4.13	10	1.97	494	1	3.09	72	1130	47	2.43	<5	6	383	<20	0.60

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Project: **4020**

CERTIFICATE OF ANALYSIS VA11244714

Sample Description	Method Analyte Units LOR	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2	Au- AA23 Au ppm 0.005
431953		<10	10	341	<10	195	0.058
431954		<10	10	318	<10	168	0.005
431955		<10	10	328	<10	60	0.011
431956		<10	10	329	<10	139	0.006
431957		<10	10	307	<10	123	0.005
431958		<10	10	325	<10	60	0.006
431959		<10	10	342	<10	72	<0.005
431960		<10	10	356	<10	94	0.005
431961		<10	10	331	<10	84	0.006
431962		<10	10	289	<10	102	0.019
431963		<10	10	318	<10	131	0.005
431964		<10	10	82	<10	548	0.096
431965		<10	10	255	<10	98	0.011
431966		<10	10	202	<10	78	<0.005
431967		<10	10	210	<10	60	<0.005
431968		<10	10	186	<10	59	<0.005
431969		<10	10	316	<10	58	<0.005
431970		<10	10	302	<10	126	<0.005
431971		<10	10	174	<10	98	<0.005
431972		<10	10	239	<10	67	<0.005
431973		<10	<10	260	<10	195	<0.005
431974		<10	10	182	<10	103	<0.005
431975		<10	10	76	<10	63	0.620

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC VOJ 2N0**

Finalized Date: 12- DEC- 2011
Account: PB.

CERTIFICATE VA11244715

Project: 4020
P.O. No.: 322

This report is for 49 Pulp samples submitted to our lab in Vancouver, BC, Canada on 22-NOV- 2011.

The following have access to data associated with this certificate:

WADE BARNES	CARL EDMUNDS	RON KONST

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 24	Pulp Login - Rcd w/o Barcode
LOG-QC	QC Test on Received Samples

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
Cu-AA49	Assay Cu - HBr Digestion	AAS
ME-ICP61	33 element four acid ICP-AES	ICP- AES

To: **NORTHGATE MINERALS - KEMESS MINE**
ATTN: RON KONST
KEMESS MINE
PO BOX 3519
SMITHERS BC V03 2N0

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

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Project: **4020**

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CERTIFICATE OF ANALYSIS VA11244715

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu- AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
431776		0.24	0.007	<0.5	7.45	<5	1140	1.0	<2	3.29	<0.5	7	166	63	1.86	20
431777		0.22	0.011	<0.5	7.54	<5	1690	0.9	<2	2.36	<0.5	5	211	106	2.23	20
431778		0.26	0.025	<0.5	7.10	11	1370	1.0	<2	2.03	<0.5	4	220	236	2.12	20
431779		0.26	0.008	<0.5	6.32	<5	1240	0.9	<2	2.17	<0.5	3	170	67	1.51	10
431780		0.24	0.011	<0.5	7.65	<5	1670	1.1	<2	2.04	<0.5	5	156	112	2.18	10
431781		0.24	0.025	<0.5	6.60	<5	1350	0.8	<2	1.78	<0.5	7	228	242	1.61	10
431782		0.22	0.015	<0.5	7.45	5	1600	1.0	2	2.10	<0.5	4	171	146	1.72	10
431783		0.28	0.012	<0.5	6.82	<5	1350	0.9	<2	1.61	<0.5	5	202	118	1.50	10
431784		0.20	0.004	<0.5	7.22	<5	1190	1.0	2	2.88	<0.5	4	130	43	2.00	10
431785		0.28	0.006	<0.5	7.62	<5	1200	1.1	<2	2.04	<0.5	4	151	66	1.98	10
431786		0.18	0.019	<0.5	7.87	<5	1580	1.1	<2	2.17	<0.5	3	196	184	1.99	20
431787		0.22	0.007	<0.5	7.31	<5	1380	1.0	<2	2.57	<0.5	3	157	68	2.09	10
431788		0.24	0.006	<0.5	8.27	<5	1470	1.2	<2	2.42	<0.5	3	195	56	2.68	20
431789		0.24	0.015	<0.5	7.90	<5	1400	1.2	<2	2.32	<0.5	4	171	152	2.06	20
431790		0.24	0.009	<0.5	8.06	5	1460	1.2	<2	2.14	<0.5	4	143	88	2.18	20
431791		0.24	0.008	<0.5	7.89	<5	1440	1.2	<2	2.40	<0.5	3	151	82	2.35	20
431792		0.24	0.012	<0.5	8.43	<5	1550	1.2	<2	2.43	<0.5	5	200	125	2.53	20
431793		0.26	0.009	<0.5	8.24	<5	1410	1.2	<2	2.54	<0.5	3	188	88	2.29	20
431794		0.22	0.015	<0.5	7.69	<5	1350	1.1	<2	2.38	<0.5	4	194	147	2.03	20
431795		0.26	0.013	<0.5	7.04	<5	1110	1.1	<2	2.33	<0.5	5	174	123	1.92	20
431796		0.24	0.001	<0.5	6.96	<5	1160	1.2	<2	2.43	<0.5	4	159	17	1.73	20
431797		0.22	0.004	<0.5	7.29	<5	1260	1.2	<2	2.32	<0.5	4	173	41	1.98	10
431798		0.26	0.002	<0.5	7.52	<5	1270	1.0	<2	2.65	<0.5	4	141	22	2.53	10
431799		0.20	0.011	<0.5	7.50	<5	1460	1.0	<2	2.32	<0.5	5	160	98	2.06	20
431800		0.24	0.001	<0.5	8.55	8	650	1.4	<2	3.97	<0.5	10	70	13	3.72	20
431901		0.20	0.014	<0.5	7.61	14	460	0.9	<2	6.85	<0.5	20	183	133	4.83	20
431902		0.22	0.006	1.3	6.95	7	200	1.2	<2	5.44	<0.5	21	194	65	4.96	20
431903		0.22	0.005	<0.5	7.82	12	640	1.6	<2	3.91	<0.5	18	105	49	5.65	20
431904		0.24	0.004	<0.5	8.40	6	480	1.1	<2	4.08	<0.5	27	85	40	7.88	20
431905		0.20	0.003	2.5	6.84	18	760	1.6	<2	1.91	1.2	10	182	30	4.98	20
431906		0.20	0.001	1.3	6.66	9	450	0.8	2	2.27	1.3	4	239	18	5.17	20
431907		0.20	0.003	5.5	4.22	7	140	0.5	4	0.98	13.0	1	513	33	18.20	10
431909		0.20	0.015	6.2	7.76	13	470	1.4	4	3.56	2.1	16	133	178	3.45	20
431910		0.22	0.019	5.8	8.03	36	370	1.3	5	2.70	5.6	13	105	179	3.27	20
431911		0.22	0.014	1.8	6.98	17	660	1.3	4	2.19	0.5	11	200	133	3.80	20
431912		0.20	0.014	10.6	7.13	21	950	1.2	19	3.46	0.6	5	236	109	2.29	20
431913		0.20	0.002	<0.5	7.05	8	320	0.9	<2	2.89	<0.5	4	164	8	1.01	20
431914		0.20	0.002	1.0	7.69	6	500	1.1	2	2.52	<0.5	5	160	5	2.06	20
431915		0.22	0.014	0.6	7.13	6	440	0.8	2	2.34	0.5	3	185	117	1.58	20
431916		0.20	0.009	<0.5	6.59	6	390	1.0	<2	3.05	<0.5	6	174	70	1.34	20

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Page: 2 - B Total # Pages: 3 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244715

