

**GEOLOGICAL – GEOCHEMICAL  
ASSESSMENT REPORT**

**SCOTIA PROPERTY  
SCOTIA RIVER AREA, SKEENA MD**

Report For  
**Geo Minerals Ltd.**

Report Compiled By  
**Arnex Resources Ltd.**

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Report Date  
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## 1. SUMMARY

The Scotia Prospect is located in the Scotia River area, approximately 40 km southeast of Prince Rupert in west central British Columbia. The Scotia group of claims consists of two cell selected mineral claims that total 2,939.4 hectares in area.

Infrastructure in the area is good, with all of the main valleys in the area accessible by logging roads. A rail line is located along the north bank of the Skeena River, and electric power is available on the south bank of the Skeena River.

The property lies within a belt of metavolcanic and metasedimentary rocks trending approximately north-south between the Skeena River to the north and the Ecstall River to the south. The volcanic rocks have been subjected to upper amphibolite grade metamorphism during three periods of folding and are now represented by amphibolites, gneisses and schists. The lithologies underlying the Scotia property belong to a metavolcanic unit which is intruded by the Ecstall granite along the west side of the property, and by several stages of dioritic to pegmatitic dykes.

North and south of the Ecstall River, several occurrences and VMS-type zinc (+/- copper-lead-silver-gold) deposits are known that are hosted within the metavolcanic unit. Eleven occurrences of this type are located within ten kilometers of the southern margin of the Scotia Property.

The Albere Zone at the Scotia Property was discovered by Texas Gulf Sulphur in 1958 during a regional reconnaissance program. The Albere Zone is characterized by coarsely crystalline, massive to semi-massive sphalerite with lesser amounts of pyrite, galena, pyrrhotite, magnetite and chalcopyrite. The mineralized zone is essentially open to the north and west. The mineralized zone lies at the base of a felsic metavolcanic sequence and is underlain by intermediate and mafic metavolcanic rocks. Up to six zones have been intersected by diamond drilling. Evidence suggests that repetition of the mineralization may be due to isoclinal folding which may be present. Mineralization may represent one previously extensive sphalerite lens that has been repeatedly folded and migmatized, or up to three or more lenses that may intersect locally. Alternatively, two main mineralized zones are intersected in many holes. The two bands are commonly mineralogically different and may represent two massive sulphide layers that are discrete from each other, as opposed to being repeated by folding.

In 1960, 10 holes were drilled by Texasgulf Inc of which seven intersected massive sulphide zones. Drill intersections ranged between 2.2 to 7.7 metres in length. The best intersection was from drill hole S-01-60 which assayed 19.9% zinc and 26 g/t silver over 7.7 metres. In 1980, additional diamond drilling by Kidd Creek Mines Ltd expanded the strike length and down-dip dimensions of the massive sulphide mineralization at the Albere Zone. Massive sulphides were intersected in six holes with the best being 9.8% zinc and 14 g/t silver over 18.1 metres.

In 1997, a drill program was conducted by Arnex Resources Ltd for Bishop Resources Inc at the Albere Zone. Disseminated, semi-massive and massive base metal sulphide intersections were encountered in nine of the ten holes drilled. The thickest intersection was in drill hole S-37-97 which encountered 26.7 metres grading 9.0% zinc, 1.2% lead, 21.5 g/t silver, 0.3 g/t gold and 0.2% copper. Mineralized intersections greater than 15 metres in length were also intersected in two additional holes.

The 1997 drill program extended potentially economic grades in the Albere Zone by about 45 meters, to 205 meters north of the outcrop of the main Albere Showing, and it remains open in this direction. The vertical extent of the mineralization encountered is increasing to the north. Results established a vertical range of sub-economic to economic grades of mineralization of 95 meters, and a horizontal range of over 60 meters at the base of the zone. The high grade "core" area widened to about 30 meters about 190 meters north of the main showing. Also, the grade of zinc mineralization encountered in the deeper western zones appears to be gradually increasing to the north.

The Albere Zone on the Scotia Property lies along the western limb of a broad south-plunging anticline. The Albere Zone is characterized in outcrop by a well developed gossan which is readily apparent from the air. A very similar gossan outcrops in cliff faces which lie along the eastern limb of the anticline adjacent to the Albere Zone (the "East Limb" gossan zone).

A field exploration program was conducted during the period June 30 to July 3, 2005 by a crew of three to persons. Expenditures totalled \$43,030.71 as per a Statement of Exploration and Development Work filed as Event Number 4052977. The objectives of the program were to resample selected intervals of the 1997 drill core and to prospect and sample an exposed outcropping gossanous area.

Inclement weather conditions limited helicopter access to the Property. Selected intervals of the 1997 drill core were re-sampled. Analytical results are posted in this Assessment Report. Numerous samples were "over-limit" for the geochemical analysis that was performed.

Only limited time was spent prospecting and sampling the East Limb gossan zone. Abundant limonite and some pyrite were found associated with a small portion of the gossan that was visited. Elevated base metal values were present in some of the samples that were taken.

## 2. INTRODUCTION AND TERMS OF REFERENCE

### *Terms of Reference*

Geo Minerals Ltd. (“Geo Minerals”) has authorized Arnex Resources Ltd. (“Arnex”) to carry out a field exploration program on the Scotia Property.

### *General*

The objectives of the 2005 field exploration program were as follows:

- To resample selected drill core intervals from stored drill core to verify analytical and assay results from the 1997 drill program,
- To prospect and sample a gossanous area outcropping in cliff faces east of the Albere Zone.

The field program was conducted by a three to five person crew during the period June 30 to July 3, 2005.

A Statement of Exploration and Development Work was filed as Event Number 4052977 as per Appendix A. Expenditures totalled 43,030.71.

The field crew consisted of the following:

<b>Person</b>	<b>Affiliation</b>	<b>Activities</b>
A O Birkeland	Arnex Resources Ltd	Project Geologist
Paul Gray	Doublestar Resources Ltd	Geologist, Core Sampler
Aaron Bradley	Doublestar Resources Ltd	Geologist, Core Sampler
Piotr Lutynski	Subcontractor	Climber, Geologist
Jolanta Sanford	Subcontractor	Climber, Sampler

A total of 83 samples were taken for the core re-sampling program. A total of nine rock chip samples and one silt sample were taken from the East Limb Zone.

Inclement weather and low ceilings prevented helicopter access to the Property except for limited periods. The core re-sampling program was achieved, but only limited prospecting and sampling was carried out on the outcropping gossanous area east of the Albere Zone.

Arne O. Birkeland, P.Eng. has personally conducted and supervised the field diamond drill exploration program carried out on the on the Property by Arnex during 1997 and the field exploration program carried out during June, July, 2005.

### 3. PROPERTY INFORMATION

#### 3.1 Location and Access

The Scotia Prospect is located in the Scotia River area, approximately 40 km southeast of Prince Rupert in west central British Columbia (Figure 1). The property lies within a belt of metavolcanic and metasedimentary rock trending approximately north-south between the Skeena River to the north and the Ecstall River to the south (Figure 2). Access is by helicopter from Prince Rupert or by barge from Kwinitza on the north shore of the Skeena River to the Scotia River logging camp on the south shore of the Skeena River, owned by Interfor (International Forest Products) and operated by Bear Creek Contracting of Terrace, BC (Figure 2).

#### 3.2 Property Description and Ownership

The Scotia group of claims consists of 2 cell claims totaling 2,939.4 hectares. The former Scotia 1 and Scotia 2 claims, Tenure Numbers 508831 and 508832 are owned by Doublestar Resources Ltd (“Doublestar”) and are subject to the provisions of an agreement between Doublestar and Falconbridge Limited. Ialta Industries Ltd (“Ialta”) has the right to acquire up to a 50% working interest in the Property from Doublestar. Ialta has assigned its option right to Geo Minerals Ltd.

Tenure information is contained in Table 1. The claims are plotted on Figure 3, Scotia Claims.

**Table 1**

<b>Tenure Number</b>	<b>Owner</b>	<b>Good To Date</b>	<b>Area Ha</b>
508831	139464 (100%)	2005/OCT/31	1309.0
508833	139464 (100%)	2005/OCT/31	1630.4
<b>Totals</b>	<b>2 Claims</b>		<b>2939.4</b>

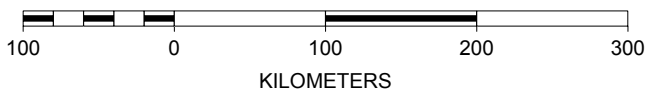
#### 3.3 Physiography

Most of the area covers the Kitimat Ranges of the Coast Mountains at elevations from 25 meters at the Skeena River to peaks up to 1,580 meters. Terrain is mostly mountainous with smooth, steep, bare rock faces to moderate brush and tree-covered slopes and

# Scotia Property - Location Map



SCALE 1 : 5,000,000

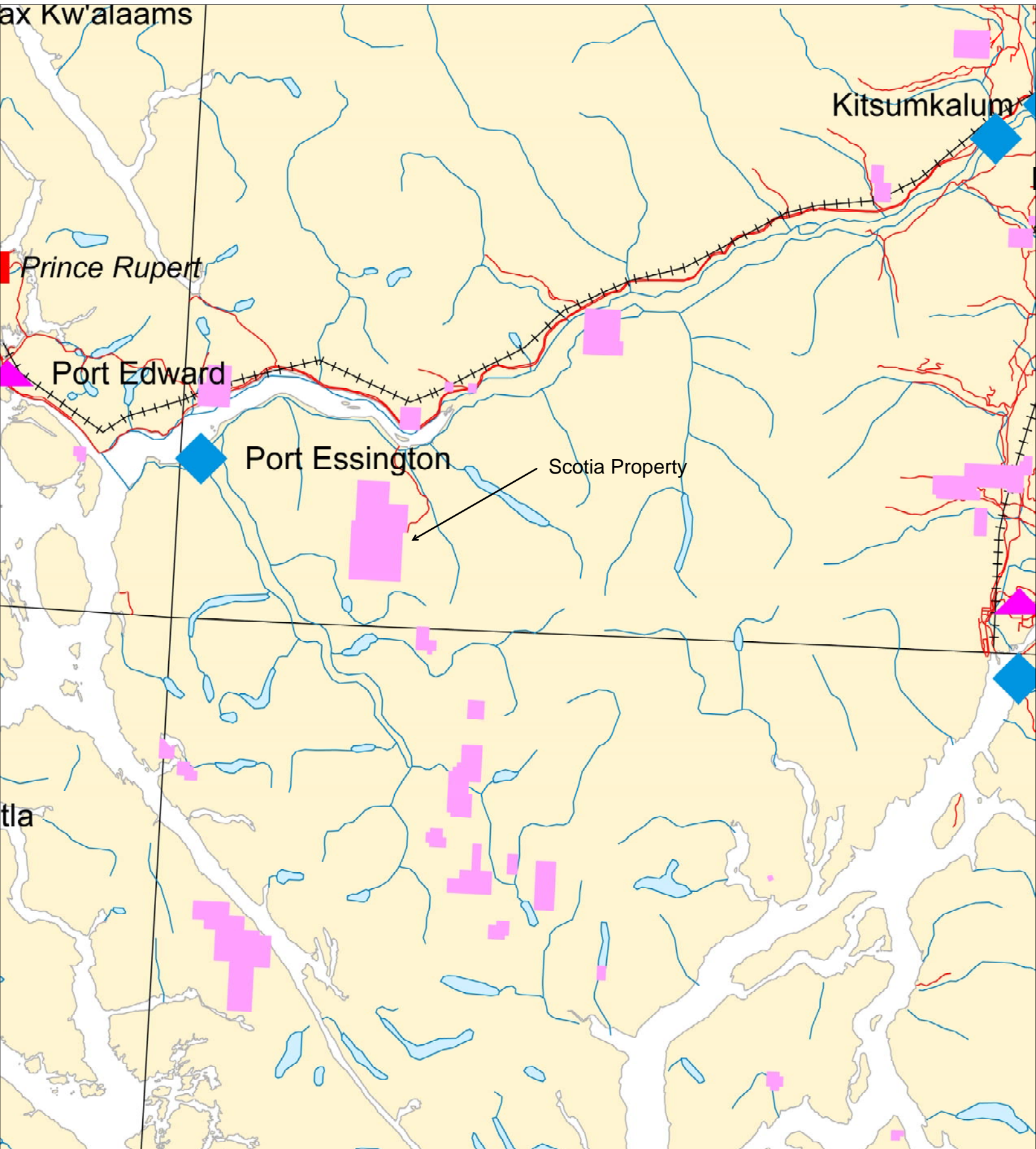


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Ltd.

