24603

1994 EXPLORATION PROGRAM
TUCHODI PROTEROZOIC BASIN

Liard Mining Division
NTS 94K
58° 30′ North Latitude
125° 00′ West Longitude

-prepared by-
Henry J. Awmack, P.Eng.

October, 1994

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1.0 INTRODUCTION

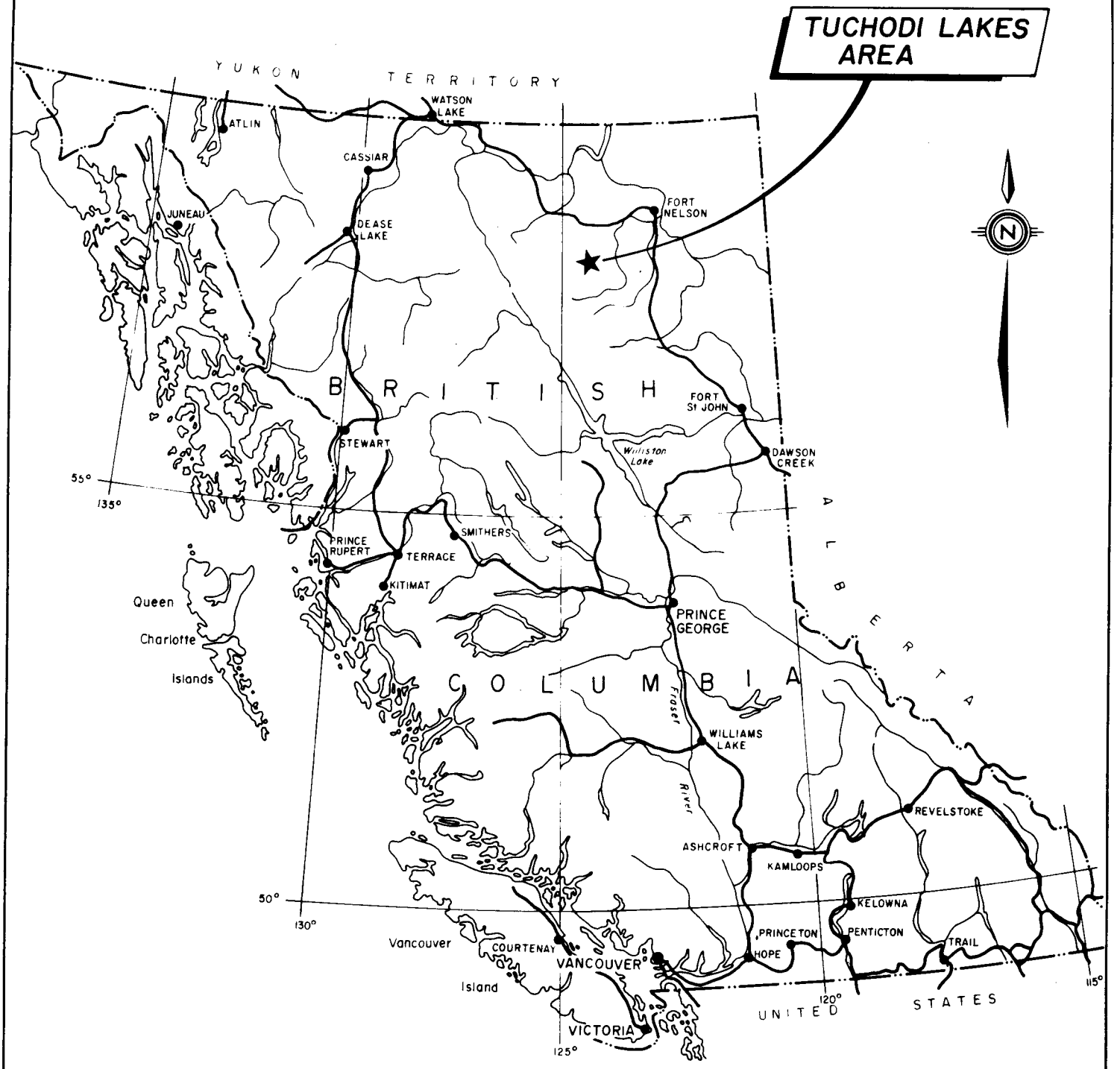
The Tuchodi Middle Proterozoic basin, near Fort Nelson in northern British Columbia, exhibits stratigraphic similarities to the Belt-Purcell Middle Proterozoic basin of southeastern British Columbia and northwestern Montana. Both consist of a thick, rift-related sequence of Helikian siliciclastics and dolomite, mainly deposited in shallow water; correlations have been made between individual formations of the two basins. A brief reconnaissance exploration program in July 1994 was directed at the basin's stratabound copper potential.

