

ARIS SUMMARY SHEET

District Geologist, Nelson

Off Confidential: 92.09.03

ASSESSMENT REPORT 21917

MINING DIVISION: Nelson

PROPERTY: Kena  
LOCATION: LAT 49 10 00 LONG 117 16 00  
UTM 11 5445798 480559  
NTS 082F06W  
CLAIM(S): Kena 18-25, Cottonwood, Pitt, Linde 1-2  
OPERATOR(S): Noramco Min.  
UTHOR(S): Lisle, T.E.  
EPORT YEAR: 1991, 149 Pages  
KEYWORDS: Jurassic, Elise Formation, Tuffs, Basalts, Pyrite, Chalcopyrite

WORK  
ONE: Drilling, Geophysical, Geochemical, Geological, Physical  
DIAD 486.7 m 1 hole(s); NQ  
EMGR 31.3 km  
Map(s) - 4; Scale(s) - 1:2500  
GEOL 250.0 ha  
Map(s) - 1; Scale(s) - 1:2500  
IPOL 31.8 km  
Map(s) - 6; Scale(s) - 1:2500  
LINE 25.8 km  
MAGG 31.3 km  
Map(s) - 4; Scale(s) - 1:2500  
ROCK 29 sample(s); ME  
Map(s) - 1; Scale(s) - 1:2500  
SAMP 322 sample(s); ME  
SOIL 634 sample(s); ME  
Map(s) - 2; Scale(s) - 1:2500

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VANCOUVER, B.C.

GEOLOGICAL, GEOCHEMICAL AND DRILLING REPORT

ON THE

K GROUP OF MINERAL CLAIMS

(VOLUME 1)

NELSON MINING DIVISION

LAT. 49 10'; LONG. 117 16'; NTS 82F/6W

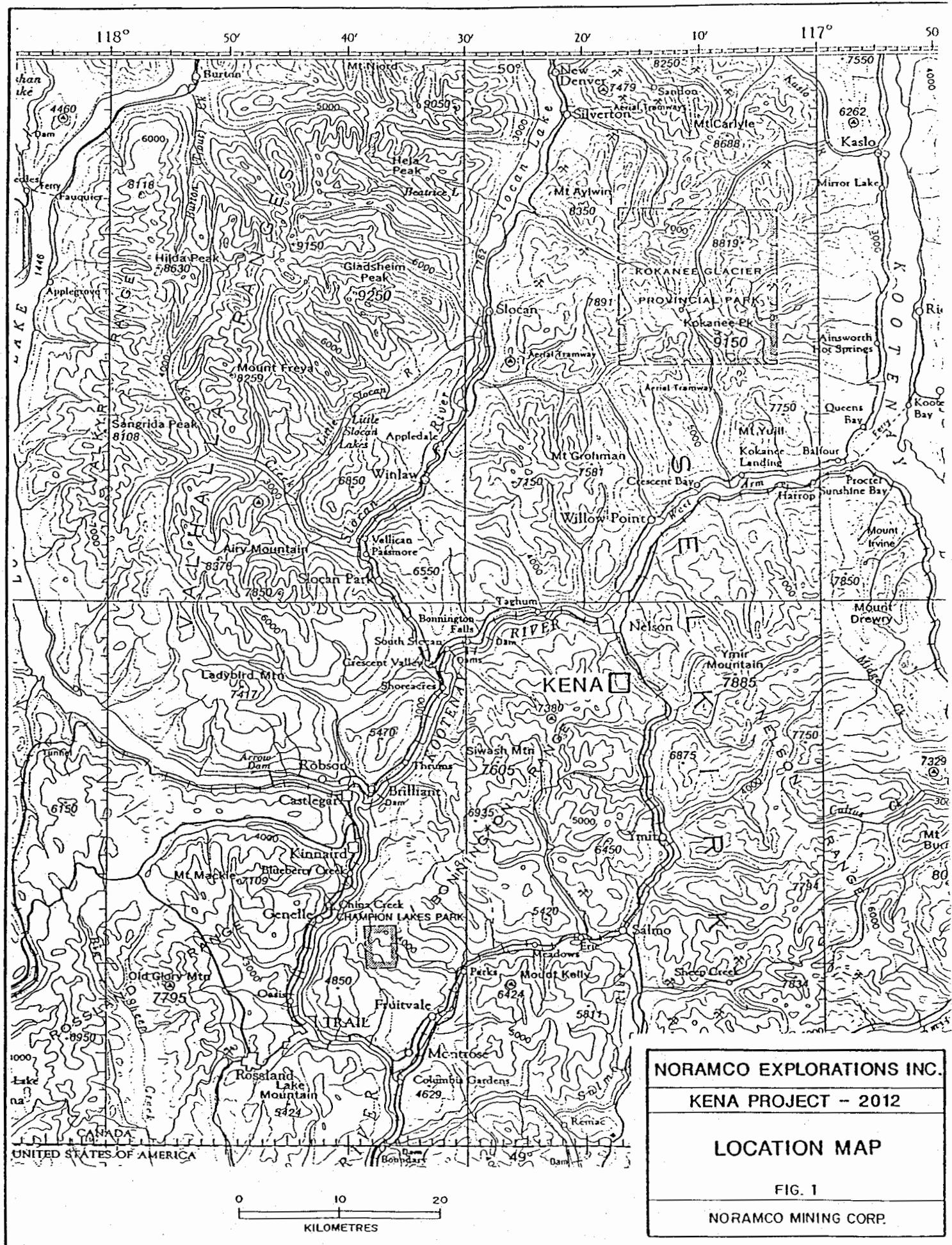
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OWNERS: OTTO AND OTAKAR JANOUT.  
CHARLES PITTMAN.  
NORAMCO MINING CORP.

OPERATOR: NORAMCO MINING CORP.

AUTHOR: T.E.LISLE, P.ENG.

DATE: OCTOBER 18, 1991



## TABLE OF CONTENTS

INTRODUCTION	1
LOCATION AND ACCESS	1
PROPERTY	2
PREVIOUS WORK	3
1991 WORK PROGRAM	6
REGIONAL GEOLOGY	7
PROPERTY GEOLOGY	7
GEOCHEMISTRY	11
LITHOGEOCHEMISTRY	13
GEOPHYSICS	13
DRILL PROGRAM	14
CONCLUSIONS	15
REFERENCES	16

## APPENDICES

STATEMENT OF QUALIFICATIONS	Appendix 1
DRILL LOGS AND ASSAY DATA SHEETS	" 2
ASSAY CERTIFICATES	" 3
STATEMENT OF COSTS	" 4
STATEMENT OF WORK AND GROUPING NOTICES	" 5

## ILLUSTRATIONS

LOCATION MAP	After p 1	Fig. 1
CLAIM MAP	" " 2	Fig. 2
DETAIL OF 1991 WORK PROGRAM	" " 6	Fig. 3
REGIONAL GEOLOGY (Hoy and Andrews)	" " 7	Fig. 4a
REGIONAL GEOLOGY (Open File 1989-11)	" " 7	Fig. 4b
PROPERTY GEOLOGY (1:2500) (Pocket)		Fig. 5
SOIL GEOCHEMISTRY-GOLD (1:2500) (Pocket)		Fig. 6a
SOIL GEOCHEMISTRY-COPPER (1:2500) (Pocket)		Fig. 6b
LITHOGEOCHEMISTRY (1:2500) (Pocket)		Fig. 6c

### INTRODUCTION.

In 1989 and 1990, Noramco Explorations Inc., on behalf of Golden News Inc., and Golden Lake Resources Ltd., undertook exploration on the Shaft and Kena mining properties located about seven kilometres south of Nelson in the Nelson Mining Division. Further exploration was carried out in 1991 on the Kena property , and on the adjacent Cottonwood-Pitt claims located to the south of the Kena property.

This report (Volume 1) describes the geological, geochemical and drilling program carried out on the above properties between June 16 and September 30, 1991.

Costs applicable to the exploration program are tabulated in Appendix 4 to the report, and support Statements of Work 3005423, 3005457, and 3006694 filed in the Nelson Mining Recorders office on September 3, 1991 and September 20, 1991.

Drill core from the program is stored on the Kena property in the core storage area located near grid coordinates 56+25N and 51+00W.

### LOCATION AND ACCESS.

The K Group of mineral claims is located approximately seven kilometres south of the city of Nelson, in southeast British Columbia, and can be located on map sheet 82F/6W.

Highway 6A connecting Nelson to Salmo runs through the eastern section of the property. Access from the highway is via the Giveout Creek - Gold Creek forestry road, and by a number of four-wheel drive logging roads that traverse the claims.

The claims are located on the northeast flank of Toad Mountain, and much of the property covers the steeply forested slopes draining northeast and southeast into Cottonwood Creek adjacent to Highway 6A. Elevations on the property range from approximately 895 metres at Cottonwood Lake, to 1795 metres above sea-level in the southwestern claim area.

PROPERTY.

The K Group is comprised of mineral claims held under two option agreements , the Kena option, and the Southwest Block option. All claims are located and recorded in the Nelson Mining Division. Claim particulars are as follows:

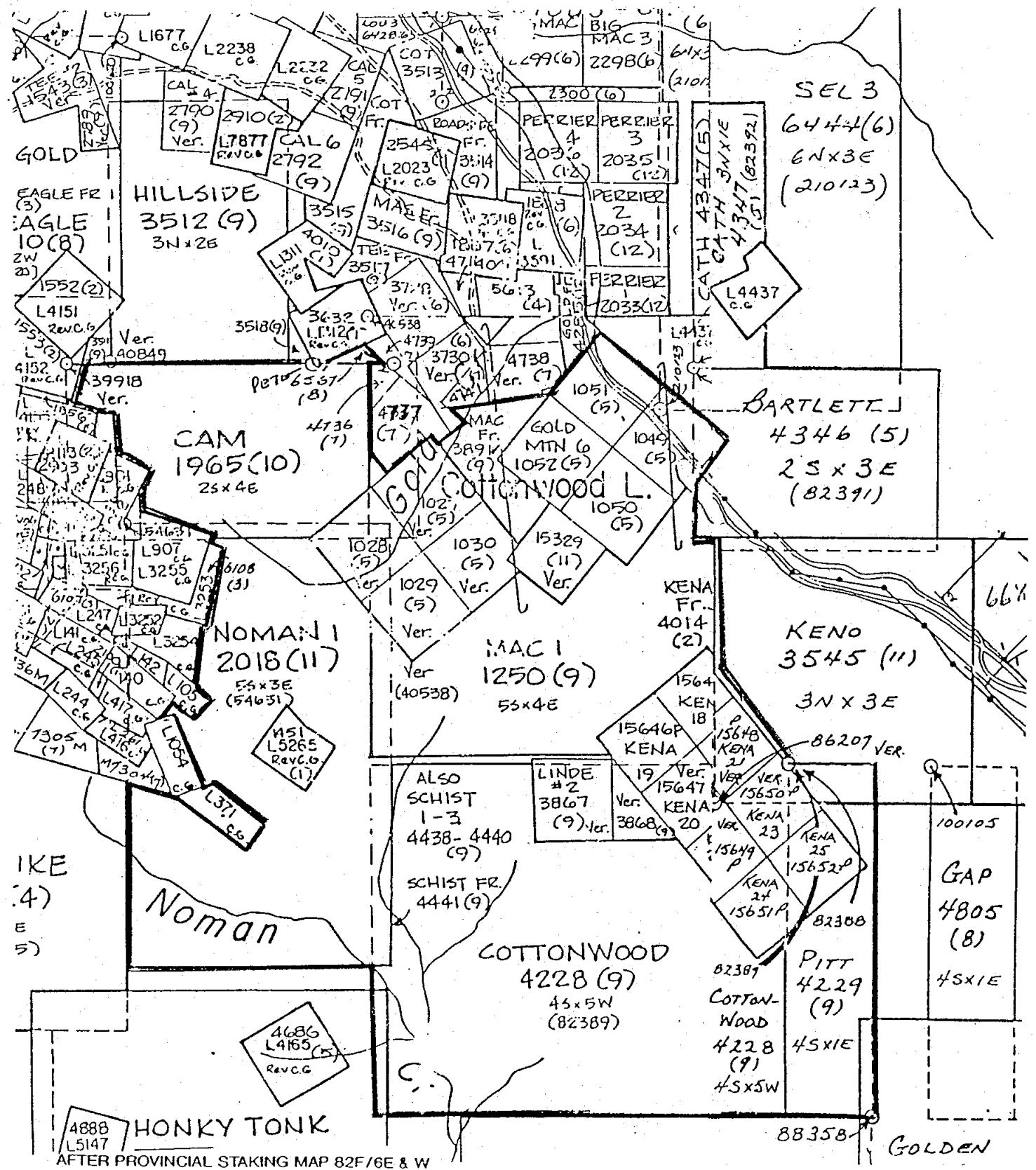
KENA OPTION

CLAIM	UNITS	RECORD	EXPIRY DATE *
Kena #7	1	15329	Nov.5, 2001
Kena #18	1	15645	Nov.5, 2001
Kena #19	1	15646	Nov.5, 2001
Kena #20	1	15647	Nov.5, 2001
Kena #21	1	15648	Nov.5, 2001
Kena #22	1	15649	Nov.5, 2001
Kena #23	1	15650	Nov.5, 2001
Kena #24	1	15651	Nov.5, 2001
Kena #25	1	15652	Nov.5, 2001
Mac #1	20	1250	Sept.18, 2001
Gold Mtn.	1	1028	May 3, 2001
Gold Mtn #1	1	1027	May 3, 2001
Gold Mtn #2	1	1029	May 3, 2001
Gold Mtn #3	1	1030	May 3, 2001
Gold Mtn #9 Fr	1	1049	May 22, 2001
Gold Mtn #8	1	1050	May 22, 2001
Gold Mtn #7	1	1051	May 22, 2001
Gold Mtn #6	1	1052	May 22, 2001
Linde #2	1	3867	Sept.7, 2001
Linde #1	1	3868	Sept.7, 2001
Kena FR.	1	4014	Feb. 7, 2001
Mac FR.	1	3891	Sept.25, 2001

SOUTH WEST BLOCK OPTION.

Pitt	4	4229	Sept.27, 1998
Cottonwood	20	4228	Sept.27, 1998
Noman #1	15	2018	Nov. 20, 1998
Cam	8	1965	Oct. 9, 1997
Schist #1	1	4438	Sept.29, 1998
Schist #2	1	4439	Sept.29, 1998
Schist #3	1	4440	Sept.29, 1997
Schist Fr	1	4441	Sept.29, 1997
Pete**	1	6567	Aug. 14, 2000
**(Noramco)			

\*Anniversary dates as per assessment work recorded on September 3, and September 20, 1991.



0 1000  
METRES

NORAMCO EXPLORATIONS INC.
KENA PROJECT - 2012
K GROUP LOCATION
FIG. 2
NORAMCO MINING CORP.

### Previous Work

Mineralization in the Kena Claim area was first described in a report by G.M. Dawson, contained within the Geological Survey of Canada Summary Report for 1888 - 1889, on the Cottonwood Mine.

No further information on exploration appears in either the Geological Survey of Canada records or the Provincial Government records within the Ministry of Energy, Mines and Petroleum Resources, thus little is known about exploration within the claim area prior to 1973. However post 1973 exploration has identified numerous old prospect pits and trenches, as well as several old adits indicating periods of high exploration activity in the early part of the century.

Otto Janout staked the original Kena claims in 1973 with exploration work having been carried out by various companies as follows:

1974      Ducanex Resources Ltd.

The Company collected soil samples and drilled four percussion holes aggregating 250 metres within a gold prospect in the northern section of the claim block. While prospecting the southeastern section of the claim block resulted in the discovery of a wide zone of copper mineralization.

1975      Lacanex Mining Company Ltd.

A program of geological mapping and geochemical sampling was carried out over widespaced (400 - 800 ft.) grid lines. The work resulted in a series of large linear copper anomalies in the southeastern portion of the claim block, which follow the regional foliation. 27 chip samples were taken in ten foot intervals along the entire 270 foot length of an old adit (Noramco grid coordinates 92+34N 1+60W), with the samples averaging 0.16% Cu over the entire length. This adit was probably driven to intersect a two foot wide quartz vein at depth. A grab sample from the quartz vein assayed 1.1% Cu and 0.076 oz./ton Au.

1976 - 77    Quintana Minerals Corp.

The program consisted of geological and geochemical surveys based on the hypothesis that visible sulphide mineralization represented the upward extent of a porphyry copper sulphide system. In 1977 the Company carried out a wide spaced I.P. survey along lines 800 feet apart with a dipole spacing of 300 feet. The work resulted in a chargeability anomaly parallel to the strike of the volcanics and approximately coincident with the copper geochemical anomaly. Lithogeochemical sampling ranged as high as 70 feet of 0.53% Cu cut along an outcrop of sericite schist.

Previous Work (cont'd...)1981 - 82 Kerr Addison Mines Ltd.

Kerr carried out wide spread geochemical and geological surveys over the Kena Copper Zone and culminated the program with three widespaced drill holes aggregating 635.20 metres. The top 51.0 metres of drill hole 81-KK-4 assayed 0.271% copper. Samples representing, 63 metres of the underlying 85 metres, three to four metre staggered intervals totalling 22 metres were not assayed, average 0.16% copper. Gold content in the hole locally ranged up to 0.01 oz./ton.

Sampled intervals in drill hole 81-KK-6, near the previously sampled adit, yielded 0.181% copper over a 45 metre section. Gold content ranged up to 0.01 oz./ton locally as in hole 81-KK-4. Where assayed, sections of hole 81-KK-5 yielded from 0.10 to 0.22% copper over various section widths.

1985 - 86 Lacana Mining Corporation

The Company carried out an extensive program which included an airborne geophysical survey in addition to geological mapping & geophysical sampling. The program culminated with a drilling program undertaken over 2 years (1985-86) consisting of 36 holes aggregating 4,444.5 metres. However with the exception of one hole KK-85-12, all of the work was done on the northwestern gold showing and no work was carried out on the copper showing. Hole LK 85-12 was drilled approximately 175 metres south of the Kerr Addison hole 81-KK-4, at the northern end of the Copper Zone, however this hole was not analyzed for copper.

In 1986 Lacana covered the northwestern sections of the Kena claims with an extensive grid, which ended at the northern extent of the Kena Copper Zone.

1987 Tournigan Mining Exploration Ltd.

Tournigan drilled six holes aggregating 918.93 metres of which only one hole TK-87-42 was drilled in the Kena Copper Zone.

Drill hole TK-87-42 was collared between previous holes KK-81-4 and LK-85-12 in order to test anomalous gold and copper soil geochemistry and where there appeared to be a gap in previous drill coverage. Hole TK-87-42 was selectively sampled with 25 samples taken of which the best copper intersection was 0.175% Cu over 9.72 metres from 85.04 - 94.76 metres.

Previous Work (cont'd...)

Tournigan Mining Exploration Ltd.

Although anomalous gold and copper was detected in the assayed samples from each hole, grades were not deemed to be sufficiently encouraging to continue work.

1989 - 90

Golden Lake Resources Ltd./Noramco Mining Corporation

Golden Lake Resources Ltd. optioned the property from the Janouts' in late August 1989, following a property examination and review of data from previous work conducted in mid-July, 1989.

Personnel for Noramco Explorations Inc., operator for Golden Lake Resources Limited, spent several days at the Kena property in October, 1989. A preliminary work program was undertaken to locate and tie in claim posts and several old grids over which much of the previous work had been completed. The results of this work were used to compile technical data with the objective of formulating a detailed exploration plan for the property.

In 1990, Geological, geochemical and geophysical surveys were carried out on the Kena Copper(Kena South Grid), and limited geological surveys on the Kena Gold Grid located near Gold Creek. In October, 1990, drill holes K90-1 and 2 were completed to investigate gold soil anomalies near Gold Creek, and two holes, K90-3 and 4 were drilled to investigate geophysical and geochemical anomalies on the Kena south grid.

### 1991 WORK PROGRAM

The 1991 field program of geochemical, geological and geophysical surveys was carried out between June 16 and August 15, 1991. The drilling program was carried out from September 2 to September 30 1991.

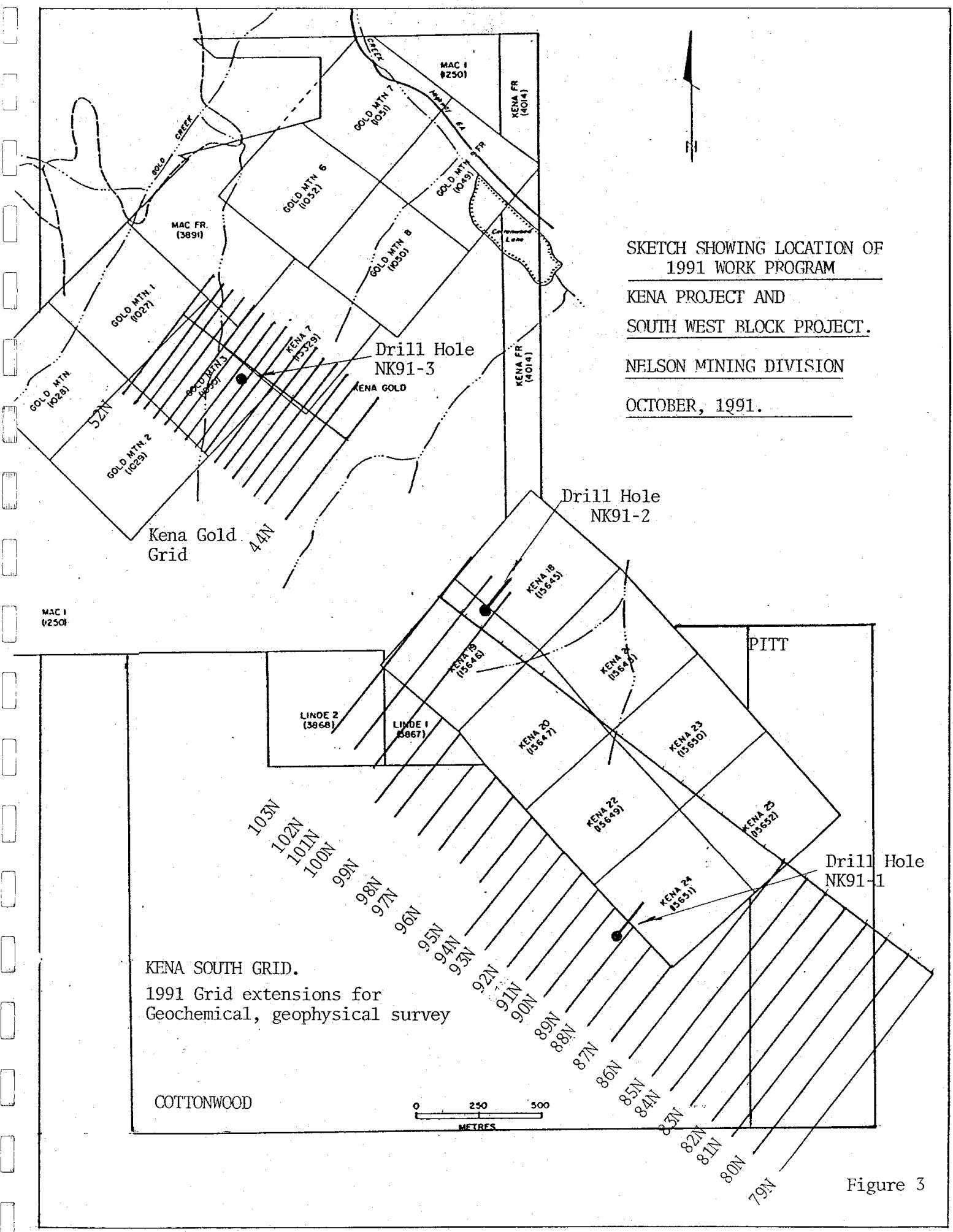
The field program focussed on two areas of the property.

- a) The Kena Gold zone near Gold Creek in the northern section of the claims.
- b) The Kena Copper zone in the southeast section of the claims. The grid in this area extends from the Kena ground onto the Cottonwood-Pitt claims of the South West Block Option and is called the 'Kena South Grid'. For the purposes of this report, technical data relates to the entire grid as work was carried out on both properties. The boundaries of each property is shown on maps accompanying this report. Applicable assessment costs have been pro rated.

	<u>KENA GOLD</u>	<u>KENA SOUTH</u>	<u>TOTAL</u>
Grid lines	9.60 Km.	16.2 Km.	25.8 Km
Soil Samples	-	634	634
Rock Samples	2	27	29
Down Hole EM	-	390 M	390 M
Gradient IP	5.4 Km.	26.4 Km.	31.8 Km.
Pole-Dipole IP.	0.5 Km.	1.725Km.	2.25 Km.
Magnetic Survey.	9.6 Km.	17.025 Km.	26.625Km.
VLF-EM	9.6 Km.	17.025 Km.	26.625Km.
Protem 37 EM.	4.7 Km.	-	4.7 Km.
Geological Survey.	-	Approx 10 metric units	

Three drill holes aggregating 1074 metres were completed in September, 1991. Drill hole NK 91-1 was collared on the Cottonwood claim and drilled northeast into the Kena 24 claim for a length of 486.77 metres (1597 feet). The core was continuously sampled mainly in 1.5 metre lengths and analyzed for six elements. Drill hole NK 91-2 was collared on the Kena claims near the northern end of the Kena South Grid, and hole NK 91-3 was drilled on the Kena Gold zone. Ten samples from the bottom of hole TK 87-43 were collected, and all drill sites and road access spurs were reclaimed.

One half of the costs associated with hole NK 91-1 have been applied for assessment credit to claims of the South West Block, along with pro rated costs of the field program.



SKETCH SHOWING LOCATION OF  
1991 WORK PROGRAM  
KENA PROJECT AND  
SOUTH WEST BLOCK PROJECT.  
NELSON MINING DIVISION  
OCTOBER, 1991.