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
431776		2.33	10	0.67	306	51	2.36	<1	560	5	0.70	<5	5	232	<20	0.18
431777		3.35	10	0.86	428	87	2.62	1	610	13	0.44	5	6	231	<20	0.20
431778		2.60	10	0.48	286	51	2.70	1	580	7	0.15	<5	6	258	<20	0.19
431779		2.40	10	0.39	248	17	2.28	<1	450	6	0.07	<5	6	206	<20	0.16
431780		2.87	10	0.55	291	11	2.70	<1	600	8	0.19	<5	5	343	<20	0.20
431781		2.61	10	0.39	227	60	2.53	1	500	7	0.61	5	5	191	<20	0.16
431782		2.96	10	0.44	282	37	2.69	1	560	8	0.30	<5	5	264	<20	0.18
431783		2.85	10	0.39	229	23	2.59	2	480	4	0.15	5	4	259	<20	0.16
431784		2.13	10	0.41	262	5	2.63	<1	590	7	0.04	<5	5	319	<20	0.18
431785		2.68	10	0.45	297	8	3.03	3	540	10	0.04	<5	5	273	<20	0.18
431786		2.70	10	0.52	322	12	2.80	3	580	10	0.20	<5	5	342	<20	0.19
431787		2.33	10	0.48	321	14	2.65	2	580	7	0.08	5	5	378	<20	0.18
431788		2.33	10	0.55	333	17	3.18	3	630	10	0.06	<5	6	575	<20	0.20
431789		2.58	10	0.50	271	7	3.24	2	610	8	0.16	<5	5	470	<20	0.19
431790		2.31	10	0.52	323	9	3.29	3	640	8	0.07	<5	6	428	<20	0.20
431791		2.13	10	0.55	332	7	2.99	2	620	11	0.04	<5	5	437	<20	0.19
431792		2.25	10	0.58	324	8	3.19	4	640	8	0.15	<5	5	579	<20	0.20
431793		2.22	10	0.52	324	12	2.87	3	580	8	0.17	<5	5	526	<20	0.19
431794		2.46	10	0.45	315	23	3.03	3	550	6	0.32	<5	5	413	<20	0.17
431795		2.22	10	0.47	339	7	2.61	1	620	8	0.37	<5	6	351	<20	0.17
431796		2.53	10	0.32	306	2	2.68	1	380	5	0.03	<5	4	331	<20	0.16
431797		2.59	10	0.42	259	6	2.65	1	470	6	0.05	<5	4	351	<20	0.18
431798		2.14	10	0.49	298	7	2.63	<1	550	4	0.02	<5	5	357	<20	0.18
431799		2.25	10	0.52	283	9	2.79	1	570	6	0.12	<5	5	385	<20	0.19
431800		1.61	10	1.03	895	2	3.26	<1	1000	4	<0.01	<5	10	325	<20	0.28
431901		0.49	10	4.71	1645	27	2.97	44	1140	3	0.32	6	34	399	<20	0.71
431902		0.55	10	3.87	1690	31	2.70	56	890	5	1.10	<5	25	257	<20	0.55
431903		1.34	20	2.31	3790	2	1.91	26	1450	22	0.44	6	22	216	<20	1.03
431904		0.80	10	4.03	6730	1	1.58	28	1790	38	0.35	<5	36	293	<20	1.59
431905		2.23	20	1.91	2500	8	0.36	5	820	55	1.10	<5	13	56	<20	0.52
431906		1.58	10	0.48	526	2	2.54	4	540	70	4.89	<5	3	174	<20	0.12
431907		1.89	<10	0.16	242	8	0.12	<1	320	203	>10.0	6	3	24	<20	0.08
431909		2.19	20	1.65	1375	3	1.59	13	940	29	1.47	8	13	161	<20	0.42
431910		3.04	10	1.47	1390	5	0.69	4	850	20	2.17	7	9	78	<20	0.32
431911		2.80	20	1.46	1770	13	0.11	11	680	26	1.65	<5	10	52	<20	0.37
431912		3.55	10	0.71	1800	7	0.24	6	940	49	0.77	5	9	65	<20	0.27
431913		1.48	<10	0.51	1015	4	3.61	5	760	10	0.14	<5	5	232	<20	0.22
431914		3.31	<10	0.69	1575	10	0.46	3	660	11	0.74	6	4	51	<20	0.15
431915		2.05	<10	0.60	1430	3	2.48	5	650	8	0.38	5	3	130	<20	0.14
431916		1.63	10	0.60	1005	20	2.90	5	610	9	0.38	<5	4	174	<20	0.22

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Project: **4020**

CERTIFICATE OF ANALYSIS VA11244715

Sample Description	Method	ME- ICP61	ME- ICP61	ME- ICP61	ME-	ME- ICP61	Au- AA23
	Analyte	Tl	U	V	ICP61	Zn	Au
	Units	ppm	ppm	ppm	W	ppm	ppm
	LOR	10	10	1	ppm 10	2	0.005
431776		<10	10	33	<10	55	0.012
431777		<10	10	41	<10	72	0.018
431778		<10	10	35	<10	28	0.030
431779		<10	10	28	<10	26	0.008
431780		<10	10	39	<10	31	0.014
431781		<10	10	36	<10	23	0.060
431782		<10	10	34	<10	29	0.030
431783		<10	10	31	<10	22	0.018
431784		<10	10	34	<10	31	<0.005
431785		10	<10	33	<10	30	<0.005
431786		<10	<10	36	<10	28	0.016
431787		<10	<10	34	<10	31	<0.005
431788		<10	<10	41	<10	33	<0.005
431789		<10	<10	37	<10	24	0.007
431790		<10	<10	37	<10	30	<0.005
431791		<10	<10	37	<10	32	0.006
431792		<10	<10	40	<10	30	0.006
431793		<10	<10	36	<10	25	<0.005
431794		<10	10	34	<10	25	0.012
431795		<10	10	32	<10	31	0.008
431796		<10	10	31	<10	21	<0.005
431797		<10	10	32	<10	25	<0.005
431798		<10	10	34	<10	30	<0.005
431799		<10	10	34	<10	28	<0.005
431800		<10	10	106	<10	61	<0.005
431901		<10	10	281	<10	76	0.016
431902		<10	10	182	<10	119	0.030
431903		<10	<10	223	<10	186	<0.005
431904		<10	<10	304	<10	179	<0.005
431905		<10	<10	100	<10	329	0.046
431906		<10	10	39	10	112	0.139
431907		<10	<10	52	20	849	0.456
431909		<10	<10	95	10	260	0.171
431910		<10	<10	74	10	606	0.253
431911		<10	<10	78	10	208	0.115
431912		<10	<10	90	10	140	0.200
431913		<10	10	71	<10	84	<0.005
431914		<10	10	49	<10	120	0.066
431915		<10	10	41	<10	116	0.065
431916		<10	10	46	<10	80	0.037

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Date: 12- DEC- 2011
Account: PI

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CERTIFICATE OF ANALYSIS VA11244715

Sample Description	Method	WE-21	Cu- AA49	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61
	Analyte	Recvd Wt.	Cu	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga
	Units	kg	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
	LOR	0.02	0.001	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
431917		0.22	0.004	<0.5	7.63	7	970	1.3	<2	2.18	<0.5	8	165	29	5.54	30
431918		0.24	0.058	1.2	8.53	7	660	1.1	2	1.85	<0.5	8	181	542	9.32	30
431919		0.22	0.038	1.5	7.06	11	810	1.2	<2	2.33	<0.5	25	222	357	4.20	20
431920		0.22	0.008	<0.5	6.93	<5	730	1.4	<2	2.68	<0.5	8	235	55	2.79	20
431921		0.26	0.001	<0.5	7.02	<5	890	1.3	<2	4.42	<0.5	4	152	7	1.08	10
431922		0.26	0.003	5.4	7.63	14	870	1.5	32	2.57	<0.5	13	198	17	2.90	20
431923		0.28	0.004	2.6	4.63	21	560	0.7	7	3.62	<0.5	19	371	35	11.35	10
431924		0.24	0.010	0.7	7.64	7	1510	1.1	9	5.27	<0.5	12	145	84	4.52	20
431925		0.24	0.003	<0.5	7.58	<5	1460	1.3	<2	2.50	<0.5	10	165	11	3.73	10

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CERTIFICATE OF ANALYSIS VA11244715

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti
	Units	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
	LOR	0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
431917		2.33	10	2.17	3400	10	0.33	3	630	11	0.33	<5	13	85	<20	0.40
431918		1.97	10	3.05	5770	49	0.03	10	950	7	0.42	<5	18	21	<20	0.66
431919		2.19	10	1.56	2330	58	0.76	15	520	9	0.70	5	14	80	<20	0.54
431920		1.38	20	1.70	1520	12	2.05	4	420	10	0.27	<5	13	232	<20	0.47
431921		1.70	10	0.89	1195	9	2.21	4	870	6	0.01	<5	9	251	<20	0.25
431922		2.65	10	0.85	849	9	1.26	12	550	9	1.89	<5	15	151	<20	0.47
431923		1.81	<10	0.72	1710	25	0.14	9	510	19	>10.0	6	6	73	<20	0.13
431924		2.28	10	1.24	1755	4	1.72	12	1040	11	1.35	5	20	310	<20	0.42
431925		2.92	10	1.06	972	2	2.58	4	990	6	<0.01	<5	11	444	<20	0.28

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Project: **4020**

CERTIFICATE OF ANALYSIS VA11244715

Sample Description	Method Analyte Units LOR	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2	Au- AA23 Au ppm 0.005
431917		<10	<10	75	<10	288	0.009
431918		<10	<10	127	10	507	0.014
431919		<10	<10	99	10	210	0.281
431920		<10	<10	78	<10	154	0.012
431921		<10	10	63	<10	63	<0.005
431922		<10	<10	97	10	65	1.060
431923		<10	<10	59	10	134	0.343
431924		<10	<10	140	<10	132	0.057
431925		<10	<10	103	<10	63	<0.005

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North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC VOJ 2N0**

Finalized Date: 12- DEC- 2011
Account: PB.

CERTIFICATE VA11244717

Project: 4020
P.O. No.: 321

This report is for 78 Pulp samples submitted to our lab in Vancouver, BC, Canada on 22-NOV- 2011.