Figure 1

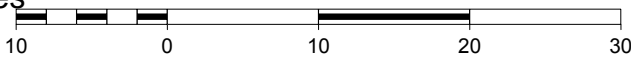


# Scotia Property - Property Location Map<sup>6-</sup>



Compiled By:  
Arnex Resources  
Ltd.

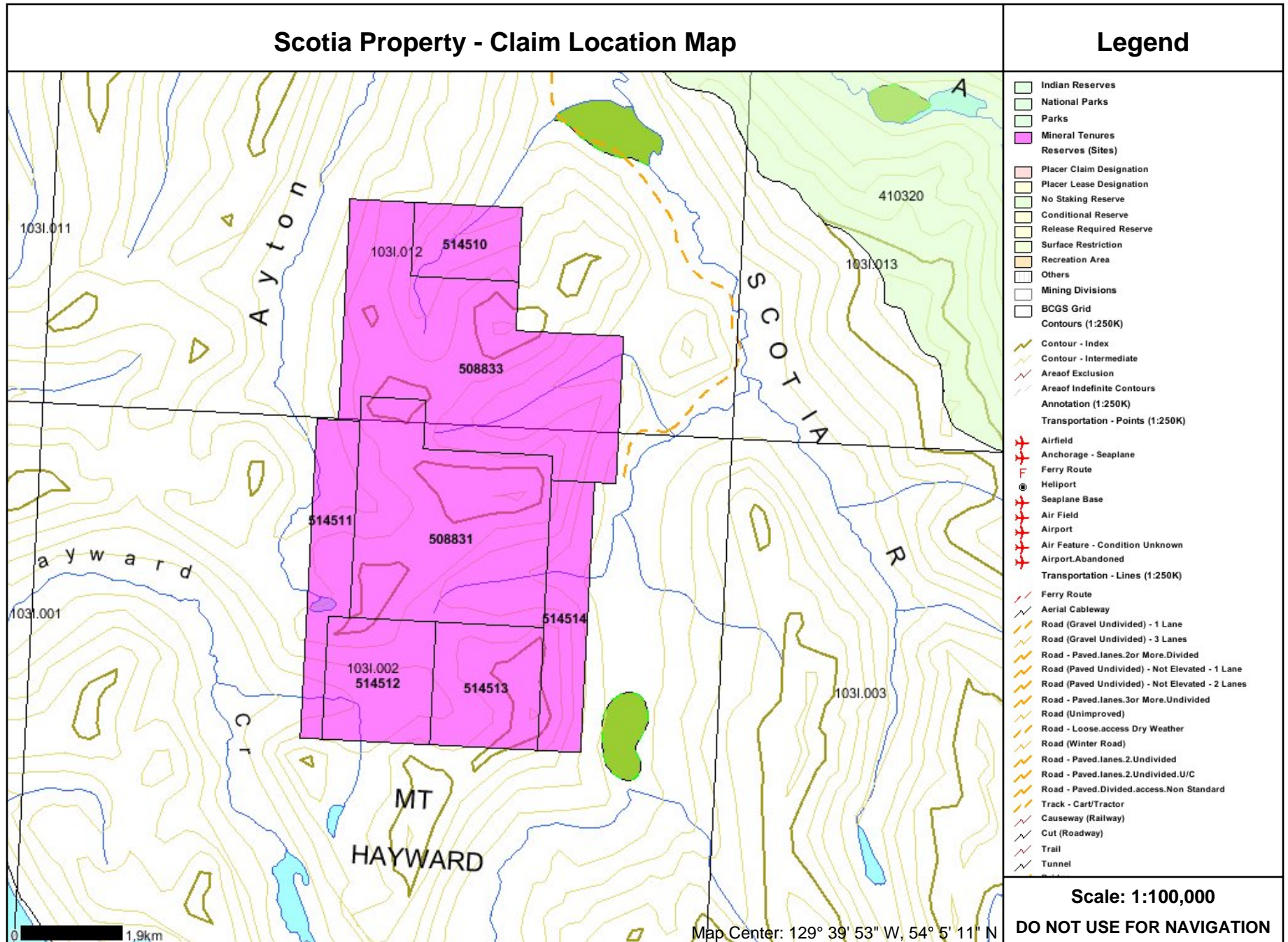
SCALE 1 : 500,000



KILOMETERS

Figure 2





Compiled By:  
 Arnex Resources  
 Ltd

Figure 3

intervening, U-shaped swampy river valleys of the Scotia River, Big Falls Creek and Carthew Creek drainage systems (Figure 2).

### ***3.4 Climate and Vegetation***

The Prince Rupert area has a coastal climate characterized by high precipitation and moderate temperatures. Winters are mild and wet with precipitation occurring mostly as rain and snowfall generally restricted to higher elevations. Temperatures reach lows of about -10°C. Summer weather is variable, typically with mixed rain and cloud, and temperatures from 10°C to 25°C. Lakes are generally ice-free by early April. Freeze-up typically occurs in mid-November.

Heavy forest cover is restricted to parts of main valley floors, with sparse coniferous growth on hillsides up to about 1,000 meters. Fir, hemlock and willows dominate with lesser poplar, birch and alder. Short brush and lichen dominates above 1,000 meters.

### ***3.5 Infrastructure***

All of the main valleys in the area are accessible by logging roads maintained by Bear Creek Contracting. The area is intermittently logged and most valleys have been logged from recently to over 30 years ago. More recent, deactivated logging roads are still accessible by four wheel drive vehicles.

A Canadian National rail line is located along the north bank of the Skeena River, which links Prince Rupert with interior British Columbia. Electric power is available on the south bank of the Skeena River near the Scotia River camp (Figure 2). Water is plentiful year round. A year round deep-sea shipping port is located at Prince Rupert.

### ***3.6 Property History***

#### **3.6.1 Regional Exploration**

Regionally, most exploration in the area was conducted in the 1950's and 1960's when the Texas Gulf Sulphur Company was developing the Ecstall VMS deposit for its sulphur content. Reserves of approximately six million tons were delineated by extensive diamond drilling and underground development. As cheap sources of sulphur were then developed as a by-product of the petroleum industry, the Ecstall deposit was never mined.

Most regional exploration has historically been centered on the Ecstall area in the southern portion of the Scotia-Quaal belt. Texasgulf and Cominco drilled the Packsack claims and Noranda carried out extensive geophysical surveys and limited drilling at the

Horse Fly prospect. Atna drilled the Horse Fly prospect in 1995 with encouraging results.

A regional geochemical stream sediment and water reconnaissance program was carried out by the British Columbia Geological survey on NTS map sheets 103I - Terrace and 103J - Prince Rupert in 1978 and 1979. These samples were reanalyzed in 1991 and published as BC RGS 42 in June 1995. The release includes previously unreleased data for 26 metals in stream sediments. A total of 2,253 stream sediment and 2,237 stream water samples were collected from 2,128 sites.

A two year geological mapping program was conducted by the BCGSB by D Alldrick. The 1:20,000 scale mapping was released in 2001 as a Geoscience Map titled Geology and Mineral Deposits of the Ecstall Greenstone Belt, North West BC.

The GSB subsequently conducted a Regional Geochemical Survey (Open File 2001-13) reporting the results of stream sediment and water sampling of 228 sites over a 1,800 square kilometre area.

### **3.6.2 Scotia Property Exploration**

The Albere Zone at the Scotia Deposit was discovered by Texas Gulf Sulphur in 1958 during a regional reconnaissance program. There is very limited data available pertaining to the early exploration work carried out at this time.

In 1960, 10 holes were drilled by Texasgulf Inc. for a total of 570 metres. Of the 10 holes drilled, seven holes intersected significant base and precious metal mineralization (Table 2, Texasgulf Inc – Significant 1960 Drill Intersections). Drill intersections ranged between 2.2 to 7.7 metres in length. The best intersection was from drill hole S-01-60 which assayed 19.9% zinc and 26 g/t silver over 7.7 metres.

A report by Delancey, 1977 documents the following observations and interpretations based on geologic and drill data:

1. *The felsic unit is about 60 m thick. It probably pinches out to the northeast and may become thicker down dip to the southwest.*
2. *The sulphides are generally confined to the felsic unit. Where exposed at surface, the Sulphides occur near the “pinch out” of the felsic unit and the footwall (structural) mafic gneiss. To the northwest the Sulphides occur within the felsic unit, structurally above the mafic gneiss-felsic gneiss contact.*
3. *The massive sulphide zone, exposed at surface, is an irregular lensoid body, crudely conformable with the host rocks, and consisting of a massive zone with associated bands and lenses.*
4. *Although several of the massive sulphide sections may be complexly folded portions of the same band or body drilling data to the northwest suggest that there is more than one sulphide lens or horizon.*

5. *Although it is not possible to project individual intersections from one section to another, the sulphide “zone” itself can be projected a distance of 110 metres from the surface exposure to the last drill section to the northwest.*
6. *Sulphides appear to be concentrated in the crests of folds. This may in part be due to sulphide re-mobilization during metamorphism.*
7. *Pyrite bands occur both structurally above and lateral to the massive sphalerite body.*

In 1970, limited mapping and soil geochemistry were performed by Texasgulf. A well defined multi-element soil anomaly was present associated with the massive sulphide outcrop at the Albere zone.

Seven holes with an aggregate length of 960 metres were drilled in 1980 (Table 2, Kidd Creek Mines Ltd, Significant 1980 Drill Intersections). Massive sulphides were intersected in six holes with the best being 9.8% zinc and 14 g/t silver over 18.1 metres. The diamond drilling by Kidd Creek expanded the strike length and down-dip dimensions of the massive sulphide mineralization at the Albere Zone.

In 1981, 1:5,000 scale mapping of the south central area of the claims was completed. Four broadly spaced step-out holes were drilled with an aggregate length of 1,104.2 metres. Three of the holes were drilled in the vicinity of the main zone at the Albere Showing. Although a substantial section of the pyrite-sericite host-rock “alteration zone” was cut, no massive sulphides were intersected and the 1980 dimensions of the zone were not increased. The fourth hole that was drilled one kilometre to the northwest to test a gossanous zone did not return encouraging assay results. A down hole pulse EM geophysical survey was also conducted using holes S-11, 14, 16, 17, 19 and 20.

In 1984, Andaurex Resources Inc. optioned the property and drilled 11 holes with an aggregate length of 767 m. Drilling confirmed earlier results and demonstrated continuity to the massive sulphides within the drilled zone.