### REGIONAL GEOLOGY. -Figure 4a, 4b.

The Kena property lies on the eastern limb of the Hall Creek Syncline, a south plunging fold associated with intense shearing that dominates the structure of the Nelson Map area.

The syncline incorporates units of the lower Jurassic Rossland Group comprised of a basal assemblage of fine-grained clastic rocks of the Archibald formation; volcanic rocks of the Elise formation; and clastic rocks of the overlying Hall formation. These units are intruded by several coeval stocks, dykes and sill-like bodies of monzodiorite and by the lower Jurassic Silver King Porphyry (182 m.y.). As well, the Rossland Group is intruded by the middle Jurassic Nelson batholith (165 m.y.) and a number of related granodiorite stocks.

Gold-copper mineralization in the Rossland Group is generally interpreted as being coeval with lower Jurassic volcanism and ranges through a variety of deposit types including stratiform massive sulphides, skarns, and shear-vein stockworks associated with synvolcanic plutons.

Mineralization occurring on the Kena property consists of shear vein and quartz stockworks containing pyrite and chalcopyrite with gold values. High concentrations of pyrite in fine-grained siliceous tuff horizons indicates that exhalative (syngenetic) may also be present.

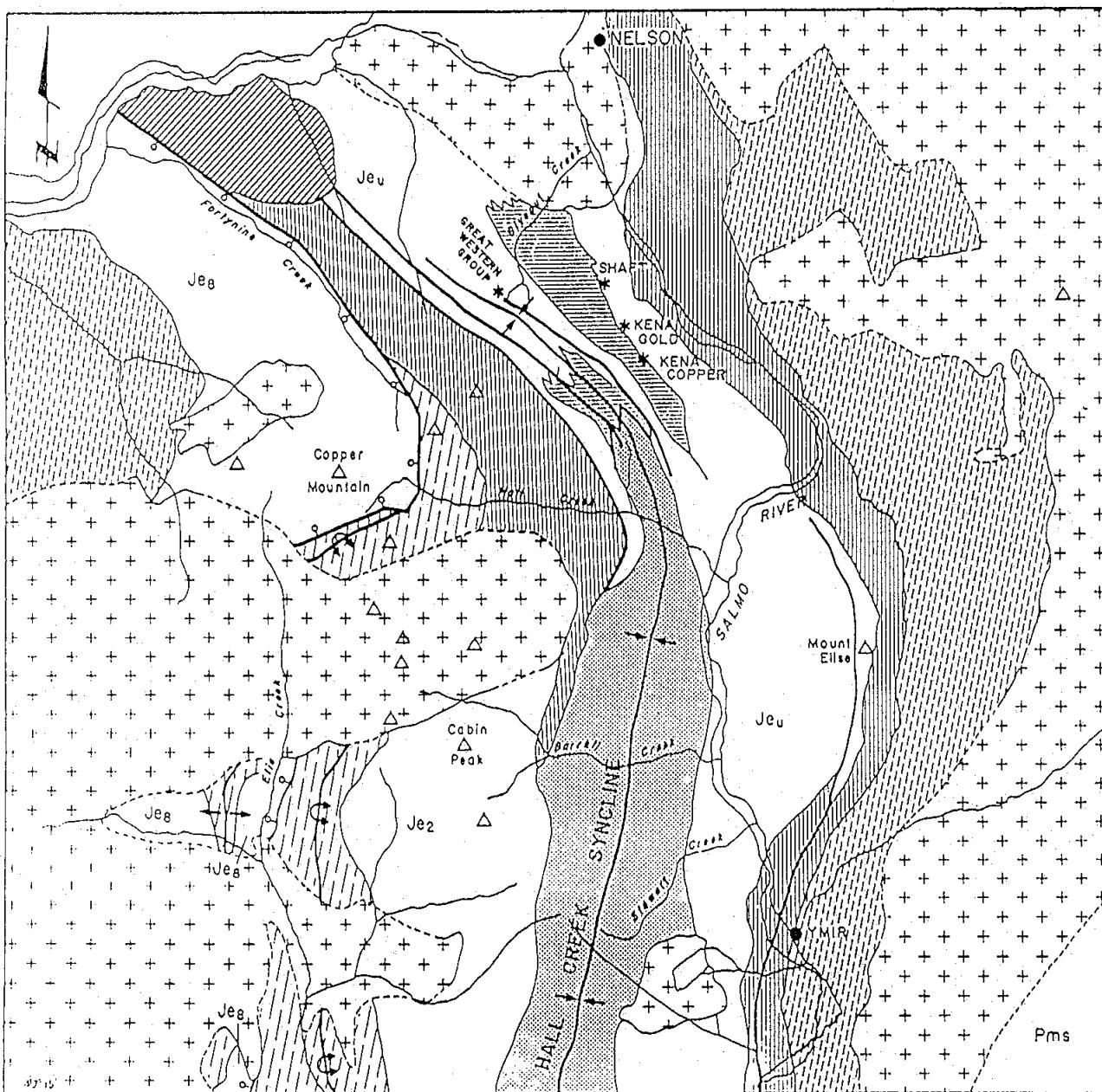
### PROPERTY GEOLOGY.

The Kena property is underlain by basic to intermediate volcanic rocks of the upper Elise formation. The formation includes both epiclastic and pyroclastic members. The volcanic units are intruded by stocks of the Nelson Batholith; by elongate sills ? dykes ? of a synvolcanic monzodiorite complex; and by the Silver King Porphyry, a large plagioclase porphyry stock with related dykes and sills.

### SILVER KING PORPHYRY. (MAP UNIT C)

The Silver King Porphyry Stock is an elongate mass up to 2.0 x 9.0 km. trending northwest along the northeast flank of the Hall Creek Syncline. Southerly sections of the stock are incorporated into the core of the syncline.

Within the Kena-Cottonwood claims, the east boundary of the stock is defined for approximately 2.5 kilometres southeast of Gold Creek. The southeasterly section is characterized by a number of thinning dyke and sill-like masses that appear to



### LEGEND

MIDDLE JURASSIC

++ NELSON intrusions  
LOWER OR MIDDLE JURASSIC (?)

diagonal hatching  
LOWER JURASSIC  
ROSSLAND GROUP

horizontal hatching  
SILVER KING intrusions  
solid black  
HALL FORMATION

dotted pattern  
ELISE FORMATION  
upper Elise

+ Jeu intermediate to mafic  
crystal and fine tuff

+ Je8 intermediate lapilli and  
crystal tuff  
lower Elise

+ Je2 mafic pyroclastic breccia

horizontal hatching  
mafic flow breccia, flows

wavy lines  
ARCHIBALD FORMATION /  
PALEOZOIC

Pms metasedimentary rocks

triangle MOUNTAIN TOP

upward arrow ANTICLINE

downward arrow SYNCLINE

horizontal line FAULT

circle on line FAULT (circle indicates downthrown slope)

solid line HIGHWAY

0 5 KM

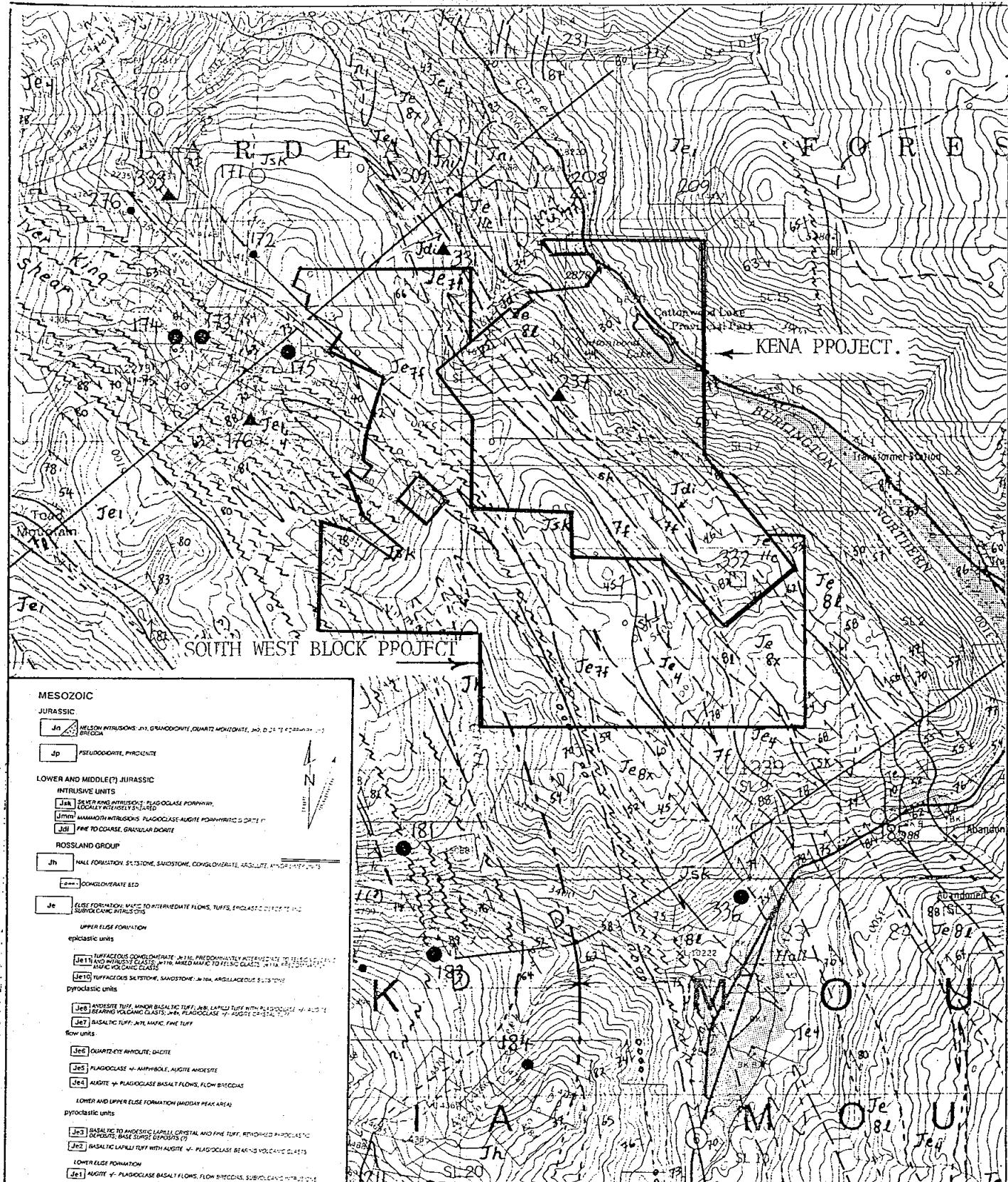
NORAMCO EXPLORATIONS INC.  
KENA PROJECT - 2012/2017

### REGIONAL GEOLOGY

FIG. 4a

NORAMCO MINING CORP.

After Hoy and Andrew, 1989



### REGIONAL GEOLOGY (After Open File 1989-11)

SHOWING APPROXIMATE LOCATION

KENA PROJECT (2012) and SOUTHWEST BLOCK PROJECT(2017)

Scale 1:50,000

October, 1991.

mark the southeast end of the stock. At Gold Creek, the northeast flank of the stock is also marked by a number of dyke and sill-like masses that follow the regional trend. Northeast faulting in this area has resulted in right-lateral offsets in the range of 100 to 150 metres.

The Silver King unit is a plagioclase-rich porphyry that is commonly medium to coarse grained. Fine-grained phases have been noted near the southerly contact of the stock. The feldspars are weak to moderately altered and the hornblende is weakly to highly chloritized. Weak to moderate potassic feldspar flooding is evident in some areas, and the margins of the stock are marked by erratic quartz veining. Epidote, commonly associated with chlorite, is locally, evident, and the unit is mineralized with traces, to locally 3% pyrite.

#### MONZODIORITE COMPLEX (Map unit B).

A mafic intrusive complex in the Gold Creek-Kena area was recognized in 1988 by geologists working with the Provincial Ministry of Energy, Mines and Petroleum Resources. Descriptions of this complex can be found in the Reference section under the authors T. Hoy, and K. Andrews.

Rocks included in the complex have tentatively been identified throughout the length of the property (+ 4 km.). Current interpretation indicates that the complex includes a number of dyke and sill-like masses a few, to a few tens of metres wide. They commonly occur within about 600 metres of the Silver King Porphyry contact.

Previous mapping indicated that in the northern section of the property, the complex comprised a few narrow sill-like masses that were often difficult to trace along strike. In the Kena South Grid, the complex was interpreted to thicken to a belt about 500 metres wide.

Diamond drilling in the project area in 1991 encountered narrow zones up to a few metres wide that resemble fine-grained monzodiorite and diorite. These zones however appear to occur in and grade to plagioclase or augite crystal tuff, or to fine-grained tuff. The gradational character of the zones may be partly due to alteration, however there remains uncertainty as to the relationship between them and the adjacent rocks.

Figure 5 to this report notes the presence of a number of dioritic units, not unlike the distribution noted further to the north.

### LAMPROPHYRE DYKES (Map unit A)

Dark grey to olive-brown dykes occur within the regional trend within a few hundred metres of the Silver King porphyry contact. The dykes are narrow (-+2.0 metres) and commonly massive, showing little of the deformation evident in the host tuff. The dykes are commonly magnetic.

### ANDESITE (PLAGIOCLASE) PORPHYRY. (Map unit 2)

A distinct plagioclase-rich porphyry forms persistent sill-like masses within the regional trend, commonly within about 400 metres of the Silver King Porphyry contact. They range up to about 150 metres in width, and are evident throughout the length of the property, a distance of over 4 kilometres.

The rock is grey to green-grey; contains 1% to +10 coarse plagioclase laths up to 1 cm. long; and up to 10% 1-3 mm black augite crystals in a fine grained dioritic matrix that locally appears tuffaceous. The unit is massive to well sheared; variably altered by chlorite and epidote, and locally contains 2% disseminated pyrite.

### TUFF ASSEMBLAGE (Map unit 4).

Diamond drilling has shown that pale-grey aphanitic dacitic ? tuff horizons, a few to a few tens of metres thick occur within the Elise volcanics underlying the Kena property. The dacite is mineralized with about 2% disseminated pyrite and traces of chalcopyrite.

The aphanitic tuff grades to fine-grained and locally medium grained plagioclase - augite crystal tuff varying from grey to dark-grey in colour (4d). The pale, coarser grained phases of the crystal tuff have previously been mapped as; may locally include; and are difficult to distinguish from the fine-grained dioritic rocks noted above.

The fine-grained crystal tuff, in places grades to green andesite tuff (4a), that is commonly chloritic and contains finely disseminated magnetite. Fine-grained mafic tuff (4a) is also present, and in drill core is seen to form narrow beds within the coarser tuff assemblage. Both the andesite and mafic tuff units contain plagioclase and/or augite crystal phases (4c).

A distinct lapilli tuff unit (4b) underlies and appears to form a relatively continuous formation along the northeast flank of the map area. Clasts of mafic tuff, fine grained intrusive ? or dacitic tuff, and andesite (plagioclase) porphyry have been noted in a plagioclase-rich crystal tuff commonly highly altered by chlorite and epidote.

#### AUGITE BASALT. (Map unit 3)

Outcrops of dark green Augite porphyry form a narrow (+100M) belt trending southeast near the baseline from 79N to 86N. Sections of this unit are highly sheared and chloritized and difficult to distinguish from other units.

On the southwest side of the map area near the south end of the Silver King Porphyry stock, augite porphyry is also present, but appears to grade to augite-rich tuff. The trend to this section is not well defined.

All of the tuffaceous rocks, and to a lesser extent the intrusive rocks have been fractured and altered by highly variable concentrations of quartz-calcite +- chlorite, epidote, hematite and pyrite veinlets. In addition, a number of quartz veins form local weak stockworks or occur as coarse veins more than a half metre wide. Some of these veins are well mineralized with pyrite and chalcopyrite. Narrow, pinkish-grey siliceous zones are locally abundant in some sections of the tuff assemblage.

The mafic rocks are commonly chloritized, particularly in areas of high shearing, and epidote ranges from weak to strong. The pale grey dacitic tuffs are locally altered to sericite rich rocks.

Pyrite is present in much of the map area in amounts ranging from trace to about 10%. The highest concentrations (3-10%) occur in fine-grained siliceous tuff horizons close to the Lapilli tuff unit and may be syngenetic. These areas locally show strong anomalous IP responses.

In other areas, pyrite, with trace to 0.5% chalcopyrite, is disseminated, or occurs in fractures that locally are preferentially aligned along the foliation. The sulphides also occur disseminated in the quartz-calcite veinlets. In some areas, the chalcopyrite is sufficiently concentrated to produce significant widths of 0.1% to 0.3% copper. A few narrow irregular quartz veins close to the Silver King Porphyry stock are variably mineralized with chalcopyrite and pyrite.

### GEOCHEMISTRY. (Maps 6a to 6c)

The geochemical survey initiated in 1990 was extended southwest and southeast onto the Cottonwood and Pitt claims. Three lines (101N to 103N) on the Kena property were also surveyed.

All soil samples were collected from grid lines with 100 metre spacing and picket intervals of 25 metres. A total of 634 samples and 27 rock samples were collected from the Kena South Grid. Two rock samples were collected from the Kena Gold Grid.

The claim area has been glaciated and bedrock is obscured commonly by thin (< 2M) accumulations of brown glacial till that in places grades to a coarse boulder till. The till is overlain by a brown to black organic-rich layer that may be thick, but locally is thin and rests on bedrock. In some areas, such as the basin draining the southeast grid to the south, outcropping is scarce suggesting possibly thicker overburden .

All samples were collected with a grub hoe. Attempts were made to sample 'B' horizon soils, and samples were commonly taken from depths of 20 to 35 cm. Details as to location, sample number, depths, colour, horizon etc. were recorded on geochemical field sheets .

Samples were packaged in standard Kraft soil envelopes appropriately marked with identity numbers. The samples were shipped to Acme Analytical Laboratory in Vancouver where they were dried, screened, and analyzed for copper, lead, zinc, silver and arsenic by ICP methods, and for gold by Acid leach/AA from 10 gram samples. Rock samples collected during the field program were also analyzed for the same elements.

Previous soil surveys in 1990 revealed an anomalous copper-gold trend southeast to the Kena property boundary. The 1991 work confirmed this trend and revealed a locally diminished continuation of anomalies to the limits of survey coverage to the southeast. Areas of weaker responses are partly coincident with the large basin noted above.

### **GOLD.**

A large gold in soil anomaly was partly outlined in 1990 along the southwest Kena property boundary. Extended coverage indicates that the anomaly overlaps the Kena-Cottonwood boundary; trends southeast; varies from about 75 to 200 metres wide, and is 700 metres long with smaller extensions along trend. This anomaly was partly tested in 1991 with

drill hole NK91-1.

On lines 79N to 81N along trend to the southeast, a number of one to five sample anomalies are incompletely defined by present coverage. On the Cottonwood claim to the southwest of the main anomaly, a number of small lenticular gold anomalies are evident and are believed to relate to narrow mineralized quartz veins within or near the Silver King Porphyry.

#### COPPER.

1990 surveys partly outlined a 370 ppm copper anomaly coincident with the large gold anomaly near the Kena property boundary. The surveys also partly outlined a large, up to 250 metre wide anomaly with scattered gold anomalies along the southwest side of the baseline. Extended coverage onto the Cottonwood-Pitt claims has revealed the following:

- a) The anomaly along the Kena - Cottonwood property boundary is about 400 metres long, and up to but commonly less than 100 metres wide. It is coincident with the gold anomaly and was partly investigated by drill hole NK 91-1.
- b) The large anomaly near the baseline continues for 200 metres onto the Cottonwood-Pitt claim. The anomaly thins markedly and swings to a more southerly direction. It does not cross the trace of a southerly flowing creek.
- c) There appears to be a shift in the anomalies to the southwest. A smaller lenticular anomaly measuring about 75 by 200 metres is separated from the main anomaly by about 75 metres. A third lenticular anomaly one to three sample sites wide occurs between 85N and 80N about 500 metres west of the baseline.
- d) A number of small, one or two sample, anomalies are evident within the main trend. Weaker anomalous areas near the southeast and southwest section of the grid are incompletely defined.

#### LEAD.

Previous surveys revealed a number of weak 30 and 70 ppm lead anomalies scattered mainly on the northeast side of the grid. The 1991 survey also showed a wide scattering of higher assays, but also revealed a weakly anomalous trend that is partly coincident with the Silver King Porphyry, and the dyke-sill complex along it's flank.

**ZINC.**

Weak 300 and 500 ppm zinc anomalies were previously indicated mainly on the northeast section of the Kena Grid. The 1991 work revealed a range of assays of 47 to 559 ppm zinc. Three samples assayed greater than 300 ppm zinc.

**ARSENIC.**

Contoured at 20 and 70 ppm arsenic, the 1990 work revealed weakly scattered areas of interest. The 1991 assays showed a range of 2 to 35 ppm arsenic, with 14 assays greater than or equal to 20 ppm arsenic.

**SILVER.**

The silver content of the 1991 samples ranged from 0.1 to 4.5 ppm silver. Most of the assays are less than 1.0 ppm silver.

**LITHOGEOCHEMISTRY.**

Twenty-seven rock samples were collected from the Kena South Grid. The samples were mainly of the 'grab' type and can be located on figure (6c) to this report.

The highest assay for gold, silver copper and lead was a .22M chip of a quartz vein mineralized with pyrite, chalcopyrite and galena. The vein is located on the Cottonwood claim (95N) to the southwest of the Kena property, and is one of a number of veins noted in the area. The sample assayed 8646 ppb gold, 11,429 ppm copper, 2348 ppm lead and 123.8 ppm silver. One metre samples in the hanging and footwalls of the vein assayed low gold and up to 660 ppm copper.

A few samples collected from limited outcrop exposures on southern grid lines 81N to 84N some 400 to 500 metres west of the baseline yielded important results. Assays of samples 41261, 62, 63, 65, 67, and 41270 ranged from 1482 to 7073 ppm copper and 89 to 694 ppb gold. These results support the soil geochemical assays and indicate a continuation of mineralization to the southeast.

**GEOPHYSICAL PROGRAM.**

A geophysical program of induced polarization, magnetic, electromagnetic and down hole EM surveys was undertaken on the property in July by Delta Geoscience Ltd. A separate report covering this aspect of exploration will be prepared by Delta Geoscience and will be included as a separate volume for assessment credit.

### DIAMOND DRILL PROGRAM.

During September, 1991, a three hole drill program aggregating 1074.3 metres was carried out on the property. The holes were drilled to test geochemical, geophysical and geological targets identified during the summer program.

A total of 631 core samples from the drilling, mainly from 1.5 metre lengths, were analyzed for copper, lead, zinc, silver and arsenic by ICP methods, and for gold by FA/ICP. The resulting assays have been compiled onto standard assay data sheets and are included with drill logs of individual holes.

#### **DRILL HOLE NK91-1.**

This hole was drilled for the following reasons:

- a) To test the strong copper-gold soil anomaly near the common boundary of the Kena and Cottonwood claim.
- b) To test at depth the gradient IP chargeability anomaly flanking the copper-gold soil anomaly on the northeast.
- c) To test the possible depth extensions to mineralization noted in diamond drill hole K90-4.

The hole was drilled at 040/-60 degrees from grid coordinates 89+19 and 6+50W on the Kena South Grid. The hole depth is 486.7 metres.

The hole encountered a tuff assemblage believed to correlate with unit Je8 on Open file Map 1989-11. The rocks grade from dacitic to andesitic and to plagioclase-augite crystal tuff. The rocks vary from aphanitic to fine and medium-grained, and are pale grey to dark grey and green in colour. The coarser varieties locally resemble fine-grained monzodiorite and diorite. The assemblage is locally siliceous; variably fractured and veined by quartz-calcite +-chlorite, epidote and hematite; commonly altered by chlorite and epidote; and mineralized with trace to 10% (average 1% to 3%) pyrite, traces of chalcopyrite, and fine magnetite. The sulphides occur as disseminations, fracture fillings and locally in the white quartz-calcite veinlets.

The entire hole was sampled mainly in 1.5 metre lengths. 322 samples were collected. The gold content of the samples ranged to 1894 ppb gold. The higher assays are either widely scattered, or loosely clustered to a depth of 242.0 metres.

Copper content ranged to 1756 ppm. As with the gold, the higher assays tend to occur in the upper section of the hole, however slightly elevated levels (164 to 916 ppm) also occur from 377.0 to 408.5 M. Correlation between high copper and high gold tends to be general rather than specific.

The following averages give an indication of the range of copper and gold encountered in the hole.

From (M).	To (M).	Width (M).	CU(PPM)	AU.(PPB)
71.0	83.0	12.0	372	299
95.0	105.5	10.5	565	182.7
165.5	174.5	9.0	447.7	741
206.0	231.5	25.5	568.6	388.7

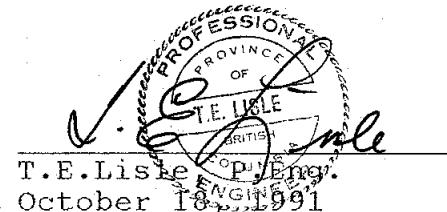
Lead assays are mainly in the 2 to 10 ppm range with one high of 382 ppm. Zinc assays range from 9 to 112 ppm. Arsenic assays are commonly less than 5ppm with one high of 225 ppm that is coincident with a sample assaying anomalously high in silver, lead and gold. Silver assays are normally less than 0.5 ppm. with one high assay of 9.3 ppm.

#### CONCLUSIONS.

The geochemical and geological surveys were successful in determining the southeasterly mineralized trend along the Kena and Cottonwood claims.

Drill testing of the large copper-gold soil anomaly along the Kena-Cottonwood claim boundary revealed a large number of anomalous gold and copper assays that ranged up to 1894 ppb and 1756 ppm respectively. These results are believed to be partly responsible for the anomalous soils.