The following have access to data associated with this certificate:

WADE BARNES	CARL EDMUNDS	RON KONST

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 24	Pulp Login - Rcd w/o Barcode
LOG-QC	QC Test on Received Samples

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
Cu-AA49	Assay Cu - HBr Digestion	AAS
ME-ICP61	33 element four acid ICP-AES	ICP- AES

To: **NORTHGATE MINERALS - KEMESS MINE**
ATTN: RON KONST
KEMESS MINE
PO BOX 3519
SMITHERS BC V03 2N0

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

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

MIN 1=1 C111.=P

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244717

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu-AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
428429		0.22	0.011	<0.5	8.46	<5	180	0.8	<2	6.09	0.8	27	140	100	6.67	20
428430		0.24	0.008	1.0	7.20	11	170	0.8	<2	8.68	1.1	22	99	74	5.18	20
428431		0.26	0.011	0.8	7.75	17	440	1.0	<2	6.38	1.7	32	77	110	8.23	20
428432		0.22	0.013	0.5	6.83	12	80	1.0	<2	6.95	1.0	27	60	118	7.75	20
428433		0.28	0.007	<0.5	7.55	10	140	1.1	<2	5.76	1.0	22	76	73	7.35	20
428434		0.26	0.015	<0.5	7.28	7	240	1.0	<2	6.01	1.0	26	84	144	7.72	20
428435		0.22	0.013	0.6	7.16	8	1390	1.0	<2	6.98	1.0	26	73	120	7.21	20
428436		0.26	0.028	1.0	7.05	13	850	1.4	2	4.72	1.9	18	169	295	5.98	20
428437		0.26	0.004	<0.5	7.67	7	1020	2.2	<2	1.14	0.6	5	147	36	4.75	30
428438		0.26	0.010	<0.5	7.03	7	440	1.4	<2	4.98	5.9	19	174	91	6.17	20
428439		0.22	0.011	<0.5	7.14	<5	250	1.0	<2	5.37	1.4	29	237	105	7.29	20
428440		0.26	0.008	<0.5	7.20	6	480	1.8	<2	3.03	1.4	10	216	74	4.38	20
428441		0.26	0.010	<0.5	6.66	<5	270	1.5	<2	3.85	0.8	15	221	95	5.42	20
428442		0.26	0.033	0.6	6.54	11	610	1.0	<2	3.84	0.9	54	164	277	6.83	20
428443		0.22	0.010	5.8	8.16	17	800	1.3	<2	4.50	2.4	23	200	97	6.00	20
428444		0.08	0.010	0.6	7.53	36	150	2.6	5	2.37	1.1	21	67	91	5.39	20
431751		0.22	<0.001	<0.5	5.84	<5	1180	0.7	<2	1.22	<0.5	1	251	4	0.74	10
431752		0.24	0.012	<0.5	7.16	<5	1400	1.1	<2	2.41	<0.5	4	153	106	1.57	10
431753		0.18	0.003	<0.5	6.35	<5	1150	1.2	<2	2.98	<0.5	3	213	30	1.30	20
431754		0.22	0.004	<0.5	6.83	<5	1460	1.2	<2	3.15	<0.5	3	154	42	1.95	20
431755		0.24	0.006	<0.5	7.33	<5	1430	1.3	<2	2.33	0.5	3	163	57	2.17	20
431756		0.18	0.002	<0.5	7.20	<5	1400	1.3	<2	2.34	<0.5	3	227	19	2.08	20
431757		0.22	0.006	<0.5	7.33	<5	1420	1.2	<2	2.37	<0.5	4	142	56	2.09	10
431758		0.22	0.007	<0.5	7.34	<5	1370	1.2	3	2.50	0.6	4	199	59	2.10	20
431759		0.22	0.009	<0.5	6.87	<5	1510	1.1	<2	1.98	0.5	4	150	71	2.30	10
431760		0.24	0.002	<0.5	6.88	<5	1300	1.0	2	3.09	0.8	5	158	10	1.64	20
431761		0.20	0.003	<0.5	7.50	<5	1040	1.1	2	3.70	0.8	4	174	25	1.29	20
431762		0.24	0.001	<0.5	6.84	<5	1460	0.8	3	4.09	0.7	4	163	4	1.30	10
431763		0.24	0.003	<0.5	7.10	<5	1460	1.0	2	2.50	0.8	6	170	19	1.53	10
431764		0.24	0.012	<0.5	7.02	<5	1450	1.1	<2	2.66	0.6	5	151	101	1.93	20
431765		0.22	0.016	<0.5	7.77	<5	1170	1.1	<2	3.62	0.6	6	144	136	2.16	20
431766		0.22	0.025	<0.5	7.29	<5	1510	1.0	<2	2.64	0.7	5	157	218	1.86	20
431767		0.24	0.011	<0.5	6.91	<5	1160	1.0	<2	2.89	0.6	5	147	98	1.97	20
431768		0.22	0.009	<0.5	7.74	<5	1090	0.9	2	1.51	0.6	5	244	73	3.23	20
431769		0.20	0.002	<0.5	8.52	<5	1180	0.7	<2	0.41	0.6	4	281	7	5.80	20
431770		0.24	0.014	0.5	7.37	9	660	0.7	2	0.93	0.7	10	235	132	7.28	20
431771		0.20	0.002	<0.5	7.73	<5	910	0.9	<2	1.57	0.6	7	261	10	3.09	20
431772		0.20	0.011	<0.5	6.89	<5	1470	1.0	2	1.79	0.5	5	183	99	2.47	10
431773		0.26	0.005	<0.5	7.03	<5	1540	1.1	<2	1.52	0.6	4	174	39	1.54	10
431774		0.22	0.005	<0.5	6.89	<5	1470	1.1	<2	1.94	0.6	3	175	44	1.36	10

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Page: 2 - B Total # Pages: 3 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

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CERTIFICATE OF ANALYSIS VA11244717

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
428429		0.36	10	3.79	1410	7	2.31	28	1260	3	0.99	<5	35	356	<20	1.20
428430		0.73	10	3.19	2440	13	1.37	22	1070	15	1.30	5	29	257	<20	1.03
428431		0.69	10	2.38	3360	1	0.44	25	1240	19	1.14	8	33	119	<20	1.27
428432		0.59	10	0.95	2300	5	0.22	8	1530	15	1.21	8	30	99	<20	1.34
428433		0.60	10	1.64	1940	4	1.41	6	1660	9	0.99	<5	34	219	<20	1.49
428434		0.36	10	2.33	2520	2	1.53	8	1560	6	1.65	5	32	260	<20	1.38
428435		0.68	10	2.07	3220	4	0.45	8	1480	14	2.10	5	31	180	<20	1.33
428436		2.34	10	1.78	4750	10	0.04	20	620	21	1.86	<5	16	56	<20	0.39
428437		2.45	30	1.70	1395	7	0.06	3	380	9	0.88	<5	12	31	<20	0.34
428438		1.19	10	2.69	3630	18	0.78	30	940	18	1.17	<5	21	149	<20	0.61
428439		0.29	10	4.51	2900	4	1.57	66	890	19	0.68	<5	31	275	<20	0.58
428440		1.35	30	1.86	1815	27	0.40	15	760	59	0.91	<5	11	89	<20	0.39
428441		0.90	10	2.22	2130	15	0.34	23	410	12	0.86	<5	17	100	<20	0.57
428442		1.75	10	1.18	2580	12	0.16	130	440	13	2.80	<5	14	68	<20	0.42
428443		1.92	10	1.59	2860	15	0.48	45	820	27	1.17	6	22	140	<20	0.73
428444		3.75	10	1.70	468	1	2.79	68	1080	63	2.61	<5	5	370	<20	0.53
431751		2.87	10	0.15	141	1	2.24	3	120	6	0.07	<5	2	152	<20	0.07
431752		2.34	10	0.42	303	35	2.76	2	500	6	0.42	<5	4	329	<20	0.16
431753		1.88	<10	0.31	242	56	2.47	2	530	4	0.17	<5	3	321	<20	0.16
431754		2.04	10	0.41	331	50	2.77	1	540	10	0.07	<5	4	463	<20	0.17
431755		1.91	10	0.44	383	51	2.86	2	540	10	0.06	<5	4	490	<20	0.17
431756		1.97	10	0.42	380	9	2.86	3	540	8	0.02	<5	4	576	<20	0.16
431757		1.87	10	0.44	343	3	3.05	2	560	8	0.07	<5	4	528	<20	0.17
431758		1.92	10	0.45	345	4	2.79	14	530	18	0.12	<5	4	514	<20	0.17
431759		1.95	10	0.44	290	8	2.89	3	510	7	0.30	<5	4	468	<20	0.16
431760		2.26	10	0.50	281	147	2.10	2	500	10	0.90	<5	4	255	<20	0.15
431761		1.82	10	0.53	259	59	2.10	3	490	12	0.48	<5	5	239	<20	0.15
431762		2.52	<10	0.73	353	23	2.65	2	460	10	0.46	<5	4	180	<20	0.14
431763		2.24	10	0.48	290	17	2.79	3	530	9	0.37	<5	4	326	<20	0.16
431764		1.90	10	0.51	266	31	2.60	2	550	6	0.22	<5	4	386	<20	0.18
431765		1.83	10	0.78	360	56	2.10	2	580	6	0.65	<5	6	330	<20	0.18
431766		2.11	10	0.65	386	93	2.77	2	590	11	0.41	<5	5	292	<20	0.19
431767		1.85	10	0.49	384	23	2.23	2	550	8	0.42	<5	4	298	<20	0.18
431768		2.60	10	1.58	622	20	1.50	1	580	6	0.51	<5	4	157	<20	0.16
431769		3.09	20	2.47	1505	28	0.09	1	570	2	0.52	<5	5	23	<20	0.16
431770		2.75	10	1.75	1045	26	0.12	1	460	10	3.15	<5	4	44	<20	0.13
431771		2.83	10	1.36	606	17	1.47	2	590	6	0.77	5	5	133	<20	0.17
431772		2.64	10	0.77	376	12	2.64	1	620	8	0.23	<5	6	292	<20	0.20
431773		3.01	10	0.43	230	4	3.08	4	470	6	0.02	<5	5	388	<20	0.16
431774		2.70	10	0.34	216	6	2.90	2	430	4	0.05	<5	4	398	<20	0.16