Andaurex allowed the option to forfeit and in 1987 Kidd Creek cut 10 kilometres of grid lines and conducted magnetometer, VLF-EM and litho-geochemical surveys. A total of 159 grab samples were studied in order to locate areas of hydrothermal alteration that may be related to massive sulphide occurrences. The geophysical surveys found conductors associated with the massive sulphide mineralized zones. The surveys concluded the following:

1. *The strong north trending V.L.F. responses are encouraging and may represent the trace of the known mineralization and/or new mineralized horizons.*
2. *The magnetic data (magnetic highs) show that a fair amount or erratically disseminated magnetite is present in certain horizons. The higher magnetic susceptibility of these horizons generally indicates that the bedrock is more mafic. The areas of magnetic lows (low magnetic susceptibility) may be due to felsic volcanic horizons or metasediments.*

Table 2

**TEXASGULF INC - SCOTIA PROJECT  
SIGNIFICANT 1960 DRILL INTERSECTIONS  
WEIGHTED INTERVALS - DRILLED LENGTH IN METERS**

HOLE		FROM	TO	WIDTH	Zn %	Pb %	Cu %	Ag g/t	Au g/t
S-01-60		16.1	23.8	7.7	19.89	0.92	0.34	26.2	0.1
S-02-60		3.5	7.0	3.5	14.58	1.28	0.16	30.2	0.0
S-02-60		14.9	17.2	2.3	14.29	0.25	0.61	21.3	0.0
S-06-60		17.1	21.3	4.2	9.15	1.13	0.17	13.7	0.0
S-06-60		29.3	33.1	3.8	28.73	4.44	0.41	68.6	0.7
S-07-60		29.9	34.1	4.2	11.39	1.93	0.16	81.1	1.3
S-09-60		36.9	39.1	2.2	12.33	2.29	0.13	16.4	0.3
S-09-60		44.9	48.3	3.4	11.56	1.18	0.12	13.3	0.0
S-10-60		57.4	61.3	3.9	0.13	2.41	0.13	22.8	0.6

**KIDD CREEK MINES LTD - SCOTIA PROJECT  
SIGNIFICANT 1980 DRILL INTERSECTIONS  
WEIGHTED INTERVALS - DRILLED LENGTH IN METERS**

HOLE		FROM	TO	WIDTH	Zn %	Pb %	Cu %	Ag g/t	Au g/t
S-11-80		63.3	81.4	18.1	9.78	1.01	0.08	13.7	0.1
S-11-80	Incl	63.3	65.4	2.1	28.70	1.00		20.6	
S-11-80	Incl	71.4	72.2	0.8	33.50	2.70		30.9	
S-11-80	Incl	76.1	76.6	0.6	24.40	8.10		154.3	
S-11-80	Incl	79.3	81.4	2.2	35.90	3.20		24.0	
S-12-80		64.6	67.2	2.6	4.89	0.23	0.10	18.1	0.3
S-12-80		77.3	77.8	0.5	18.00	0.30		13.7	
S-13-80		59.2	62.0	2.8	7.50	0.99	0.32	29.6	0.5
S-14-80		132.1	135.5	3.4	7.83	0.27	0.06	9.9	0.1
S-15-80		66.5	73.7	7.2	7.10	1.60		27.4	0.6
S-16-80		69.0	73.7	4.7	2.84	1.79	0.26	29.6	0.2

3. *It is interesting to note that the stronger V.L.F. conductors tend to run along the magnetically inferred contact between mafic and felsic rock.*

A Falconbridge Limited (“Falconbridge”) Memorandum by Money, 1989, states the following:

1. *The limited exploration on the Scotia property has indicated that the claims are underlain by favourable geology, which host Zn dominant massive sulphides.*
2. *An evaluation of the available data indicates that a 2,000 metre drill program should be conducted in conjunction with geologic mapping and prospecting. The drilling should consist of 1,300 metres to test favourable stratigraphy with two drill sections 400 and 800 metres along strike from the Scotia deposit.*

Falconbridge Limited conducted an environmental reclamation program on the property in 1992.

Bishop Resources Inc (“Bishop”) entered into an option agreement in 1996 with Falconbridge to acquire 100% interest in the Scotia Property subject to certain terms and conditions. In 1997, a drill program was conducted by Arnex Resources Ltd (“Arnex”) for Bishop at the Albere Zone. Disseminated, semi-massive and massive base metal sulphide intersections were encountered in nine of the ten holes drilled. The thickest intersection was in drill hole S-37-97 which encountered 26.7 metres grading 9.0% zinc, 1.2% lead, 21.5 g/t silver, 0.3 g/t gold and 0.2% copper. Mineralized intersections greater than 15 metres in length were also intersected in two additional holes. (Table 3, Significant 1997 Drill Results).

The 1997 drill program extended potentially economic grades in the Albere Zone by about 45 meters, to 205 meters north of the outcrop of the main Albere Showing, and it remains open in this direction. The vertical extent of the mineralization encountered is increasing to the north. Results established a vertical range of sub-economic to economic grades of mineralization of 95 meters, and a horizontal range of over 60 meters at the base of the zone. The high grade "core" area widened to about 30 meters about 190 meters north of the main showing. Also, the grade of zinc mineralization encountered in the deeper western zones appears to be gradually increasing to the north.

Although the results of the 1997 drill program were encouraging, a poor mining exploration financing environment in BC at the time precluded Bishop from meeting its Work Commitments and the Property reverted to Doublestar Resources Ltd through an agreement with Falconbridge.

A Reclamation Program was completed on the Scotia Property in 2001 by Arnex for Falconbridge and Bishop. All drill sites were de-constructed and all reusable timbers were flown to the core storage area on the Scotia ridge-top. Core logging and processing facilities were reclaimed. All core was cross stacked for permanent storage.

Table 3

**ARNEX RESOURCES LTD - SCOTIA PROJECT  
SIGNIFICANT 1997 DRILL INTERSECTIONS  
WEIGHTED INTERVALS - DRILLED LENGTH IN METERS**

HOLE		FROM	TO	WIDTH	%Zn	%Pb	ppm Ag	ppbAu	%Cu
S-33-97		47.4	47.8	0.4	6.8	0.9	26.0	120.0	0.1
S-33-97		68.7	90.1	21.4	6.7	1.1	25.9	559.4	0.1
S-33-97	Incl	68.7	72.3	3.6	22.6	2.3	47.0	1206.4	0.2
S-33-97	Incl	69.2	72.3	3.1	25.5	2.6	53.6	1394.5	0.2
S-33-97	Incl	79.4	80.0	0.6	4.8	1.4	42.0	745.0	0.1
S-33-97	Incl	85.8	90.1	4.3	13.8	2.5	39.3	283.6	0.2
S-33-97	Incl	86.9	90.1	3.2	16.3	2.7	46.0	324.1	0.2
S-33-97	Min-En	85.8	90.1	4.3	13.2	2.6	51.7	298.2	#N/A
S-34-97		62.2	62.6	0.4	18.7	1.9	47.0	90.0	0.2
S-35-97	NO SIGNIFICANT INTERSECTIONS								
S-36-97		11.0	26.2	15.3	7.8	0.1	7.9	90.5	0.2
S-36-97	Incl	11.0	13.5	2.5	14.9	0.3	20.0	114.9	0.5
S-36-97	Incl	18.1	20.7	2.6	4.8	0.0	8.0	183.1	0.3
S-36-97	Incl	22.8	26.2	3.5	19.3	0.1	12.3	133.8	0.3
S-36-97	Incl	24.1	26.2	2.1	29.7	0.1	21.3	345.0	0.3
S-36-97		74.4	76.1	1.8	11.9	0.4	35.6	184.5	0.8
S-36-97	Incl	74.4	75.7	1.3	1.3	0.3	42.8	230.0	1.0
S-36-97	Incl	75.7	76.1	0.5	42.1	0.6	15.0	55.0	0.2
S-36-97		81.1	90.1	8.9	7.2	0.8	18.4	287.5	0.1
S-36-97	Incl	81.1	84.3	3.1	5.2	1.4	19.1	194.1	
S-36-97	Incl	81.1	81.6	0.5	32.0	0.4	17.0	70.0	
S-36-97	Incl	85.9	90.1	4.1	11.5	0.3	9.9	86.9	
S-36-97	Incl	87.0	90.1	3.1	14.7	0.4	10.9	78.7	
S-37-97		15.6	42.3	26.7	9.0	1.2	21.5	297.9	0.2
S-37-97	Incl	15.6	16.4	0.8	3.6	0.8	17.3	114.6	
S-37-97	Incl	15.8	16.4	0.6	4.1	0.9	18.4	85.0	
S-37-97	Incl	21.6	42.3	20.7	11.2	1.4	24.3	339.3	0.2
S-37-97	Incl	21.6	38.1	16.4	11.6	1.4	25.5	380.0	0.2
S-37-97	Incl	21.6	22.1	0.4	8.8	8.6	66.0	130.0	
S-37-97	Incl	25.9	27.7	1.8	32.9	4.7	67.0	425.0	
S-37-97	Incl	30.6	32.1	1.5	7.7	1.0	36.0	1120.0	
S-37-97	Incl	33.0	38.1	5.1	23.0	1.3	28.5	469.6	0.3
S-37-97	Incl	40.6	42.3	1.7	22.6	3.7	45.7	406.9	0.3
S-38-97		17.4	18.0	0.7	46.4	3.5	55.0	450.0	
S-38-97		28.1	30.1	2.0	5.0	0.4	9.8	118.9	
S-38-97	Incl	28.9	30.1	1.2	6.7	0.7	11.7	179.8	
S-38-97		36.8	37.0	0.2	24.9	0.0	12.0	25.0	
S-38-97		47.9	48.5	0.6	3.2	0.3	30.0	30.0	
S-39-97		30.2	33.0	2.8	1.1	0.4	13.6	253.8	0.3



Table 3

**ARNEX RESOURCES LTD - SCOTIA PROJECT  
SIGNIFICANT 1997 DRILL INTERSECTIONS  
WEIGHTED INTERVALS - DRILLED LENGTH IN METERS**

HOLE		FROM	TO	WIDTH	%Zn	%Pb	ppm Ag	ppbAu	%Cu
S-39-97	Incl	30.2	31.9	1.7	0.0	0.1	9.4	200.0	0.4
S-39-97	Incl	31.9	32.1	0.2	5.9	1.1	26.0	425.0	0.2
S-39-97		46.5	57.1	10.6	6.0	0.0	11.7	219.6	
S-39-97	Incl	46.5	49.5	3.0	16.5	0.4	14.5	186.7	
S-39-97	Incl	54.7	57.1	2.4	5.2	1.4	29.6	640.0	
S-39-97		62.6	65.9	3.3	3.1	1.1	14.4	103.8	
S-39-97	Incl	65.1	65.9	0.8	6.8	2.2	49.4	625.6	
S-40-97		40.4	43.2	2.8	3.8	0.9	26.1	710.4	0.3
S-40-97	Incl	40.4	42.4	2.0	0.1	0.1	5.5	50.0	0.3
S-40-97	Incl	42.4	44.0	1.7	6.3	1.3	36.9	1123.6	0.2
S-40-97		60.8	62.7	1.9	3.4	1.8	19.0	346.7	
S-40-97	Incl	62.0	62.7	0.8	6.8	2.3	24.0	590.0	
S-40-97		70.3	71.2	0.9	2.2	0.3	24.0	505.0	
S-40-97		77.6	78.3	0.7	3.1	1.7	28.0	330.0	
S-40-97		81.7	82.3	0.6	17.5	5.0	61.0	210.0	0.2
S-41-97		65.0	80.8	15.9	0.8	0.0	5.3	55.5	0.0
S-41-97	Incl	65.0	65.6	0.6	2.7	0.0	7.0	95.0	
S-41-97	Incl	80.0	80.8	0.8	1.8	0.1	13.0	160.0	
S-42-97		67.7	78.0	10.3	2.1	0.1	7.5	172.4	0.2
S-42-97	Incl	67.7	70.9	3.1	0.1	0.1	7.8	78.4	0.3
S-42-97	Incl	71.7	78.0	6.3	3.2	0.1	7.7	231.0	0.2
S-42-97	Incl	71.7	73.6	1.9	8.5	0.1	5.4	78.6	0.4
S-42-97	Incl	77.6	78.0	0.5	7.9	0.1	3.0	40.0	
S-42-97		87.2	104.3	17.2	2.7	0.3	11.8	110.0	0.1
S-42-97	Incl	87.2	100.3	13.1	3.1	0.2	10.7	110.8	0.1
S-42-97	Incl	87.2	94.7	7.6	2.9	0.2	8.6	137.8	0.1
S-42-97	Incl	91.7	94.7	3.0	4.7	0.3	9.1	119.7	0.1
S-42-97	Incl	91.7	92.5	0.7	10.2	0.6	12.0	120.0	0.0
S-42-97	Incl	99.1	100.3	1.2	10.1	0.1	18.6	95.0	0.4
S-42-97	Incl	103.5	104.3	0.8	5.5	2.1	55.0	365.0	0.1

Ialta Industries Ltd (“Ialta”) entered into an option agreement with Doublestar Resources Ltd to acquire a 50% working interest in the Property. Ialta subsequently assigned its option right to Geo Minerals Ltd.