2.0 LOCATION, ACCESS AND GEOGRAPHY

The Tuchodi basin is bounded by latitudes 58° 00′ and 58° 45′ North and longitudes 124° 10′ and 125° 50′ West in northeastern British Columbia (Figure 1). The area is centred about 130 kilometres west of Fort Nelson, which has scheduled air service. The Alaska Highway cuts through the northern edge of the basin, and secondary roads provided access to the former Davis-Keays and Churchill copper mines in the northwestern part of the basin. The Churchill Mine road leaves the Alaska Highway near Mile 401, extends 27 kilometres south up the Racing River, then climbs westward along Delano Creek and Magnum Creek to the former camp and portal. Although the road remains in reasonably good shape, bridges have washed out near the Alaska Highway, preventing road access. The Davis-Keays deposit is reached by a road which heads south for thirty kilometres up the Toad River from Mile 440. The 1994 exploration program was carried out with a helicopter based at Toad River Lodge at Mile 391 on the Alaska Highway.

The topography is typical of rugged, glaciated terranes, with deep valleys and serrated ridges. Elevations range from 1000 metres on the Alaska Highway to over 2700 metres on some peaks. Valley glaciers are present at higher elevations. The majority of the area is above treeline, which lies at approximately 1450 metres.

The Stone Mountain Provincial Park covers the drainage of MacDonald Creek, immediately south of Summit Pass at Mile 393 on the Alaska Highway. The Wokkpash Provincial Recreational Area covers the Wokkpash drainage, immediately to the south. Muncho Lake Provincial Park covers the extreme northwestern tip of the Tuchodi Formation exposure, near Mile 440 on the Alaska Highway. The majority of the Tuchodi basin is covered by Study Areas under the Protected Area Strategy and could also be closed to mine development in the near future.



TUCHODI LAKES AREA
PROPERTY LOCATION MAP

0 100 200 MILES
0 100 200 300 KILOMETRES

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Drawn	N.T.S.	Date	FIG. No.
J.J.E.	94K		1.

3.0 REGIONAL GEOLOGY AND MINERALIZATION

3.1 Regional Geology

Regional mapping in the Tuchodi basin has been carried out by Taylor and Stott (1971), Bell (1968) and Preto (1971). Halferdahl (1986) modified Taylor and Stott's map in several areas. The following discussion is derived from their work.

In the Tuchodi area, Proterozoic rocks form an unmetamorphosed to very low-rank metamorphosed sedimentary sequence over 7600 metres in thickness. The strata have been divided into three successions and tentatively assigned to the Helikian and Hadrynian Eras (Taylor and Stott, 1971). The two older successions have been assigned a Helikian (Middle Proterozoic) age primarily on the basis of their lithological similarity to the Helikian Belt-Purcell rocks of the southern Rocky Mountains. The Helikian strata comprise: (1) a lower quartzite-carbonate succession, at least 3,300 metres thick, divided into the Chischa, Tetsa, George, Henry Creek and Tuchodi Formations; and (2) an upper shaly flysch succession, at least 2,400 metres in thickness, divided into the Aida and Gataga Formations (Bell, 1968). The Hadrynian rocks are only found west of the Gundahoo Thrust Fault, to the west of the Tuchodi basin, do not exhibit potential for stratabound Kupferschiefer-type copper-silver-cobalt mineralization and will not be discussed further.

The oldest formation, the Chischa Formation (**Unit Pc**), is composed predominantly of pale grey and pastel-hued, aphanitic dolomite with fine-grained quartzites becoming prominent in the upper third of the succession. Stromatolites, "molar tooth" structure, desiccation breccias and ripple marks are common in the carbonate beds, suggesting a shallow water deposition. The Chischa Formation, with a thickness of 900 metres, resembles part of the Waterton and Altyn Formations of the Belt-Purcell basin (Bell, 1968).