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MAI 1=1 CIII.=P

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244717

Sample Description	Method Analyte Units LOR	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2	Au- AA23 Au ppm 0.005
428429		<10	10	335	<10	64	<0.005
428430		<10	10	278	10	139	0.019
428431		<10	<10	331	10	313	0.013
428432		<10	<10	344	10	154	0.005
428433		<10	10	366	10	136	<0.005
428434		<10	<10	351	<10	110	<0.005
428435		<10	<10	332	10	170	0.007
428436		<10	<10	109	<10	415	0.021
428437		<10	<10	39	<10	185	<0.005
428438		<10	<10	183	<10	847	<0.005
428439		<10	<10	258	<10	154	<0.005
428440		<10	<10	94	<10	209	<0.005
428441		<10	<10	134	<10	113	<0.005
428442		<10	<10	127	<10	175	0.006
428443		<10	<10	187	20	375	0.014
428444		<10	10	70	<10	75	1.380
431751		<10	10	10	<10	14	<0.005
431752		<10	10	29	<10	32	0.020
431753		<10	10	27	<10	26	0.009
431754		<10	10	32	<10	31	<0.005
431755		<10	10	33	<10	36	<0.005
431756		<10	10	31	<10	32	<0.005
431757		<10	10	32	<10	29	<0.005
431758		<10	20	31	<10	34	<0.005
431759		<10	20	33	<10	22	<0.005
431760		<10	10	31	<10	46	0.038
431761		<10	10	28	<10	46	0.009
431762		<10	20	25	<10	47	<0.005
431763		<10	20	31	<10	40	<0.005
431764		<10	10	38	<10	20	<0.005
431765		<10	10	36	<10	31	0.013
431766		<10	20	36	<10	40	0.017
431767		<10	10	34	<10	35	0.010
431768		<10	10	32	<10	63	0.013
431769		<10	<10	35	<10	130	<0.005
431770		<10	<10	30	20	121	0.953
431771		<10	10	33	<10	66	0.011
431772		<10	20	37	<10	38	0.010
431773		<10	20	28	<10	17	<0.005
431774		<10	20	26	<10	13	<0.005

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Project: **4020**

CERTIFICATE OF ANALYSIS VA11244717

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu- AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
431775		0.08	0.020	0.6	7.27	45	140	2.8	14	2.46	0.9	22	72	165	5.32	20
431851		0.12	0.076	0.9	3.60	14	170	0.5	<2	13.1	1.3	11	114	738	4.35	10
431852		0.22	0.019	<0.5	5.49	11	380	1.0	<2	7.27	0.8	13	147	175	3.57	10
431853		0.22	0.034	<0.5	2.45	39	50	<0.5	<2	13.2	0.8	10	171	338	9.42	10
431854		0.22	0.017	<0.5	2.21	46	80	<0.5	<2	13.80	0.6	11	202	212	9.15	10
431855		0.24	0.014	<0.5	1.98	23	140	<0.5	2	9.67	0.8	27	138	154	8.07	10
431856		0.24	0.215	6.9	5.80	17	400	1.1	<2	11.15	1.6	24	97	2140	5.98	20
431857		0.24	0.023	<0.5	6.95	6	220	1.2	<2	9.59	0.7	14	64	225	4.92	20
431858		0.22	0.080	2.5	2.50	25	30	<0.5	<2	11.80	0.8	16	188	1215	7.95	10
431859		0.24	0.128	2.3	1.79	45	10	<0.5	<2	12.15	0.7	9	195	1295	8.87	10
431860		0.26	0.064	0.9	2.31	29	30	<0.5	<2	13.15	1.1	5	171	644	8.73	10
431861		0.22	0.037	0.5	2.16	28	10	<0.5	<2	12.7	0.6	5	263	362	8.22	10
431862		0.26	0.082	1.8	1.97	85	10	<0.5	<2	14.10	1.0	11	185	820	8.98	10
431863		0.22	0.001	<0.5	2.01	17	370	<0.5	<2	18.8	0.7	5	64	14	2.16	<10
431864		0.26	0.010	<0.5	1.74	66	120	<0.5	<2	11.10	0.7	5	212	106	5.36	<10
431865		0.24	0.032	<0.5	2.33	30	10	<0.5	<2	13.60	1.8	7	203	282	8.11	10
431866		0.26	0.012	<0.5	5.12	36	570	0.6	<2	11.30	2.5	17	136	101	6.98	10
431867		0.28	0.015	<0.5	6.65	15	1360	0.7	2	9.89	1.0	27	108	144	4.69	10
431868		0.24	0.008	<0.5	8.25	10	530	0.7	2	8.07	0.7	20	110	60	4.08	20
431869		0.28	0.003	<0.5	8.23	8	480	0.7	<2	7.55	0.6	15	104	36	3.94	20
431870		0.24	0.009	<0.5	8.10	9	270	0.9	<2	6.57	<0.5	23	104	83	5.43	20
431871		0.24	0.007	0.5	8.89	7	340	1.0	2	8.18	0.7	21	89	69	6.23	20
431872		0.24	0.007	<0.5	6.22	5	130	0.7	<2	12.50	<0.5	22	73	82	5.72	20
431873		0.24	0.012	<0.5	7.40	9	270	0.8	<2	7.06	<0.5	24	134	109	6.00	20
431874		0.26	0.007	<0.5	8.26	8	320	0.8	2	7.79	<0.5	15	113	48	4.41	20
431875		0.08	0.021	0.8	7.87	48	140	2.8	16	2.57	0.5	20	77	180	5.39	20
431926		0.22	0.011	0.6	7.84	29	840	1.3	4	1.67	<0.5	16	227	90	6.58	20
431927		0.22	0.012	1.2	7.07	17	870	1.1	5	5.20	<0.5	9	210	148	5.94	20
431928		0.24	0.055	5.1	6.82	19	680	1.2	3	12.9	2.4	5	87	547	3.87	10
431929		0.24	0.028	5.5	6.22	16	600	1.2	15	6.86	0.6	9	159	253	10.95	20
431930		0.26	0.015	0.5	7.05	7	350	1.4	<2	6.76	<0.5	3	114	142	3.29	20
431931		0.26	0.027	0.6	2.79	41	60	0.5	2	17.5	<0.5	4	176	289	14.65	20
431932		0.20	0.035	0.8	2.35	19	20	<0.5	<2	19.5	<0.5	<1	196	380	14.85	20
431933		0.24	0.095	0.5	2.73	25	10	<0.5	<2	21.2	<0.5	<1	209	1070	15.60	20
431934		0.22	0.052	0.9	7.35	11	680	1.9	2	8.01	0.6	85	94	520	5.35	10
431935		0.22	0.049	0.7	0.99	13	20	<0.5	3	18.2	<0.5	21	147	524	15.00	10
431936		0.22	0.011	<0.5	8.01	10	1630	2.0	<2	10.90	<0.5	6	98	97	5.64	20
431937		0.08	0.012	0.7	8.26	36	170	2.7	7	2.55	0.6	19	70	94	5.70	20

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Page: 3 - B Total # Pages: 3 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244717

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
431775		3.98	10	1.90	481	<1	2.97	71	1080	46	2.38	7	5	356	<20	0.58
431851		0.48	10	1.43	3820	4	0.51	15	1010	31	0.32	5	10	123	<20	0.42
431852		0.58	40	1.98	2020	2	1.78	11	1220	10	0.32	8	17	226	<20	0.83
431853		0.13	20	0.97	2770	1	0.20	15	1690	8	0.06	<5	6	54	<20	0.23
431854		0.22	20	0.85	2690	2	0.09	15	1480	10	0.17	<5	6	55	<20	0.23
431855		0.24	20	0.85	1715	3	0.17	21	850	18	1.44	<5	6	52	<20	0.24
431856		0.64	40	2.41	2640	1	1.62	21	1020	11	0.86	12	24	254	<20	1.00
431857		0.35	20	2.44	2640	1	2.64	10	610	9	0.22	6	22	389	<20	0.80
431858		0.06	10	0.85	2380	<1	0.53	21	360	9	0.73	<5	6	94	<20	0.20
431859		0.01	20	1.13	3240	<1	0.02	20	360	9	0.60	<5	4	59	<20	0.17
431860		0.06	<10	0.62	3260	1	0.15	13	310	14	0.24	<5	4	40	<20	0.17
431861		0.01	10	0.73	2910	<1	0.01	12	240	7	0.21	<5	4	26	<20	0.18
431862		0.02	10	0.89	3410	29	0.02	14	270	107	0.51	<5	4	63	<20	0.17
431863		0.52	<10	1.13	2430	<1	0.16	10	460	2	0.04	8	5	64	<20	0.21
431864		0.32	<10	2.57	2610	1	0.07	11	460	3	0.02	5	4	69	<20	0.19
431865		0.02	<10	1.25	3000	1	0.11	13	500	7	0.09	6	6	58	<20	0.23
431866		0.72	10	3.03	2340	1	1.16	22	660	31	0.46	7	18	302	<20	0.63
431867		1.53	20	3.84	1640	1	1.57	25	1610	23	0.74	13	28	398	<20	1.08
431868		0.73	10	3.90	986	3	2.55	25	1130	5	0.41	11	34	555	<20	1.20
431869		0.68	10	3.76	968	1	2.58	24	1210	6	0.23	10	34	538	<20	1.19
431870		0.60	10	3.82	1460	2	2.69	31	1170	8	0.64	6	34	412	<20	1.17
431871		1.31	10	3.25	2730	4	1.30	28	1330	19	0.67	8	36	196	<20	1.26
431872		0.30	<10	2.85	1015	2	1.01	22	740	4	0.53	5	23	253	<20	0.78
431873		0.65	10	3.26	1155	2	2.81	25	1140	5	0.66	9	30	362	<20	1.05
431874		0.73	<10	3.03	992	4	2.79	26	1050	4	0.23	10	33	403	<20	1.18
431875		4.00	10	1.89	489	1	2.96	73	1110	53	2.37	<5	6	374	<20	0.58
431926		2.60	20	1.94	3010	12	0.21	20	890	23	2.01	7	19	55	<20	0.62
431927		2.88	10	1.10	2390	7	0.08	8	870	17	3.82	8	9	57	<20	0.23
431928		2.63	10	1.32	4790	12	0.09	7	840	29	0.97	8	10	124	<20	0.21
431929		1.52	10	1.70	3860	74	0.52	9	980	23	4.43	7	12	98	<20	0.34
431930		0.95	<10	0.77	1700	4	3.63	6	480	12	0.42	<5	5	183	<20	0.11
431931		0.28	<10	0.46	3460	2	0.24	3	520	8	1.37	<5	4	54	<20	0.06
431932		0.06	<10	0.22	4370	2	0.04	2	790	4	0.51	<5	3	30	<20	0.06
431933		0.01	<10	0.24	4020	7	0.01	2	880	6	0.19	<5	2	19	<20	0.08
431934		1.44	10	2.32	1805	23	2.78	26	1610	21	3.93	5	20	223	<20	0.32
431935		0.03	<10	0.18	3160	110	0.08	7	310	4	1.21	<5	2	38	<20	0.03
431936		1.88	10	1.86	3520	6	1.72	9	1280	4	0.03	<5	11	340	<20	0.25
431937		4.03	10	1.85	503	1	3.04	72	1160	71	2.77	<5	6	406	<20	0.56