Untested sections of the copper-gold anomaly, and untested sections of the anomalous trend to the southeast require further evaluation.



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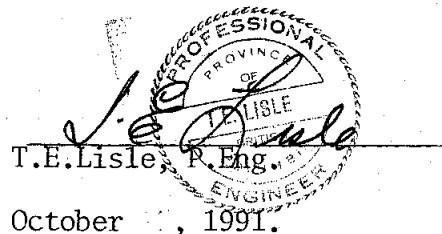
**APPENDIX 1**

**STATEMENT OF QUALIFICATIONS**

## STATEMENT OF QUALIFICATIONS

I Thomas E Lisle of 145 West Rockland Road, North Vancouver, British Columbia, do hereby certify:

- That I am a geologist with business address at #4-1548 Lonsdale Ave. North Vancouver, British Columbia.
- That I am a graduate of the University of British Columbia, and hold a Bachelor of Science degree granted in 1964.
- That I am a member in good standing of:
  - Geological Association of Canada.
  - Canadian Institute of Mining and Metallurgy.
  - Association of Professional Engineers and Geoscientists of British Columbia.
- That I carried out the field work and supervised the drilling program described herein.
- That I prepared this report on the geological, geochemical and drilling aspects of the exploration program
- That I have no interest in the properties described herein, or in the securities of Golden Lake Resources Ltd., or Noramco Mining Corporation.



APPENDIX 2

DIAMOND DRILL LOGS, HOLES NK91-1,2,3. and ASSAY DATA SHEETS.

## D R I L L      L O G

HOLE NO. NK 91-1

DRILL LOG							HOLE NO. NK 91-1
DRILLING CO.	LOCATION SKETCH		TESTS		DATE STARTED:		PROJECT:
LONE RANGER DRILLING LTD.			DEPTH	DIP ANGLE	AZIMUTH	SEPT 4 /91	KENA-COTTONWOOD
			COLLAR	-60	040°	DATE COMPLETED: SEPT 14 /91	N.T.S.: 82F /6W
			91.44	-57°?		COLLAR ELEV.: ~1563 M	LOCATION: KENA SOUTH GRID.
			182.88	-55°		NORTHING: 89419 N	
			274.32	-54°		EASTING: 6450W	
			397.78	-53°		AZIMUTH: 040°	
			486.77	-52°		DEPTH: 486.76	
						CORE SIZE: N.Q.	DATE LOGGED: SEPT 6-19 1991
HOLE TYPE CORE							LOGGED BY: TE-LISLO
INTERVAL (METRES)	LITHOLOGY		ALTERATION		MINERALIZATION		REMARKS
FROM	TO	ROCK TYPE	COLOUR	TEXTURE			(lithology, alteration, mineralization, structure, age relations, etc.)
0	3.66	CASING,					
3.06	50.28	ANDESITE TUFF	GREY - GREEN	FINE - GRAIN - FRAGMENTAL	Chlorite Calcite Epidote	2% - 3% Pyrite Trace to 1% Chalcopyrite - Fine magnetite.	Section grades to dacite tuff. - Foliation, Bedding: 45°-70°; Ave 50-55° to C.A. - Locally contains 0.3-4 cm. lensoid clasts of andesite tuff, augite crystal tuff and dacite tuff. Dacitic sections tend to occur in irregular layers. - Section grades to augite crystal tuff at bottom. - 10.98-11.40 - Lamprophyre. Dark grey/green - 49.75-50.28 - " " " - Increasing concentrations of veins and fracture fillings of grey quartz, calcite + epidote - Trace to 4% sulphide mineral as disseminated pyrite. Pyrite and chalcopyrite also occur as coatings on chlorite fractures, or with quartz-calcite veins.

## DRILL LOG

HOLE NO. NK 91-1

INTERVAL		LITHOLOGY		ALTERATION	MINERALIZATION	REMARKS	
FROM	TO	ROCK TYPE	COLOUR	TEXTURE		(lithology, alteration, mineralization, structure, age relations, etc.)	
50.28	60.6	Augite Crystal Tuff	Green	WEAKLY PEROVSKITIC	Chlorite	1-2% pyrite Trace Chalcopyrite.	Section contains up to 5% (1-10mm) augite crystals in green chloritic tuff; and a few clasts? to 5cm of grey tuff, and augite crystal tuff. - Highly fractured overlined by Qtz + Chlorite + Epidote + tremolite. - Sulphides as disseminations & fracture coatings.
60.60	75.29	Andesite Tuff / Dacite Tuff	Grey - Green	Fine - GRAINED	Chlorite Epidote Carbonate, (Calcite)	2% Pyrite - Chalcopyrite	Gradual to dacite tuff mainly after 72.0m. - Local augite-rich zones. - Weak banding of darker chloritic layers @ 50-60° to core axis. - 67.8M - 5cm. dark lampasphyre? at 45° to cd. - Epidote-carbonate occur in clots or fractures. - White quartz-carbonate fractures veins + Epidote + hematite and sulphide are erratic, less dense than above. - Trace to 1% pyrite, disseminations, & fractures. Chalcopyrite is weakly disseminated, on chloritic fractures, or locally in vein fractures
75.29	84.40	Andesite? Tuff - Dacite Tuff	Grey - Green to Green	Fine to Medium Locally Fragmental	Chlorite Epidote Carbonate(Calcite)	2% Pyrite Trace Chalcopyrite Trace Magnetite	Gradational assemblage as above - Highly altered by Chlorite-carbonate and epidote that fill fractures or occur as pale diffuse clots to 1.5cm. in diameter. Rare tuff clasts. - Abundant white quartz-calcite + hematite fracture fillings & local grey chalcocite zones. - Sulphides locally strong in vein fractures.
84.40	84.86	DACITE TUFF	Grey - Green	Fine GRAINED	WEAK CHLORITIC Calcite.	1% Pyrite Trace Chalcopyrite Trace Magnetite.	As in 72.0 to 75.29m. local gradation to Andesite Tuff. Weakly banded (bedding)? @ 45°-50° to C.A. - Rare clasts of fine grained chlorite tuff.

## DRILL LOG

HOLE NO. NK91-1

INTERVAL		LITHOLOGY		ALTERATION	MINERALIZATION	REMARKS	
FROM	TO	ROCK TYPE	COLOUR	TEXTURE		(lithology, alteration, mineralization, structure, age relations, etc.)	
84.86	90.3	Andesite Tuff - Dacite Tuff.	Grey - Green	Fine Grained	Chlorite	1% - 2% Pyrite Trace chalcopyrite Trace magnetite.	- Similar to section above 84.40. without alteration. - Pale grey clast-like zones in darker matrix. - 85.95 - 86.40M. Massive f.G. dacite tuff. - Dark crude bands at 55°-60° to C.A. - 88.0M - 60° Quartz-chlorite-Calcite vein - 1-2cm. - Numerous Calcite-quartz fracture fillings. - Sulfides mainly disseminated.
90.30	97.25	Dacite Tuff.	Grey - Green. Med. to Gray	Fine to Coarse Grained	Chlorite Epidote	1% pyrite Trace chalcopyrite " magnetite.	Grades locally to andesite tuff. - Weak banding and bottom contact @ 50°-55° to C.A. - local banding at 20° to C.A. Weak veining. - Mineralization mainly disseminated, locally as veins/fractures.
97.25	105.20	Dacite Tuff - Andesite Tuff.	Pale to Dark Grey Green-hues	Fine - Grained to weakly crystalline	Chlorite - Wk to Mod. Epidote - Weak silicification.	Tr - 4% (Av) 2% pyrite Traces chalcopyrite " magnetite.	Andesitic sections grade to augite-crystal tuff. - Increasingly pale-grey & dacitic towards bottom. - Section contains ± 1cm epidote-calcite clast-like alteration features, & rare dark-green chlorite-rich clasts. - Building? Foliation 45°-60° to core axis. - Calcite + Quartz + Chlorite Epiprite is weak to moderate. - Sulfides commonly disseminated, but also present on chlorite fractures, " quartz-Calc. fractures.
105.20	113.47	Dacite Tuff	Gray to Pale Grey	Fine - Grained - Aphanitic	weak chlorite " Sericitic.	1% Pyrite Trace chalcopyrite.	Section contains up to 4% 1-3mm weakly altered augite crystals & local 1cm. clots (clasts)? - May be more highly altered than is evident. - Weak quartz-calcite vein fractures. - Bottom contact irregular at ~55° to C.A. - Weak sulfide, mainly fine disseminations.

## DRILL LOG

HOLE NO. NK91-1

INTERVAL (METRES)	LITHOLOGY			ALTERATION	MINERALIZATION	REMARKS	
	FROM	TO	ROCK TYPE	COLOUR	TEXTURE		
113.47	121.20	Dacite Tuff - Augite Crystal Tuff	Pale to Dark Grey	Fine to Medium Grained	Weak chlorite " Epidote	1% - 2% pyrite Trace chalcopyrite. Fine magnetite.	- 20% of section is a dark-grey to green (chloritic) augite crystal tuff, weakly banded at 55° to C.A.  - 60% of section is a fine to medium grained dacite tuff gradational to augite crystal tuff, and resembles fine-grained foliated intrusive. It contains 5% - 10% black 1-3 mm (locally 5mm) augite + biotite? crystals in grey feldspathic matrix. Colour banding is marked by variations in mafic content, and 1-3 cm mafic concentrations form clast-like features. - Section is weak to moderately fractured and locally vein cut by white Calcite + Qtz + Chalcocite + epidote. Sulfide as above.
121.20	123.55	Plagioclase - Augite Crystal Tuff	DARK Grey - Grey	Fine Granular Weakly crystalline	Chlorite - Epidote.	1% pyrite Tr. Magnetite	- Weak andesitic laminations @ 55° - 60° to C.A. - Section marked by ~ 5%, 1-3 mm. altered felspar with fine augite and biotite? - Weak Calcite-quartz + hematite fractures. - Bottom contact at 50° to C.A. - Sulfides weak as disseminations + fractures.
123.55	131.56	Dacite Tuff.	Grey	Fine Grained	Chlorite Weak sericitic	2% - 3% Pyrite Traces Chalcopyrite	- Increasingly andesitic towards bottom. - Section grades locally to medium-grained tuff; resembling fine-grained intrusive, and may be a highly altered feldspathic tuff. In places, it contains up to 5% chloritized augite, and mafic clots as above. - Weak stockwork breccia zones. Bottom Contact at 45° to C.A.; 2-3% disseminated fractures containing sulfide as above.

## DRILL LOG

HOLE NO. NK91-1.

INTERVAL (METRES)		LITHOLOGY			ALTERATION	MINERALIZATION	REMARKS
FROM	TO	ROCK TYPE	COLOUR	TEXTURE			(lithology, alteration, mineralization, structure, age relations, etc.)
131.56	136.9	Plagioclase-Augite CRYSTAL TUFF	DARK Green- Grey	FINE Grained	Chlorite. Epidote.	To -4% (Av. 1%) Pyrite Trace chalcopyrite.	Similar to section 12120-123.55. Possibly an augite-rich flow - Section marked by 75% pale grey-green clots (1-zones) of epidote-carbonate alteration giving a weak porphyritic texture. - Weak foliation and bottom contact 45° to C.R.
136.9	141.7	Plagioclase-Augite CRYSTAL TUFF	Green Grey.	Fine to Medium	moderate to Shiny Chlorite weak sericite.	2% pyrite trace chalcopyrite	Grades locally to andesitic and dacite tuff. - Section grades from above unit but is significantly less altered. - Scattered calcite-quartz + hematite and minor quartz veins. - Bottom contact is gradational. - Trace to 75% Pyrite. Higher concentrations occur near quartz-carbonate veins. - Chalcopyrite occurs on chloritic fractures.
141.7	173.85	DACITE TUFF? Augite Crystal TUFF	Gray- DARK Grey		Chlorite.		- Gradational assemblage varying from dacite to andesite tuff. 141.7-155.25m. massive gray to dark grey tuff grading at 148.0 to fine plagioclase-augite crystal tuff. Above 148.0, section is moderately altered and cut by thin chlorite-pyrite fractures. Below 148.0, unit is marked by 1/2-zcm epidote-chlorite clots and augite-rich clasts. 3% pyrite; trace chalcopyrite to 148.0m. 1% pyrite, " chalcopyrite below 148.0m.
							155.25-173.85m. Augite crystal tuff-dacite tuff. Fine-medium grained; dark grey-green.

## DRILL LOG

HOLE NO. NK 91-1

INTERVAL		LITHOLOGY		ALTERATION	MINERALIZATION	REMARKS
FROM	TO	ROCK TYPE	COLOUR	TEXTURE		(lithology, alteration, mineralization, structure, age relations, etc.)
141.7	173.85				Tr - 4% pyrite Trace - Chalcopyrite TRACE - Magnetite.	155.25 - 173.85M Cont. Crude 40°-45° (local 60°) Bedding? foliation. Section marked by lensoid grey clastic and mafic augite-rich clasts; or thin irregular lenses. - Moderate chloritic alteration - with weak to moderately scattered quartz-calcite + hematite + pyrite fractures.
						- 166.73M - Sheared and broken along ± 15° CA Quartz-Calcite-pyrite vein.
						- 171.5 - 173.5M. Section is broken and limonitic (wk) along a 10°-20° ca vuggy (1-3cm) quartz-carbonate-chlorite-pyrite vein in sheared tuff. Trace - 4% Pyrite Traces chalcopyrite, trace magnetite
173.85	181.43	Augite crystal tuff	Grey - weak green porphyritic	weak Epidote	Chlorite Trace Chalcopyrite Trace Magnetite.	- As in 131.56 - 136.90M - Section grades from above to andesitic tuff, and is mottled by carbonate-epidote clots to 2cm. wide. - Bottom contact bedded at 70° to CA. - Scattered quartz-carbonate + hematite veins.
181.43	209.41	Dacite tuff.	Grey	Fine to Medium Grained	Chlorite Tr - 4% (Av 2%) Pyrite Tr - 4% Chalcopyrite. Tr. Magnetite	Section is massive with weak 55°-60° CA. foliation towards base. Unit is marked by 4% - 5% fine black to chloritized augite (1-2% are ± 3mm), in a fine feldspathic matrix. - Section is weak to moderately crackle brecciated and chloritized. Bottom contact 60° CA. - 206.9M - 2cm. 55° Qtz-Carb vein with 30% pyrite - 208.0M - Qtz-Chlorite-Carb vein; 1cm; 5-15° CA.

## DRILL LOG

HOLE NO. NK91-1

INTERVAL		LITHOLOGY		ALTERATION	MINERALIZATION	REMARKS	
FROM	TO	ROCK TYPE	COLOUR	TEXTURE			
209.41	237.9	DACITE TUFF - Augite Crystal Tuff	Grey - Dark	Fine Grained Crystalline	Chlorite Tr. Chalcopyrite Tr. magnetite.	1-4% (Av. 2%) pyrite. Traces Chalcopyrite 2-3% pyrite Trace Chalcopyrite	- 209.41 - 210.1 M. Dark grey augite crystal tuff highly foliated at 60° to C.A. Moderate chlorite, ± sericite. - 210.1 - 213.5 M. As above, weakly foliated Distinct pale grey dacitic section to 210.57 M., with bottom contact at 60° to C.A. Not as highly foliated as above. Gradual base to medium grained crystalline tuff. Weak-moderate Oy-calcite-pyrite + chalcopyrite fractures; and local strong chlorite-pyrite fractures.
						- 213.5 - 215.93 M. Grey crystalline dacite? Massive. Grades from above and contain 5-8% 2-4mm black augite in foliated matrix. 215.3 - 1cm chlorite-rich band at 55° C.A. - local pale altered zones; and also mafic-rich dots. Bottom contact sharp (bedded)? at 60° C.A.	
						- 215.93 - 222.64 M. Grey-dark grey, fine grained Mafic commonly occur in irregular 0.5-2cm (rarely local) chloritic layers or clasts? foliated at 60° C.A. - 243.0 M. 13cm. Plagioclase crystal tuff. 221.5 - 222.7 M. Pale grey, weakly bleached - Section cut by, shiny Oy-calcite fractures, with Pyrite + chalcopyrite.	
						170-87. Pyrite Trace Chalcopyrite	
						222.64 - 237.9 M. Grey, foliated, medium- grained tuff as in 213.5-215.93 M. 230.5 - 230.8 M. Bleached zone, with narrow zones scattered from 233.0 to 237.9 M.	

## DRILL LOG

HOLE NO. NK 91-1

INTERVAL		LITHOLOGY		ALTERATION	MINERALIZATION	REMARKS	
FROM	TO	ROCK TYPE	COLOUR	TEXTURE		(lithology, alteration, mineralization, structure, age relations, etc.)	
209.41	237.9					222.64 - 237.9 m. Cont. - At 236.05 m., DK gray F.G. crystal tuff or IA 215.93 - 222.64 m. - Rare Pale grey beds? at 50° C.A. - Foliation ~60°; Bottom Contact 65° C.A. - Scattered Otg-Calcite-Chlorite fractures at 10° C.A. with local stringer zones to 3cm. at 35° C.A. - 2 to 3% disseminated and fracture controlled pyrite decreasing to 1% - 2% at bottom. Trace Chalcopyrite. - local pink fine-grained siliceous zones.	
237.9	242.1	DACITE TUFF	Pale Grey	Fine Grain - Aplanitic	Weak Clay Chlorite	2-3% Pyrite - Trace Chalcopyrite	Section cut by dark chlorite 60° fractures, and local strong grey siliceous-clay veins mainly in foliation, that in places are brecciated. - 2-3% fine pyrite as disseminations or fracture coatings. Trace Chalcopyrite as disseminations in siliceous fractures.
242.1	242.5(?)	LAMPROPHYRE	Daric Grey - Olive Grey	FINE Grained	Otg-Calcite	Fine Magnetite	Unit crushed and goopy along 30° fault
242.5(?)	252.9	Dacite Tuff, Augite Crystal Tuff, Andesite Tuff.	Grey to Green locally	Fine to Medium to Locally Pink.	Weak Sericitic Silicicools? Potassie Feldspar	1-5% (Av 3%) Pyrite Traces Chalcopyrite	243.25 - 243.65 m. Lamprophyre. (As of 242.10 m) 244.2 - 245.6 m. Pale buff to pink-grey silicic tuff with local clay alteratn's. Dark tuff occurs locally in 55° C.A. bands. - Abundant Otg-Calcite-Chlorite + Pyrite Chlorite Fractures. - Slightly coarser grained + Otg-Calcite clots at bottom. Contact 60° to c.a.

## DRILL LOG

HOLE NO. NK91-1

INTERVAL (metres)		LITHOLOGY		ALTERATION	MINERALIZATION	REMARKS
FROM	TO	ROCK TYPE	COLOUR	TEXTURE		(lithology, alteration, mineralization, structure, age relations, etc.)
252.9	264.6	Dacite TUFF / Augite Crystal	Grey-Green to weakly medium	Fine to locally siliceous Chlorite	2% pyrite. Trace Chalcopyrite	252.9 - 254.3 - Medium grained finely crystalline pinkish grey dacite (interc.?) locally siliceous. Local 1cm mafic clots. — Gradational to:
		TUFF	Salmon	Grained.	Weak clay?	254.3 - 257.1 - Fine grained, pinkish-grey to greenish grey, chloritic andesitic tuff, with local dark irregular andesitic bands "clasts". Section has pale buff alteration zones (clay)? Ground fractures. — Gradational to:
			Pink.		2% Pyrite - locally V. Fine Tr. Chalcopyrite Trace magnetite.	257.1 - 260.8 - Fine-grained pale grey-green chloritic dacite tuff. Highly broken along chloritic fractures after 259.0! — Gradational to:
					Tr-5% Pyrite (Av-2%) Tr. Chalcopyrite.	260.8 - 264.26 - dark grey dacite? Augite crystal tuff? Then to fine grained chloritized dacite with local dark chloritic (shiny) clasts?
						264.26 - 264.6 lamprophyre - Bottom Contact 60°CA — Section from Trace to 5% pyrite and traces chalcopyrite - Sphalerite are locally shiny on scattered quartz-calcite-chlorite fractures.
264.6	266.96	Augite Crystal Tuff	Dark Green - Grey	Fine to Medium Grained	Chlorite? 1-2% Pyrite	Grades to Andesite tuff. - Scattered Quartz-calcite-epidote-chlorite + pyrite + traces chalcopyrite. - Bottom Contact sharp - irregular.
266.96	272.58	Dacite TUFF	Pale Buff - Grey to Grey + Pinkish	Abundant to Chlorite	Weakly siliceous.	Gradational assemblage, weak to moderately foliated (bedded)? at 50-60° to C.A. - Scattered Quartz-calcite-chlorite-pyrite fractions. - Local crackle brecciations after 285.5m with increase in chlorite + sphalerite. - Bottom Contact irregular at 50°-70° to C.A.
			Green	Glauc.		

## DRILL LOG

HOLE NO. NK91-1

INTERVAL (metres)	LITHOLOGY			ALTERATION	MINERALIZATION	REMARKS	
FROM	TO	ROCK TYPE	COLOUR	TEXTURE		(lithology, alteration, mineralization, structure, age relations, etc.)	
266.96	292.58			Clay/siliceous Potash Felspar?	Trace - 2% (13.6m) Pyrite -	266.96-274.7M - Buff grey-green, weakly pinkish with clay-silica alteration in brecciated sections. Finely disseminated pyrite. 274.7-283.55M - Grey fine-medium grained felsic grading to slightly pink-grey zones as above. Disseminated / fracture sulphide. 283.55-287.6M - Grey buff with pinkish fine grained siliceous alteration zones in 55° foliation. Local quartz-chlorite-pyrite banding in 1-3cm widths. - Highly broken 285.6-286.21M. 287.6-292.58M - Dacite Tuff. Coarse-grained Trace Chalcopyrite, 2-3% Pyrite.	
292.58	296.22	Anodesitic Tuff	Dull Grey-Green Weakly Porphyritic	Fine Granular Carbonate Chlorite	Chlorite. Carbonate. Trace Chalcopyrite.	Possibly altered Plagioclase-Augite crystal tuff. - Contains >5%, 2-5mm feldspar? altered to carbonate + epidote. - Local dark bands at 55°-60° C.A.- Chloritic - Weakly scattered Quartz-Calcite-Epidote fractures. - Contacts cut a 70° to C.A.	
296.22	323.45	Dacite Tuff	Grey to Pale Grey to faint pink	Aphanitic to Fine Grained	Weakly siliceous Chlorite.	1%-2% Pyrite Trace Chalcopyrite.	Section locally grades to andesite tuff. - Weak banding at 45°-50° C.A.. Commonly cherty above 312.0M.; and top section contains a few dark green chloritic clasts. - 318.0M. 1cm. quartz-chlorite calcite vein at 20° C.A. - 320.15M. 30° Qz-Calcite-Pyrite up to 10% pyrite. - Section varies from massive to locally well fractured. Sulphides mainly disseminated but also occur on fracture planes & chlorite.

## DRILL LOG

HOLE NO. NK91-1

INTERVAL METRES	LITHOLOGY			ALTERATION	MINERALIZATION	REMARKS	
FROM	TO	ROCK TYPE	COLOUR	TEXTURE		(lithology, alteration, mineralization, structure, age relations, etc.)	
323.45	329.85	Augite Crystal Tuff / Dacite Tuff	Daric Grey	Mosions Grained - Fine Grained	Chlorite Epidote	Tr-2% Pyrite Tr-Chalcopyrite	Section varies from a medium-grained unit, resembling fine-grained intrusive at top, to fine-grained slightly cherty tuff near bottom. Top section to 324.1m is marked by narrow zones of coarse crystal tuff, and by vague 50° ca. bands, and local mafic clots. - Weak foliation-fractures at 55° ca and weak Quartz-chlorite-calcite-epidote fractures.
329.85	340.05	DACITE TUFF	Grey-Green to Pale Grey	Aphantic to medium Grained	Chlorite Weakly Siliceous Weak Sericitic	Tr-4% (Av 2%) Pyrite Trace Chalcopyrite?	Grades from above to dacite, andesitic, and locally crystal tuff. - Zone of locally marked by 60° chlorite-green bands up to 10cm. wide, and by black to dark green clasts? - 333.25-337.36m - Aphantic, pale grey-green, weak clay altered, weak sericitic, slightly pink-cherty. - 337.36-340.05m - Section becomes more andesitic. - See Herd weak to moderate Quartz-chlorite-calcite + hematite fractures. - Sulfides are mainly disseminated, locally on fractures, or with white Qt-Calcite veins.
340.05	344.5	Augite Crystal Tuff / Dacite Tuff	Daric Grey Green	Fine Cracked	Weakly siliceous	2-3% Pyrite Trace Chalco Pyrite	- Section has local 70° ca bands (tensey clasts) - Strongly crackle brecciated - chloritic after 343.5m. - Weak foliation? 55°-70° ca. - Bottom contact area highly broken. - Trace to 5% (Av 2.5%) Pyrite, as dissemination, fracture fillings and loc with scattered Quartz-Calcite fractures.