The 320-metre thick Tetsa Formation (**Unit Ps**), which disconformably overlies the Chischa Formation is characterised by thin-bedded, dark grey to black, silicious, feldspathic, micaceous and carbonaceous, mudstones, siltstones and shales. The Tetsa Formation could be tentatively correlated with the Aldridge Formation of the Belt-Purcell basin, which hosts the Sullivan lead-zinc deposit. The upper beds become increasingly dolomitic and gradational with the dolomite of the overlying George Formation. The George Formation (**Unit Pd**) comprises 370 to 530 metres of very fine, crystalline limestone and dolomite, exhibiting stromatolitic beds, "molar tooth" structure and desiccation breccias. Bell (1968) correlates the George Formation with the Siyeh Formation of the Belt-Purcell Group. The upper contact of the George Formation is gradational with calcareous mudstones of the Henry Creek Formation (**Unit Ph**), which has a thickness of 470 metres. The mudstone is commonly laminated and thin, very fine-grained

sandstone and limestone beds are present. The number and thickness of the sandstone beds increases upwards, grading into the Tuchodi Formation.

The Tuchodi Formation (**Unit Pt**) is the most extensively exposed Helikian formation in the map-area. It is a 1,500-metre thick sequence of brown-weathering feldspathic quartzite, dolomitic siltstones and sandstones, and argillaceous, grey-brown dolomite. Varicoloured shales and sandstones are abundant to the west. The presence of crossbedding, ripple marks, mud cracks and rare stromatolites again suggest shallow water deposition. Bell (1968) correlates the Tuchodi Formation with the Roosville Formation of the Belt-Purcell basin.

The Aida Formation (**Unit Pa**), which conformably overlies the Tuchodi Formation, is composed of calcareous mudstones and siltstones with minor poorly sorted sandstones and conglomerates, suggesting deposition in deeper water than the previous formations. It is conformably overlain by the Gataga Formation (**Unit Pg**), which is a sequence of dark grey to olive grey mudstones and siltstones with thin sandstone units. Flame structures and laminations are common in the mudstones.

Cambrian Atan Group clastics and carbonates unconformably overlie rocks of the Henry Creek, Tuchodi, Aida and Gataga Formations. The eastern, clastic facies (**Unit Cs**) of the Atan Group (termed the "Sylvia Formation" by Preto, 1971) comprises varicoloured fanglomerates up to 1,500 metres thick, which were deposited adjacent to active faults. They grade from coarse, polymictic boulder conglomerates near the faults to silicious quartzite with intercalated siltstone and silty shale over distances of several kilometres. On the western edge of the basin, the Atan Group is represented by a carbonate platform (**Unit Ca**).

The structural style of the rocks in the Tuchodi map-area differs from that of the southern Rocky Mountains with much less total shortening. The imbricate array of interleaved thrust faults which occur to the south are not seen here. Instead, the strata have been deformed into a series of asymmetrical folds with the east limbs of anticlines impinging on the adjacent synclines along steep reverse faults. The Tuchodi anticline has been elevated as much as 6100 metres, exposing the Helikian strata.

All Helikian formations are cut by steeply dipping diabase dykes with strike lengths in the order of several hundred to several thousands of metres. The dykes are commonly 6 to 15 metres wide, but are locally up to 75 metres in width. These dykes post-date the folding and are generally located along tension fractures perpendicular to fold axes or paralleling the axial planes. The dykes are truncated against the sub-Cambrian surface and cobbles of dyke material are present in Lower Cambrian conglomerates, indicating that the dykes are Proterozoic in age. Several

greenstone bodies exist as concordant bodies within Hadrynian units are thought to be surface extrusions which the dykes are feeder channels.

3.2 Regional Mineralization

Copper-bearing quartz-carbonate veins with strike lengths up to 1,500 metres occur throughout the western half of the Tuchodi basin, generally within the Aida and Gataga Formations. Most of these veins are hosted in tension fractures perpendicular to the fold axes, which plunge gently to the southeast. Diabase dykes are associated with many of these veins, but are "generally post-mineral in age" (Preto, 1971). The veining, which is undeformed, post-dates the folding, but pre-dates deposition of Cambrian basal conglomerates which contain mineralized vein clasts. At least 47 of these copper-bearing quartz-carbonate veins have been recorded, some reporting silver values in the order of 50 grams per tonne, and one with reported erythrite.