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MAI 1=1 CIII.=P

Project: **4020**

CERTIFICATE OF ANALYSIS VA11244717

Sample Description	Method Analyte Units LOR	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2	Au- AA23 Au ppm 0.005
431775		<10	20	74	<10	59	0.584
431851		<10	<10	85	10	210	0.052
431852		<10	<10	173	<10	88	0.020
431853		<10	10	133	30	111	0.029
431854		<10	<10	104	40	102	0.019
431855		<10	<10	107	10	103	0.017
431856		<10	10	248	10	136	0.182
431857		<10	20	174	<10	73	0.025
431858		<10	<10	83	10	101	0.132
431859		<10	<10	41	30	121	0.099
431860		<10	<10	26	20	88	0.049
431861		<10	<10	40	10	74	0.046
431862		<10	<10	32	20	126	0.139
431863		<10	<10	39	<10	94	<0.005
431864		<10	<10	37	20	105	0.025
431865		<10	<10	49	20	195	0.016
431866		<10	<10	182	10	228	0.021
431867		<10	10	272	<10	83	0.009
431868		<10	10	319	<10	68	0.005
431869		<10	10	336	<10	97	0.005
431870		<10	10	347	<10	134	0.010
431871		<10	<10	386	10	317	0.009
431872		<10	<10	297	<10	73	0.009
431873		<10	10	361	<10	63	0.010
431874		<10	10	355	<10	54	0.014
431875		<10	20	76	<10	58	0.621
431926		<10	<10	126	10	301	0.026
431927		<10	<10	71	10	165	0.048
431928		<10	<10	81	10	356	0.117
431929		<10	<10	94	20	280	0.283
431930		<10	20	53	10	61	0.038
431931		<10	<10	126	40	33	0.101
431932		<10	<10	95	30	22	0.177
431933		<10	<10	117	10	24	0.380
431934		<10	10	109	<10	80	0.194
431935		<10	<10	141	70	15	0.189
431936		<10	<10	101	10	72	0.047
431937		<10	20	74	<10	74	1.390

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC VOJ 2N0**

Finalized Date: 12- DEC- 2011
Account: PB.

CERTIFICATE VA11245453

Project: 4020

P.O. No.: 324

This report is for 25 Crushed Rock samples submitted to our lab in Vancouver, BC, Canada on 22- NOV-2011.

The following have access to data associated with this certificate:

WADE BARNES	CARL EDMUNDS	RON KONST

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 24	Pulp Login - Rcd w/o Barcode
LOG- 22	Sample login - Rcd w/o BarCode
PUL- 31	Pulverize split to 85%<75 urn

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
Cu-AA49	Assay Cu - HBr Digestion	AAS
ME-ICP61	33 element four acid ICP-AES	ICP- AES

To: **NORTHGATE MINERALS - KEMESS MINE**
ATTN: RON KONST
KEMESS MINE
PO BOX 3519
SMITHERS BC V03 2N0

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

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Page: 2 - A Total # Pages: 2 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11245453

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu- AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
431876		0.28	0.003	<0.5	8.62	10	220	0.8	<2	7.86	0.6	15	71	31	4.66	20
431877		0.20	0.002	<0.5	7.58	8	300	0.7	<2	7.93	<0.5	16	65	20	4.19	20
431878		0.28	0.005	<0.5	7.88	5	530	0.8	<2	6.34	<0.5	21	74	45	6.39	20
431879		0.24	0.007	<0.5	7.48	8	430	0.6	<2	6.04	<0.5	26	73	59	5.26	20
431880		0.22	0.004	<0.5	7.70	6	490	0.6	<2	6.04	<0.5	17	80	33	5.83	20
431881		0.24	0.006	<0.5	8.45	6	370	0.7	<2	6.92	<0.5	22	80	60	7.02	20
431882		0.24	0.010	<0.5	7.94	7	390	0.7	<2	6.49	<0.5	25	75	94	6.66	20
431883		0.22	0.006	<0.5	8.29	8	310	0.8	<2	6.16	<0.5	24	74	62	6.50	20
431884		0.20	0.005	<0.5	8.10	7	310	0.8	<2	5.73	<0.5	23	74	44	6.55	20
431885		0.26	0.005	<0.5	7.77	5	320	0.8	<2	5.56	<0.5	19	79	60	6.00	20
431886		0.26	0.010	<0.5	7.31	9	160	0.7	3	6.29	0.6	23	77	94	5.62	10
431887		0.22	0.011	<0.5	7.72	11	210	0.8	2	5.65	1.5	26	76	97	6.09	20
431888		0.26	0.005	<0.5	7.74	10	1290	0.8	<2	4.53	2.0	15	6	49	4.52	20
431889		0.28	0.006	<0.5	8.48	9	930	0.9	2	5.57	1.4	19	26	59	4.42	20
431890		0.28	0.012	<0.5	8.12	8	740	0.9	2	5.51	0.6	25	79	107	5.75	20
431891		0.24	0.006	<0.5	7.55	10	2280	0.9	<2	4.37	0.7	19	84	60	4.07	10
431892		0.26	0.004	<0.5	8.01	5	2390	1.0	<2	4.61	0.5	21	95	39	5.05	20
431893		0.30	0.004	<0.5	7.72	<5	2090	1.0	<2	4.63	0.5	20	92	40	4.60	10
431894		0.20	0.008	<0.5	7.28	8	510	1.0	<2	6.42	0.6	25	69	79	6.53	20
431895		0.26	0.007	<0.5	7.95	8	230	0.9	<2	5.43	0.7	26	76	70	7.39	20
431896		0.24	0.017	<0.5	7.30	6	370	1.2	2	4.84	0.8	29	41	157	4.97	20
431897		0.26	0.007	<0.5	6.56	8	180	1.0	<2	4.27	0.6	18	23	59	6.13	20
431898		0.22	0.005	<0.5	6.71	8	310	1.0	<2	4.82	0.8	28	192	46	6.54	20
431899		0.24	0.006	<0.5	7.00	8	200	1.0	<2	4.58	0.7	28	159	55	6.70	20
431900		0.08	0.012	0.6	7.74	31	160	2.7	5	2.48	1.0	21	70	92	5.59	20

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Page: 2 - B Total # Pages: 2 (A - C) Finalized
Date: 12- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11245453