## **4. GEOLOGY AND MINERALIZATION**

### ***4.1 Regional Geology***

Most of the Prince Rupert - Skeena area is underlain by plutonic and metamorphic rocks of the Coast Plutonic Complex (Hutchinson, 1982). The regional distribution of the metavolcanic rocks of the Ecstall Greenstone Belt is illustrated in Figure 4, Scotia Property – Regional Geology. Plutonic rocks consist of major plutons and smaller irregular bodies, mostly of quartz diorite and granodiorite. Diorite and quartz monzonite are less common, and gabbro and granite are rare. Most of the plutonic rocks are probably Mesozoic in age.

A north-northwest-trending belt of metavolcanic and metasedimentary rocks known as the Scotia - Quaal metamorphic complex has been mapped through the area between the Skeena River and Douglas Channel. Both metavolcanic and metasedimentary rocks are present. Map units represent lithologic-metamorphic packages which probably contain strata of variable ages. Because of the strong metamorphic overprint and lack of fossils, the age of these strata is uncertain, however, radiometric dating places them at pre-Early Jurassic age.

With the exception of a small wedge of metasedimentary rocks at the western margin of the belt, the units from west to east, as defined by Gareau (1997) are: the Big Falls orthogneiss, in the southern part only; a metavolcanic unit, a metasedimentary clastic unit, a quartzite unit and a layered gneiss unit. The units of interest are the metavolcanic unit, which hosts the Scotia Deposit and several other VMS-type deposits north and south of the Ecstall River, and the metasedimentary unit, particularly near its contact with the metavolcanic unit.

The region has undergone three phases of deformation. Metamorphism is variable, from low to high grade and generally increasing in grade from west to east. The major structural trend in the area is northwest.

The Ecstall Pluton, which borders the Scotia - Quaal metamorphic belt to the west, is Cretaceous in age while the Quottoon Pluton to the east is Late Paleocene to Early Eocene in age (Gareau, 1997). The Ecstall Pluton appears to have been generated and mobilized from east to west during an intense period of metamorphism of Late Cretaceous age (Hutchinson, 1982).

# Scotia Property - Regional Geology Map <sup>-16-</sup>

**BC Administrative Area Layers**

**Mineral Titles Layers**

**Topographic Layers**

**Grid Layers**

— Grid 1:250K maps - outline

**BCGS Geology Layers 2005**

**Volcanic rocks by era (<1.5M)**

- Cenozoic volcanic rocks
- Mesozoic volcanic rocks
- Paleozoic volcanic rocks
- Proterozoic volcanic rocks
- Unknown

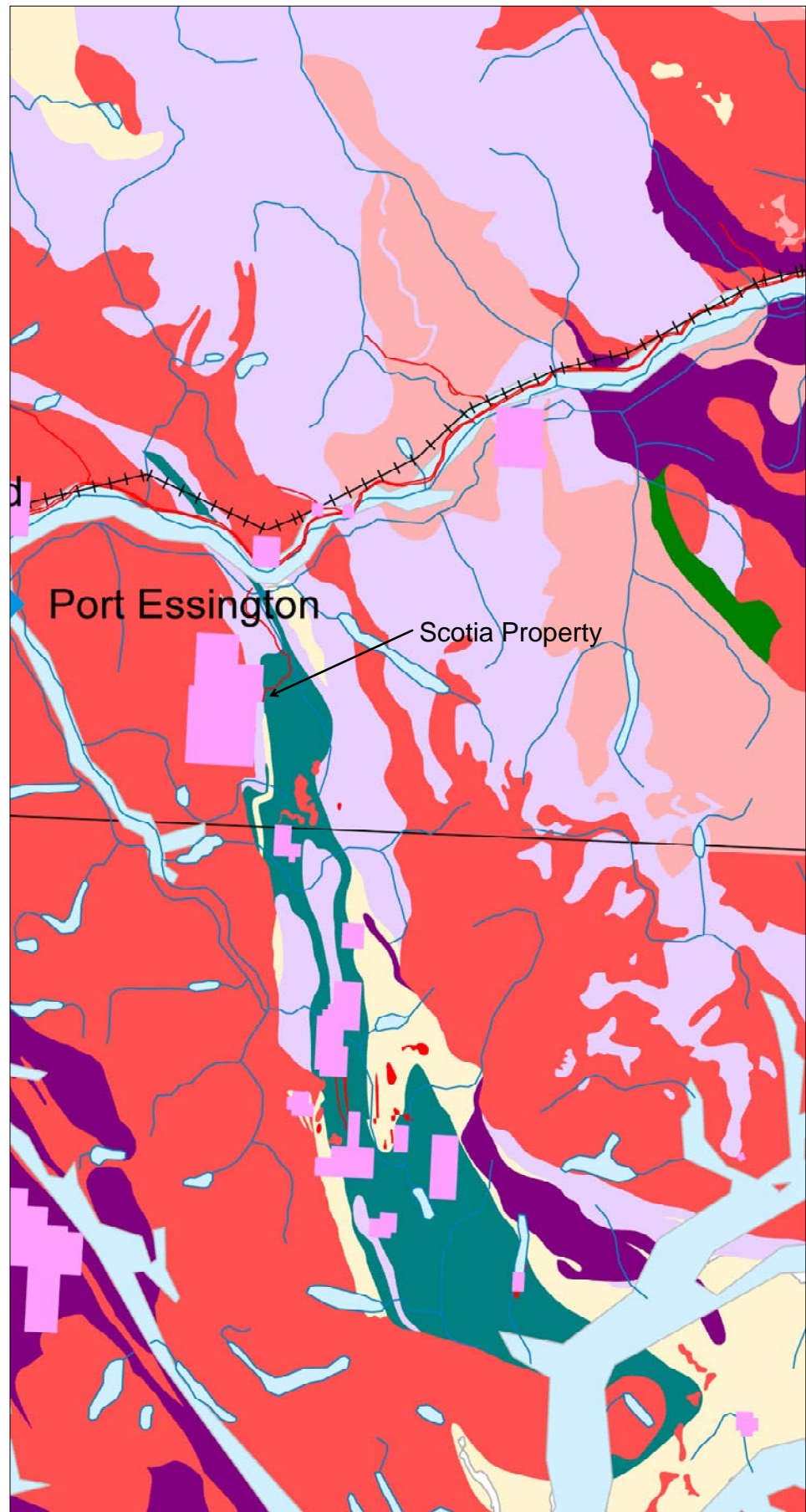
**Metamorphic rocks by era (<1.5M)**

- Cenozoic metamorphic rocks
- Mesozoic metamorphic rocks
- Paleozoic metamorphic rocks
- Proterozoic metamorphic rocks
- Unknown

**Intrusive rocks by era (<1.5M)**

- Cenozoic Intrusives
- Mesozoic Intrusives
- Paleozoic Intrusives
- Proterozoic Intrusives
- Ultramafic
- Unknown

**BC Border Layers**



Compiled By:  
 Arnex Resources  
 Ltd

SCALE 1 : 500,000

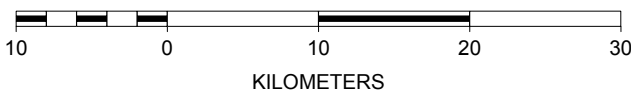


Figure 4



## 4.2 *Local Surficial Geology*

The area has been heavily glaciated by alpine and valley glaciers and by at least one ice sheet, although glacial deposits are rare (Hutchinson, 1982). Discontinuous deposits of colluvium till and talus are present on mountain slopes locally, and thick Pleistocene and Recent fluvial deposits occupy river valleys. At higher elevations, outcrop is abundant, and in flatter areas is partly covered by a thin mantle of unconsolidated materials. The area is geologically favorable for development of transportation and utility routes, and many roads have already been constructed in the valleys to facilitate logging.

## 4.3 *Local Geology*

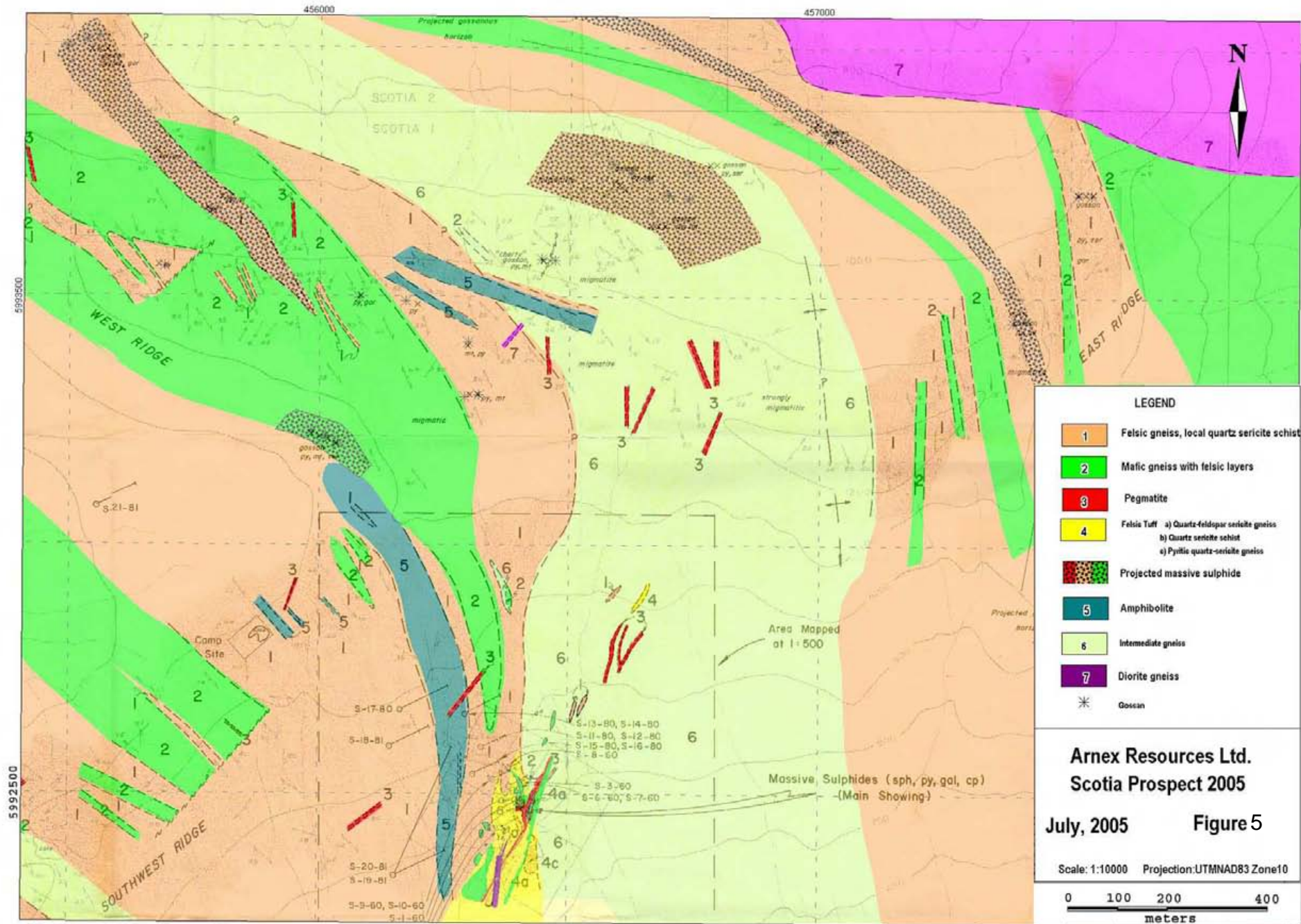
The lithologies underlying the Scotia property belong to the Devonian(?) metavolcanic unit that have been intruded by the Cretaceous Ecstall granite intrusion to the north of the property, and by several stages of dioritic to pegmatitic dykes of late Cretaceous to Eocene(?) age (Figure 5). The metavolcanic rocks are tentatively parts of a bimodal (?) suite of tholeiitic basalt and andesite, and calc-alkalic dacite to rhyolite (Manojlovic, et. al. 1987), possibly of Island Arc affinity.

The volcanic rocks have been subjected to upper amphibolite grade metamorphism that slightly post-dated the second of two stages of intense isoclinal folding (Gareau, 1991a, b; Krage, 1984). Gareau (1991a, b) states that metamorphic grade increases to the north and east and is a reflection of increasing levels of uplift and erosion in those directions. At least one megascopic antiform-synform pair has been mapped on the property (Eldridge, 1983). A third stage of folding appears to be post-metamorphic and is characterized by broad "warps" of all pre-intrusion lithologies and is thought to be temporally associated with the intrusion of the Ecstall intrusive rocks (Eldridge, 1983).