## DRILL LOG

HOLE NO. NK91-1

INTERVAL (METRES)				LITHOLOGY	ALTERATION	MINERALIZATION	REMARKS
FROM	TO	ROCK TYPE	COLOUR	TEXTURE			(lithology, alteration, mineralization, structure, age relations, etc.)
344.5	381.86	ANDESITE TUFF	Green- Dark to Pale Grey	FINE TO MEDIUM-GRAIN	STRONG CHLORITE EPIDOTE	2-3% Pyrite Trace chalcopyrite.	Section grades to plagioclase-augite crystal tuff and to dacite tuff. - 344.5-357.2m - Crudely banded with dark tuff layers at ~60° CA. Moderate to strong chlorite and weak to strong epidote. Scattered quartz-calcite-hematite veins. Tr-5% pyrite.
						Tr-3% (ave 1%) Pyrite. Tr. Chalcopyrite Tr. Magnetite. - As above.	- 357.2-368.1m - Plagioclase-augite crystal tuff with minor dark banding. Commonly massive, locally broken. Scattered Qtz-Calcite vein - 368.1m-372.4m. Grades down above to augite-rich andesite tuff with increasing dark well-chloritized mafics near bottom. Sulphides as in above section.
				SILICOUS	2-5% Pyrite trace chalcopyrite	Ave 2-3% Pyrite. Trace chalcopyrite	- 372.4-373.6m - Gray dacite; pinkish-grey. Locally brecciated - silicous, 372.6m - ~20cm pink-white quartz-calcite. - Weak banding at ~60° CA.
							- 373.6-381.86m - Gradational to dark crystal tuff. Strong chloritic alteration, charky towards bottom. - Locally strong white-pink Quartz-Calcite veins. - Foliation? concentrated by fractures @ 60° CA. - Short sections on a silicic root with up to 5% py. - Chalcopyrite, as fine disseminations - or with veins
381.86	384.88	Dacite TUFF?	Grey to Pinkish Grey	Fine to Medium- Grained	weakly silicous. Trace Chalcopyrite	2-3% Pyrite. Trace Chalcopyrite	Unit locally resembles fine-grained intercal. Possibly highly altered dacite or crystal tuff. - Locally crackle brecciated with chlorite. - Scattered Quartz-calcite-chlorite fractures. - 3% pyrite as fine disseminations or with chloritic fractures. Chalcopyrite finely disseminated on fractures or with white veins.

## DRILL LOG

HOLE NO. 141C91-1

INTERVAL		LITHOLOGY		ALTERATION	MINERALIZATION	REMARKS	
FROM	TO	ROCK TYPE	COLOUR	TEXTURE		(lithology, alteration, mineralization, structure, age relations, etc.)	
384.88	392.05	Andesite Tuff	Dark green to Gray Green	Fine Granular	weak-mod. chlorite	2-3% Pyrite Trace Chalcopyrite	Section has local gradations to dacite tuff and augite crystal tuff. -Foliation-fracturing at 50-55° to C.A. and local color banding (irregular) at 30° to 60° C.A. - 391.2M - 15cm. dark lamprophyre at 30° C.A. - Section marked by weak silicic zones around Quartz-Calcite-Epidote-hematite and pyrite fractures.
392.05	393.85	LAMPROPHYRE				Fine Magnetite.	Contacts at ~45° to C.A.
393.85	409.56	Andesite Tuff	Dark to Gray - Green	Fine Granular Chloritic	weakly silicic Chloritic	3-4% Pyrite Trace Chalcopyrite Trace Magnetite	Gradational to plagioclase-augite crystal tuff at above 392.05M. - Coarse banding at 60° C.A. - 397.9M. 5 cm. pale grey fine grained dacite band with pyrite at 60° C.A. - Section marked by pale brecciated silicic zones chloritic zones, near bottom, and by biotely epidote-pyrite and hematite alterations in fractured areas.
409.56	418.4	Dacite Tuff	Green - Gray. Weakly pink	Fine - Granular Phyllitic. Weakly Porphyritic	Silicic Phyllitic. Weakly Porphyritic	2% Pyrite Trace Chalcopyrite	Section grades to augite crystal tuff: - Olive colored lamprophyre dykes at: 410.03 - 410.20M; 410.30 - 410.45M; 412.65 - 413.3N; 414.05 - 414.35. Contacts commonly 30-60° to C.A. - 409.6 - 414.1N. Siliceous zones, in part well brecciated with chloritic fractures. This zone is aphanitic to weakly porphyritic and locally resembles in hotines. More abundant after 416M.

## DRILL LOG

HOLE NO. NK91-1

INTERVAL		LITHOLOGY		ALTERATION		MINERALIZATION	REMARKS (lithology, alteration, mineralization, structure, age relations, etc.)
FROM	TO	ROCK TYPE	COLOUR	TEXTURE			
418.4	435.7	Andesite Tuff / Augite Crystal	Dull Grey - Green	Fine - Grained	Weakly siliceous Chloritic	Trace - 10% (locally 30%) Pyrite Trace Chalcopyrite Trace Magnetite	Generally as in section 393.85 - 409.56 m. - Weakly banded at 40°-55° - Weak to moderate chlorite alteration: - 432.9 - 433.8 m. Grades to pink-grey siliceous fine-grained tuff, with 3 to locally 10% pyrite. - Section is marked by scattered Quartz-Calcite ± Epidote ± hematite; chlorite fracture fillings and locally by strong blotchy epidote alteration. - Sulphide content as disseminations and fracture fillings is highly variable. Top section 3-4% pyrite + trace chalcopyrite; Central section Tr-2% " + " " ; Bottom section 2-3% " " "
435.7	456.1	Plagioclase-Augite Crystal Tuff	Grey-Green	Medium Grained	Chlorite Locally siliceous to weakly Epidote	Tr-5% Pyrite (Average 1-2%) Trace Chalcopyrite Trace Magnetite	Massive, locally chloritic. 435.7 - 438.5 m. 1-3cm Quartz-Chlorite-Calcite-Epidote pyrite + chalcopyrite vein @ 0-15°CA continuous down about section: - 438.3 m - 15cm chloritic andesite band at 60°CA followed by 10-15cm pinkish-green siliceous zones with strong chloritic fractures. - 442.0 - 443.7 m. F.T. andesite tuff - crystal tuff band with contacts at 65° and 50° F.C.A. - 452.3 - 452.8 m - Grey siliceous zone followed by 12-20 cm pink calcite vein with top contact of ~ 80° CA. - Weakly scattered Qf-Calcite veins as a base - Moderate chlorite alteration, weak Epidote - Sulphide as disseminations, fracture fillings; locally in white fracture veins.

## DRILL LOG

HOLE NO. NICKI-1

INTERVAL		LITHOLOGY		ALTERATION	MINERALIZATION	REMARKS (lithology, alteration, mineralization, structure, age relations, etc.)	
FROM	TO	ROCK TYPE	COLOUR	TEXTURE			
456.1	462.3	DACITE TUFF	Grey	Medium	Weakly siliceous	Tr-2% Pyrite	Fine-grained and siliceous from 457.2-478.45 m.
			Greenish		Chloritic	Tr. Chalcopyrite	Section is characterized by 3% 2-3mm black
						Pyrite crystals and local clots, and by rare	
						chloritic andesite clasts.	
						-Foliation - 60° CA.	
						-Scattered Qtz-Calcite-Pyrite fractures-	
						-Bottom Contact area broken. Silicification above	
462.3	474.1	Plagioclase - Augite Crystal Tuff.	Green- Gray to Pale Grey	Medium Granular locally Porphyritic	Silicified - Chlorite Epidote.	Trace to 4% Pyrite	-462.23 m. 5cm F.G. silicified pink tuff.
						Trace Chalcopyrite	-463.37-463.54 m. Gray clastic, weakly siliceous.
							-464.36 m - 4cm. pink fine-grained siliceous zone.
							-464.73 m - 468.35 m. Vascularly silicified, pink-grey,
							weakly banding (foliated) at 45°-60° CA.
							-473.25-474.1 m - Vascularly silicified, with grey- pink layers.
							-Scattered Qtz-Calcite-Epidote-hematite± Pyrite fractures as above
							-Bottom Contact marked by strong 60° quartz- calcite-pyrite zone at 60° CA.
							-Trace - 4% Pyrite. with local concentrations 18 cm - 3cm 60° bands at 472.8 & 473.5 m.
474.1	486.76	ANDESITE TUFF	Dark Grey- Green	Fine to Medium Granular	Weakly siliceous Carbonate - ? Clay. Calcite.	2% Pyrite Trace Chalcopyrite	Section grades to Augite ± Plagioclase crystal tuff
							-Bandings/foliation 55°-60° CA.
							-477.2-477.66 m - Narrow Qtz-Calcite with locally
							strong quartz-chlorite-pyrite-calcite immediately above -
							-481.9 m - Narrow Hematite filled breccia zone.
							-474.5 - 475.3 m. Siliceous, beige-grey alteration
							-Weakly scattered quartz-calcite-Ep-Ch. fractures as above.
486.76 END OF HOLE							

## SAMPLE DATA DRILL LOG

ASSAY LAB: ACME ANALYTICAL LAB

NUMBER	SAMPLE (METERS)			CORE			VISUAL ESTIMATES (% ORE MINERALS)		ASSAY RESULTS				
	FROM(m)	TO(m)	LENGTH	% REC	RQD	S.G.	Cu(ppm)	Ph(ppm)	Zn(ppm)	Ag(ppm)	As(ppm)	Au(ppm)	
54501	3.66	5.0	1.34	67%	1-4 cm. 11. Brokers		359	13	77	.1	5	59	
502	5.0	6.5	1.50	~100%	1-2cm pieces		401	8	73	.1	3	63	
503	6.5	8.0	1.50	94.2%	11 Brokers		280	3	67	.1	5	48	
504	8.0	9.5	1.50	95.3%	" fine-D.V. Brokers		222	4	68	.1	6	37	
505	9.5	11.0	1.50	93.3%	1-2cm pieces		163	3	63	.1	3	57	
506	11.0	12.5	1.50	88.1%	Brokers 1-5cm. occ.		32	3	60	.1	11	173	
507	12.5	14.0	1.50	90.5%	Brokers 1-5cm pieces Massive		35	3	68	.2	32	198	
508	14.0	15.5	1.50	+100%	Massive 1-3cm.		461	2	64	.3	2	156	
509	15.5	17.0	1.50	91%	Massive locally broken		317	2	69	.2	4	179	
54510	17.0	18.5	1.50	97%	5-30cm -		66	4	59	.1	3	154	
511	18.5	20.0	1.50	100%	" "		141	2	64	.1	5	149	
512	20.0	21.5	1.50	99%	3-30cm, N		499	2	68	.1	2	98	
513	21.5	23.0	1.50	98.4%	1-3cm, Massive		402	2	97	.1	2	71	
514	23.0	24.5	1.50	100%	2-3cm, "		531	2	73	.3	2	70	
515	24.5	26.0	1.50	100%	2-3cm, "		232	11	112	.1	4	126	
516	26.0	27.5	1.50	100%	1-7cm, "		1301	3	60	.1	6	123	
517	27.5	29.0	1.50	100%	1-3cm, "		718	3	77	.1	3	30	
518	29.0	30.5	1.50	92%	7-30", "		231	2	82	.1	2	29	
519	30.5	32.0	1.50	87%	Massive - Brokers 0.320 Fault? at 32.0		420	2	76	.1	2	41	
54520	32.0	33.5	1.50	100%	Fault? at 32.0		410	2	45	.1	2	94	
521	33.5	35.0	1.50	100%	5-30cm, massive		687	3	57	.3	4	248	
522	35.0	36.5	1.50	100%	5-15" pieces		300	2	56	.1	13	319	
523	36.5	38.0	1.50	100%	10-30cm, massive		296	2	48	.1	2	130	
524	38.0	39.5	1.50	100%	10-50cm, pieces		129	2	41	.1	9	171	
525	39.5	41.0	1.50	100%	Massive 10-35cm pieces		341	2	49	.1	15	151	
526	41.0	42.5	1.50	100%	10-35cm pieces		203	2	39	.1	4	38	
527	42.5	44.0	1.50	100%	Massive 10-40cm pieces		861	2	46	.1	7	110	
528	44.0	45.5	1.50	100%	Massive 2-30cm pieces		365	2	40	.1	11	185	
529	45.5	47.0	1.50	100%	10-35cm pieces		661	2	38	.1	8	82	
54530	47.0	48.5	1.50	100%	10-35cm pieces		578	3	55	.1	9	48	

M = Massive  
10-30cm = Length of core sampled.

## SAMPLE DATA DRILL LOG

ASSAY LAB: Acme Analytical Lab

NUMBER	SAMPLE (METRES)			CORE		VISUAL ESTIMATES (% ORE MINERALS)	ASSAY RESULTS					
	FROM(m)	TO(m)	LENGTH(m)	% REC	RQD		Cu.(ppm)	Pb.(ppm)	Zn.(ppm)	Ag(ppm)	As(ppm)	Au.(ppb)
54531	48.5	50.0	1.5	100%	M. 3-35cm. M. fractured		306	4	62	.1	5	34
32	50.0	51.5	1.5	"	M. 2-35cm.		547	2	64	.1	2	35
33	51.5	53.0	1.5	"	M. 10-40cm.		760	2	58	.1	2	112
34	53.0	54.5	1.5	"	M. 5-40cm.		639	2	59	.1	2	103
35	54.5	56.0	1.5	"	M. 15-40cm.		975	2	51	.1	2	108
36	56.0	57.5	1.5	"	M. 3-40cm.		120	2	54	.1	6	209
37	57.5	59.0	1.5	"	M. 15-30cm.		297	3	67	.1	5	120
38	59.0	60.5	1.5	"	M. 10-50cm.		381	4	70	.1	7	121
39	60.5	62.0	1.5	"	M. 10-40cm.		694	3	53	.1	9	82
54540	62.0	63.5	1.5	"	M. 10-30cm.		946	2	52	.6	6	85
41	63.5	65.0	1.5	"	M. 15-50cm.		869	2	45	.3	2	70
42	65.0	66.5	1.5	"	M. 10-40cm.		568	2	52	.1	5	123
43	66.5	68.0	1.5	"	1-35cm.		825	2	46	.4	4	133
44	68.0	69.5	1.5	"	M. 2-40cm.		757	2	48	.4	2	98
45	69.5	71.0	1.5	"	10-30cm.		859	2	48	.8	2	126
46	71.0	72.5	1.5	"	M. 10-30cm.		1164	2	47	1.4	3	604.
47	72.5	74.0	1.5	"	M. 10-30cm.		68	3	31	.1	6	153
48	74.0	75.5	1.5	4	M. 10-30cm.		397	2	36	.3	5	244
49	75.5	77.0	1.5	"	M. 10-20cm.	12M. 372 PPM Cu	314	3	46	.1	4	213
54550	77.0	78.5	1.5	4	M. 10-35cm.		181	3	53	.2	6	106
51	78.5	80.0	1.5	4	M. 10-35cm.		227	2	43	.1	6	115
52	80.0	81.5	1.5	4	M. 15-30cm.		514	2	45	.4	5	350
53	81.5	83.0	1.5	"	M. 5-40cm.		116	5	43	.1	5	610
54	83.0	84.5	1.5	"	M. 15-30cm.		192	4	38	.1	4	97
55	84.5	86.0	1.5	"	M. 10-30cm.		103	2	38	.1	5	150
56	86.0	87.5	1.5	"	M. 15-35cm.		803	2	39	.6	3	121
57	87.5	89.0	1.5	"	M. 5-35cm.		472	2	39	.1	2	102
58	89.0	90.5	1.5	"	M. 15-35cm.		415	3	40	.4	6	115
59	90.5	92.0	1.5	"	M. 5-35cm.		478	2	39	.2	3	97
54560	92.0	93.5	1.5	"	M. 12-50cm.		128	2	34	.1	3	43

M = Massive  
15-20 cm = lengths of core.  
" =

## SAMPLE DATA DRILL LOG

ASSAY LAB: Acme ANALYTICAL LAB

SAMPLE (METERS)						CORE						VISUAL ESTIMATES (% ORE MINERALS)		ASSAY RESULTS					
NUMBER	FROM(M)	TO(M)	LENGTH	% REC	RQD	S.G.			Cu(PPM)	Pb(PPM)	Zn(PPM)	Ag(PPM)	As(PPM)	Au.(PPM)					
54561	93.5	95.0	.15	100%	M. 15-50CM.				76	2	35	.2	4	136					
62	95.0	96.5	.15	"	M. 15-50CM.				110	4	46	.1	2	207					
63	96.5	98.0	.15	"	M. 10-35CM.				121	2	50	.1	4	50					
64	98.0	99.5	.15	"	M. 10-60CM.				509	2	39	.6	5	282					
65	99.5	101.0	.15	"	M. 15-50CM.		10.5M - 565 PPM Cu.		772	2	28	.8	3	117				182.7	
66	101.0	102.5	.15	"	M. 2-30CM.				641	4	28	.5	4	136				PPB Au	
67	102.5	104.0	.15	"	M. 3-35CM.				1460	2	29	1.9	2	251					
68	104.0	105.5	.15	"	M. 3-25CM.				346	4	32	.5	3	236					
69	105.5	107.0	.15	"	M. 5-35CM.				153	3	9	.2	3	187					
54570	107.0	108.5	.15	"	M. 5-35CM.				58	2	12	.1	2	157					
71	108.5	110.0	.15	"	M. 3-35CM.				23	3	19	.1	4	123					
72	110.0	111.5	.15	"	M. 15-35CM.				24	2	16	.1	5	45					
73	111.5	113.0	.15	"	M. 5-35CM.				12	3	14	.1	2	38					
74	113.0	114.5	.15	"	M. 5-40CM.				469	4	25	.8	2	143					
75	114.5	116.0	.15	"	M. 3-60CM.				472	2	29	.8	3	96					
76	116.0	117.5	.15	"	M. 5-35CM.				215	3	16	.4	2	127					
77	117.5	119.0	.15	"	M. 3-60CM.				82	2	23	.4	2	62					
78	119.0	120.5	.15	"	M. 2-50CM.				591	2	33	.8	2	95					
79	120.5	122.0	.15	"	M. 5-60CM.				209	2	39	.5	3	162					
54580	122.0	123.5	.15	"	M. 12-60CM.				152	2	59	.7	2	59					
81	123.5	125.0	.15	"	M. 10-25CM.				231	2	19	.5	2	179					
82	125.0	126.5	.15	"	M. 3-30CM.				41	4	15	.2	8	31					
83	126.5	128.0	.15	"	M. 12-50CM.				23	2	16	.1	3	32					
84	128.0	129.5	.15	"	M. 5-40CM.				10	2	17	.1	14	32					
85	129.5	131.0	.15	"	M. 3-35CM.				102	2	17	.4	3	119					
86	131.0	132.5	.15	100%	M. 2-60CM.				270	2	38	.5	5	79					
87	132.5	134.0	.15	"	M. 3-50CM.				101	2	39	.3	7	15					
88	134.0	135.5	.15	"	M. 20-70CM.				464	2	39	.7	7	52					
89	135.5	137.0	.15	"	M. 3-35CM.				310	2	46	.5	3	98					
54590	137.0	138.5	.15	"	M. 5-50CM.				593	2	41	.9	4	78					

M = MASSIVE  
5-10CM. = LENGTHS OF CORE.  
" = AVERAGE.

\* =  
Au. FA + ICP.  
100M. SAMPLE.

DRILL HOLE NO. NK91-1

SAMPLE DATA DRILL LOG						ASSAY LAB: Acme Analytical Lab							
NUMBER	SAMPLE (METERS)			CORE		VISUAL ESTIMATES (% ORE MINERALS)		ASSAY RESULTS					
	FROM	TO	LENGTH	% REC	RQD	S.G.	Cu (PPM)	Pb (PPM)	Zn (PPM)	Ag (PPM)	As (PPM)	Au (PPB)	
54591	138.5	140.0	1.50	100%	M.15-40cm.		152	2	38	.7	8	249	
92	140.0	141.5	1.50	98.3%	M.3-35cm		240	2	40	.4	4	76	
93	141.5	143.0	1.50	99.0%	M.2-30cm		256	2	34	.6	5	173	
94	143.0	144.5	1.50	100%	M.5-40cm		121	2	22	.4	3	126	
95	144.5	146.0	1.50	100%	M.1-35cm		149	2	24	.4	2	158	
96	146.0	147.5	1.50	100%	M.20-40cm		76	2	32	.3	6	103	
97	147.5	149.0	1.50	100%	M.1-40cm		135	2	29	.5	5	107	
98	149.0	150.5	1.50	100%	M.10-40cm		123	3	36	.4	2	230	
99	150.5	152.0	1.50	100%	M.15-50cm		95	2	37	.2	2	69	
54600	152.0	153.5	1.50	100%	M.15-60cm		109	2	37	.4	3	31	
601	153.5	155.0	1.50	100%	M.1-50cm		233	2	39	.6	3	124	
02	155.0	156.5	1.50	100%	M.3-35cm		417	2	37	.7	5	153	
03	156.5	158.0	1.50	100%	M.15-20cm		262	2	38	5	6	145	
04	158.0	159.5	1.50	100%	M.15-50cm		639	2	42	.7	4	80	
05	159.5	161.0	1.50	100%	M.5-40cm		612	2	37	.7	3	65	
06	161.0	162.5	1.50	100%	M.10-40cm		795	2	33	1.2	5	149	
07	162.5	164.0	1.50	100%	M.10-60cm		1756	2	31	1.3	4	129	
08	164.0	165.5	1.50	100%	M.5-25cm loc. Brokens. M.150cm		846	2	34	1.1	3	157	
09	165.5	167.0	1.50	100%	M.15-50cm loc. Brokens. M.150cm		506	2	37	2.1	4	1370	
54610	167.0	168.5	1.50	100%	M.15-50cm loc. Brokens. M.150cm		1408	2	31	1.4	5	359	
11	168.5	170.0	1.50	98.7%	M.150cm loc. Brokens. M.35-60cm	9M. 447.7PPM Cu.	319	2	43	.7	8	189	
12	170.0	171.5	1.50	91.9%	M.35-60cm loc. Brokens.		164	2	32	1.0	23	433	
13	171.5	173.0	1.50	96.7%	loc. Brokens.		81	2	31	1.7	25	1706	
14	173.0	174.5	1.50	99.3%	loc. Brokens. M.10-40cm		213	2	36	.7	9	390	
15	174.5	176.0	1.50	96.6%	M.5-50cm		155	2	40	.4	2	55	
16	176.0	177.5	1.50	96.6%	M.5-100cm		172	2	39	.3	5	19	
17	177.5	179.0	1.50	100%	M.3-70cm		95	2	43	.3	3	30	
18	179.0	180.5	1.50	100%	M.20-70cm		143	2	39	.3	3	21	
19	180.5	182.0	1.50	100%	M.15-70cm		62	5	34	.3	3	35	
54620	182.0	183.5	1.50	100%	M.15-60cm		35	9	17	.1	2	142	

M = Massive  
10-15cm = Lengths  
of core sampled.  
II. As = Assay II, 2.1

9.0M.  
741PPB  
Au

SAMPLE DATA DRILL LOG							ASSAY LAB: ACMU ANALYTICAL LAB					
NUMBER	SAMPLE			CORE		VISUAL ESTIMATES (% ORE MINERALS)	ASSAY RESULTS					
	FROM(m)	TO(m)	LENGTH(m)	% REC	RQD		Cu(PPM)	Pb(PPM)	Zn(PPM)	Ag(PPM)	As(PPM)	Au(PPB) **
54621	183.5	185.0	1.5	100%	M. 10-30 CM.		18	8	17	.1	.2	104
22	185.0	186.5	1.5	"	M. 10-30 CM.		8	5	16	.1	.2	107
23	186.5	188.0	1.5	"	M. 10-40 CM.		25	5	16	.1	.2	164
24	188.0	189.5	1.5	"	M. 10-35 CM.		25	2	16	.1	.2	111
25	189.5	191.0	1.5	"	M. 15-40 CM.		62	6	15	.2	.2	216
26	191.0	192.5	1.5	"	M. 15-35 CM.		25	2	17	.1	.2	101
27	192.5	194.0	1.5	"	M. 15-35 CM.		63	3	18	.2	.3	103
28	194.0	195.5	1.5	"	M. 10-40 CM.		63	8	16	.3	.2	181
29	195.5	197.0	1.5	"	M. 15-35 CM.		198	6	20	.5	.10	308
54630	197.0	198.5	1.5	"	M. 10-40 CM.		110	7	20	.3	.5	127
31	198.5	200.0	1.5	"	M. 10-40 CM.		149	3	16	.2	.5	154
32	200.0	201.5	1.5	"	M. 4-50 CM. Loc. Broken		134	382	19	9.3	225	309
33	201.5	203.0	1.5	"	M. 4-50 CM. Loc. Broken 1-25 CM. clear		150	6	21	.3	.4	158
34	203.0	204.5	1.5	"	M. 4-50 CM.		148	7	22	.3	.9	118
35	204.5	206.0	1.5	"	M. 5-40 CM.		342	5	23	.6	.15	182
36	206.0	207.5	1.5	"	M. 30-50 CM.		181	2	25	.4	.21	396
37	207.5	209.0	1.5	"	M. 5-45 CM.		665	7	16	.7	.12	263
38	209.0	210.5	1.5	"	M. 5-35 CM. Loc. Broken		592	2	25	.7	.7	168
39	210.5	212.0	1.5	"	M. 3-40 CM.		103	2	39	.4	.5	286
54640	212.0	213.5	1.5	"	M. 10-70 CM.		1081	6	32	1.0	.3	134
41	213.5	215.0	1.5	"	M. 10-35 CM.		144	5	26	.1	.6	256
42	215.0	216.5	1.5	"	M. 7-50 CM.	25.5M - 568.6 PPM	78	4	27	.4	.5	289
43	216.5	218.0	1.5	"	M. 4-50 CM.	Cu:	649	4	32	.6	.4	199
44	218.0	219.5	1.5	"	M. 3-40 CM.		317	3	27	.5	.5	264
45	219.5	221.0	1.5	"	M. 12-35 CM.		697	2	30	.7	.2	218
46	221.0	222.5	1.5	"	M. 3-50 CM.		1049	5	33	1.2	.4	275
47	222.5	224.0	1.5	"	M. 10-50 CM.		676	4	39	1.1	.4	226
48	224.0	225.5	1.5	"	M. 15-60 CM.		423	2	22	.6	.4	112
49	225.5	227.0	1.5	"	M. 15-50 CM.		633	4	22	1.0	.5	327
54650	227.0	228.5	1.5	"	M. 10-50 CM.		927	6	23	2.3	.4	1894