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
431876		1.02	10	3.33	1735	2	2.19	20	1130	12	0.20	5	35	357	<20	1.26
431877		0.63	10	3.28	1115	1	2.80	19	1150	<2	0.14	<5	30	464	<20	1.13
431878		1.45	10	3.13	1085	2	2.21	23	1170	<2	0.30	<5	31	378	<20	1.20
431879		0.83	<10	3.04	943	1	3.11	25	1220	<2	0.61	<5	28	404	<20	1.16
431880		0.93	<10	3.37	906	2	2.95	24	1220	<2	0.16	<5	29	395	<20	1.20
431881		0.76	10	3.52	1005	1	2.98	25	1240	<2	0.46	<5	33	467	<20	1.26
431882		0.70	10	3.05	983	1	3.07	22	1240	<2	0.70	<5	32	489	<20	1.17
431883		0.44	10	3.45	1185	1	3.50	25	1200	2	0.44	<5	33	554	<20	1.22
431884		0.42	10	3.52	1230	2	3.18	22	1160	<2	0.30	5	33	470	<20	1.19
431885		0.37	<10	3.33	1220	1	3.16	34	1110	14	0.18	10	33	477	<20	1.15
431886		0.41	10	2.92	1120	6	3.03	25	1030	7	1.35	11	31	487	<20	1.07
431887		0.35	10	2.98	1325	<1	3.34	23	1070	15	0.58	10	32	511	<20	1.10
431888		1.54	<10	1.80	2120	<1	2.75	2	810	17	0.52	6	17	509	<20	0.37
431889		1.10	10	2.32	2010	14	3.41	9	910	9	0.40	8	23	534	<20	0.59
431890		0.88	10	3.11	1585	<1	2.87	22	1150	4	0.54	5	29	437	<20	0.87
431891		1.88	10	2.75	935	7	2.84	22	950	3	0.25	5	20	428	<20	0.30
431892		1.58	10	3.31	1035	<1	2.38	25	1020	<2	0.13	<5	22	594	<20	0.33
431893		1.56	10	3.17	939	2	2.49	24	1000	2	0.14	5	20	587	<20	0.32
431894		1.44	<10	2.46	1955	1	1.51	22	960	10	0.38	8	29	268	<20	0.97
431895		0.86	<10	3.06	1670	<1	2.10	23	1090	15	0.32	7	33	252	<20	1.14
431896		1.52	20	2.19	1190	11	1.66	17	920	20	0.78	8	23	178	<20	0.87
431897		0.30	10	2.53	1830	<1	2.51	7	1310	10	0.20	10	28	271	<20	1.20
431898		0.43	10	4.38	2090	<1	1.48	59	910	11	0.17	6	30	275	<20	0.60
431899		0.27	10	4.26	1780	<1	2.29	57	840	8	0.23	7	31	240	<20	0.63
431900		3.95	10	1.82	495	<1	2.98	68	1130	64	2.66	<5	6	387	<20	0.57

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Project: **4020**

MAI 1=1 CIII.=P

CERTIFICATE OF ANALYSIS VA11245453

Sample Description	Method Analyte Units LOR	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2	Au- AA23 Au ppm 0.005
431876		<10	<10	383	10	161	0.006
431877		<10	<10	300	<10	63	<0.005
431878		<10	<10	332	<10	72	<0.005
431879		<10	<10	331	<10	105	0.005
431880		<10	<10	390	<10	86	<0.005
431881		<10	<10	349	<10	68	0.006
431882		<10	<10	312	<10	64	0.006
431883		<10	<10	326	10	75	0.022
431884		<10	<10	318	<10	79	<0.005
431885		<10	20	303	<10	78	<0.005
431886		<10	10	284	<10	69	0.012
431887		<10	10	290	<10	145	0.005
431888		<10	10	193	<10	241	<0.005
431889		<10	20	236	<10	152	<0.005
431890		<10	20	278	<10	94	<0.005
431891		<10	10	146	<10	49	<0.005
431892		<10	10	162	<10	48	<0.005
431893		<10	10	158	<10	49	<0.005
431894		<10	10	289	<10	106	<0.005
431895		<10	10	338	<10	140	<0.005
431896		<10	<10	209	<10	121	0.007
431897		<10	10	283	<10	74	0.005
431898		<10	10	232	<10	158	<0.005
431899		<10	10	235	<10	109	<0.005
431900		<10	20	72	<10	75	1.330

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC VOJ 2N0**

Finalized Date: 13- DEC- 2011
Account: PB.

CERTIFICATE VA11245454

Project: 4020

P.O. No.: 323

This report is for 25 Crushed Rock samples submitted to our lab in Vancouver, BC, Canada on 22- NOV-2011.

The following have access to data associated with this certificate:

WADE BARNES	CARL EDMUNDS	RON KONST

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
PUL- QC	Pulverizing QC Test
LOG- 22	Sample login - Rcd w/o BarCode
PUL- 31	Pulverize split to 85%<75 urn

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
Cu-AA49	Assay Cu - HBr Digestion	AAS
ME-ICP61	33 element four acid ICP-AES	ICP- AES

To: **NORTHGATE MINERALS - KEMESS MINE**
ATTN: RON KONST
KEMESS MINE
PO BOX 3519
SMITHERS BC V03 2N0

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

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Page: 2 - A Total # Pages: 2 (A - C) Finalized
Date: 13- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11245454

Sample Description	Method Analyte Units LOR	WE-21 Recvd Wt. kg 0.02	Cu- AA49 Cu % 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
428400		0.20	0.001	<0.5	7.97	<5	1050	1.3	<2	3.63	0.6	8	5	9	3.44	10
431976		0.22	0.009	<0.5	6.46	8	280	0.8	<2	6.46	0.7	20	139	81	4.75	20
431977		0.22	0.007	<0.5	7.07	7	170	1.0	<2	5.46	0.6	22	132	68	5.43	20
431978		0.20	0.004	<0.5	6.94	5	160	1.3	2	6.18	0.6	16	142	39	3.84	20
431979		0.20	0.004	<0.5	7.07	9	590	2.9	<2	3.13	1.4	10	9	35	2.51	30
431980		0.22	0.035	0.5	8.43	26	390	1.2	3	6.73	0.5	36	83	345	6.52	20
431981		0.22	0.004	<0.5	7.54	13	550	1.5	<2	2.58	1.6	14	47	29	5.03	20
431982		0.20	0.005	0.9	7.08	22	570	1.8	<2	2.32	1.5	14	46	45	4.63	20
431983		0.20	0.007	<0.5	6.95	20	580	1.7	<2	2.43	6.5	10	16	60	3.70	20
431984		0.20	0.006	0.7	6.08	16	410	1.3	<2	2.71	4.7	13	32	51	3.68	20
431985		0.22	0.002	0.5	7.37	6	570	1.0	2	2.06	1.3	2	14	17	1.06	20
431986		0.22	0.014	1.3	6.47	9	940	1.1	3	2.60	1.4	3	12	122	1.58	20
431987		0.20	0.001	<0.5	7.25	8	430	1.1	<2	2.19	1.2	3	14	6	0.59	20
431988		0.22	0.001	<0.5	7.56	<5	380	1.1	<2	2.31	1.3	3	14	2	0.88	20
431989		0.20	0.001	<0.5	8.13	9	920	1.5	<2	1.44	3.6	9	25	4	5.40	20
431990		0.22	0.004	<0.5	7.94	19	960	1.5	4	1.67	0.5	11	27	34	5.08	30
431991		0.22	0.011	1.4	6.75	7	730	1.0	2	2.62	0.9	12	38	92	4.77	20
431992		0.20	0.235	26.2	3.22	30	340	0.5	127	5.62	0.8	34	11	2560	25.6	10
431993		0.20	0.010	4.1	7.52	5	690	1.2	8	1.55	0.8	4	7	94	2.87	20
431994		0.22	0.008	0.6	7.34	<5	730	1.2	4	1.09	0.7	4	3	74	1.65	20
431995		0.22	0.012	5.6	3.69	16	140	0.7	30	9.48	<0.5	37	9	123	21.7	10
431996		0.22	0.032	8.5	0.87	12	30	<0.5	18	23.6	1.0	8	2	306	10.30	<10
431997		0.22	0.003	5.7	0.95	5	90	<0.5	30	7.07	<0.5	17	33	26	28.3	<10
431998		0.22	0.001	0.7	6.15	11	800	1.0	5	6.78	<0.5	4	27	6	3.77	20
431999		0.20	0.005	0.9	7.39	16	800	1.2	2	11.00	<0.5	6	10	43	5.71	20

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Page: 2 - B Total # Pages: 2 (A - C) Finalized
Date: 13- DEC- 2011
Account: PI

Project: **4020**

CERTIFICATE OF ANALYSIS VA11245454

Sample Description	Method Analyte Units LOR	ME- ICP61 K % 0.01	ME- ICP61 La ppm 10	ME- ICP61 Mg % 0.01	ME- ICP61 Mn ppm 5	ME- ICP61 Mo ppm 1	ME- ICP61 Na % 0.01	ME- ICP61 Ni ppm 1	ME- ICP61 P ppm 10	ME- ICP61 Pb ppm 2	ME- ICP61 S % 0.01	ME- ICP61 Sb ppm 5	ME- ICP61 Sc ppm 1	ME- ICP61 Sr ppm 1	ME- ICP61 Th ppm 20	ME- ICP61 Ti % 0.01
428400		2.13	10	1.01	876	<1	2.45	1	930	7	<0.01	<5	10	500	<20	0.27
431976		0.44	10	3.82	1385	1	2.12	43	880	7	0.30	5	36	262	<20	0.60
431977		0.16	20	3.98	1305	1	2.81	48	920	3	0.23	9	28	279	<20	0.61
431978		0.18	10	3.91	1285	2	3.06	49	920	5	0.15	6	26	290	<20	0.53
431979		1.47	30	1.55	1370	19	1.87	5	670	37	0.26	5	10	233	<20	0.51
431980		1.19	10	2.36	2750	74	1.67	41	1680	18	1.89	14	36	277	<20	1.61
431981		1.64	20	2.35	3220	<1	1.02	19	760	14	0.30	6	18	132	<20	0.69
431982		1.74	20	2.22	1420	2	0.73	18	790	24	0.95	6	16	144	<20	0.57
431983		1.88	20	1.87	1510	2	1.00	5	730	21	0.65	7	10	127	<20	0.41
431984		1.36	20	1.45	1525	1	1.16	9	760	33	1.29	7	10	111	<20	0.43
431985		1.91	<10	0.54	815	6	2.75	2	610	19	0.20	5	4	221	<20	0.15
431986		2.52	<10	0.54	1315	1	1.24	4	550	28	0.33	5	3	138	<20	0.14
431987		1.03	<10	0.39	691	<1	4.40	4	630	20	0.03	<5	3	397	<20	0.15
431988		1.57	<10	0.56	987	15	3.40	4	640	10	0.03	5	4	278	<20	0.20
431989		2.68	10	2.19	3680	16	0.09	8	720	7	0.46	7	17	38	<20	0.56
431990		2.76	20	2.01	2770	4	0.14	13	600	10	0.73	7	16	37	<20	0.52
431991		2.32	10	1.61	3070	12	0.04	13	780	7	0.85	5	14	32	<20	0.49
431992		0.80	<10	0.86	3040	15	0.02	<1	390	47	>10.0	<5	5	62	<20	0.12
431993		3.10	<10	0.64	952	41	0.06	1	520	13	1.25	8	7	50	<20	0.19
431994		3.45	<10	0.47	576	9	0.06	<1	170	4	0.83	5	1	33	<20	0.06
431995		0.74	<10	1.14	6740	9	0.02	5	930	36	>10.0	<5	4	87	<20	0.08
431996		0.06	10	0.49	9410	3	0.01	2	110	30	>10.0	<5	1	180	<20	0.02
431997		0.29	<10	0.22	2140	9	0.01	3	140	30	>10.0	<5	3	53	<20	0.03
431998		2.38	30	0.90	2930	5	0.03	5	1110	10	0.84	7	9	77	<20	0.23
431999		2.23	10	1.44	4600	14	0.58	4	1060	16	0.39	8	12	159	<20	0.29