On the Scotia Property the volcanic lithologies have been deformed and recrystallized. Units now termed amphibolite are characterized by a melanocratic, gneissic to sub-gneissic hornblende-rich rock. The amphibolite can occur as massive, 20 plus meter to less than 2 cm thick units. The outlines of stretched lapilli-sized fragments are commonly seen in outcrop due to differential weathering. Other mafic metavolcanic rocks are usually black, biotite-rich gneisses and schists, although hornblende and biotite do occur together locally. Myers (1982) thought that these rocks might be meta-andesites. Intermediate metavolcanic rocks contain visually 10 to 30 percent mafic minerals, usually biotite.

These mafic and intermediate rocks are almost invariably non to weakly magnetic. A unit called interbanded gneiss is characterized by numerous interbanded felsic with mafic, intermediate and amphibolite units. These bands range from three to over 10 per meter. The felsic bands are usually moderately magnetic.

Felsic metavolcanic rocks are dominantly feldspar-rich, gneissic and less commonly schistose rocks with up to 10% biotite, and rare hornblende. Quartz is rare. The most



GIS and Compilation By Arnex Resources Ltd.

after Kidd Creek  
Mines Ltd, 1982

common type is commonly moderately to strongly magnetic. Other felsic rocks are found only within and near the Albere zone mineralization. These are chert, chert breccia, "exhalite", and quartz porphyry schist. These highly siliceous rocks display very well preserved textures that suggest both replacement and primary silica deposition, presumably of hydrothermal origin. These units are almost always present in close proximity to sulphide mineralization.

There are several other rock units that are spatially associated with sulphide mineralization. These are brown biotite gneiss and schist, felsic brown biotite gneiss and schist, felsic sericite gneiss and schist, felsic muscovite gneiss and schist, and massive sericite to muscovite gneiss and schist. These rocks are located either with or to the west of the sulphide mineralization. They may represent hydrothermally altered equivalents of the units described above. Units containing brown biotite usually occur between unaltered and sulphide-bearing or muscovite-sericite altered units. This suggests that brown biotite, sericite and muscovite represent increasingly altered equivalents of unaltered hornblende and black biotite-bearing rocks. This appears to be particularly evident for the more mafic units, i.e. black biotite - brown biotite - massive sericite gneiss/schist.

Several episodes of mafic, felsic and pegmatitic dyking have occurred. These appear to be of late deformation age to very late and undeformed. Pegmatite dykes also occur throughout the property. They are quite variable in composition. An unusual white, garnet-bearing plagioclase-rich type is compositionally similar to felsic gneisses and may be a partial melt of felsic units. Other leucocratic, plagioclase-rich pegmatite dykes appear to be confined to hinge zones of folds.

#### ***4.4. Regional Mineralization***

North and south of the Ecstall River, several VMS-type zinc (+/- copper-lead-silver-gold) occurrences and deposits are known within the metavolcanic unit. Eleven deposits of this type are located within ten kilometers of the southern margin of the Bishop claims. Most of these are within claims previously held by Atna Resources Limited or Ecstall Mining Corporation, both of Vancouver, BC.

Horsefly, Third Outcrop, East Plateau, Packsack and Trench are all located north of the Ecstall River. The Ecstall, Phoebe Creek, Mariposite, West Grid, Thirteen Creek Cirque, El Amino, South Creek Grid are located south of the Ecstall River.

#### ***4.5 Mineralization and Structure***

The Albere Zone is characterized by thick, massive to interweaving pods, lenses and stringers of coarsely crystalline massive to semi-massive, very dark brown sphalerite, with lesser amounts of pyrite, galena, pyrrhotite, magnetite and chalcopyrite in decreasing abundance. The Main Showing exposes some of the thickest known mineralization, and outcrops with a pod-like core of massive mineralization almost 10 meters in diameter with bands, pods and stringers striking up-dip to the east and down dip to the west by about 20 to 30 degrees. Drilling indicates that this 'core zone' strikes

at 340 degrees and plunges about 8 degrees to the south-southeast. Up to six zones have been intersected. Figure 6, Scotia Prospect - Geology Map illustrates the outcrop of the Massive Sulphide Zone at the contact between the overlying Felsic Tuffs (Unit 4) and underlying Mafic Gneiss (Unit 2) in the vicinity of the cross-cutting late stage Pegmatite Dyke (Unit 3).

The up-dip extensions pinch out completely, or occur as thin but high grade sphalerite sheets up to 30 cm thick that decrease in size and intensity to the east. These often occur at the sharp, abrupt contact between black biotite schist-gneiss and felsic gneiss. The down-dip extensions to the west usually grade into increasingly iron sulphide-rich disseminated mineralization. This mineralization is associated with sericite- and muscovite-rich rocks that may be the hydrothermally altered equivalents of black biotite-bearing rocks. Low grade zinc mineralization has been intersected over 100 meters down dip with approximately an order of magnitude greater pyrite and pyrrhotite mineralization. This suggests that the iron sulphide-rich zone may be the down dip feeder zone. It is this zone that outcrops southwest of the sphalerite outcrop as bright red, rusty rocks.

The mineralization and its characteristic hosting rocks are dipping at about 40 degrees to the west. These rocks are structurally underlain by a thick unit of interbanded mafic gneisses. To the east, the sequence of thick felsic and mafic gneisses become increasingly steeply dipping based on outcrop and drill information. The zone is structurally overlain by a thick felsic gneiss package, which in turn is overlain by a moderately west dipping amphibolite unit above 875 meters in elevation.

## **6.0 2005 FIELD EXPLORATION PROGRAM**

### ***6.1 Diamond Drill Core Re-sampling Program***

Diamond drill core from some of the previous exploration programs carried out on the Property is cross-stacked at an old campsite and core processing facility located on the ridge-top above the Albere Zone showing area. The drill core from the 1997 drill program was intact and accessible. Due to the deterioration of the wooden core boxes, some of the drill core from other historical programs has been dumped and is not available for re-sampling. Other core would have to be re-boxed and re-tagged prior to any further processing.

Selected intervals from six drill holes from the 1997 program were chosen to be re-sampled to allow verification of results to conform to NI43-101 requirements. It was intended that the one-half core remnants from the 1997 program would be sawed into quarter splits for re-sampling, however lack of time due to poor flying conditions did not allow for sawing of the core. Instead, the one-half splits remaining from the 1997 program were taken as part of the re-sampling program. Representative specimens were

**Table 4**  
**Diamond Drill Core Verification Sampling**  
**Scotia Property**

Date Sampled: 3-Jul-05  
 Sampled By: Arne Birkeland

Drill Hole Number	Intersection From (m)	To (m)	Interval	Acme Sample #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
S-33-97	47.40	47.80	0.40	128755	2174	7115	>10000	25.2	104
S-33-97	68.70	69.20	0.50	128756	968	5935	>10000	9.3	129
S-33-97	69.20	69.80	0.60	128757	3649	>10000	>10000	>100	2369
S-33-97	69.80	70.20	0.40	128758	1479	>10000	>10000	32.5	226
S-33-97	70.20	70.80	0.60	128759	771	674	1077	2.4	38
S-33-97	70.80	72.30	1.50	128760	1571	>10000	>10000	43.7	1529
S-33-97	79.40	80.00	0.60	128761	1365	>10000	>10000	40.5	603
S-33-97	85.75	86.05	0.30	128762	1034	>10000	>10000	71.3	119
S-33-97	86.05	86.90	0.85	128763	880	8147	4385	11.3	194
S-33-97	86.90	88.70	1.80	128764	2001	>10000	>10000	63.2	124
S-33-97	88.70	89.10	0.40	128765	1400	>10000	>10000	20.8	206
S-33-97	89.10	90.10	1.00	128766	1078	>10000	>10000	20.1	100
S-36-97	10.00	10.95	0.95	126501	848	719	1920	2.4	31
S-36-97	10.95	12.45	1.50	126502	4895	5806	>10000	24.0	207
S-36-97	13.46	13.96	0.50	126503	732	676	2192	1.5	108
S-36-97	12.45	13.46	1.01	126504	2938	758	>10000	7.1	137
S-36-97	13.96	14.84	0.88	126505	919	421	>10000	2.7	295
S-36-97	14.84	15.55	0.71	126506	223	284	303	0.5	6
S-36-97	15.55	15.87	0.32	126507	645	559	>10000	1.3	52
S-36-97	15.87	16.98	1.11	126508	296	302	585	0.8	29
S-36-97	16.98	18.10	1.12	126509	55	90	119	<.3	48
S-36-97	18.10	18.51	0.41	126510	2359	308	>10000	7.1	144
S-36-97	18.51	20.74	2.23	126511	2194	595	>10000	6.8	97
S-36-97	20.74	21.75	1.01	126512	194	155	335	<.3	9
S-36-97	21.75	22.75	1.00	126513	279	104	314	0.5	8
S-36-97	22.75	24.10	1.35	126514	912	649	>10000	3.1	58
S-36-97	24.10	24.52	0.42	126515	2319	299	>10000	9.1	63
S-36-97	0.00		0.00	126516	3554	2593	>10000	17.5	316
S-36-97	0.00		0.00	126517	2804	2045	>10000	11.5	467
S-36-97	0.00		0.00	126518	1800	449	1310	8.1	262
S-36-97	74.35	75.66	1.31	126519	>10000	4040	>10000	49.3	162
S-36-97	75.66	76.12	0.46	126520	2841	>10000	>10000	33.5	319
S-36-97	80.38	81.12	0.74	126521	692	3305	1746	16.4	457
S-36-97	81.12	81.61	0.49	126522	989	5924	>10000	12.2	120
S-36-97	81.61	82.75	1.14	126523	538	6421	7494	8.0	109
S-36-97	82.75	83.42	0.67	126524	244	4584	476	3.8	53
S-36-97	83.42	84.25	0.83	126525	2065	>10000	3031	20.6	174
S-36-97	84.25	84.84	0.59	126526	2268	1932	5418	9.0	369
S-36-97	84.84	85.91	1.07	126527	2053	>10000	>10000	62.3	1480
S-36-97	85.91	87.00	1.09	126528	293	2738	>10000	9.6	317
S-36-97	87.00	88.00	1.00	126529	529	6515	>10000	10.3	78
S-36-97	88.00	89.00	1.00	126530	672	1218	>10000	2.3	75
S-36-97	89.00	90.05	1.05	126531	2686	4707	>10000	14.9	83
S-37-97	15.57	15.79	0.22	128532	2504	7091	>10000	15.2	209
S-37-97	15.79	16.35	0.56	128533	2707	>10000	>10000	21.0	94
S-37-97	17.00	19.13	2.13	128534	2850	4327	>10000	13.0	111
S-37-97	21.64	22.08	0.44	128535	1512	>10000	>10000	50.2	143
S-37-97	22.08	23.88	1.80	128536	239	6365	2197	7.1	75
S-37-97	23.88	25.94	2.06	128537	612	3111	581	10.4	104