M = Massive  
10-20 CM. Lengths of  
core Sampled  
" = All others

SAMPLE DATA DRILL LOG						ASSAY LAB: Acme Analytical Lab									
SAMPLE			CORE			VISUAL ESTIMATES (% ORE MINERALS)			ASSAY RESULTS						
NUMBER	FROM(m)	TO(m)	LENGTH(m)	% REC	RQD	S.G.	206.0-231.5M.			Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Au <sup>xx</sup> (ppm)
54651	228.5	230.0	1.5	100%	M. 10-30cm.					441	2	23	.9	2	279
52	230.0	231.5	1.5	100%	M. 5-50cm.					930	5	20	1.4	3	1022
53	231.5	233.0	1.5	100%	M. 3-15cm. Loc. Broken					756	2	20	.9	2	139
54	233.0	234.5	1.5	100%	M. 3-25cm. Loc. Broken					500	7	13	.7	3	92
55	234.5	236.0	1.5	100%	M. 3-25cm. Broken					146	5	17	.4	2	89
56	236.0	237.5	1.5	100%	M. 10-20cm. Loc. Broken					909	4	25	1.2	2	147
57	237.5	239.0	1.5	100%	M. 5-20cm. Loc. Broken					869	4	17	.8	2	130
58	239.0	240.5	1.5	94.7%	M. 1-15cm. Loc. Broken					644	6	23	1.3	5	403
59	240.5	242.0	1.5	87.6%	M. 1-15cm. Loc. Broken					669	4	32	1.6	3	673
54660	242.0	243.5	1.5	92.0%	M. 10-20cm. Loc. Broken					296	10	50	.6	3	139
61	243.5	245.0	1.5	95.9%	M. 1-30cm. Loc. Broken					287	3	24	.6	2	113
62	245.0	246.5	1.5	99.3%	M. 1-30cm. Loc. Broken					288	2	27	.5	2	107
63	246.5	248.0	1.5	100%	M. 10-30cm.					345	4	31	.9	2	84
64	248.0	249.5	1.5	98.7%	M. 5-35cm					795	4	19	.6	2	100
65	249.5	251.0	1.5	96.9%	M. 10-35cm					439	3	16	.5	2	71
66	251.0	252.5	1.5	97.3%	M. 5-35cm					374	2	25	.8	2	55
67	252.5	254.0	1.5	100%	M. 5-40cm					193	4	23	.4	2	35
68	254.0	255.5	1.5	100%	M. 3-50cm					62	2	18	.1	2	38
69	255.5	257.0	1.5	100%	M. 5-35cm					68	3	25	.5	2	66
54670	257.0	258.5	1.5	100%	M. 3-35cm. Loc. Broken					9	2	18	.2	2	38
71	258.5	260.0	1.5	100%	M. 1-40cm. Loc. Broken					10	2	22	.1	2	15
72	260.0	261.5	1.5	99.3%	M. 1-30cm. Loc. Broken					137	3	25	.4	2	43
73	261.5	263.0	1.5	97.7%	M. 15-40cm					23	2	22	.3	2	72
74	263.0	264.5	1.5	98.0%	M. 3-30cm					23	5	30	.2	5	61
75	264.5	266.0	1.5	100%	M. 12-70cm					204	2	36	.6	2	42
76	266.0	267.5	1.5	100%	M. 12-50cm					255	2	25	.6	2	62
77	267.5	269.0	1.5	100%	M. 10-40cm					5	3	23	.2	2	10
78	269.0	270.5	1.5	100%	M. 4-60cm					3	2	12	.1	2	5
79	270.5	272.0	1.5	100%	M. 30-60cm					5	2	21	.2	2	13
54680	272.0	273.5	1.5	100%	M. 10-40cm					26	2	15	.1	3	10

SAMPLE DATA DRILL LOG							ASSAY LAB: Reno Analytical Lab.								
NUMBER	SAMPLE (metres)			CORE			VISUAL ESTIMATES (% ORE MINERALS)			ASSAY RESULTS					
	FROM	TO	LENGTH	% REC	RQD	S.G.				Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Au (ppb)
54681	273.5	275.0	1.50	100%	M-15-40cm					18	3	25	.3	3	36
82	275.0	276.5	1.50	100%	M-5-70cm					14	2	23	.2	4	46
83	276.5	278.0	1.50	99.3%	3-70cm locally broken					11	2	11	.1	3	20
84	278.0	279.5	1.50	99.3%	M-10-40cm					11	2	9	.1	3	25
85	279.5	281.0	1.50	100%	3-40cm					6	2	23	.1	2	41
86	281.0	282.5	1.50	100%	M-2-40cm					13	2	14	.2	2	28
87	282.5	284.0	1.50	100%	Brickcom 2-15cm					60	2	14	.1	2	25
88	284.0	285.5	1.50	100%	M-2-7cm					24	2	15	.1	2	14
89	285.5	287.0	1.50	88.7	locally broken 4-50cm					26	2	20	.3	3	45
54690	287.0	288.5	1.50	97.3	M-1-35cm					49	2	21	.2	3	39
91	288.5	290.0	1.50	95.4	M-5-40cm					87	2	25	.3	4	38
92	290.0	291.5	1.50	97.3	M-15-70cm					7	2	16	.1	3	35
93	291.5	293.0	1.50	100%	M-2-100cm					154	2	17	.3	4	21
94	293.0	294.5	1.50	100%	M-4-80cm					95	2	24	.4	5	50
95	294.5	296.0	1.50	100%	M-25-50cm					10	2	24	.2	5	33
96	296.0	297.5	1.50	100%	2-35cm					5	4	14	.1	2	16
97	297.5	299.0	1.50	100%	M-10-50cm					6	2	15	.1	3	17
98	299.0	300.5	1.50	100%	M-15-30cm					4	2	13	.1	3	9
99	300.5	302.0	1.50	100%	locally broken 1-35cm					5	2	14	.1	3	8
54700	302.0	303.5	1.50	98.7%	M-3-50cm					5	2	15	.1	2	3
701	303.5	305.0	1.50	96.2%	M-5-50cm					5	5	14	.1	3	7
2	305.0	306.5	1.50	96.7%	M-1-50cm					6	2	13	.2	2	7
3	306.5	308.0	1.50	100%	M-5-40cm					6	2	14	.1	2	5
4	308.0	309.5	1.50	100%	M-5-50cm					5	3	11	.2	2	8
5	309.5	311.0	1.50	100%	M-1-35cm					4	2	11	.1	2	26
6	311.0	312.5	1.50	100%	1-35cm					5	3	14	.1	3	13
7	312.5	314.0	1.50	100%	locally broken 1-40cm					8	2	16	.2	4	50
8	314.0	315.5	1.50	100%	M-6-60cm					9	2	15	.2	3	23
9	315.5	317.0	1.50	100%	M-15-40cm					26	2	15	.1	4	29
54710	317.0	318.5	1.50	100%	M-15-35cm					15	2	15	.2	3	33

Metres  
10-30cm = length of core sampled.

ANALYSES  
F.A. ICP.  
100g. sample.

SAMPLE DATA DRILL LOG						ASSAY LAB: Acme ANALYTICAL LAB.							
NUMBER	SAMPLE (METERS)			CORE		VISUAL ESTIMATES (% ORE MINERALS)		ASSAY RESULTS					
	FROM	TO	LENGTH	% REC	RQD	S.G.	Cu(PPM)	Pb(PPM)	Zn(PPM)	Ag(PPM)	As(PPM)	Au <sup>g</sup> (PPB)	
54711	318.5	320.0	1.50	100%	M. 5-10cm.		16	2	16	.2	4	20	
12	320.0	321.5	1.50	100%	M. 10-30cm.		13	2	16	.2	3	35	
13	321.5	323.0	1.50	100%	M. 12-35cm		8	3	11	.1	2	27	
14	323.0	324.5	1.50	100%	M. 2-35cm		75	2	15	.2	2	43	
15	324.5	326.0	1.50	95.3%	M. 3-60cm		76	2	14	.2	2	35	
16	326.0	327.5	1.50	95.0%	M. 3-38cm		113	4	19	.1	2	19	
17	327.5	329.0	1.50	98.7%	M. 3-60cm		154	5	14	.2	2	34	
18	329.0	330.5	1.50	100%	3-40cm		121	2	13	.1	2	40	
19	330.5	332.0	1.50	100%	M. 25-60cm		22	6	17	.1	2	41	
54720	332.0	333.5	1.50	100%	M. 20-40cm		72	3	18	.1	2	26	
21	333.5	335.0	1.50	100%	M. 4-40cm		7	2	12	.1	9	64	
22	335.0	336.5	1.50	100%	M. 2-40cm		13	2	12	.1	6	46	
23	336.5	338.0	1.50	98.7%	M. 10-35cm		21	2	16	.1	2	27	
24	338.0	339.5	1.50	96.7%	M. 12-40cm		9	2	12	.1	2	18	
25	339.5	341.0	1.50	98.0%	M. 8-40cm		48	3	14	.1	2	27	
26	341.0	342.5	1.50	100%	M. 10-35cm		57	2	13	.1	2	50	
27	342.5	344.0	1.50	98.7%	M. 10-40cm H. Breaks		43	2	15	.1	2	43	
28	344.0	345.5	1.50	95.4%	M. 10-35cm Loc. H. Breaks		23	2	26	.2	3	37	
29	345.5	347.0	1.50	96.7%	M. 1-15cm		46	2	26	.1	2	40	
54730	347.0	348.5	1.50	100%	M. 1-35cm		54	2	20	.1	2	46	
31	348.5	350.0	1.50	100%	1-15cm		119	3	24	.6	3	183	
32	350.0	351.5	1.50	100%	M. 1-50cm		41	2	20	.1	3	29	
33	351.5	353.0	1.50	100%	5-35cm		22	3	23	.2	2	25	
34	353.0	354.5	1.50	99.3%	M. 1-35cm		290	2	20	.3	2	66	
35	354.5	356.0	1.50	99.3%	M. 1-30cm Loc. H. Breaks		384	3	19	.5	2	43	
36	356.0	357.5	1.50	100%	M. 5-50cm		135	3	16	.2	2	29	
37	357.5	359.0	1.50	100%	M. 3-35cm		65	2	20	.2	2	14	
38	359.0	360.5	1.50	100%	M. 1-135cm Loc. H. Breaks		108	2	20	.2	2	20	
39	360.5	362.0	1.50	86%	M. 1-20cm approx.		209	2	17	.3	3	32	
54740	362.0	363.5	1.50	98%	1-45cm		113	2	20	.1	2	15	

SAMPLE DATA DRILL LOG						ASSAY LAB: Acme Analytical Lab						
NUMBER	SAMPLE			CORE		VISUAL ESTIMATES (% ORE MINERALS)		ASSAY RESULTS				
	FROM	TO	LENGTH	% REC	RQD	S.G.	Cu(PPM)	Pb(PPM)	Zn(PPM)	Ag(PPM)	As(PPM)	Au** (PPM)
54741	363.5	365.0	1.50	98.3%	M. 3-35cm		195	2	17	.4	3	33
42	365.0	366.5	1.50	98.7%	M. 2-40cm		445	2	18	.5	2	46
43	366.5	368.0	1.50	100%	M. 10-40cm		126	3	17	.2	2	21
44	368.0	369.5	1.50	100%	M. 2-40cm		157	2	12	.2	3	26
45	369.5	371.0	1.50	100%	M. 2-35cm		268	3	16	.3	2	36
46	371.0	372.5	1.50	100%	1-35cm		201	9	21	.3	2	54
47	372.5	374.0	1.50	100%	M. 1-70cm		224	18	23	1.2	3	196
48	374.0	375.5	1.50	98.7%	M. 15-70cm		418	2	21	.6	2	82
49	375.5	377.0	1.50	96.5%	M. 15-35cm		457	2	14	.5	2	49
54750	377.0	378.5	1.50	97.3%	5-35cm		764	2	17	.7	2	99
51	380.0	380.0	1.50	100%	3-25cm		835	2	19	.6	2	94
52	380.0	381.5	1.50	100%	5-35cm		604	3	15	.5	2	102
53	381.5	383.0	1.50	100%	Beckon 1-30cm		378	5	14	.3	2	71
54	383.0	384.5	1.50	100%	1-40cm		339	5	9	.3	2	88
55	384.5	386.0	1.50	100%	2-40cm		662	2	19	.7	2	77
56	386.0	387.5	1.50	100%	1-55cm		463	3	19	.4	2	37
57	387.5	389.0	1.50	100%	1-45cm		199	4	23	.3	2	21
58	389.0	390.5	1.50	100%	1-65cm		229	2	18	.3	2	49
59	390.5	392.0	1.50	100%	M. 10-35cm		393	3	25	.4	3	39
54760	392.0	393.5	1.50	100%	M. 15-40cm		164	12	48	.4	7	16
61	393.5	395.0	1.50	100%	M. 10-35cm		501	3	29	.5	4	54
62	395.0	396.5	1.50	100%	M. 5-35cm		420	3	18	.3	2	44
63	396.5	398.0	1.50	100%	M. 15-40cm		781	2	19	.7	2	56
64	398.0	399.5	1.50	100%	M. 15-35cm		641	2	17	.5	2	51
65	399.5	401.0	1.50	100%	M. 15-50cm		515	2	17	.5	2	51
66	401.0	402.5	1.50	100%	M. 20-50cm		582	2	19	.5	3	47
67	402.5	404.0	1.50	100%	M. 20-50cm		358	2	17	.4	2	36
68	404.0	405.5	1.50	100%	M. 3-35cm		916	2	15	.6	2	50
69	405.5	407.0	1.50	100%	M. 12-70cm		503	7	16	.5	2	35
54770	407.0	408.5	1.50	100%	M. 5-60cm		756	4	15	.6	2	50

## SAMPLE DATA DRILL LOG

ASSAY LAB: Acme Analytical Lab

NUMBER	SAMPLE			CORE			VISUAL ESTIMATES (% ORE MINERALS)		ASSAY RESULTS				
	FROM	TO	LENGTH	% REC	RQD	S.G.	Cu(PPM)	Pb(PPM)	Zn(PPM)	Ag(PPM)	As(PPM)	Au <sup>xx</sup> (PPB)	
54771	408.5	410.0	1.50	100%	M. 15-35cm		319	2	18	.2	5	38	
72	410.0	411.5	1.50	98.7%	M. 15-100cm		65	8	26	.2	4	46	
73	411.5	413.0	1.50	98%	M. 5-35cm		66	5	25	.1	4	24	
74	413.0	414.5	1.50	99.3%	M. 1-15cm		47	8	40	.1	4	25	
75	414.5	416.0	1.50	100%	M. 5-30cm		75	4	19	.1	2	29	
76	416.0	417.5	1.50	94%	3-30cm		147	2	16	.1	2	42	
77	417.5	419.0	1.50	98%	1-35cm		185	2	15	.2	2	46	
78	419.0	420.5	1.50	100%	10-30cm		93	5	17	.1	2	31	
79	420.5	422.0	1.50	100%	1-35cm		59	2	25	.1	2	44	
54780	422.0	423.5	1.50	100%	3-40cm		51	2	25	.2	2	56	
81	423.5	425.0	1.50	92.7%	M. 1-40cm Breaks		119	2	25	.3	2	50	
82	425.0	426.5	1.50	89.1%	1-20cm		162	2	25	.3	2	39	
83	426.5	428.0	1.50	98.7%	1-100cm		272	2	22	.4	2	44	
84	428.0	429.5	1.50	100%	1-50cm		106	2	22	.1	2	41	
85	429.5	431.0	1.50	96%	2-35cm		98	2	18	.1	2	29	
86	431.0	432.5	1.50	100%	5-35cm		230	2	21	.2	2	29	
87	432.5	434.0	1.50	99.3%	2-40cm		22	2	12	.3	5	59	
88	434.0	435.5	1.50	99%	6-20cm		105	2	21	.4	2	44	
89	435.5	437.0	1.50	99.3%	1-30cm		129	2	17	.4	2	30	
54790	437.0	438.5	1.50	100%	1-30cm		175	2	24	.4	2	15	
91	438.5	440.0	1.50	99.3%	M. 3-40cm		226	2	17	.5	3	42	
92	440.0	441.5	1.50	99%	M. 10-50cm		110	2	21	.3	2	15	
93	441.5	443.0	1.50	99.3%	M. 3-50cm		272	2	22	.6	2	23	
94	443.0	444.5	1.50	100%	Breaks		86	3	23	.3	2	14	
95	444.5	446.0	1.50	100%	M. 20-50cm		183	2	24	.5	2	21	
96	446.0	447.5	1.50	100%	M. 5-40cm		49	2	28	.3	2	12	
97	447.5	449.0	1.50	100%	Breaks		155	3	23	.5	2	31	
98	449.0	450.5	1.50	98%	2-30cm		168	2	19	.3	2	28	
99	450.5	452.0	1.50	97.4%	M. 3-60cm		46	2	22	.3	2	21	
54800	452.0	453.5	1.50	98.7%	M. 10-40cm		135	2	16	.4	2	38	

M = Massive  
10-30 = Lengths of core sampled.

S A M P L E      D A T A      D R I L L      L O G

ASSAY LAB: Acute Anteysocial Lab

M. & Marshall  
10-30 - Lengths of cores sampled.

Aer XX FA/ICP  
10 AMI samples

DRILL HOLE NO. NK81-1

APPENDIX 3

ASSAY CERTIFICATES

- a) Soil and Rock assays, Field Program.
- b) Diamond Drill Assays.

## GEOCHEMICAL ANALYSIS CERTIFICATE

Noramco Exploration Inc. PROJECT KENA FILE # 91-2515 Page 1  
 900 - 999 W. Hastings St., Vancouver BC V6C 2W2 Attn: T.E. LISLE

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0161-S	33	19	105	.1	23	130 -
1WS 0162-S	73	13	80	.2	35	141 -
1WS 0163-S	60	50	177	.3	10	36 -
1WS 0164-S	87	16	145	.2	9	54 -
1WS 0165-S	135	16	130	.3	6	24
1WS 0166-S	112	37	172	.4	6	11
1WS 0167-S	48	24	127	.3	4	4
1WS 0168-S	72	68	178	.2	11	1
1WS 0169-S	174	25	138	.7	7	4
1WS 0170-S	114	56	222	.6	22	1
1WS 0171-S	107	65	202	.3	9	4
1WS 0172-S	111	40	109	.4	8	10
1WS 0173-S	93	18	142	.1	6	7
1WS 0174-S	232	58	165	1.0	5	1
1WS 0175-S	77	31	142	.5	7	17
1WS 0176-S	60	17	125	.3	4	17
1WS 0177-S	83	19	96	.2	10	12
1WS 0178-S	99	31	119	.3	15	14
1WS 0179-S	80	18	107	.2	8	1
1WS 0180-S	99	21	111	.3	20	2
1WS 0181-S	73	25	116	.1	10	10 ✓
1WS 0182-S	242	46	211	.7	24	23
1WS 0183-S	82	49	210	.3	20	11
1WS 0184-S	105	32	152	.3	16	49 -
1WS 0185-S	143	29	148	.4	11	26
1WS 0186-S	91	29	117	.4	7	8
1WS 0187-S	103	29	136	.4	7	14
1WS 0188-S	91	37	145	.3	8	5
1WS 0189-S	71	39	209	.3	10	1
1WS 0190-S	129	81	559	.4	23	94 -
1WS 0191-S	107	35	236	.6	14	2
1WS 0192-S	121	46	181	.4	7	11
1WS 0193-S	106	17	138	.4	6	2
1WS 0194-S	95	36	138	.4	7	5
1WS 0195-S	149	42	150	.9	5	1
1WS 0196-S	99	20	121	.2	7	1
STANDARD C/AU-S	58	37	133	6.8	40	49

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 SAMPLE TYPE: SOIL      AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 14 1991

DATE REPORT MAILED: July 17/91.

SIGNED BY: *C. Leong*

D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Noramco Exploration Inc. PROJECT KENA FILE # 91-2515 Page 2

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0197-S	73	9	103	.3	6	12
1WS 0198-S	68	22	100	.3	8	11
1WS 0199-S	79	24	108	.3	9	31
1WS 0200-S	501	33	134	.5	11	122
1WS 0201-S	295	25	150	.8	12	168
1WS 0202-S	148	28	165	.6	22	69
1WS 0203-S	99	34	180	.9	10	84
1WS 0204-S	151	35	177	.5	30	70
1WS 0205-S	235	28	126	.6	11	26
1WS 0206-S	113	26	152	.3	12	18
1WS 0207-S	61	79	174	.5	12	9
1WS 0208-S	82	54	246	.4	9	14
1WS 0209-S	74	38	170	.3	11	18
1WS 0210-S	68	13	92	.3	9	29
1WS 0211-S	75	24	139	.3	12	17
1WS 0212-S	92	19	123	.2	10	10
1WS 0213-S	68	22	125	.3	9	16
1WS 0214-S	90	30	131	.3	10	5
1WS 0215-S	87	15	112	.4	8	11
1WS 0216-S	35	20	80	.5	8	6
1WS 0217-S	218	14	69	1.1	6	69
1WS 0218-S	119	47	174	.5	13	25
1WS 0219-S	175	38	235	.3	13	22
1WS 0220-S	87	88	215	.1	21	16
1WS 0221-S	99	39	138	.4	14	23
1WS 0222-S	99	43	226	.4	8	73
1WS 0223-S	101	37	177	.4	10	20
1WS 0224-S	82	48	158	.4	13	18
1WS 0225-S	128	109	203	.5	13	14
1WS 0226-S	93	36	135	.3	10	70
1WS 0227-S	114	36	117	.4	11	19
1WS 0228-S	99	16	103	.5	9	17
1WS 0229-S	85	23	89	.6	6	13
1WS 0230-S	112	14	82	.5	7	9
1WS 0231-S	47	19	97	.4	13	15
1WS 0232-S	26	15	60	.4	8	10
STANDARD C/AU-S	58	38	132	6.7	39	46

Noramco Exploration Inc. PROJECT KENA FILE # 91-2515 Page 3

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0233-S	222	34	187	.5	7	75 ✓
1WS 0234-S	291	2	134	.8	3	145 ✓
1WS 0235-S	351	2	143	.5	2	118 ✓
1WS 0236-S	153	26	185	.4	5	122 ✓
1WS 0237-S	163	30	241	.5	6	44 ✓
1WS 0238-S	137	50	221	.4	4	28
1WS 0239-S	109	76	189	.3	7	12
1WS 0240-S	104	55	169	.2	13	21
1WS 0241-S	115	69	185	.6	6	20
1WS 0242-S	114	48	136	.2	16	54 ✓
1WS 0243-S	187	32	133	.6	13	49 ✓
1WS 0244-S	111	27	126	.6	9	33 ✓
1WS 0245-S	125	41	129	2.0	3	34 ✓
1WS 0246-S	92	41	146	.5	2	26
1WS 0247-S	107	35	92	.6	6	9
1WS 0248-S	96	6	119	.6	5	20
1WS 0249-S	114	18	170	.4	2	139 ✓
1WS 0250-S	139	60	235	.3	5	43 ✓
1WS 0251-S	123	32	184	.3	3	35 ✓
1WS 0252-S	134	25	165	.5	2	24
1WS 0253-S	185	23	147	.9	2	42 ✓
1WS 0254-S	140	39	145	.6	7	80 ✓
1WS 0255-S	161	40	153	.4	5	14
1WS 0256-S	157	37	150	.6	9	19
1WS 0257-S	123	42	144	.4	8	9
1WS 0258-S	92	31	102	.1	12	14
1WS 0259-S	31	23	39	.1	2	12
1WS 0260-S	95	32	116	.5	6	125 ✓
1WS 0261-S	95	35	127	.7	5	23
1WS 0262-S	84	18	100	.5	6	9 ✓
1WS 0263-S	369	2	60	.8	6	56 ✓
1WS 0264-S	241	2	56	.1	2	27
1WS 0265-S	472	7	82	.2	2	39 ✓
1WS 0266-S	301	2	145	.3	2	19
1WS 0267-S	783	14	256	.3	2	37 ✓
1WS 0268-S	278	2	148	.4	2	25
STANDARD C/AU-S	58	44	124	7.3	43	47

Noramco Exploration Inc. PROJECT KENA FILE # 91-2515 Page 4

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0269-S	581	108	89	.4	8	28
1WS 0270-S	173	19	132	.6	9	53-
1WS 0271-S	287	28	242	.7	2	33-
1WS 0272-S	183	25	169	.1	2	35-
1WS 0273-S	126	15	156	.6	9	31-
1WS 0274-S	134	26	97	.2	4	42-
1WS 0275-S	176	33	110	.5	6	40-
1WS 0276-S	426	32	94	.7	5	59-
1WS 0277-S	290	18	134	.5	5	44-
1WS 0278-S	199	22	187	.5	8	59-
1WS 0279-S	219	35	226	.4	4	69-
1WS 0280-S	238	19	186	.6	16	46-
1WS 0281-S	153	37	182	.6	10	21
1WS 0282-S	126	34	199	.2	5	26
1WS 0283-S	187	42	163	.1	10	20
1WS 0284-S	128	20	146	.1	4	34-
1WS 0285-S	99	36	139	.1	8	6
1WS 0286-S	108	55	157	.3	3	9
1WS 0287-S	202	23	115	.8	11	7
1WS 0288-S	219	125	281	.8	11	8
1WS 0289-S	150	34	168	.9	9	5
1WS 0290-S	90	34	133	.2	7	2
1WS 0291-S	76	37	166	.3	13	10
1WS 0292-S	92	23	146	.1	8	11
1WS 0293-S	138	68	257	1.0	8	74
1WS 0294-S	122	34	176	1.1	11	43-
1WS 0295-S	125	12	152	.1	6	22
1WS 0296-S	71	66	255	.1	10	9
1WS 0297-S	57	31	245	.2	7	6
1WS 0298-S	83	31	163	.2	7	10
1WS 0299-S	137	10	129	.6	10	7
1WS 0300-S	99	31	152	.2	13	73-
1WS 0301-S	147	53	278	.5	11	67-
1WS 0302-S	84	32	123	.1	13	62-
1WS 0303-S	829	23	93	.5	7	33-
1WS 0304-S	911	30	100	.2	10	25
STANDARD C/AU-S	58	39	130	7.2	42	47