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To: **NORTHGATE MINERALS - KEMESS MINE KEMESS MINE PO BOX 3519 SMITHERS BC V07 2N0**

Project: **4020**

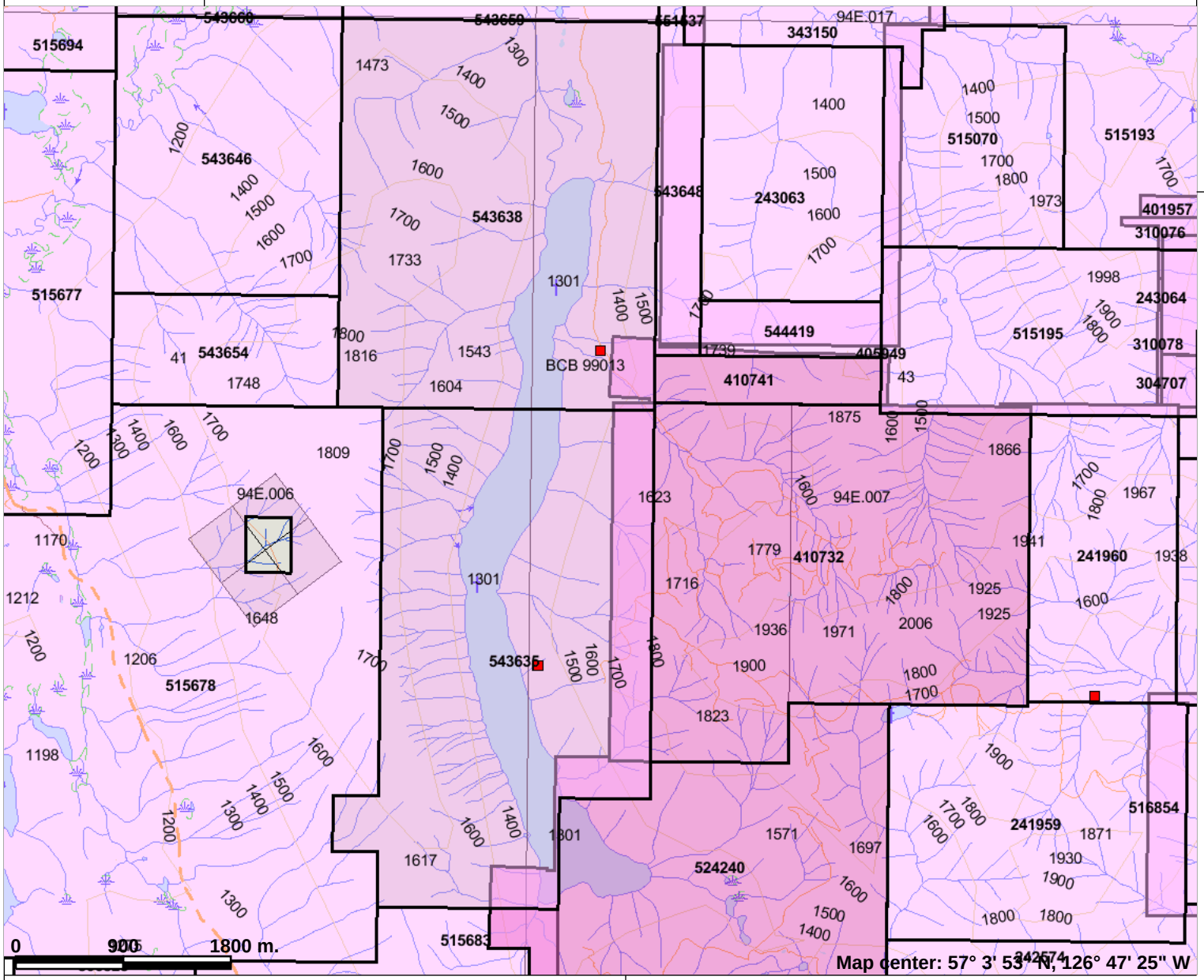
MAI 1=1 CIII.=P

CERTIFICATE OF ANALYSIS VA11245454

Sample Description	Method Analyte Units LOR	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2	Au- AA23 Au ppm 0.005
428400		<10	10	100	<10	60	<0.005
431976		<10	10	234	<10	116	0.018
431977		<10	10	223	<10	75	0.007
431978		<10	10	177	<10	69	0.008
431979		<10	<10	88	<10	135	<0.005
431980		<10	<10	308	10	162	0.091
431981		<10	<10	147	<10	315	0.069
431982		<10	<10	108	<10	186	0.034
431983		<10	<10	66	<10	612	0.014
431984		<10	<10	82	<10	369	0.060
431985		<10	20	40	<10	112	0.018
431986		<10	10	43	<10	148	0.079
431987		<10	30	39	<10	90	<0.005
431988		<10	20	44	<10	122	<0.005
431989		<10	<10	108	10	668	0.006
431990		<10	<10	85	10	275	0.024
431991		<10	<10	101	10	226	0.029
431992		<10	<10	40	<10	215	0.301
431993		<10	<10	57	10	92	0.097
431994		<10	<10	15	10	50	0.021
431995		<10	10	53	10	351	0.466
431996		<10	10	13	10	198	0.325
431997		<10	10	13	10	58	0.226
431998		<10	<10	79	10	173	0.066
431999		<10	10	98	10	235	0.023

Appendix 3:
Plan Map – 1:50,000 Grid, Claims, DDH Locations

2011 Kemess Underground Drill Program



Legend

- Indian Reserves
- National Parks
- Conservancy Areas
- Parks
- Federal Transfer Lands

Mineral Tenure (current)

- Mineral Claim
- Mineral Lease
- First Nations Treaty Related Lands
- First Nations Treaty Lands
- Survey Parcels
- BCGS Grid

Contours (1:250K)

- Contour - Index
- Contour - Intermediate
- Areaof Exclusion
- Areaof Indefinite Contours

Transportation - Points (TRIM)