**Table 4**  
**Diamond Drill Core Verification Sampling**  
**Scotia Property**

Date Sampled: 3-Jul-05  
 Sampled By: Arne Birkeland

Drill Hole Number	Intersection From (m)	To (m)	Interval	Acme Sample #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
S-37-97	25.94	27.70	1.76	128538	1540	>10000	>10000	52.8	3985
S-37-97	27.70	29.88	2.18	128539	655	3859	6739	16.1	325
S-37-97	29.88	30.62	0.74	128540	187	777	379	2.4	189
S-37-97	30.62	30.94	0.32	128541	2904	>10000	>10000	29.0	230
S-37-97	30.94	32.65	1.71	128542	218	236	536	0.7	37
S-37-97	32.65	32.97	0.32	128543	3718	>10000	1438	32.8	1190
S-37-97	32.97	33.90	0.93	128544	3670	>10000	>10000	19.9	742
S-37-97	33.90	35.70	1.80	128545	4225	962	>10000	11.9	618
S-37-97	35.70	36.60	0.90	128546	2349	>10000	>10000	25.6	503
S-37-97	36.60	37.25	0.65	128547	462	>10000	>10000	15.0	130
S-37-97	37.25	38.05	0.80	128548	2744	>10000	>10000	23.1	1126
S-37-97	38.05	38.63	0.58	128549	341	934	2039	1.9	59
S-37-97	38.63	40.55	1.92	128550	216	524	4131	0.9	22
S-37-97	40.55	41.45	0.90	128551	4081	>10000	>10000	69.9	593
S-37-97	41.45	42.29	0.84	128552	1627	>10000	>10000	11.3	62
S-37-97	42.29	43.29	1.00	128553	1096	>10000	4046	25.9	161
S-37-97	43.29	44.18	0.89	128554	948	>10000	819	42.2	214
S-34-97	62.20	62.60	0.40	128767	1815	>10000	>10000	32.3	69
S-42-97	71.72	73.36	1.64	128768	119	196	2493	0.9	6
S-42-97	91.73	92.45	0.72	128769	129	>10000	>10000	20.8	151
S-42-97	92.45	93.30	0.85	128770	466	3832	>10000	13.0	241
S-42-97	62.45	63.60	1.15	128771	3029	917	553	10.6	82
S-42-97	97.00	98.37	1.37	128772	864	1847	>10000	6.3	36
S-42-97	98.37	99.05	0.68	128773	564	3041	>10000	8.5	85
S-42-97	99.05	100.27	1.22	128774	2947	1101	>10000	11.9	57
S-42-97	103.51	104.30	0.79	128775	929	846	1877	9.2	69
S-39-97	31.90	32.10	0.20	128776	2468	>10000	>10000	27.0	822
S-39-97	32.65	33.00	0.35	128777	1348	>10000	>10000	26.3	286
S-39-97	46.50	47.50	1.00	128778	2978	3108	>10000	14.0	145
S-39-97	47.50	49.50	2.00	128779	1285	5302	>10000	11.6	158
S-39-97	54.70	55.30	0.60	128780	2007	>10000	>10000	47.2	1330
S-39-97	55.30	57.10	1.80	128781	770	8022	>10000	25.5	1307
S-39-97	65.10	65.40	0.30	128782	865	>10000	>10000	48.7	657
S-39-97	65.40	65.90	0.50	128783	354	5156	>10000	13.0	137

**Table 5**  
**GEOCHEMICAL DATA SHEET**  
**ROCK CHIP SAMPLING - Scotia Property**

PROJECT: Scotia Sampler: P. Lutinski Date: July, 2005

Sample Number	UTM Location		Sample Type	Width App/True	Rock Type	Alteration	Weathering	Mineralization
	Easting	Northing						
128951	456843	5992650	Rep Chip	1.0m TW	Rhyolite			Limonite
128952	456840	5992648	Rep Chip	3.0m TW	Rhyolite	Sericite		Limonite
128953	456841	5992644	Rep Chip	1.0m TW	Rhyolite	Sericite		Limonite
128954	456839	5992642	Rep Chip	2.1m TW	Rhyolite	Sericite		Limonite, Magnetite
128955	456929	5992621	Rep Chip	1.9m TW	Rhyolite	Sericite	Sheared	Limonite, Magnetite
128956	456827	5992618	Rep Chip	1.7m TW	Rhyolite	Sericite	Sheared	Limonite
128957	456700	5992520	Rep Chip		Rhyolite	Sericite		Limonite, Pyrite
128958	456690	5992510	Float Grab		Rhyolite			
128959	456680	5992500	Silt				Weathered	Limonite

**Table 6**  
**Rock Chip Sampling**  
**Scotia Property**

Date Sampled: 2-Jul-05  
 Sampled By: Piotr Lutinski

Acme Sample #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
128951	7	4	116	<.3	2
128952	67	12	147	<.3	4
128953	31	5	150	<.3	6
128954	22	6	208	<.3	2
128955	233	5	81	<.3	<2
128956	19	<3	43	<.3	<2
128957	118	5	133	0.4	5
128958	156	4	90	<.3	11
128959	28	4	102	<.3	3

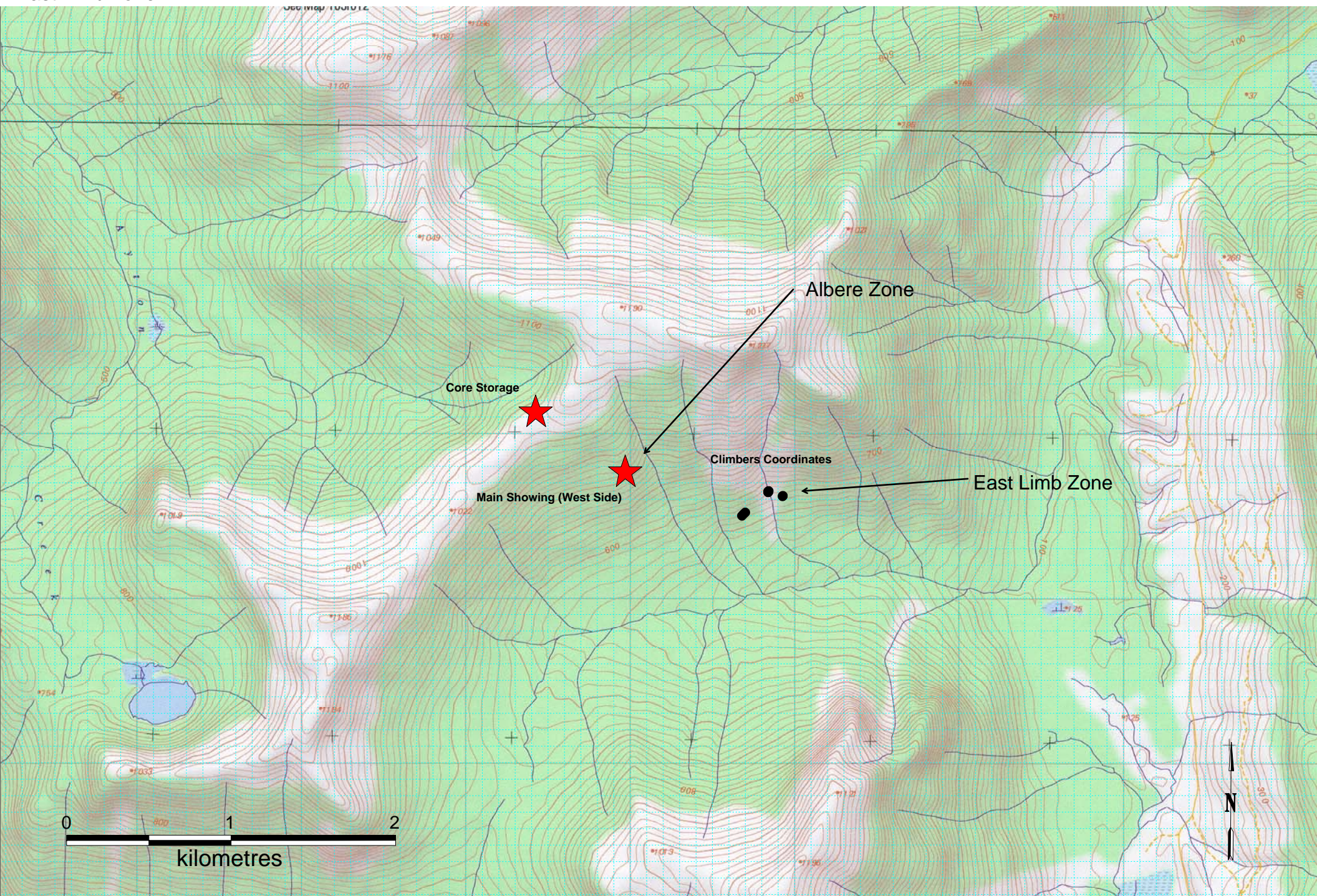
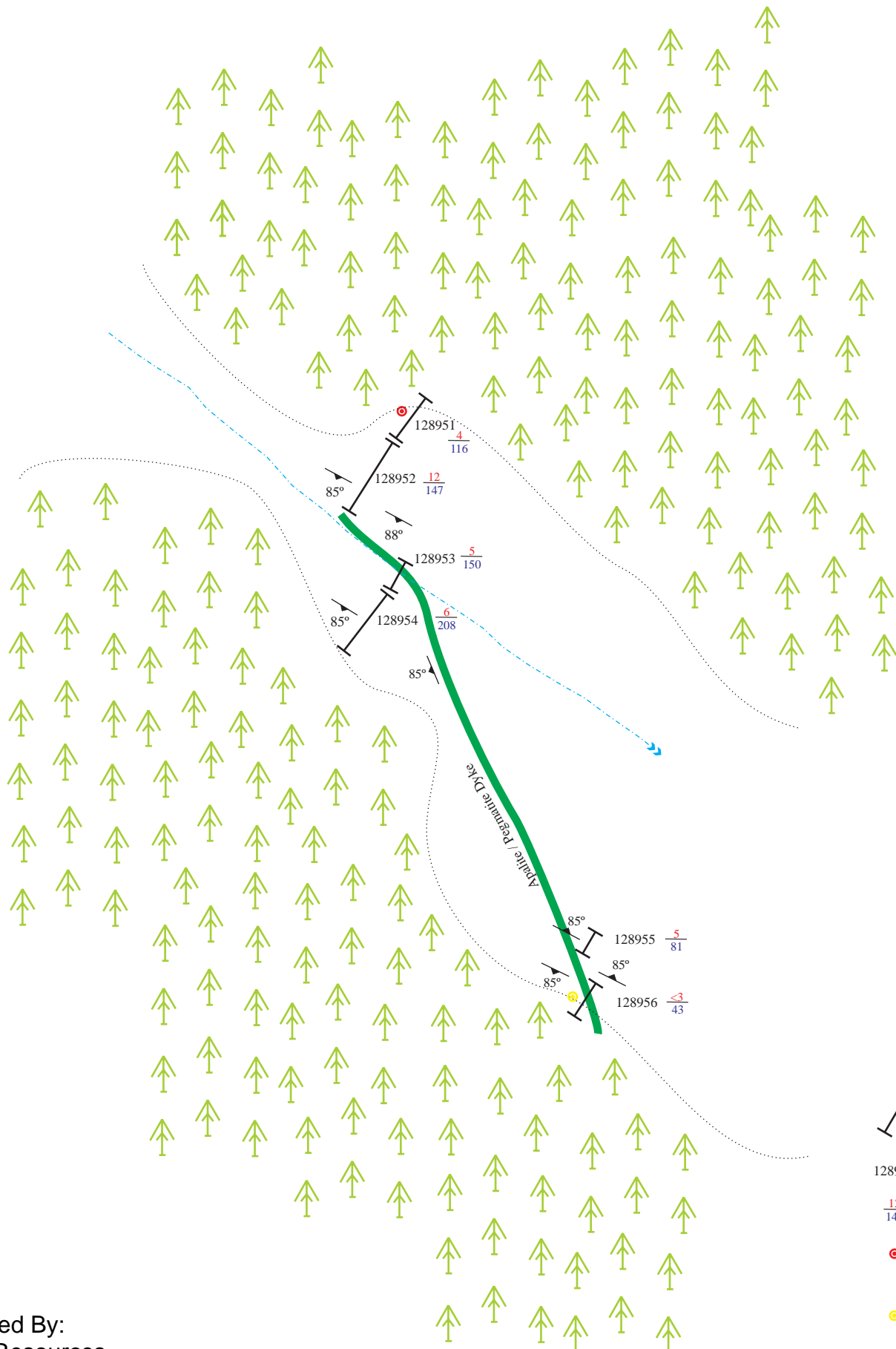





Figure 6

# Scotia Project

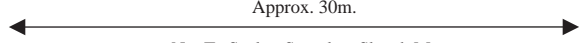
## Climbing Samplers Sketch Map - July 2, 2005



 Sampling Interval  
 128955 Sample #  
 $\frac{12}{147}$   $\frac{Pb \text{ ppm}}{Zn \text{ ppm}}$   
 5992650 m N.  
 456843 mE.  
 Elevation 610 m.  
 5992618 m N.  
 456827 mE.  
 Elevation 600 m.