Noramco Exploration Inc. PROJECT KENA FILE # 91-2515 Page 5

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0305-S	625	23	79	.4	3	26
1WS 0306-S	163	17	91	.2	10	36 ✓
1WS 0307-S	277	12	86	.4	2	41 ✓
1WS 0308-S	86	8	117	.1	2	7
1WS 0309-S	550	38	201	.5	8	34 ✓
1WS 0310-S	699	45	231	.6	2	39 ✓
1WS 0311-S	604	15	198	.6	4	24
1WS 0312-S	252	9	142	.6	4	26
1WS 0313-S	913	57	266	1.1	11	44 ✓
1WS 0314-S	241	17	142	.1	5	40 ✓
1WS 0315-S	530	17	102	.8	5	113 ✓
1WS 0316-S	718	18	114	1.1	6	52 ✓
1WS 0317-S	217	23	111	.2	12	128 ✓
1WS 0318-S	368	28	105	.7	6	57 ✓
1WS 0319-S	213	50	106	.8	12	49 ✓
1WS 0320-S	250	16	181	.4	4	79 ✓
1WS 0321-S	113	31	169	.1	7	105 ✓
1WS 0322-S	163	17	125	.5	6	50 ✓
1WS 0323-S	116	27	105	.1	4	26
1WS 0324-S	115	84	193	.1	11	23
1WS 0325-S	105	33	253	.1	2	8
1WS 0326-S	252	15	119	.6	2	31 ✓
1WS 0327-S	226	36	188	.1	2	33 ✓
1WS 0328-S	154	97	311	.9	20	13
1WS 0329-S	240	47	202	.4	7	9
1WS 0330-S	194	25	170	.2	2	8
1WS 0331-S	82	67	122	.2	8	5
1WS 0332-S	139	57	176	.8	31	6
1WS 0333-S	59	48	110	.1	8	8 ✓
STANDARD C/AU-S	56	37	133	7.1	41	49

## GEOCHEMICAL ANALYSIS CERTIFICATE

Noramco Exploration Inc. FILE # 91-2337 Page 1  
 900 - 999 W. Hastings St., Vancouver BC V6C 2W2 Attn: T.E. LISLE

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
IWS 0001-S	360	17	89	1.2	12	65
IWS 0002-S	35	8	50	.5	10	8
IWS 0003-S	162	14	68	1.0	15	29
IWS 0004-S	48	17	133	.9	12	17
IWS 0005-S	57	13	155	.4	8	75
IWS 0006-S	72	7	125	.6	11	540
IWS 0007-S	53	13	115	.3	15	29
IWS 0008-S	41	25	144	.3	11	36
IWS 0009-S	59	6	116	.4	11	57
IWS 0010-S	75	11	136	.3	6	15
IWS 0011-S	83	27	150	.7	6	9
IWS 0012-S	86	15	133	.3	7	10
IWS 0013-S	60	16	119	.3	10	25
IWS 0014-S	82	21	127	.5	8	11
IWS 0015-S	100	10	120	.3	13	10
IWS 0016-S	97	12	98	.4	6	9
IWS 0017-S	57	17	120	.3	13	39
IWS 0018-S	39	17	163	.4	5	35
IWS 0019-S	36	15	122	.3	10	14
IWS 0020-S	45	13	126	.5	8	50
IWS 0021-S	38	12	150	.6	10	44
IWS 0022-S	24	56	136	.1	10	20
IWS 0023-S	37	23	131	.3	11	49
IWS 0024-S	33	73	118	.4	9	4
IWS 0025-S	26	13	75	.7	9	7
IWS 0026-S	26	16	112	.2	5	12
IWS 0027-S	42	26	152	.9	11	170
IWS 0028-S	26	72	232	.4	13	17
IWS 0029-S	40	28	150	.7	10	19
IWS 0030-S	981	11	89	1.1	11	54
IWS 0031-S	738	12	76	.6	12	130
IWS 0032-S	270	11	88	1.3	14	100
IWS 0033-S	108	7	73	1.1	12	26
IWS 0034-S	80	12	56	.5	6	46
IWS 0035-S	35	107	139	.4	5	8
IWS 0036-S	59	8	118	.6	6	19
STANDARD C/AU-S	58	40	132	7.4	39	53

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Mn Fe Sr Ca P La Cr Mg Ba Ti B W AND LIMITED FOR Na K AND Al. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: SOIL AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 7 1991

DATE REPORT MAILED: July 11/91

SIGNED BY..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



Noramco Exploration Inc. FILE # 91-2337 Page 2



SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
IWS 0037-S	76	26	138	.3	9	25
IWS 0038-S	70	39	134	.3	13	13
IWS 0039-S	58	16	134	.5	13	21
IWS 0040-S	44	21	123	.2	11	27
IWS 0041-S	56	21	88	.3	12	17
IWS 0042-S	29	23	104	.5	8	12
IWS 0043-S	47	22	120	.1	9	57
IWS 0044-S	71	20	132	.2	11	25
IWS 0045-S	64	30	113	.5	13	23
IWS 0046-S	72	28	120	.3	10	8
IWS 0047-S	160	20	121	.4	15	13
IWS 0048-S	37	17	94	.7	12	18
IWS 0049-S	46	22	119	.5	8	11
IWS 0050-S	48	20	137	.7	12	4
IWS 0051-S	62	28	126	.5	10	12
IWS 0052-S	35	47	122	.5	10	11
IWS 0053-S	34	70	125	.5	18	11
IWS 0054-S	28	23	124	.3	9	34
IWS 0055-S	28	21	119	.2	10	38
IWS 0056-S	33	16	118	.3	11	18
IWS 0057-S	24	33	102	.6	7	74
IWS 0058-S	41	16	129	.5	7	17
IWS 0059-S	33	9	109	.3	12	19
IWS 0060-S	35	20	122	.3	12	23
IWS 0061-S	20	34	87	.2	10	10
IWS 0062-S	20	29	77	.4	9	8
IWS 0063-S	17	18	74	.3	5	1
IWS 0064-S	56	18	103	.3	9	20
IWS 0065-S	23	68	123	.2	12	7
IWS 0066-S	25	23	90	.1	12	10
IWS 0067-S	18	28	79	.1	12	7
IWS 0068-S	34	17	87	.5	12	36
IWS 0069-S	29	22	95	.6	11	15
IWS 0070-S	25	32	187	.4	18	44
IWS 0071-S	33	52	336	.2	20	81
IWS 0072-S	25	19	144	.2	10	5
STANDARD C/AU-S	57	42	131	7.0	42	47



SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
IWS 0073-S	23	48	169	.4	6	30
IWS 0074-S	30	21	78	.4	4	48
IWS 0075-S	19	21	64	.5	6	42
IWS 0076-S	32	18	101	.4	3	30
IWS 0077-S	25	21	117	.3	7	17
IWS 0078-S	28	23	98	.3	6	8
IWS 0079-S	29	30	98	.2	10	20
IWS 0080-S	29	26	115	.2	6	2
IWS 0081-S	33	32	132	.7	7	8
IWS 0082-S	25	32	146	.4	6	9
IWS 0083-S	27	28	160	.3	7	4
IWS 0084-S	45	26	125	.4	6	3
IWS 0085-S	57	25	147	.3	7	8
IWS 0086-S	52	22	129	.4	8	9
IWS 0087-S	32	28	114	.6	10	7
IWS 0088-S	11	28	68	.4	2	42
IWS 0089-S	37	25	78	.7	7	9
IWS 0090-S	59	7	115	.2	4	3
IWS 0091-S	61	23	118	.3	6	27
IWS 0092-S	57	15	108	.2	8	14
IWS 0093-S	58	77	176	1.2	8	6
IWS 0094-S	72	50	121	.2	13	72
IWS 0095-S	68	58	186	.4	8	4
IWS 0096-S	39	23	123	.4	5	13
IWS 0097-S	37	27	136	.3	6	9
IWS 0098-S	59	12	160	.3	5	44
IWS 0099-S	34	25	97	.4	5	12
IWS 0100-S	30	14	62	.7	7	6
IWS 0101-S	42	37	89	.3	7	6
IWS 0102-S	48	34	128	.2	10	9
IWS 0103-S	56	16	104	.1	12	25
IWS 0104-S	31	26	121	.3	10	10
IWS 0105-S	58	18	101	.3	10	15
IWS 0106-S	50	16	105	.2	10	14
IWS 0107-S	38	17	92	.4	9	16
IWS 0108-S	61	32	124	.3	7	33
STANDARD C/AU-S	58	39	131	6.8	38	46



SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
IWS 0109-S	105	22	140	.2	8	8
IWS 0110-S	88	21	143	.3	5	4
IWS 0111-S	97	36	135	.1	8	33
IWS 0112-S	101	23	150	.5	9	9
IWS 0113-S	555	57	137	.2	5	33
IWS 0114-S	52	22	130	.3	8	8
IWS 0115-S	68	28	148	.6	3	7
IWS 0116-S	53	16	91	.6	10	5
IWS 0117-S	43	19	86	.3	7	6
IWS 0118-S	51	28	127	.1	11	12
IWS 0119-S	43	32	147	.3	9	15
IWS 0120-S	139	76	153	1.6	7	120
IWS 0121-S	43	83	131	.5	12	92
IWS 0122-S	61	22	121	.3	11	25
IWS 0123-S	53	18	113	.2	8	15
IWS 0124-S	55	17	97	.4	4	9
IWS 0125-S	48	23	94	.4	6	10
IWS 0126-S	87	27	153	.4	9	6
IWS 0127-S	73	20	131	.2	8	9
IWS 0128-S	80	18	141	.6	8	7
IWS 0129-S	68	19	123	.4	12	22
IWS 0130-S	87	18	139	.3	15	41
IWS 0131-S	50	15	98	.1	8	8
IWS 0132-S	100	38	189	.5	7	9
IWS 0133-S	132	20	134	.5	8	18
IWS 0134-S	86	23	111	.3	15	17
IWS 0135-S	55	39	96	.3	21	390
IWS 0136-S	54	55	142	.1	12	44
IWS 0137-S	97	34	139	.6	12	9
IWS 0138-S	76	16	112	.5	8	7
IWS 0139-S	40	13	82	.2	6	4
IWS 0140-S	62	5	94	.6	13	6
IWS 0141-S	42	14	86	.5	10	33
IWS 0142-S	51	26	108	.3	12	18
IWS 0143-S	54	79	135	.2	11	10
IWS 0144-S	130	4	164	.1	6	4
STANDARD C/AU-S	60	38	132	7.3	39	46



SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
IWS 0145-S	177	10	173	.4	8	21
IWS 0146-S	105	15	114	.5	6	21
IWS 0147-S	54	15	120	.6	4	24
IWS 0148-S	34	22	89	.5	9	11
IWS 0149-S	106	42	158	1.0	5	1
IWS 0150-S	126	14	214	.3	5	3
IWS 0151-S	77	47	204	4.5	10	18
IWS 0152-S	78	47	206	.3	35	3
IWS 0153-S	90	24	112	.1	8	5
IWS 0154-S	68	94	125	.3	12	8
IWS 0155-S	129	22	132	.4	5	23
IWS 0156-S	78	29	119	.1	8	26
IWS 0157-S	74	50	158	.5	9	6
IWS 0158-S	43	20	76	.3	5	49
IWS 0159-S	55	8	79	.4	7	8
IWS 0160-S	24	20	58	.7	6	1 ✓
STANDARD C/AU-S	57	38	135	7.3	38	49

## GEOCHEMICAL ANALYSIS CERTIFICATE

Noramco Exploration Inc., PROJECT KENA (S. BLOCK) FILE # 91-3058 Page 1  
 900 - 999 W. Hastings St., Vancouver BC V6C 2W2 Attn: T.E. LISLE

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0334-S	74	28	175	.3	6	150.0
1WS 0335-S	82	3	117	.1	2	22.0
1WS 0336-S	79	14	130	.2	2	15.1
1WS 0337-S	104	21	139	.3	2	46.3
1WS 0338-S	94	18	149	.3	5	28.6
1WS 0339-S	46	227	173	.1	15	14.3
1WS 0340-S	99	31	141	.3	7	41.0
1WS 0341-S	139	17	109	.6	8	52.3
1WS 0342-S	103	17	107	.5	4	19.2
1WS 0343-S	187	13	101	.5	2	29.5
1WS 0344-S	108	7	137	.4	7	22.3
1WS 0345-S	124	18	117	.3	8	53.5
1WS 0346-S	382	29	128	.5	7	43.9
1WS 0347-S	399	24	71	.5	4	28.7
1WS 0348-S	266	23	105	.7	2	10.9
1WS 0349-S	145	14	78	.5	2	33.6
1WS 0350-S	495	10	76	.6	3	28.1
1WS 0351-S	298	16	131	.3	2	34.7
1WS 0352-S	131	16	65	.6	3	43.9
1WS 0353-S	128	23	75	.8	6	45.5
1WS 0354-S	439	7	121	.6	4	69.8
1WS 0355-S	333	19	120	.5	4	74.9
1WS 0356-S	84	5	63	1.3	4	26.7
1WS 0357-S	102	7	97	1.7	5	17.2
1WS 0358-S	95	18	96	.9	5	16.5
1WS 0359-S	149	6	99	1.9	4	19.7
1WS 0360-S	280	4	85	.7	2	54.5
1WS 0361-S	93	14	186	1.1	3	56.7
1WS 0362-S	139	34	83	.5	8	25.5
1WS 0363-S	122	21	82	1.1	4	38.6
1WS 0364-S	139	13	135	.7	3	33.4
1WS 0365-S	114	16	83	.3	6	120.0
1WS 0366-S	66	28	100	.5	5	46.0
1WS 0367-S	116	9	98	.6	6	36.5
1WS 0368-S	84	19	117	.4	4	23.2
1WS 0369-S	157	25	114	.6	7	14.4
STANDARD C/AU-S	58	38	132	6.6	38	49.2

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Mn Fe Sr Ca P La Cr Mg Ba Ti B W AND LIMITED FOR Na K AND Al. AU DETECTION LIMIT BY ICP IS 3 PPM.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

SAMPLE TYPE: P1 TO P9 SOIL P10 ROCK      AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 31 1991

DATE REPORT MAILED: Aug 7/91

SIGNED BY... *C.L.* D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0370-S	146	17	115	.3	7	12.3
1WS 0371-S	156	37	127	.4	12	16.8
1WS 0372-S	154	61	152	.3	6	4.5
1WS 0373-S	248	25	163	.5	11	6.3
1WS 0374-S	81	28	101	.1	18	4.3
1WS 0375-S	75	16	213	.2	9	54.3
1WS 0376-S	67	11	130	.3	9	6.4
1WS 0377-S	51	6	127	.1	7	3.5
1WS 0378-S	67	3	137	.1	3	53.2
1WS 0379-S	91	2	118	.1	2	7.1
1WS 0380-S	114	4	134	.1	8	11.6
1WS 0381-S	101	52	131	.4	11	2.4
1WS 0382-S	70	26	125	.2	10	.5
1WS 0383-S	74	9	144	.4	7	54.4
1WS 0384-S	111	12	146	.3	11	9.2
1WS 0385-S	74	16	180	.4	9	3.9
1WS 0386-S	50	24	140	.8	11	2.0
1WS 0387-S	51	9	123	.1	8	21.3
1WS 0388-S	50	17	130	.6	11	5.7
1WS 0389-S	61	23	121	.1	13	7.8
1WS 0390-S	60	10	103	.6	11	3.9
1WS 0391-S	135	41	97	.5	4	4.1
1WS 0392-S	202	16	85	.9	8	5.2
1WS 0393-S	44	11	91	.7	9	6.3
1WS 0394-S	58	16	143	.8	8	7.0
1WS 0395-S	177	14	126	1.6	7	16.5
1WS 0396-S	387	41	157	.4	11	26.7
1WS 0397-S	105	10	133	1.1	7	24.9
1WS 0398-S	106	13	117	1.4	12	8.6
1WS 0399-S	84	11	96	1.5	5	.7
1WS 0400-S	128	13	105	.8	9	7.3
1WS 0401-S	54	31	142	.8	20	20.7
1WS 0402-S	215	17	100	.7	11	34.6
1WS 0403-S	235	23	135	.3	5	36.2
1WS 0404-S	142	50	123	.3	8	1.0
1WS 0405-S	142	16	120	.4	10	5.1
STANDARD C/AU-S	58	38	132	7.1	43	51.0

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0406-S	161	25	100	.7	4	29.2
1WS 0407-S	157	15	142	.8	2	20.0
1WS 0408-S	144	13	111	.5	3	12.7
1WS 0409-S	90	28	144	.5	4	30.3
1WS 0410-S	112	15	86	.3	2	56.9
1WS 0411-S	191	18	82	.3	4	3.9
1WS 0412-S	152	15	123	.4	2	5.9
1WS 0413-S	106	16	109	.3	9	56.2
1WS 0414-S	119	89	160	.3	7	27.4
1WS 0415-S	155	20	127	.3	3	26.4
1WS 0416-S	82	16	145	.4	4	9.1
1WS 0417-S	48	19	134	.5	6	9.4
1WS 0418-S	47	15	204	.5	3	5.7
1WS 0419-S	63	14	147	.3	2	5.6
1WS 0420-S	103	7	117	.4	2	97.9
1WS 0421-S	70	5	130	.3	2	1.8
1WS 0422-S	83	22	208	.5	2	4.9
1WS 0423-S	81	4	155	.3	3	16.6
1WS 0424-S	87	11	142	.3	2	297.5
1WS 0425-S	79	12	152	.6	5	41.9
1WS 0426-S	52	9	181	.3	4	47.8
1WS 0427-S	95	12	158	.7	2	26.6
1WS 0428-S	73	12	129	1.0	6	8.6
1WS 0429-S	52	9	136	.9	5	3.2
1WS 0430-S	46	17	91	.3	7	8.0
1WS 0431-S	149	8	78	.6	7	22.4
1WS 0432-S	216	11	105	.5	7	25.6
1WS 0433-S	116	10	88	.6	3	17.9
1WS 0434-S	110	9	97	.7	4	33.0
1WS 0435-S	158	9	104	.9	5	23.0
1WS 0436-S	2256	4	119	.9	4	13.9
1WS 0437-S	434	11	87	.9	7	24.0
1WS 0438-S	112	14	110	1.1	6	35.4
1WS 0439-S	81	11	78	.9	6	35.4
1WS 0440-S	100	9	96	.8	3	11.1
1WS 0441-S	100	3	67	.8	3	57.4
STANDARD C/AU-S	56	35	135	6.8	40	52.1

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0442-S	70	7	118	.5	8	32.8
1WS 0443-S	123	5	132	.9	7	70.8
1WS 0444-S	142	9	92	.9	7	32.8
1WS 0445-S	161	12	83	.7	7	9.2
1WS 0446-S	187	12	130	.9	6	12.2
1WS 0447-S	206	68	219	.9	8	16.0
1WS 0448-S	238	31	163	.5	2	12.9
1WS 0449-S	238	102	111	.6	11	22.1
1WS 0450-S	151	13	131	.9	7	13.5
1WS 0451-S	385	13	101	.9	7	25.2
1WS 0452-S	275	7	115	.7	10	28.8
1WS 0453-S	181	15	104	.5	10	7.8
1WS 0454-S	163	21	139	.1	8	9.9
1WS 0455-S	235	9	128	.3	7	7.9
1WS 0456-S	178	36	131	.7	10	17.3
1WS 0457-S	36	12	133	.8	3	3.1
1WS 0458-S	28	12	111	.6	12	2.0
1WS 0459-S	34	16	129	.3	9	6.6
1WS 0460-S	86	15	146	.5	7	7.5
1WS 0461-S	74	11	116	.3	6	10.6
1WS 0462-S	58	7	149	.1	5	.8
1WS 0463-S	90	5	155	.3	8	13.3
1WS 0464-S	58	11	176	.2	10	15.8
1WS 0465-S	66	15	140	.4	6	4.2
1WS 0466-S	85	12	156	.5	9	19.7
1WS 0467-S	81	21	141	.2	8	21.8
1WS 0468-S	78	26	124	.3	10	15.4
1WS 0469-S	55	4	111	.3	9	20.1
1WS 0470-S	56	15	150	.7	11	12.1
1WS 0471-S	54	9	103	.6	7	4.5
1WS 0472-S	211	9	91	1.1	10	75.2
1WS 0473-S	235	12	115	.7	14	53.1
1WS 0474-S	274	24	134	.3	11	43.5
1WS 0475-S	729	6	103	.8	8	30.5
1WS 0476-S	374	9	119	.3	11	58.1
1WS 0477-S	576	7	150	.3	8	64.8
STANDARD C/AU-S	58	38	134	7.5	42	52.9

Noramco Exploration Inc. PROJECT KENA (S. BLOCK) FILE # 91-3058 Page 5

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0478-S	335	13	167	.2	6	55.1
1WS 0479-S	175	19	86	.7	6	27.7
1WS 0480-S	94	19	77	.4	8	12.8
1WS 0481-S	78	18	114	.6	8	20.6
1WS 0482-S	310	14	108	.1	8	61.5
1WS 0483-S	112	8	109	.7	7	65.2
1WS 0484-S	292	9	92	.6	6	18.8
1WS 0485-S	188	17	96	.7	8	34.7
1WS 0486-S	176	14	105	.5	7	830.0
1WS 0487-S	86	17	116	.6	6	43.2
1WS 0488-S	159	22	118	.5	6	12.7
1WS 0489-S	245	15	133	1.0	4	16.7
1WS 0490-S	318	28	116	.6	8	24.2
1WS 0491-S	280	11	110	.5	6	21.6
1WS 0492-S	152	26	257	.5	9	6.0
1WS 0493-S	197	35	194	.4	5	12.2
1WS 0494-S	230	16	99	.5	8	35.7
1WS 0495-S	224	19	114	.6	9	41.8
1WS 0496-S	198	18	107	.7	5	35.8
1WS 0497-S	65	16	110	.2	10	10.2
1WS 0498-S	22	16	117	.3	7	5.3
1WS 0499-S	60	16	110	.4	6	3.8
1WS 0500-S	82	7	92	.2	11	7.4
1WS 0501-S	27	14	76	.4	6	3.0
1WS 0502-S	23	11	109	.4	4	2.0
1WS 0503-S	27	15	113	.2	6	3.8
1WS 0504-S	24	12	136	.3	9	3.6
1WS 0505-S	36	10	152	.5	7	6.0
1WS 0506-S	38	14	124	.2	3	30.7
1WS 0507-S	62	23	149	.1	5	5.0
1WS 0508-S	45	15	101	.1	4	20.7
1WS 0509-S	48	44	133	.1	7	6.1
1WS 0510-S	91	23	154	.3	5	64.7
1WS 0511-S	66	11	122	.2	5	11.7
1WS 0512-S	44	40	88	.2	10	9.8
1WS 0513-S	47	13	188	.3	8	17.5
STANDARD C/AU-S	58	39	133	6.7	40	49.2

Noramco Exploration Inc. PROJECT KENA (S. BLOCK) FILE # 91-3058 Page 6

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0514-S	969	16	113	.8	5	23.2
1WS 0515-S	173	18	98	.4	7	66.6
1WS 0516-S	76	17	123	.6	8	78.0
1WS 0517-S	87	15	125	.6	5	156.0
1WS 0518-S	387	14	129	.3	9	59.0
1WS 0519-S	188	12	140	.4	8	51.1
1WS 0520-S	317	15	139	.7	8	288.0
1WS 0521-S	234	15	113	.9	7	22.9
1WS 0522-S	384	13	151	.5	7	29.0
1WS 0523-S	376	22	144	.5	8	29.6
1WS 0524-S	129	6	102	.7	10	42.0
1WS 0525-S	77	28	106	.3	11	79.6
1WS 0526-S	76	13	94	.8	7	29.1
1WS 0527-S	79	9	93	1.0	7	28.0
1WS 0528-S	76	15	104	.9	6	41.4
1WS 0529-S	494	6	118	.8	9	2088.0
1WS 0530-S	147	9	105	.3	9	312.0
1WS 0531-S	88	16	84	1.2	7	18.5
1WS 0532-S	100	14	101	1.3	7	31.5
1WS 0533-S	43	55	73	.3	2	11.3
1WS 0534-S	69	30	207	.4	12	4.6
1WS 0535-S	99	15	107	.4	8	9.6
1WS 0536-S	57	62	196	.5	9	5.5
1WS 0537-S	209	13	118	.7	8	44.8
1WS 0538-S	181	10	101	.7	5	12.8
1WS 0539-S	32	28	174	.5	10	4.0
1WS 0540-S	48	26	132	.5	7	1.3
1WS 0541-S	44	13	125	.3	4	4.3
1WS 0542-S	30	16	122	.6	7	3.5
1WS 0543-S	38	13	108	.3	7	3.1
1WS 0544-S	41	17	123	.4	6	2.9
1WS 0545-S	35	9	124	.2	5	3.4
1WS 0546-S	53	13	121	.4	5	4.7
1WS 0547-S	51	28	123	.4	6	4.1
1WS 0548-S	88	25	110	.4	4	3.7
1WS 0549-S	38	22	125	.2	6	6.2
STANDARD C/AU-S	56	37	133	6.9	42	45.2