- Helipad

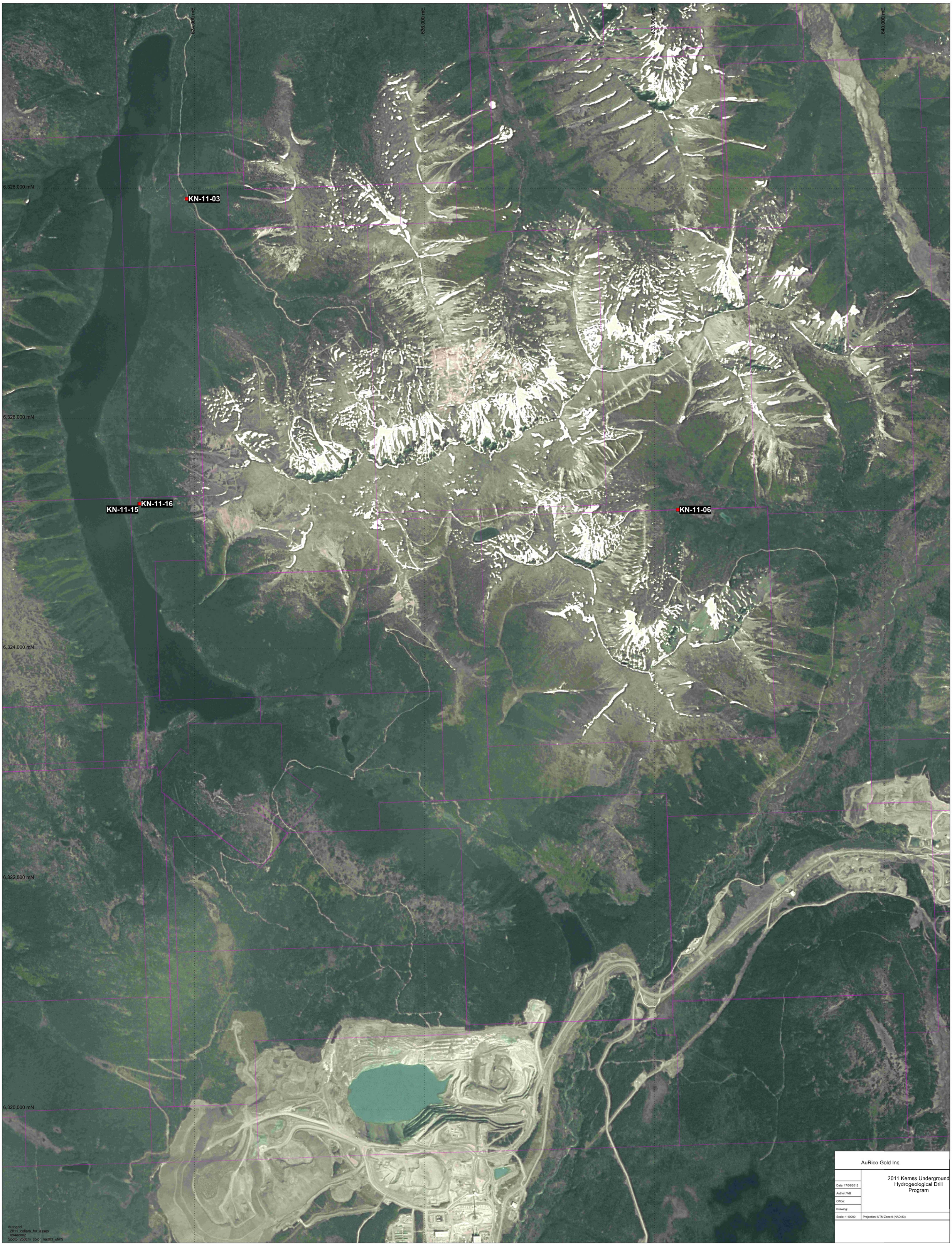
Transportation - Lines (TRIM)

- Airfield
- Airport
- Airstrip
- Airport.Abandoned
- Ferry Route
- Road (Gravel Undivided) - 1 Lane
- Road (Gravel Undivided) - 2 Lanes
- Road (Gravel Undivided) - U/C - 1 Lane
- Road (Gravel Undivided) - U/C - 2 Lanes
- Road (Paved Divided) - Not Elevated - 1 Lane Each Way

N

Scale: 1:50,000

Notes: 2011 Kemess Underground Drillhole collars are located with red squares.



AuRico Gold Inc.

	2011 Kemss Underground Hydrogeological Drill Program
Date: 17/08/2012	
Author: WB	
Office:	
Drawing:	
Scale: 1:10000	Projection: UTM Zone 9 (NAD 83)

Appendix 4:
Sections – 1:1,000 DDH Au,Cu

633,750 mE

634,000 mE

634,250 mE

1,500 mN

1,250 mN

1,000 mN

750 mN

KN-11-03

0

50

100

150

KN-11-03

HoleID

Cu%
Histogram
42.553191 mm/unit

Aupm
Histogram
9.433962 mm/unit

Group_Call
TraceShade

EOH

Legends
kmsu_ddh_Assay2011AR_Group_Call

- CASING
- Quaternary Sediments
- Post Mineral Blake Lake Intrusive
- Cretaceous Dikes
- Askitka Volcanics
- Late Triassic Dikes

mm given at scale of 1:1000

Autogrid
N6327912a
N6327912d
N63279121
N63279122
N6327912s

AuRico Gold Inc.

KN-11-03

Date: 03/08/2012	
Author: WB	
Office:	
Drawing:	
Scale: 1:1000	Projection: Non-Earth (meters)

0 25 50
metres

638,000 mE

638,250 mE

638,500 mE

1,750 mN

KN-11-06

0

50

100

150

KN-11-06

1,500 mN

1,250 mN

1,000 mN

HoleID

Cu%
Histogram
42.553191 mm/unit

Auppm
Histogram
9.433962 mm/unit

Group_Call
TraceShade

EOH

Legends
kmsu_ddh_Assay2011AR_Group_Call

- CASING
- Quaternary Sediments
- Post Mineral Blake Lake Intrusive
- Cretaceous Dikes
- Askitka Volcanics
- Late Triassic Dikes

mm given at scale of 1:1000

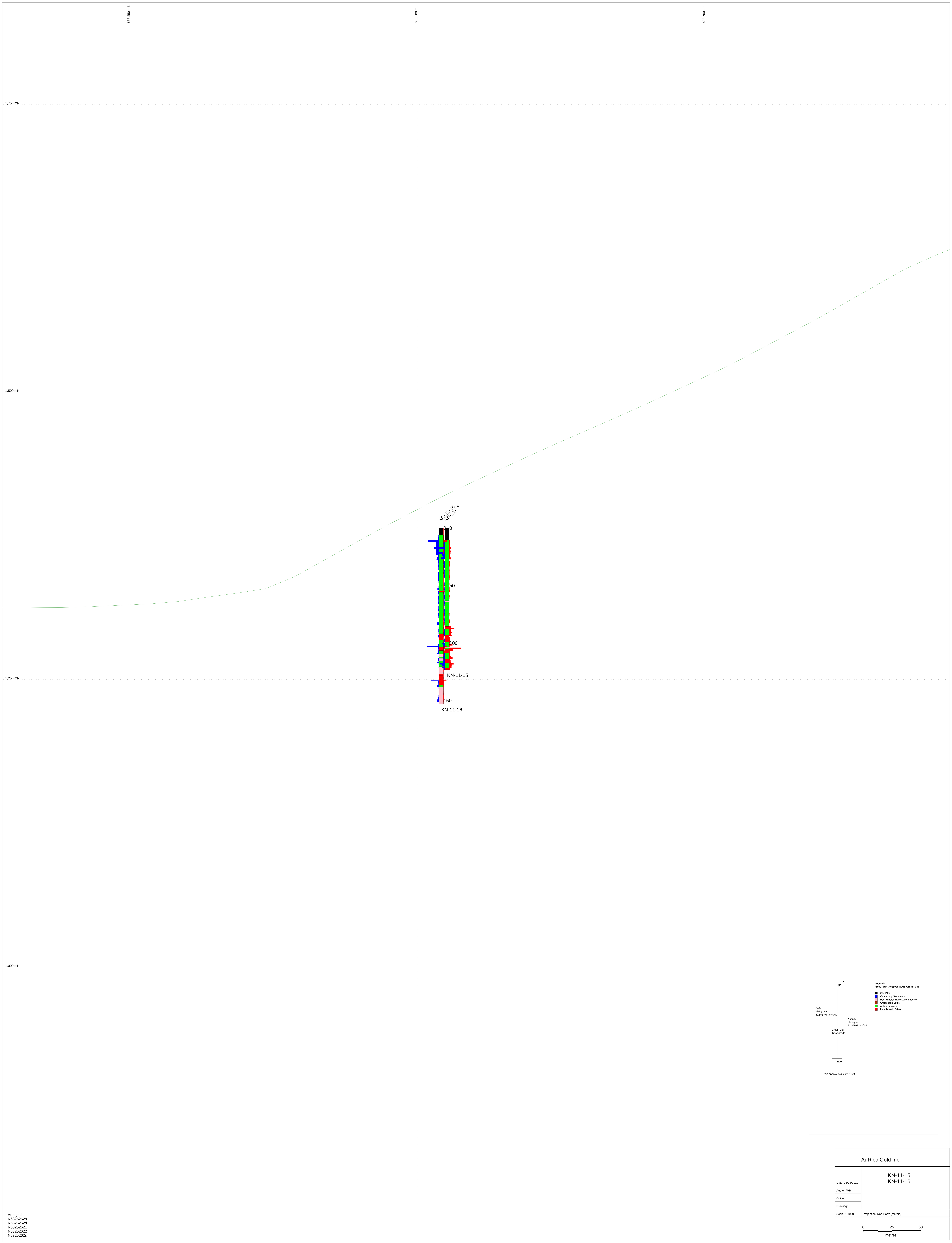
Autogrid
N6325209a
N6325209d
N6325091
N6325092
N6325209s

AuRico Gold Inc.

KN-11-06

Date: 03/08/2012	
Author: WB	
Office:	
Drawing:	
Scale: 1:1000	Projection: Non-Earth (meters)

0 25 50
metres


633,250 mE
633,500 mE
633,750 mE
1,750 mN
1,500 mN
1,250 mN
1,000 mN
KN-11-16
KN-11-15
0
50
100
150
KN-11-15
KN-11-16
HoleID
Cu%
Histogram
42.553191 mm/unit
Auppm
Histogram
9.433962 mm/unit
Group_Call
TraceShade
EOH
mm given at scale of 1:1000
Legends
kmsu_ddh_Assay2011AR_Group_Call
CASING
Quaternary Sediments
Post Mineral Blake Lake Intrusive
Cretaceous Dikes
Askitka Volcanics
Late Triassic Dikes
AuRico Gold Inc.
KN-11-15
KN-11-16
Date: 03/08/2012
Author: WB
Office:
Drawing:
Scale: 1:1000
Projection: Non-Earth (meters)
0
25
50
metres
Autogrid
N6325262a
N6325262d
N6325262l
N63252622
N6325262s