Compiled By:  
Arnex Resources

Figure 7

 Approx. 30m.  
 Not To Scale - Samplers Sketch Map

left for selected core intervals. The same intervals that were sampled during the 1997 program were selectively re-sampled during the 2005 program.

Core samples were placed in plastic sample bags then sealed in plastic containers and flown by helicopter to Prince Rupert. The samples were then trucked to North Vancouver and stored at Arnex's locked storage facility prior to delivery to Acme Labs in Vancouver.

The samples were analyzed by 30 element ICP-ES as well as fire assay and ICP-ES for 30 gram gold assay. Sample procedures and analytical and assay certificates are appended as Appendix B. Results for selected elements for core intervals sampled are presented as Table 4.

Of the 83 core interval samples taken, 60 returned "over-limit" base metal values >10,000 ppm. Due to a lack of funds, these over-limit samples were not assayed to definitively determine grades. Assaying of the over-limit samples is required as well as a statistical comparison of the 1997 sampling to the 2005 sampling to verify the 1997 results.

## **6.2 *East Limb Prospecting and Sampling Program***

A total of nine rock chip samples and one active stream sediment sample were taken by climber-geologists on the East Limb Zone. As with the core re-sampling program, the samples were analyzed by 30 element ICP-ES as well as fire assay and ICP-ES for 30 gram gold assay. Sample procedures and analytical and assay certificates are appended as Appendix B. Descriptions of the samples taken are contained in Table 5, Geochemical Data Sheet, and results for selected elements are presented as Table 6. Locations of the samples taken are identified on Figure 6 and Figure 7, a sketch map not to scale.

Abundant limonite and some pyrite were present. Pervasive sericitic alteration was also noted. Three samples carried weakly anomalous Cu values, and three additional samples returned weakly anomalous Zn, Ag and Au values.

## **7.0 CONCLUSIONS**

### **7.1 *Diamond Drill Core Re-sampling Program***

Sixty of the 83 samples of the drill core returned over-limit values for the six drill holes re-sampled. This was generally consistent with the 1997 results but the actual assay grades could not be compared because the 2005 over-limit samples were not assayed.

## 7.2 *East Limb Prospecting and Sampling Program*

Very limited prospecting verified the presence of sulphides and weathered sulphides at the East Limb Zone. Samples taken from this area were weakly anomalous in base and precious metals.

## 8.0 RECOMMENDATIONS

Based on historical exploration results and on the results of the 2005 field exploration program, the following specific recommendations, in chronological order, are made for the Scotia Property:

- Assay over-limit samples from the 2005 core re-sampling program and generate a statistical comparison of the 1997 drill hole results to the 2005 sample results to verify results consistent with NI43-101 guidelines;
- Input all historical exploration into a GIS database compilation. In particular, a 3D block model should be prepared incorporating all pertinent historical drill results. A NI43-101 compliant resource calculation should be completed followed by the generation of an up-dated Technical Report detailing the verification of the 1997 drill core assay results and reporting the findings of the resource calculations.

After completion of the foregoing, the following general recommendations are made:

- Conduct a low-level helicopter Magnetic-EM airborne survey over the entire Property;
- Based on the results of the airborne geophysical survey, prospecting, geological mapping and geochemical soil and rock chip sampling should be conducted on strike with the Albere Zone, over the entire East Limb Zone and on anomalous areas identified by the airborne geophysical survey.

Report submitted this 20<sup>th</sup> day of January, 2006 by

---

Arne O. Birkeland, P. Eng.

## 9. REFERENCES

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## 10. CERTIFICATE OF AUTHOR

### **ARNE O. BIRKELAND, P.ENG.**

**Arnex Resources Ltd.**  
**2069 Westview Drive**  
**North Vancouver, BC, Canada, V7M 3B1**  
**Telephone/Fax: (604) 904-0606**  
**Email: [arnex@shaw.ca](mailto:arnex@shaw.ca)**

I, Arne O. Birkeland, P.Eng., do hereby certify that:

1. I am currently employed as a Geological Engineer by:  
 Arnex Resources Ltd.  
 2069 Westview Drive,  
 North Vancouver, British Columbia, Canada,  
 V7M 3B1
2. I graduated with a Bachelor of Science Degree in Geological Engineering from the Colorado School of Mines in 1972. I am a 1969 graduate of BCIT obtaining a Diploma of Mining Technology.
3. I have been a practicing Professional Engineer registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1975, Registration Number 9870. I am a Fellow of the Geological Association of Canada, Registration Number F4371. I am a member of the Canadian Institute of Mining, Metallurgy, and Petroleum, Geological Society Member Number 90102. I am a member and chairman of the Honorary Advisory Board Liaison Committee of the Association of Mining Exploration, British Columbia.
4. I have worked as a geologist for a total of 34 years since my graduation from university. My primary employment since 1966 has been in the field of mineral exploration and development. My experience has encompassed



a wide range of geological environments including extensive experience in classification of deposit types as well as considerable familiarization with geochemical and geophysical survey techniques and diamond drilling procedures. Since 1990, my primary involvement in exploration activities has been focused on the BC Cordillera, primarily exploring for Volcanogenic Massive Sulphide and Porphyry type targets.

5. I am responsible for the preparation of all sections of the assessment report titled Geological and Geochemical Assessment Report, Scotia Property, Skeena Mining Division, BC relating to the Scotia Property . I have personally conducted and supervised the exploration fieldwork carried out by Arnex Resources Ltd. during 1997, 1998, 1999, 2002, 2003 and 2005 on the subject Scotia Property. Arnex Resources Ltd. currently acts as an independent consultant and contractor company for Geo Minerals Ltd.
6. The author now has no interest in the Scotia Property that is the subject of this Assessment Report. The author does not own any equity shares of have any options in Geo Minerals Ltd.

Dated at North Vancouver, British Columbia, this 20 day of January, 2006

“signed” *Arne O Birkeland*

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Arne O. Birkeland, P. Eng.  
**President, Arnex Resources Ltd.**

**Doublestar Resources  
2005 Field Program Expenses  
Scotia Property**

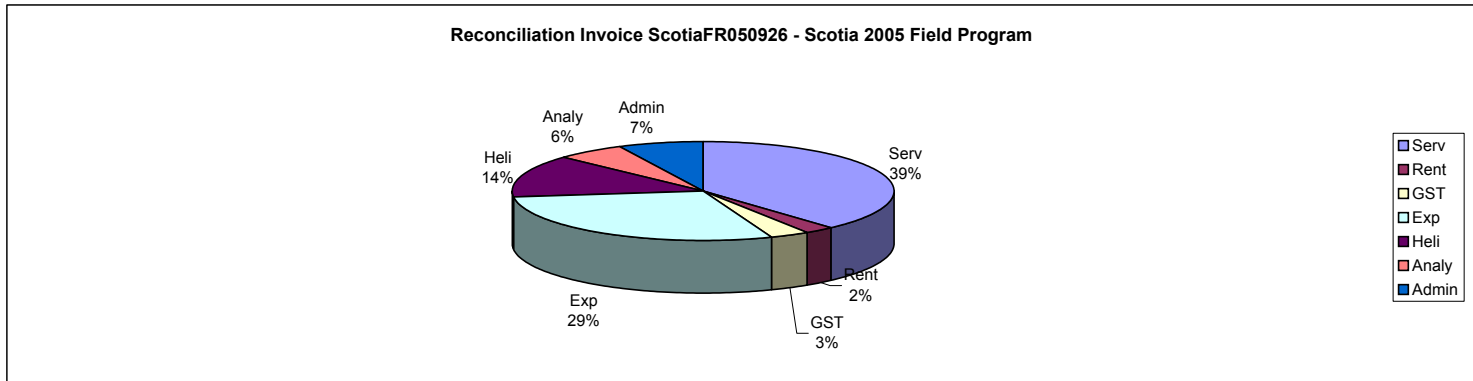
Scotia	FROM	28-Jun	TO	4-Jul		
	Days	7	Rate	500	<b>Total</b>	
P. Gray		7		250	3500	<i>N.B. includes Mob and Demob \</i>
A. Lazar		7			1750	<i>N.B. includes Mob and Demob \</i>
Hotel	Rooms	Days	4	100	800	
Food		2	4	30	60	
Vehicle Rental	Vehicles	Days	7	75	1050	
Gas					481.2	
equipment + Supplies (Bags, Ties, etc.)					118.19	
maps (acquisition)					225.97	
Digital map Scanning					270.19	
Sample Shipment (P.G. - Vancouver) Greyhound					126.85	
<b>Grand Total</b>					<b>8382.4</b>	

*Van-P.R*  
*Van-P.R*

**Reconciliation Invoice ScotiaFR050926  
2005 Scotia Field Program**

Prepared By: Arnex Resources Ltd.  
Prepared For: Geo Minerals Ltd.  
Date: 26-Sep-05

Description	Description	# Units	Cost /Unit	Paid Amount	GST
Services	Professional Engineer	10.06 days	\$625.00 /day	\$6,287.50	
	Climber - Samplers (2)	3.50 days	\$2,000.00 /day	\$7,000.00	
	Subtotal Services			\$13,287.50	
Rentals	Field Equipment	3.50 days	\$125.00 /day	\$437.50	
	Radios (2)	4.50 days	\$40.00 /day	\$180.00	
	Sat Phone	4.50 days	\$50.00 /day	\$225.00	
	Subtotal Rentals			\$842.50	
GST - Services, Rentals, Admin			\$1,165.80	\$1,141.12	
Expenses	AOB Scotia EA 050705 - Net			\$4,579.14	\$679.97
	Helicopter			\$4,877.67	
	Analytical			\$1,966.83	
	PL Scotia EA 050703			\$54.63	\$0.24
	Report			\$5,350.00	\$350.00
Subtotal Expenses			\$16,828.27		
Admin Fee (Expenses @15%)			\$2,524.24		
<b>TOTAL</b>				<b>\$34,648.31</b>	<b>\$2,171.33</b>



Appendix A



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Mineral Titles

**Mineral Claim Exploration and Development Work/Expiry Date Change**

- Select Input Method
- Select/Input Tenures
- Input Lots
- Data Input Form
- Review Form Data
- Process Payment
- Confirmation

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- ➔ [View Mineral Tenures](#)
- ➔ [View Placer Tenures](#)

Exit this e-service ►

## Mineral Titles Online

### Mineral Claim Exploration and Development Work/Expiry Date Change

Confirmation

**Recorder:** DOUBLESTAR RESOURCES LTD. (139464)

**Submitter:** DOUBLESTAR RESOURCES LTD. (139464)

**Recorded:** 2005/OCT/28

**Effective:** 2005/OCT/28

**D/E Date:** 2005/OCT/28

**Event Number:** 4052977

**Work Start Date:** 2005/JUN/30  
**Work Stop Date:** 2005/JUL/3

**Total Value of Work:** \$ 43030.71  
**Mine Permit No:**

**Work Type:** Technical Work  
**Technical Items:** Geological

**Summary of the work value:**

Tenure #	Claim Name/Property	Issue Date	Good To Date	New Good To Date	# of Days Forward	Area in Ha	Work Value Due	Sub-mission Fee
508831		2005/MAR/11	2005/OCT/31	2007/OCT/31	730	1308.98	\$ 8592.64	\$ 1047.18
508833		2005/MAR/11	2005/OCT/31	2007/OCT/31	730	1630.35	\$ 10702.25	\$ 1304.28
514510	SCOTIA NORTH	2005/JUN/14	2006/JUN/14	2007/JUN/14	365	284.23	\$ 1136.92	\$ 113.69
514511	SCOTIA W	2005/JUN/14	2006/JUN/14	2007/JUN/14	365	398.44	\$ 1593.77	\$ 159.38
514512	SCOTIA SW	2005/JUN/14	2006/JUN/14	2007/JUN/14	365	474.57	\$ 1898.26	\$ 189.83
514513	SCOTIA SE	2005/JUN/14	2006/JUN/14	2007/JUN/14	365	474.56	\$ 1898.24	\$ 189.82
514514	SCOTIA E	2005/JUN/14	2006/JUN/14	2007/JUN/14	365	417.49	\$ 1669.96	\$ 167.00

<b>Total required work value:</b>	\$	27492.04
<b>PAC name:</b>		Doublestar Resources Ltd.
<b>Debited PAC amount:</b>	\$	0.00
<b>Credited PAC amount:</b>	\$	15538.67
<b>Total Submission Fees:</b>	\$	3171.18
<b>Total Paid:</b>	\$	3171.18

The event was successfully saved.