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0550-S	41	14	124	.4	5	20.3
1WS 0551-S	40	17	135	.3	9	9.0
1WS 0552-S	47	18	89	.4	9	12.2
1WS 0553-S	31	14	113	.3	9	6.5
1WS 0554-S	27	16	121	.3	9	6.3
1WS 0555-S	43	14	107	.3	8	7.6
1WS 0556-S	165	8	95	.7	5	147.0
1WS 0557-S	104	20	124	.8	8	252.0
1WS 0558-S	184	20	108	.3	10	168.0
1WS 0559-S	104	10	123	.5	6	36.9
1WS 0560-S	64	16	107	1.0	6	31.5
1WS 0561-S	44	17	98	.8	6	15.4
1WS 0562-S	60	18	111	.5	10	472.5
1WS 0563-S	44	15	97	.6	8	15.6
1WS 0564-S	35	13	88	.5	6	27.6
1WS 0565-S	89	18	110	.4	5	72.7
1WS 0566-S	142	30	143	.3	9	199.5
1WS 0567-S	143	19	128	.4	5	54.3
1WS 0568-S	105	14	121	.5	7	36.9
1WS 0569-S	145	17	107	.5	5	61.4
1WS 0570-S	106	18	110	.6	8	63.8
1WS 0571-S	134	18	122	.5	8	64.5
1WS 0572-S	87	33	183	.6	13	52.5
1WS 0573-S	87	13	128	1.0	6	71.1
1WS 0574-S	90	57	160	.8	8	30.4
1WS 0575-S	61	16	129	.9	5	94.5
1WS 0576-S	75	13	104	.6	6	48.7
1WS 0577-S	59	30	71	.5	12	37.1
1WS 0578-S	60	14	128	.9	7	24.9
1WS 0579-S	121	21	87	.6	6	77.2
1WS 0580-S	106	12	79	.7	7	55.3
1WS 0581-S	76	8	67	.9	7	56.5
1WS 0582-S	43	13	84	.8	5	44.3
1WS 0583-S	174	15	80	.6	8	115.5
1WS 0584-S	109	19	124	.4	6	19.7
1WS 0585-S	134	13	118	.5	5	46.3
STANDARD C/AU-S	55	39	134	6.9	40	45.6

Noramco Exploration Inc. PROJECT KENA (S. BLOCK) FILE # 91-3058 Page 8

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0586-S	130	24	113	.8	9	27.0
1WS 0587-S	38	15	106	.7	10	15.4
1WS 0588-S	40	16	145	.3	11	22.7
1WS 0589-S	27	35	129	.4	9	37.2
1WS 0590-S	44	14	83	.7	8	18.2
1WS 0591-S	34	13	76	.4	6	27.8
1WS 0592-S	31	17	75	.3	10	12.3
1WS 0593-S	57	22	97	.5	8	11.4
1WS 0594-S	24	15	130	.3	6	17.0
1WS 0595-S	63	22	116	.5	12	12.7
1WS 0596-S	66	79	137	.5	11	35.8
1WS 0597-S	32	17	123	.2	8	19.4
1WS 0598-S	28	19	102	.3	6	27.1
1WS 0599-S	28	22	119	.3	8	20.7
1WS 0600-S	35	26	123	.4	7	30.7
1WS 0601-S	22	28	103	.4	13	13.9
1WS 0602-S	40	35	155	.4	10	18.1
1WS 0603-S	23	23	50	.4	5	17.2
1WS 0604-S	28	21	102	1.0	8	31.9
1WS 0605-S	22	36	135	.6	9	5.9
1WS 0606-S	34	25	116	.7	10	59.4
1WS 0607-S	20	34	83	.4	7	36.9
1WS 0608-S	43	15	58	1.0	6	10.7
1WS 0609-S	35	38	109	.4	10	58.1
1WS 0610-S	28	25	108	.4	10	26.9
1WS 0611-S	181	12	76	.9	9	41.6
1WS 0612-S	75	13	58	1.0	9	22.9
1WS 0613-S	268	9	66	.9	11	90.0
1WS 0614-S	144	7	47	.9	6	51.0
1WS 0615-S	81	24	70	.9	10	12.9
1WS 0616-S	68	16	63	1.0	12	22.3
1WS 0617-S	473	23	88	1.2	9	49.2
1WS 0618-S	1364	22	72	1.0	9	54.2
1WS 0619-S	92	16	73	.8	9	24.9
1WS 0620-S	237	11	101	.7	10	31.4
1WS 0621-S	953	68	79	.5	14	38.1
STANDARD C/AU-S	62	39	137	7.3	42	45.8

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au* ppb
1WS 0622-S	1962	9	110	.2	12	18.6
1WS 0623-S	787	9	76	.4	12	45.7
1WS 0624-S	193	14	86	.5	9	33.4
1WS 0625-S	361	11	121	.5	12	55.1
1WS 0626-S	203	9	117	.4	12	8.3
1WS 0627-S	52	6	54	.8	6	14.7
1WS 0628-S	166	11	79	.3	12	24.6
1WS 0629-S	830	9	85	.8	9	48.4
1WS 0630-S	495	5	52	.5	7	55.4
1WS 0631-S	1056	13	77	.4	9	87.8
1WS 0632-S	111	8	72	.6	8	24.7
1WS 0633-S	76	8	64	.5	9	13.9
1WS 0634-S	161	19	48	.6	5	63.9
STANDARD C/AU-S	57	38	140	7.2	44	45.6

Noramco Exploration Inc., PROJECT KENA (S. BLOCK) FILE # 91-3058 Page 10

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 41251	157	9	129	.5	5	19
D 41252	193	91	311	.2	21	17
D 41253	27	250	62	.8	19	35
D 41254	54	7	20	.3	6	1
D 41255	855	7	54	.6	2	119
D 41256	431	6	34	.5	3	84
D 41257	15	11	66	.1	4	1
D 41258	10	15	124	.2	29	19
D 41259	24	5	22	.1	7	2
D 41260	66	4	43	.1	2	21
D 41261	2910	2	42	2.6	2	694
D 41262	2560	2	35	1.7	2	263
D 41263	1482	6	38	1.3	2	89
D 41264	565	2	31	.5	2	49
D 41265	7073	6	44	6.2	2	345
D 41266	129	4	37	.2	4	12
D 41267	5438	5	52	4.3	2	454
D 41268	171	4	61	.2	2	11
D 41269	456	5	32	.3	2	27
D 41270	2610	2	30	3.5	3	127
D 41271	187	7	47	.2	2	45
D 41272	27	4	82	.1	2	1
D 41273	1284	2	43	3.9	4	3
D 41274	89	6	56	.2	3	1
D 41275	76	8	12	.3	4	4
D 41276	11429	2348	48	123.8	12	8646
D 41277	60	28	35	1.1	7	26
D 41278	666	17	35	.5	9	21
D 41279	157	7	15	.2	5	29
STANDARD C/AU-R	58	36	132	7.1	41	470

B) Drill core assays.

## GEOCHEMICAL ANALYSIS CERTIFICATE

Noramco Exploration Inc. PROJECT 2012/2017 FILE # 91-4392 Page 1  
 900 - 999 W. Hastings St., Vancouver BC V6C 2W2 Attn: T.E. LISLE

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 54501	359	13	77	.1	5	59
D 54502	401	8	73	.1	3	63
D 54503	280	3	67	.1	5	48
D 54504	222	4	68	.1	6	37
D 54505	163	3	63	.1	3	57
D 54506	32	3	60	.1	11	173
D 54507	35	3	68	.2	32	198
D 54508	461	2	64	.3	2	156
D 54509	317	2	69	.2	4	179
D 54510	66	4	59	.1	3	154
D 54511	141	2	64	.1	5	149
D 54512	499	2	68	.1	2	98
D 54513	402	2	97	.1	2	71
D 54514	531	2	73	.3	2	70-
D 54515	232	11	112	.1	4	126
D 54516	1301	3	60	1.1	6	123
D 54517	718	3	77	.1	3	38
RE D 54514	544	2	73	.2	2	59-
D 54518	231	2	82	.1	2	29
D 54519	420	2	76	.1	2	41
D 54520	410	2	45	.1	2	94
D 54521	687	3	57	.3	4	248
D 54522	300	2	56	.1	13	319
D 54523	296	2	48	.1	2	130
D 54524	129	2	41	.1	9	171
D 54525	341	2	49	.1	15	151
D 54526	203	2	39	.1	4	38
D 54527	861	2	46	.1	7	110
D 54528	365	2	40	.1	11	185
D 54529	661	2	38	.1	8	82
D 54530	578	3	55	.1	9	48
D 54531	306	4	62	.1	5	34
D 54532	547	2	64	.1	2	35
D 54533	760	2	58	.1	2	112
D 54534	639	2	59	.1	2	103
D 54535	975	2	51	.1	2	108
D 54536	120	2	54	.1	6	209
STANDARD C/AU-R	64	41	133	7.5	41	476

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Mn Fe Sr Ca P La Cr Mg Ba Ti B W AND LIMITED FOR Na K AND Al. AU DETECTION LIMIT BY ICP IS 3 PPM.

\*SAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

SAMPLE TYPE: CORE      AU\*\* ANALYSIS BY FA/ICP FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 12 1991

DATE REPORT MAILED: Sept 20/91

SIGNED BY... *Chen* D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 54537	297	3	67	.1	5	120
D 54538	381	4	70	.1	7	121
D 54539	694	3	53	.1	9	82
D 54540	946	2	52	.6	6	85
D 54541	869	2	45	.3	2	70
D 54542	568	2	52	.1	5	123
D 54543	825	2	46	.4	4	133
D 54544	757	2	48	.4	2	98
D 54545	859	2	48	.8	2	126
D 54546	1164	2	47	1.4	3	604
D 54547	68	3	31	.1	6	153
D 54548	397	2	36	.3	5	244
D 54549	314	3	46	.1	4	213
D 54550	181	3	53	.2	6	106
D 54551	227	2	43	.1	6	115
D 54552	514	2	45	.4	5	350
D 54553	116	5	43	.1	5	610
D 54554	192	4	38	.1	4	97
D 54555	103	2	38	.1	5	150
D 54556	803	2	39	.6	3	121
D 54557	472	2	39	.1	2	102
D 54558	415	3	40	.4	6	115
D 54559	478	2	39	.2	3	97
D 54560	128	2	34	.1	3	43
D 54561	76	2	35	.2	4	136
D 54562	110	4	46	.1	2	207
D 54563	121	2	50	.1	4	50
D 54564	509	2	39	.6	5	282
RE D 54560	139	2	33	.1	2	52
D 54565	772	2	28	.8	3	117
D 54566	641	4	28	.5	4	136
D 54567	1460	2	29	1.9	2	251
D 54568	346	4	32	.5	3	236
D 54569	153	3	9	.2	3	187
D 54570	58	2	12	.1	2	157
D 54571	23	3	19	.1	4	123
D 54572	24	2	16	.1	5	45
STANDARD C/AU-R	61	38	132	7.3	41	471

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 54573	12	3	14	.1	2	38
D 54574	469	4	25	.8	2	143
D 54575	472	2	29	.8	3	96
D 54576	215	3	16	.4	2	127
D 54577	82	2	23	.4	2	62
D 54578	591	2	33	.8	2	95
RE D 54578	611	2	34	.9	2	95
D 54579	209	2	39	.5	3	162
D 54580	152	2	59	.7	2	59
D 54581	231	2	19	.5	2	179
STANDARD C/AU-R	62	38	132	7.6	43	462

Samples beginning 'RE' are duplicate samples.

## GEOCHEMICAL ANALYSIS CERTIFICATE

Noramco Exploration Inc. PROJECT 2012/2017 FILE # 91-4524 Page 1  
900 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
54582	41	4	15	.2	8	31
54583	23	2	16	.1	3	32
54584	10	2	17	.1	14	32
54585	102	2	17	.4	3	119
54586	270	2	38	.5	5	79
54587	101	2	39	.3	7	15
54588	464	2	39	.7	7	52
54589	310	2	46	.5	3	98
54590	593	2	41	.9	4	78
54591	152	2	38	.7	8	249
54592	240	2	40	.4	4	76
54593	256	2	34	.6	5	173
54594	121	2	22	.4	3	126
54595	149	2	24	.4	2	158
54596	76	2	32	.3	6	103
54597	135	2	29	.5	5	107
54598	123	3	36	.4	2	230
54599	95	2	37	.2	2	69
54600	109	2	37	.4	3	31
54601	233	2	39	.6	3	124
54602	417	2	37	.7	5	153
54603	262	2	38	.5	6	145
54604	639	2	42	.7	4	80
54605	612	2	37	.7	3	65
54606	795	2	33	1.2	5	149
54607	1756	2	31	1.3	4	129
54608	846	2	34	1.1	3	157
54609	500	2	37	2.1	4	1370
54610	1408	2	31	1.4	5	359
54611	319	2	43	.7	8	189
54612	164	2	32	1.0	23	433
54613	81	2	31	1.7	25	1706
54614	213	2	36	.7	9	390
54615	155	2	40	.4	2	55
RE 54611	289	2	42	.6	3	182
54616	172	2	39	.3	5	19
54617	95	2	43	.3	3	30
STANDARD C/AU-R	55	41	138	7.0	44	458

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 SAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
 SAMPLE TYPE: CORE      AU\*\* ANALYSIS BY FA/ICP FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 17 1991

DATE REPORT MAILED: Sept 20/91.

SIGNED BY..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
54618	143	2	39	.3	3	21
54619	62	5	34	.3	3	35
54620	35	9	17	.1	2	142
54621	18	8	17	.1	2	104
54622	8	5	16	.1	2	107
54623	25	5	16	.1	2	164
54624	25	2	16	.1	2	111
54625	62	6	15	.2	2	216
54626	25	2	17	.1	2	101
54627	63	3	18	.2	3	103
54628	63	8	16	.3	2	131
54629	198	6	20	.5	10	308
54630	110	7	20	.3	5	127
54631	149	3	16	.2	5	154
RE 54636	181	8	25	.5	21	411
54632	134	382	19	9.3	225	309
54633	150	6	21	.3	4	158
54634	148	7	22	.3	9	118
54635	342	5	23	.6	15	182
54636	181	2	25	.4	21	396
54637	665	7	16	.7	12	263
54638	592	2	25	.7	7	168
54639	183	2	39	.4	5	286
54640	1081	6	32	1.0	3	134
54641	144	5	26	.1	6	256
54642	78	4	27	.4	5	289
54643	649	4	32	.6	4	199
54644	317	3	27	.5	5	264
54645	697	2	30	.7	2	218
54646	1049	5	33	1.2	4	275
54647	676	4	39	1.1	4	226
54648	423	2	22	.6	4	112
54649	633	4	22	1.0	5	327
54650	927	6	23	2.3	4	1894
54651	441	2	23	.9	2	279
54652	930	5	20	1.4	3	1022
54653	756	2	20	.9	2	139
STANDARD C/AU-R	62	42	133	7.3	42	463

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
54654	500	7	13	.7	3	92
54655	146	5	17	.4	2	89
54656	909	4	25	1.2	2	147
54657	869	4	17	.8	2	130
54658	644	6	23	1.3	5	403
54659	669	4	32	1.6	3	673
54660	296	10	50	.6	3	139
54661	287	3	24	.6	2	113
RE 54665	418	2	16	.5	2	63
54662	288	2	27	.5	2	107
54663	345	4	31	.9	2	84
54664	295	4	19	.6	2	100
54665	439	3	16	.5	2	71 -
54666	374	2	25	.8	2	55
54667	193	4	23	.4	2	35
54668	62	2	18	.1	2	38
54669	68	3	25	.5	2	66
54670	9	2	18	.2	2	38
54671	10	2	22	.1	2	15
54672	137	3	25	.4	2	43
54673	23	2	22	.3	2	72
54674	23	5	30	.2	5	61
54675	204	2	36	.6	2	42
54676	255	2	25	.6	2	62
STANDARD C/AU-R	60	36	134	7.1	40	470

OLW

Samples beginning 'RE' are duplicate samples.

## GEOCHEMICAL ANALYSIS CERTIFICATE

Noramco Exploration Inc. PROJECT 2012/2017 FILE # 91-4724 Page 1  
 900 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 54677	5	3	23	.2	2	10
D 54678	3	2	12	.1	2	5
D 54679	5	2	21	.2	2	13
D 54680	26	2	15	.1	3	10
D 54681	18	3	25	.3	3	36
D 54682	14	2	23	.2	4	46
D 54683	11	2	11	.1	3	20
D 54684	11	2	9	.1	3	25
D 54685	6	2	23	.1	2	41
D 54686	13	2	14	.2	2	28
D 54687	60	2	14	.1	2	25
D 54688	24	2	15	.1	2	14
D 54689	26	2	20	.3	3	45
D 54690	49	2	21	.2	3	39
D 54691	87	2	25	.3	4	38
D 54692	7	2	16	.1	3	35
D 54693	154	2	17	.3	4	21
D 54694	95	2	24	.4	5	50
D 54695	10	2	24	.2	5	33
D 54696	5	4	14	.1	2	16
D 54697	6	2	15	.1	3	17
D 54698	4	2	13	.1	3	9
D 54699	5	2	14	.1	3	8
RE D 54695	10	2	24	.2	5	31
D 54700	5	2	15	.1	2	3
D 54701	5	5	14	.1	3	7
D 54702	6	2	13	.2	2	7
D 54703	6	2	14	.1	2	5
D 54704	5	3	11	.2	2	8
D 54705	4	2	11	.1	2	26
D 54706	5	3	14	.1	3	13
D 54707	8	2	16	.2	4	50
D 54708	9	2	15	.2	3	23
D 54709	26	2	15	.1	4	29
D 54710	15	2	15	.2	3	33
D 54711	16	2	16	.2	4	20
D 54712	13	2	16	.2	3	35
STANDARD C/AU-R	58	37	132	6.9	38	452

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB.

SAMPLE TYPE: CORE AU\*\* ANALYSIS BY FA/ICP FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 25 1991

DATE REPORT MAILED: Sept 30/91.

SIGNED BY..... D.TOEY, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 54713	8	3	11	.1	2	27
D 54714	75	2	15	.2	2	43
D 54715	76	2	14	.2	2	35
D 54716	113	4	19	.1	2	19
D 54717	154	5	14	.2	2	34
D 54718	121	2	13	.1	2	40
D 54719	22	6	17	.1	2	41
D 54720	72	3	18	.1	2	26
D 54721	7	2	12	.1	9	64
D 54722	13	2	12	.1	6	46
D 54723	21	2	16	.1	2	27
D 54724	9	2	12	.1	2	18
D 54725	48	3	14	.1	2	27
RE D 54728	23	4	27	.1	3	39
D 54726	57	2	13	.1	2	50
D 54727	43	2	15	.1	2	43
D 54728	23	2	26	.2	3	37
D 54729	46	2	26	.1	2	40
D 54730	54	2	20	.1	2	46
D 54731	119	3	24	.6	3	183
D 54732	41	2	20	.1	3	29
D 54733	22	3	23	.2	2	25
D 54734	290	2	20	.3	2	66
D 54735	384	3	19	.5	2	43
D 54736	135	3	16	.2	2	29
D 54737	65	2	20	.2	2	14
D 54738	108	2	20	.2	2	20
D 54739	209	2	17	.3	3	32
D 54740	113	2	20	.1	2	15
D 54741	195	2	17	.4	3	33
D 54742	445	2	18	.5	2	46
D 54743	126	3	17	.2	2	21
D 54744	157	2	12	.2	3	26
D 54745	268	3	16	.3	2	36
D 54746	201	9	21	.3	2	54
D 54747	224	18	23	1.2	3	196
D 54748	418	2	21	.6	2	82
D 54749	457	2	14	.5	2	49
STANDARD C/AU-R	58	37	132	6.6	39	468

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 54750	764	2	17	.7	2	99
D 54751	835	2	19	.6	2	94
D 54752	604	3	15	.5	2	102
D 54753	378	5	14	.3	2	71
D 54754	339	5	9	.3	2	88
D 54755	662	2	19	.7	2	77
D 54756	463	3	19	.4	2	37
D 54757	199	4	23	.3	2	21
D 54758	229	2	18	.3	2	49
D 54759	393	3	25	.4	3	39
D 54760	164	12	48	.4	7	16
D 54761	501	3	29	.5	4	54
D 54762	420	3	18	.3	2	44
D 54763	781	2	19	.7	2	56
RE D 54768	945	3	15	.6	2	58
D 54764	641	2	17	.5	2	51
D 54765	515	2	17	.5	2	51
D 54766	582	2	19	.5	3	47
D 54767	358	2	17	.4	2	36
D 54768	916	2	15	.6	2	50
D 54769	503	7	16	.5	2	35
D 54770	756	4	15	.6	2	50
D 54771	319	2	18	.2	5	38
D 54772	65	8	26	.2	4	46
D 54773	66	5	25	.1	4	24
D 54774	47	8	40	.1	4	25
D 54775	75	4	19	.1	2	29
D 54776	147	2	16	.1	2	42
D 54777	185	2	15	.2	2	46
D 54778	93	5	17	.1	2	31
D 54779	59	2	25	.1	2	44
D 54780	51	2	25	.2	2	56
D 54781	119	2	25	.3	2	50
D 54782	162	2	25	.3	2	39
D 54783	272	2	22	.4	2	44
D 54784	106	2	22	.1	2	41
D 54785	98	2	18	.1	2	29
D 54786	230	2	21	.2	2	29
STANDARD C/AU-R	60	40	132	6.7	39	477

Samples beginning 'RE' are duplicate samples.

OCT-01-1991 16:23

FROM ACME ANALYTICAL

TO NORAMCO EXP INC

P.002/005

## GEOCHEMICAL ANALYSIS CERTIFICATE

Noramco Exploration Inc., PROJECT 2012/2017 FILE # 91-4725 Page 1  
 900 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 41351	1950	2	100	3.2	6	693
D 41352	720	2	111	1.3	4	398
D 41353	1063	2	93	1.8	6	830
D 41354	502	2	96	.9	10	256
D 41355	395	4	94	.9	5	226
D 41356	513	4	147	1.1	6	221
D 41357	546	31	168	1.7	21	261
D 41358	344	10	79	1.2	14	348
D 41359	162	2	58	.5	6	380
D 41360	161	4	60	.5	6	1249
D 54787	22	2	12	.3	5	59
D 54788	105	2	21	.4	2	44
D 54789	129	2	17	.4	2	30
D 54790	175	2	24	.4	2	15
D 54791	226	2	17	.5	3	42
D 54792	110	2	21	.3	2	15
D 54793	272	2	22	.6	2	23
D 54794	86	3	23	.3	2	14
D 54795	183	2	24	.5	2	21
RE D 54791	231	2	17	.4	2	33
D 54796	49	2	28	.3	2	12
D 54797	155	3	23	.5	2	31
D 54798	168	2	19	.3	2	28
D 54799	46	2	22	.3	2	21
D 54800	135	2	16	.4	2	38
D 54801	172	2	21	.5	2	28
D 54802	172	2	20	.4	2	22
D 54803	145	2	14	.4	3	24
D 54804	134	2	17	.2	2	15
D 54805	71	2	16	.2	2	9
D 54806	134	2	18	.3	2	21
D 54807	193	2	24	.5	2	26
D 54808	192	7	71	.7	4	24
D 54809	271	4	51	1.0	4	37
D 54810	325	2	30	.6	2	26
D 54811	174	3	28	.4	2	11
D 54812	186	2	26	.3	2	16
STANDARD C/AU-R	60	41	134	7.2	42	469

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Mn Fe Sr Ca P La Cr Mg Ba Ti B W AND LIMITED FOR Na K AND Al. AU DETECTION LIMIT BY ICP IS 3 PPM.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

IPLE TYPE: CORE AU\*\* ANALYSIS BY FA/ICP FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 25 1991

DATE REPORT MAILED: Oct 1/91.

SIGNED BY..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

OCT-01-1991 16:24

FROM ACME ANALYTICAL

TO NORAMCO EXP INC

P.003/005

Noramco Exploration Inc. PROJECT 2012/2017 FILE # 91-4725 Page 2

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Au** ppb
D 54813	238	2	25	.5	2	21
D 54814	241	2	17	.7	3	44
D 54815	157	2	30	.9	2	276
D 54816	74	3	20	.4	3	60
D 54817	295	5	25	.7	2	96
D 54818	321	2	26	.5	2	55
D 54819	82	2	26	.3	2	24
D 54820	217	2	18	.5	2	32
D 54821	238	2	19	.5	2	42
D 54822	291	3	17	.5	3	35
D 54823	137	3	33	.2	2	20
D 54824	2221	3	3	1.0	14	93
D 54825	1819	3	6	.7	2	76
D 54826	1904	6	24	.7	3	91
D 54827	2080	6	10	.9	2	89
D 54828	2975	26	225	1.7	5	125
D 54829	2278	7	49	1.3	3	82
D 54830	1942	5	14	.6	3	74
D 54831	2074	2	14	.7	5	86
D 54832	1835	6	10	.8	3	83
D 54833	1449	6	12	.5	5	50
D 54834	1504	2	10	.4	4	54
D 54835	1065	2	7	.5	3	42
D 54836	658	2	7	.4	3	30
D 54837	1603	5	7	.6	4	49
D 54838	1505	6	5	.6	5	73
RE D 54835	1075	2	7	.4	3	44
D 54839	825	4	11	.4	2	58
D 54840	1385	5	20	.6	3	94
D 54841	1412	8	35	.5	9	52
D 54842	2317	2	13	.6	3	100
D 54843	1857	4	11	.6	6	85
D 54844	1552	5	13	.6	7	90
D 54845	1677	6	8	.7	3	69
D 54846	1120	6	9	.4	5	72
D 54847	1170	10	14	.6	7	90
D 54848	853	5	18	.5	5	83
STANDARD C/AU-R	61	41	133	7.4	42	467

Samples beginning 'RE' are duplicate samples.

✓

APPENDIX 4

STATEMENT OF EXPENDITURES

STATEMENT OF COSTS. (1991 Field Program)

Applicable costs are pro-rated to each project.

Kena  
(2012)

S.W. Block  
(2017)

Linecutting:

D.Murray. June 21-July 11/91	\$1,127.41	\$1,748.64
J.Denny . June 20-July 10/91	1,249.72	1,890.28
C.Pittman.June 18-20 /91	375.00	

Geophysics :

Delta Geoscience. July 3-Aug. 1	28,815.88	8,750.75
B.Woods :July 8 -24 /91	1,265.72	573.99
B.Doyle :July 9 -20 /91	837.50	517.68
J.Command:July 23-30 /91	610.55	10.56

Geochemistry: Acme Laboratory.