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**Appendix B**

From ACME ANALYTICAL LABORATORIES LTD, 852 E. HASTINGS ST. VANCOUVER BC, V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT  
 To Amex Resources Ltd. PROJECT SCOTIA

Acme file # A503409 Page 1 Received: JUL 13 2005 89 samples in this disk file.

Analysis: GROUP 10 - 0.50 GM SAMPLE LEACHED WITH 3 ML 2:2 HCL+HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.

AU\*\* GROUP 3B - 30.00 GM SAMPLE BY FIRE ASSAY & ANALYSIS BY ICP-ES.

ELEMENT Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	%	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**	
SAMPLES ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppb		
C128501	2	848	719	1920	2.4	2.4	5	613	3.55	<2	<8	<2	<2	6	4	<3	<3	61	0.56	0.06	3	6	0.71	54	0.2	<3	1.05	0.11	0.29	<2	31	
C128502	8	4995	5806	>10000	2.4	19	17	1377	9.07	>1000	16	<8	<2	3	518.5	<3	19	137	3.04	0.053	6	13	1.04	21	0.24	<3	1.19	0.05	0.59	>100	207	
C128503	<1	732	876	2192	1.5	4	12	873	4.19	<2	<8	<2	<2	7	3.8	<3	<3		1.07	0.04	0.08	3	<1	0.93	178	0.27	<3	1.26	0.11	1.09	<2	108
RE C12854	1	740	685	2240	1.1	4	12	871	4.19	<2	<8	<2	<2	7	3.9	<3	<3		1.08	0.65	0.081	3	<1	0.94	179	0.27	<3	1.27	0.11	1.08	<2	71
RRE C1287	2	770	710	2382	1	5	13	942	4.45	<2	<8	<2	<2	9	4.6	<3	<3		116	0.76	0.083	4	2	0.98	186	0.3	<3	1.36	0.14	1.13	<2	148
C128504	<1	2938	758	>10000	7.1	8	6	451	3.58	<2	3	<8	<2	6	156.1	<3	4	18	0.23	0.029	5	11	0.2	41	0.1	<3	0.38	0.06	0.23	77	137	
C128505	1	919	421	>10000	2.7	3	15	941	4.23	<2	<8	<2	<2	9	41.4	<3	3	115	1.13	0.089	5	5	0.9	85	0.29	9	1.21	0.17	0.63	4	295	
C128506	1	223	294	303	0.5	5	21	896	4.42	<2	<8	<2	<2	8	<5	3	<3	132	1.21	0.112	4	5	1.12	179	0.3	9	1.4	0.17	1.02	<2	6	
C128507	1	645	559	>10000	1.3	8	9	663	3.09	<2	<8	<2	<2	7	65.7	<3	<3	48	0.76	0.062	4	10	0.43	40	0.17	<3	0.64	0.13	0.25	11	52	
C128508	<1	298	302	585	0.8	2	9	657	2.65	<2	<8	<2	<2	6	<5	<3	<3	62	0.88	0.072	5	5	0.57	41	0.21	<3	0.8	0.15	0.33	<2	29	
C128509	<1	55	90	119	<3	6	23	839	4.54	<2	<8	<2	<2	8	<5	<3	<3	152	1.61	0.138	4	4	1.22	141	0.33	<3	1.49	0.21	0.88	<2	48	
C128510	<1	2359	308	>10000	7.1	11	12	570	4.32	<2	6	<8	<2	5	176.1	<3	<3	29	0.3	0.036	5	13	0.36	35	0.14	<3	0.5	0.07	0.31	97	144	
C128511	<1	2194	595	>10000	6.8	5	9	543	3.34	<2	<8	<2	<2	6	74.1	<3	<3	44	0.51	0.06	6	1	0.45	57	0.18	<3	0.62	0.09	0.35	24	97	
C128512	<1	194	155	335	<3	9	21	882	3.92	<2	3	<8	<2	3	88.2	<3	<3	132	1.64	0.12	3	9	1.26	63	0.29	<3	1.39	0.22	0.54	<2	9	
C128513	<1	279	104	314	0.5	7	17	906	4.68	<2	<8	<2	<2	9	0.7	<3	<3	127	1.04	0.094	4	8	1.11	151	0.33	<3	1.36	0.16	0.89	2	8	
C128514	<1	912	649	>10000	3.1	3	6	560	3.21	<2	<8	<2	<2	13	43.3	<3	<3	31	0.57	0.038	5	3	0.45	60	0.17	<3	1.03	0.08	0.37	6	58	
C128515	<1	2319	299	>10000	9.1	14	16	1949	11.05	18	<8	<2	<2	4	20	18	0.21	2	0.29	0.021	2	2	0.29	30	0.08	<3	0.45	0.02	0.16	>100	63	
C128516	1	3554	2593	>10000	17.5	10	7	666	5.05	5	<8	<2	<2	4	180.6	<3	<3	4	26	0.21	0.032	7	10	0.35	40	0.13	<3	0.54	0.06	0.34	>100	316
C128517	4	2804	2045	>10000	11.5	8	21	2071	10.39	18	8	<2	<2	1	1241.5	<3	<3	4	17	0.1	0.006	4	<1	0.24	46	0.06	6	0.27	0.02	0.23	<2	467
C128518	2	1800	449	1310	8.1	4	2	416	3.35	<2	<8	<2	<2	5	1.3	<3	<3	3	9	0.32	0.03	6	4	0.27	38	0.12	<3	0.59	0.08	0.24	<2	262
C128519	17	>10000	4040	>10000	49.3	16	1	351	13.07	0	<8	<2	<2	7	1	38.8	<3	3	8	0.04	0.003	23	13	0.22	36	0.04	<3	0.4	0.03	0.32	7	162
C128520	4	2841	>10000	>10000	33.5	4	5	2154	6.73	33	<8	<2	<2	9	972.2	<3	<3	5	38	0.15	0.031	3	3	0.47	71	0.1	<3	0.46	0.03	0.38	>100	319
C128521	1	692	3305	1746	16.4	1	1	459	2.3	4	<8	<2	<2	2	10	4.1	3	3	19	0.22	0.027	6	8	0.31	98	0.15	11	0.07	0.09	0.49	<2	457
C128522	<1	989	5924	>10000	12.2	6	3	1825	7.39	24	<8	<2	<2	3	1441.8	<3	<3	2	0.13	0.006	1	5	0.06	15	0.02	3	0.12	0.01	0.08	<2	120	
C128523	1	538	6421	7494	8	2	<1	419	2.48	4	<8	<2	<2	3	11	24.9	<3	17	0.18	0.017	12	1	0.5	90	0.13	<3	0.81	0.09	0.62	3	109	
C128524	<1	244	4584	476	3.8	1	1	473	3.31	2	<8	<2	<2	3	3.1	1.3	<3	17	0.13	0.032	7	5	0.64	133	0.21	<3	1.05	0.08	0.97	<2	53	
C128525	10	2065	>10000	3031	20.6	10	<1	148	6.03	7	<8	<2	<2	2	1	11.1	9	3	16	0.04	0.006	24	9	0.28	70	0.03	5	0.53	0.04	0.35	3	174
C128526	6	2266	1932	5418	9	8	10	279	21.5	10	<8	<2	<2	1	9.7	<3	<3	3	0.02	0.001	10	<1	0.61	13	0.05	<3	0.64	0.03	0.59	<2	369	
C128527	10	2053	>10000	>10000	62.3	4	4	393	8.66	35	<8	<2	<2	2	103.2	39	5	29	0.19	0.034	10	7	0.44	19	0.08	<3	0.43	0.04	0.4	48	1480	
C128528	15	293	2738	>10000	9.6	6	1	138	17.47	33	<8	<2	<2	1	69	5	<3	3	0.04	0.007	10	12	0.23	15	0.01	<3	0.42	0.02	0.33	20	317	
C128529	13	529	6515	>10000	10.3	4	<1	472	18.45	26	<8	<2	<2	<1	368.4	3	<3	1	0.01	0.001	9	3	0.3	14	0.02	<3	0.43	0.01	0.36	>100	78	
C128530	<1	672	1218	>10000	2.3	4	1	717	23.74	17	<8	<2	<2	<1	423	<3	<3	1	0.01	0.003	8	3	0.26	15	0.02	<3	0.36	0.01	0.32	>100	75	
C128531	23	2686	4707	>10000	14.9	15	1	867	18.51	17	<8	<2	<2	1	525.1	<3	<3	4	1	0.01	0.001	7	12	0.2	12	0.02	<3	0.26	0.01	0.24	>100	83
C128532	20	2250	7091	>10000	15.2	7	2	1095	4.51	5	<8	<2	<2	3	78.5	4	8	95	0.17	0.052	6	38	1.13	85	0.24	<3	1.24	0.07	1.17	30	209	
STANDARD1	12	126	32	141	<3	25	11	720	2.94	22	<8	<2	<2	3	39	5.5	4	5	0.87	0.08	16	196	0.59	167	0.09	18	1.98	0.08	0.17	2	467	
C128533	19	2707	>10000	>10000	21	8	2	647	7.17	11	<8	<2	<2	4	3	136.8	12	7	59	0.1	0.014	25	14	0.32	54	0.06	<3	0.44	0.05	0.31	47	94
C128534	17	2850	4327	>10000	13	7	1	656	5.73	8	<8	<2	<2	12	3	40.6	5	<3	36	0.14	0.013	37	12	0.8	72	0.12	<3	0.97	0.08	0.7	<2	111
C128535	<1	1512	>10000	>10000	50.2	8	5	1225	5.45	6	<8	<2	<2	6	347.7	24	<3	60	0.23	0.036	3	7	0.81	71	0.28	9	1.19	0.05	0.87	>100	143	
C128536	4	239	6365	2197	7	15	14																									

C128778	<1	2978	3108 >10000	14	5	8	2052	7.55	33 <8	<2	3	3	1072.4 <3	4	8	0.18	0.033	3	3	0.14	26	0.05	13	0.19	0.02	0.15 >100	145		
C128779	3	1285	5302 >10000	11.6	4	2	715	3.42	13 <8	<2	4	15	254.5 <3	<3	46	0.47	0.044	5	10	0.59	75	0.17	6	0.7	0.06	0.43 >100	158		
C128780	4	2007	>10000	>10000	47.2	4	4	823	3.76	13 <8	<2	4	14	307.1	26	7	25	0.45	0.052	5	13	0.47	114	0.11	8	0.61	0.06	0.39 >100	1330
C128781	<1	770	8022 >10000	25.5	10	5	878	3.8	7 <8	<2	<2	10	76.5	11 <3	54	0.64	0.055	3	11	0.71	173	0.23 <3		1.01	0.07	0.82	33	1307	
C128782	2	865	>10000	>10000	48.7	16	7	725	3.53	11 <8	<2	4	6	166.1	28 <3	57	0.4	0.049	3	31	0.69	124	0.17	8	0.84	0.05	0.79 >100	657	
C128783	6	354	5156 >10000	13	4	5	898	4.36	10 <8	<2	4	4	199.9 <3	<3	47	0.29	0.042	4	10	0.59	130	0.23	7	0.96	0.06	0.76 >100	137		
RE C12878	3	356	5211 >10000	12.5	4	5	919	4.49	7 <8	<2	3	4	204.2 <3		47	0.29	0.042	4	11	0.6	132	0.24	9	0.96	0.06	0.77 >100	134		
RRE C1288	2	335	5011 >10000	13.1	4	5	889	4.3	8 <8	<2	3	4	203.6 <3		5	45	0.28	0.043	3	7	0.58	130	0.23	5	0.94	0.06	0.75 >100	90	
STANDARI	12	115	30	145 <.3	24	10	668	2.76	21 <8	<2	3	39	6.2	3	5	56	0.8	0.077	13	180	0.56	145	0.08	16	1.81	0.07	0.15	2	485