B.Woods :June 28-July 30/91	1,086.35	5,849.07
	232.14	1,239.64

Accommodation:

	1,100.00	1,100.00
--	----------	----------

Truck Rentals.

	1,545.03	1,545.02
--	----------	----------

Geology and Supervision:

T.E.Lisle and Associates Ltd.		
June 1 to 30, 1991	3,932.25	2,327.25
July 1 to 15, 1991	1,605.00	2,889.00
July 16to 31, 1991	2,407.50	2,728.50
Aug. 1 to 15, 1991	2,166.75	2,166.75

Operating Supplies. Fuel, Food,  
radios, field supplies, etc.

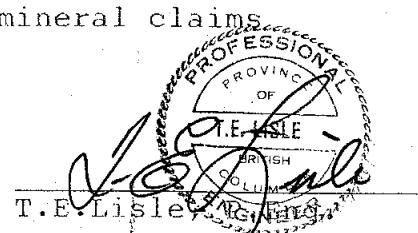
	1,368.76	1,311.48
--	----------	----------

Report Estimates.

Geological and Geochemical.	598.50	901.50
Geophysical (Delta Geoscience)	1,066.66	333.34

	<u>\$51,390.72</u>	<u>\$35,883.45</u>
--	--------------------	--------------------

Expenditures applicable to K-Group of mineral claims  
\$87,274.17



**DELTA GEOSCIENCE LTD.**Mineral Exploration Geophysics  
Consulting and Contracting642 English Bluff Rd.  
Delta, B.C., Canada V4M 2N4  
Tel: (604) 943-0983  
Fax: (604) 943-3907

July 15, 1991.

Inv. F.024.  
GST #101333748.**INVOICE**

Noramco Mining Corporation,  
900, 999 West Hastings Street,  
Vancouver, B.C.,  
V6C 2W2.

Attn: Mr. Dave Silversides.  
Exploration Manager.

**Geophysical Survey - Nelson Project**

-----  
July 3: Mobilization..... \$ ✓ 600.00. *2012*  
July 4: Kena Gold Grid:  
VLF/MAG Survey, 1 man @ \$600.00/day... \$✓ 600.00. *2012*  
July 5: Kena Gold Grid:  
VLF/MAG Survey, 2 men @ \$900.00/day... \$✓ 900.00. *2012*  
July 6-7: K90-4:  
Downhole E.M, 2 days @ \$1,200.00/day.. \$ 2,400.00. *2012*  
July 8-10: Kena Gold Grid:  
I.P. Survey, 3 days @ \$1,350.00/day... \$ 4,050.00. *2012*  
July 11-13: Kena South Grid:  
I.P. Survey, 3 days @ \$1,350.00/day... \$ 4,050.00. *2012*  
July 14: Crew Day Off.

\$  
2012 = 11,850.00  
GST = 829.50  
12,679.50

\$  
2017 = 2100  
GST = 147.00  
\$ 2247.00

<b>APPROVED</b>	
INITIAL:	<i>AB</i>
CODE:	<i>Geophys Env = 37</i>

Kena - 2012 -  
Sw. Blk =

12,679.50  
2,247.00  
-----  
14,926.50

63  
31566

**DELTA GEOSCIENCE LTD.**Mineral Exploration Geophysics  
Consulting and Contracting642 English Bluff Rd.  
Delta, B.C., Canada V4M 2N4  
Tel: (604) 943-0983  
Fax: (604) 943-3907

August 2, 1991.

Inv. F.029.  
GST #101333748.**INVOICE**

Noramco Mining Corporation,  
900, 999 West Hastings Street,  
Vancouver, B.C.,  
V6C 2W2.

Attn: Mr. Dave Silversides.  
Exploration Manager.

**Geophysical Survey - Nelson Project**

July 16-19: Kena South Grid: Gradient I.P:  
4 days @ \$1,350.00/day..... \$ 5,400.00. ✓

July 20: Kena South Grid: P-Dipole I.P:  
1 day @ \$1,350.00/day..... \$ 1,350.00.

July 21-22: Kena Gold Grid: Protom 37 Survey:  
2 days @ \$1,350.00/day..... \$ 2,700.00.

July 23: Kena South Grid: P-Dipole I.P:  
1 day @ \$1,350.00/day..... \$ 1,350.00.

July 24: Kena Gold Grid: P-Dipole I.P:  
1 day @ \$1,350.00/day..... \$ 1,350.00.

July 25: Kena South Grid: MAG/VLF Survey:  
1 day @ \$900.00/day..... \$ 900.00.

July 26-27: Kena Gold Grid, Protom 37 Survey:  
2 days @ \$1,350.00/day..... \$ 2,700.00.

July 28: Crew day off.

<b>APPROVED</b>	
INITIAL:	<i>MS</i>
CODE:	<i>2012/2017</i>

... 2.

-34-

- Ernie - note: will mail private info  
to the two projects at a later date

... 2.

July 29:	Kena South Grid, MAG/VLF Survey: 1 day @ \$900.00/day.....	\$ 900.00.
July 30:	Kena Gold Grid, Protom 37 Survey: 1 day @ \$1,350.00/day.....	\$ 1,350.00.
July 31:	Kena Gold Grid, Protom 37 Survey: 0.5 day @ \$1,350.00/day.....	\$ 675.00.
August 1:	Demobilization.....	\$ 900.00.
Per diem cost for meals:		
	1 man x 28 days x \$22.00/day.....	\$ 616.00.
	1 man x 28 days x \$22.00/day.....	\$ 616.00.
	1 man x 16 days x \$22.00/day.....	\$ 352.00.
		-----
		\$21,159.00.
	G.S.T...	\$ 1,481.13.
		-----
		\$22,640.13.

SEE : ASSOCIATES LTD.  
1548 LONSDALE AVENUE  
NORTH VANCOUVER, B.C. V7M 2J3

**APPROVED**

INITIAL: HS

CODE:

Kena - 2012 - 4616.37 23  
S.W. Block 2017 - 2, 865.

IN ACCOUNT WITH

NORTACO MINING CORPORATION

900-989 WEST HASTINGS STREET

VANCOUVER, B.C. V6C 2W2

INVOICE . 9105

JUNE 30, 1991.

To. PROFESSIONAL SERVICES.

A) KENA PROJECT, NELSON MINING DIVISION

MAY 29 TO JUNE 30, 1991.

- FEES,	12.25 days at \$300 <sup>00</sup>	\$ 3675.00	- # 30
- G.S.T. (R105168702) - 7%		257.25	# 30
- TRUCK RENTAL	275 <sup>00</sup> + 7% (G.S.T. 19.25)	294.25	# 16
- MISCELLANEOUS EXPENSES - SEE ATTACHED		389.87	# 18
	$\frac{375.00 + (19.25)}{\text{G.S.T.}} =$	<u>4,616.37</u>	\$ 4,616.37

B). S.W. BLOCK NELSON MINING DIVISION.

MAY 29 TO JUNE 30, 1991.

- FEES	7.25 days @ \$300 <sup>00</sup>	\$ 2,175.00	- 30
- G.S.T. R105168702. AT 7%		152.25	30
- TRUCK RENTAL, 275 <sup>00</sup> + 7% (G.S.T. 19.25)		294.25	- 16
- MISCELLANEOUS EXPENSES - SEE ATTACHED		243.73	- 18
	$(233.12 + (10.61)) =$ $\frac{\text{G.S.T.}}{}$	<u>2,865.23</u>	<u>2,865.23</u>

TOTAL JUNE 30, 1991.

\$ 7,481.60

J. E. Leslie

LISLE & ASSOCIATES LTD.  
LOGICAL SERVICES

145 West Rockland Road, North Vancouver, B.C. V7N 2V8

Telephone 604-987-0821

IN ACCOUNT WITH:

NORAMCO MINING CORPORATION.  
900 - 999 WEST HASTINGS ST.  
VANCOUVER, B.C. V6C 2W2

INVOICE NO.:	9016	DATE:	JULY 15, 1991.
--------------	------	-------	----------------

PROFESSIONAL SERVICES: GEOLOGY AND SUPERVISION:

2012 KONA PROJECT 5 days. \$1,500<sup>00</sup>

2017 5000714 WEST BLOCK OPTION 9 days. \$2,700<sup>00</sup>

G.S.T.

\$4,200<sup>00</sup>

294<sup>00</sup>

\$4,494<sup>00</sup>

283<sup>81</sup>

\$4,777<sup>81</sup>

EXPENSES, AS LISTED:

TOTAL.

**APPROVED**

INITIAL:

HLS

CODE:

Hera & S.W.

Blocks - see above for details

30 - Cabot Geol. Services

V.G. Lisle

T.E. LISLE & ASSOCIATES LTD.

TERMS: Net 30 days, overdue accounts subject to interest.

# T.E. LISLE & ASSOCIATES LTD.

GEOLOGICAL SERVICES

145 West Rockland Road, North Vancouver, B.C. V7N 2V8

Telephone 604-987-0821

IN ACCOUNT WITH

NORAMCO MINING CORP.

900 - 999 WEST HASTINGS STREET,  
VANCOUVER, B.C.

INVOICE NO.:	9017	DATE:	JULY 31, 1991.
--------------	------	-------	----------------

PROFESSIONAL SERVICES:

GEOLOGY & SUPERVISION OF:  
KONA PROJECT 7.5 days  
G.S.T. 7%

2250<sup>00</sup>  
157<sup>50</sup> } 2012/30

KONA SOUTH BLOCK 8.5 days  
G.S.T. 7%  
(# R105168702)

2550<sup>00</sup>  
178<sup>50</sup> } 2017/30

5,136<sup>00</sup>

EXPENSES, AS LISTED:

TRUCK RENTAL JULY 1-31, 1991	1,000 <sup>00</sup>	50% 2012/16 50% 2017/16
EXCESS MILEAGE JUNE 15-JULY 15/91 250 KM at 20¢	50 <sup>00</sup>	
G.S.T. (R105168702)	73 <sup>50</sup>	
		<u>1,123<sup>50</sup></u>

MISC OPERATING EXPENSES  
AS SHOWN.

{ /24  
494.90

# 6,754.40

**APPROVED**

INITIAL: TL

CODE: 2012 - Kona

2017 - Sat Block

V.E. Lisle

T.E. LISLE & ASSOCIATES LTD.

# LISLE & ASSOCIATES LTD.

PROFESSIONAL SERVICES

100 Rockland Road, North Vancouver, B.C. V7N 2V8

Telephone 604-987-0821

## In Account with:

Noramco Mining Corporation,  
900-999 West Hastings Street,  
Vancouver, B.C. V6C-2W2

INVOICE NO.:	9018	DATE:	August 15, 1991
--------------	------	-------	-----------------

### PROFESSIONAL SERVICES:

To geology, supervision, preparation of maps and reports on Kena and South West Block projects, Nelson Mining Division.

2012	Kena Project, Aug. 1 to 15/91 6.75 days GST # R105168702	\$2,025.00 141.75	<i>Note Punchy of Aug 15</i>
2017	S.W.Block , Aug.1 to 15/91 6.75 days GST # R105168702	2,025.00 141.75	<hr/> <i>165.03 296.76</i>
		<hr/>	<i>\$4,333.50</i>

### EXPENSES, AS LISTED:

Operating Expenses,

Total:

APPROVED	
INITIAL:	<i>AK</i>
CODE:	<i>charge 2017 - 2012</i>

*165.03  
296.76*

*\$4,630.26  
4,498.53*

*T.E. Lisle*

T.E. LISLE & ASSOCIATES LTD.

TERMS: Net 30 days, overdue accounts subject to interest.



(PEAF)

NORAMCO MINING CORPORATION  
PERSONAL EXPENSE ACCOUNT  
(Staple supporting invoices & receipts to the back)

PERIOD: May 13 - Aug 12/91

NAME: D. Silver-side

G.S

Date	Description	Project	Category & Type	Amount
May 13	Gas - Socorro, New Mexico - cash	ANAN C	Regdskt	70
May 31	Gas - Santa Fe, New Mexico - charge card	"	"	87
May 31	Delta Airlines - Courses - charge card	"	"	61.90
June 5	Gas - San Antonio, New Mexico - cash	"	"	16.12
June 7	Delta Airlines - Courses - charge card	"	"	53.26
June 10	Los Amigos Motel - charge card	"	"	107.23
July 23	Med - B. Kuey / D. Silver-side - charge card	Prospect Eval	NNN	35
July 23	Room - Winthrop Wash - charge card	"	"	62.71
July 23	Gas - Winthrop, charging for <sup>Patel</sup> Inn - charge card	"	"	24.44
July 24	Gas - Colville, charging for <sup>Patel</sup> Inn - charge card	"	"	16.65
July 24	Med - Winthrop, Wash - charge card	"	"	14.50
July 24	Gas - Osoyoos <sup>Patel Inn</sup> - charge card	"	"	29.66 1.94
Aug 1	Gas - Tidler Rentel - charge card	Kona 2012	"	78.12 2.58
Aug 1	Tidler Truck Rental - charge card	Kona 2012	"	743.11 44.52
Aug 9	Taxi - Vancouver airport - cash	S. Path	Regdskt	40.00 2.62
Aug 9	Delta Airlines - Va - Alb - Van - charge card	"	"	181.1167 175.53
Aug 10	Smiths - Miss - cash	"	"	35.10
Aug 11	waffle House - Breakfast - self + 3 crew - cash	"	"	55.17
Aug 12	waffle house - Breakfast - self + 3 crew - cash	"	"	47.20
Aug 12	Meal - Alb. Airport - cash	"	"	86.1
Aug 12	Taxi - Van Airport - cash - lost receipt - cash	"	"	40.00 2.62
July 6	N.W. Mining Assoc. - dues -	NNN	NNN	58.65

TOTAL →

NNN - \$1,026.53

RYQ - 1,563.49

2,590.02

Approved By:

Adds &amp; Extentions:

2,590.02

131.

**ACME ANALYTICAL LABORATORIES LTD.**

852 E. Hastings St., Vancouver, B.C., CANADA V6A 1R6

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

Our GST tax number: R100035377

**NORAMCO EXPLORATION INC.**

900 - 999 W. Hastings St.

Vancouver, BC

V6C 2W2

ATTENTION: D. SILVERSIDES

File: 91-3058  
Date: Aug 6 1991

QTY	ASSAY	PRICE	AMOUNT
330	CU PB ZN AG & AS ICP ANALYSIS @	3.50	1155.00
330	GEOCHEM AU ANALYSIS BY ACID LEACH (10 gm) @	5.00	1650.00
301	SOIL SAMPLE PREPARATION @	1.00	301.00
29	ROCK SAMPLE PREPARATION @	3.25	94.25
			-----
			3200.25
	GREYHOUND W/B #13146276426		66.25
			-----
		GST Taxable	3266.50
		7.00 % GST	228.66
		TOTAL	-----
			3495.16

Project: KENA (S. BLOCK)  
Samples submitted by T.E. LISLE

Tom: Calculated

\$ to Kena - 2012

\$ to S.w. Block - 2017

COPIES 1 FAX 1

Please pay last amount shown. Return one copy of this invoice with payment.  
TERMS: Net two weeks. 1.5 % per month charged on overdue accounts.

[COPY 2]

**ACME ANALYTICAL LABORATORIES LTD.**

852 E. Hastings St., Vancouver, B.C., CANADA V6A 1R6

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

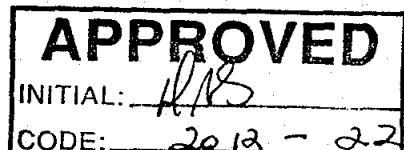
Our GST tax number: R100035377

**AA****ORAMCO EXPLORATION INC.**900 - 999 W. Hastings St.  
Vancouver, BC  
V6C 2W2File: 91-2337  
Date: Jul 10 1991

QTY	ASSAY	PRICE	AMOUNT
160	GEOCHEM CU PB ZN AG & AS ICP ANALYSIS @	3.50	560.00
160	GEOCHEM AU ANALYSIS BY ACID LEACH (10 gm) @	5.00	800.00
160	SOIL SAMPLE PREPARATION @	1.00	160.00
			-----
	GREYHOUND W/B #13155697684		1520.00
			25.85
		GST Taxable 7.00 % GST	1545.85
			108.21
		TOTAL	-----
			1654.06

Samples submitted by T.E. LISLE

COPIES 1 FAX 1

*KEN A Project*

Please pay last amount shown. Return one copy of this invoice with payment.  
TERMS: Net two weeks. 1.5 % per month charged on overdue accounts.

[ COPY 1 ]

**ACM ANALYTICAL LABORATORIES LTD.**

852 E. Hastings St., Vancouver, B.C., CANADA V6A 1R6

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

Our GST tax number: R100035377

**AA****DORAMCO EXPLORATION INC.**  
900 - 999 W. Hastings St.  
Vancouver, BC  
V6C 2W2  
ATTN: MR. D. SILVERSIDEFile: 91-2515  
Date: Jul 17 1991

QTY	ASSAY	PRICE	AMOUNT
173	GEOCHEM CU PB ZN AG & AS ANALYSIS BY ICP @	3.50	605.50
173	GEOCHEM AU ANALYSIS BY ACID LEACH (10 gm) @	5.00	865.00
173	SOIL SAMPLE PREPARATION @	1.00	173.00
			-----
			1643.50
	GREYHOUND W/B# 13155098611		25.85
			-----
		GST Taxable	1669.35
		7.00 % GST	116.85
			-----
		TOTAL	1786.20

Project: KENA  
Samples submitted by T.E. LISLE

COPIES 1 FAX 1



PROJECT

22

Please pay last amount shown. Return one copy of this invoice with payment.  
TERMS: Net two weeks. 1.5 % per month charged on overdue accounts.

[ COPY 2 ]

STATEMENT OF EXPENSES, DRILL PROGRAM. SEPT./1991.

Drill Hole NK91-1. Kena and Cottonwood Claim.

Drill Invoice, Lone Ranger Diamond Drilling. \$ 28288.83  
Less Bulldozer Costs. 825.00

GST	27463.83
	1922.47
	<u>\$29,386.30</u>

Analytic Costs. \$14.17. Freight \$1.77 = \$15.94  
322 samples at \$15.94

5,132.68

Labour. Core splitters.

B.Woods, Sept. 5-30/91	\$2,808.00
L.Addie, Sept. 21-29/91	1,040.00
	<u>3,848.00</u>
Payroll costs at 15%	577.20
	<u>\$4,425.20</u>

Costs applicable to drilling NK91-1  
322/631 x \$4,425.20

2,258.18

Geology and Supervision, Sept. 1 to 15/91  
T.E.Lisle and Associates Ltd.

4,815.00

Truck Rental. 4x4. 1/2 mo. at \$1,000.00/mo.

500.00

Accommodation. 1/2 mo. at \$1,100.00/mo.

550.00

Operating Expenses, Fuel, Food, etc.

350.40

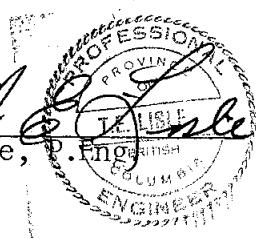
Report and Misc. supplies. 2 at \$300.00

600.00

Total available for recording assessment

\* \$43,592.56

\* Amount varies from that filed on Statement of work.  
Amount filed was partly based on estimates

T.E.Lisle, P.Eng.  




# T.E. LISLE & ASSOCIATES LTD.

## GEOLOGICAL SERVICES

145 West Rockland Road, North Vancouver, B.C. V7N 2V8

Telephone 604-987-0821

### IN ACCOUNT WITH:

NORAMCO MINING CORPORATION,  
900-999 WEST HASTINGS STREET  
VANCOUVER, B.C. V6C 2W2

INVOICE NO.:

9020

DATE:

August September 15, 1991

### PROFESSIONAL SERVICES:

Project 2012-2017, Nelson, B.C.

Drill Program

Geology - Supervision Sept 1-15/91

\$ 1,500<sup>00</sup>

G.S.T. # R105168702 @ 7%

315<sup>00</sup>

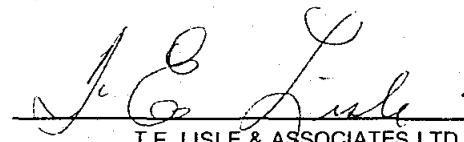
4,815<sup>00</sup>

### EXPENSES, AS LISTED:

3.50<sup>40</sup>

\$ 5,165<sup>40</sup>

Approved : L.A.S.  
S.W. Black = 50%  
DNA = 50%

  
T.E. LISLE & ASSOCIATES LTD.

**ACME ANALYTICAL LABORATORIES LTD.**

852 E. Hastings St., Vancouver, B.C., CANADA V6A 1R6

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

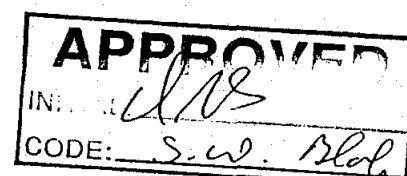
Our GST tax number: R100035377

**NORAMCO EXPLORATION INC.**900 - 999 W. Hastings St.  
Vancouver, BC  
V6C 2W2File: 91-4524  
Date: Sep 20 1991

QTY	ASSAY	PRICE	AMOUNT
95	CU PB ZN AG & AS ICP ANALYSIS @	3.50	332.50
95	GEOCHEM AU ANALYSIS BY FA/ICP FROM 10 gm SAMPLE @	6.50	617.50
95	CORE SAMPLE PREPARATION @	3.25	308.75
		GST Taxable 7.00 % GST	
		TOTAL	1258.75 88.11
			1346.86

Project: 2012/2017

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*Noramco*

[ COPY 1 ]

Please pay last amount shown. Return one copy of this invoice with payment.  
TERMS: Net two weeks. 1.5 % per month charged on overdue accounts.

**ACME ANALYTICAL LABORATORIES LTD.**

852 E. Hastings St., Vancouver, B.C., CANADA V6A 1R6

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

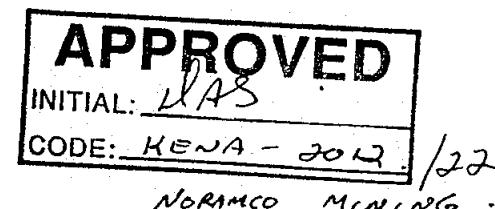
Our GST tax number: R100035377

**NORAMCO EXPLORATION INC.**900 - 999 W. Hastings St.  
Vancouver, BC  
V6C 2W2File: 91-4725  
Date: Oct 1 1991

QTY	ASSAY	PRICE	AMOUNT
121	GEOCHEM CU PB ZN AG & AS ICP ANALYSIS @	3.50	423.50
121	GEOCHEM AU ANALYSIS BY FA/ICP FROM 10 gm SAMPLE @	6.50	786.50
121	CORE SAMPLE PREPARATION @	3.25	393.25
		GST Taxable 7.00 % GST	
			1603.25
			112.23
		TOTAL	
			1715.48

Project: 2012/2017

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**ACME ANALYTICAL LABORATORIES LTD.**

852 E. Hastings St., Vancouver, B.C., CANADA V6A 1R6

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

Our GST tax number: R100035377

**NORAMCO EXPLORATION INC.**

900 - 999 W. Hastings St.

Vancouver, BC

V6C 2W2

ATTN: D. SILVERSIDES

File: 91-4724  
Date: Sep 27 1991

QTY	ASSAY	PRICE	AMOUNT
110	CU PB ZN AG & AS ANALYSIS BY ICP @	3.50	385.00
110	GEOCHEM AU ANALYSIS BY FA/ICP FROM 10 gm SAMPLE @	6.50	715.00
110	CORE SAMPLE PREPARATION @	3.25	357.50
	GST Taxable		
	7.00 % GST		
	TOTAL		
			1457.50
			102.03
			1559.53

Project: 2012/2017  
WEST ARM TRUCK LINES WAYBILL TO COME

COPIES 2 FAX 1

<b>APPROVED</b>	
INITIAL:	<i>DLB</i>
CODE:	<i>KWA</i>

*NORAMCO -**2012 / 22*Please pay last amount shown. Return one copy of this invoice with payment.  
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**ACME ANALYTICAL LABORATORIES LTD.**

852 E. Hastings St., Vancouver, B.C., CANADA V6A 1R6

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

Our GST tax number: R100035377

**NORAMCO EXPLORATION INC.**

900 - 999 W. Hastings St.

Vancouver, BC

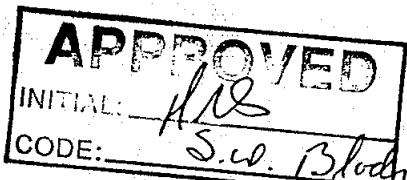
V6C 2W2

File: 91-4392  
Date: Sep 20 1991

QTY	ASSAY	PRICE	AMOUNT
81	CU PB ZN AG & AS ICP ANALYSIS @	3.50	283.50
81	GEOCHEM AU ANALYSIS BY FA/ICP FROM 10 gm SAMPLE @	6.50	526.50
81	CORE SAMPLE PREPARATION @	3.25	263.25
			1073.25
			75.13
	TOTAL		1148.38

Project: 2012/2017


Samples submitted by T.E. LISLE


*Noramo*


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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

~~21-017~~

A scale bar at the bottom of the map shows distances from 25 to 300 meters. Above the scale bar, the elevation '21,917' is written vertically. Below the scale bar, the text 'scale 1:2,500' is printed.

NORAMCO MINING CORPORATION	
<u>KENA AND SOUTH WEST BLOCK PROJECTS.</u>	
<u>NELSON MINING DIVISION.</u>	
<u>KENA SOUTH GRID.</u>	
SOIL GEOCHEMISTRY - COPPER.	
Date:	October, 1931
Scale:	1:2,500
N.T.S.	82F/65,6W
FIGURE	GB.