Prior to the 1994 reconnaissance program, no recorded exploration in the Tuchodi basin had been directed towards sedimentary copper deposits. However, several apparently stratabound occurrences of two distinct types had been noted in the course of vein exploration, without any attempt at determining their potential.

The first type comprises disseminated chalcopyrite, pyrite and/or bornite within quartzite or conglomerate of the Tuchodi and Sylvia Formations. "An occurrence of disseminated chalcopyrite in a 30-foot bed of clean, well-sorted, nearly white quartzite of the lower members of the Tuchodi Formation is reported from the headwaters of the Chischa River, 6 miles north of Tuchodi Lakes" (Preto, 1971). Several well-rounded cobbles of similar material, described as quartzite containing pyrite, chalcopyrite and malachite, were noted by Newell (1973) at his Showing T-6, located within the Chischa River floodplain at 1200 metres elevation.

Halferdahl (1986) reported another apparently stratabound copper showing of this type near the top of the Tuchodi Formation, on the east side of Canyon Creek, a southerly-flowing tributary of Delano Creek (Figure 3). He described a one to two metre thick bed comprising well-rounded 5-25 centimetre quartzite cobbles in a porous medium-grained sandstone matrix, with malachite disseminated throughout the matrix and as coatings and nodules on the cobbles.

The second type of stratabound copper mineralization reported in the Tuchodi basin is hosted by fine-grained clastics. The most striking example was noted in float by Mark (1969) in a small tributary which drains a thick package of Sylvia Formation clastics on the northern slopes of Mount Roosevelt. "It was a rounded shale rock with small veinlets of chalcocite (or perhaps tetrahedrite) in it. The surface was stained with malachite".

4.0 REGIONAL EXPLORATION HISTORY

4.1 Previous Work

Exploration in the Tuchodi area has been largely confined to quartz-carbonate-chalcopyrite veins within the Aida and Gataga Formation in the western part of the basin. The Strangward copper deposit, in the South Tetsa River area, was discovered and explored in the early 1950's. The Magnum deposit, on a tributary of Delano Creek, was first drilled in 1958. It operated as the Churchill Mine from April 1970 to October 1971 and again from January 1974 to April 1975. Before production commenced, reserves were estimated at 1.1 million tonnes of ore grading 3.92% copper (Carr, 1971). The Davis-Keays property, which lies a few kilometres north of the Magnum property, was explored until 1971, with reserves of 1.2 million tonnes of 3.3% copper for the Eagle vein. Many other showings were explored from 1958 to 1971, but none became producers.

Essentially all exploration was confined to the Aida Formation, which was considered the most favourable host for copper-bearing quartz-carbonate veins. With one exception, all work recorded in the area was directed at these quartz-carbonate veins, and strata-bound copper mineralization was mentioned as a curiosity, if at all. The exception mentioned above was an exploration program carried out west of Churchill Peak in 1981, which tested the black shales of the Aida Formation for their base metal content (Gorham, 1982), without much success.

4.2 1994 Exploration Program

In July 1994, limited helicopter-supported reconnaissance was carried out over selected portions of the Tuchodi basin, especially those areas underlain by the Tuchodi Formation. This work consisted of silt sampling, geological mapping and prospecting, carried out by a four-man crew over four days. A total of 17 rock samples and 61 silt samples were taken. Rock samples are described in Appendix C. All samples were analyzed geochemically for gold and by ICP for 32 other elements at Chemex Laboratories in North Vancouver, B.C.. Appendix D contains analytical certificates.

5.0 GEOCHEMISTRY

5.1 Silt Geochemistry

Silt sampling traverses were carried out in selected areas underlain by Tuchodi Formation rocks, with a total of 61 silt samples taken (Figures 2 and 3). Base and precious metal contents were low for all samples, with maximum values of 12 ppm As, 670 ppb Ba, 15 ppm Co, 56 ppm Cu, 22 ppm Pb and 74 ppm Zn. No gold or silver were detected in any silt samples.

5.2 Rock Geochemistry

One day was spent in the eastern part of the project area, with prospecting traverses in the vicinity of Tuchodi Lakes and Chischa River (Figure 2). Two mineralized float samples were taken from a small tributary draining north into Chischa River, both from narrow quartz-sulphide veins. Sample #626901 contained 5558 ppm Pb and #626951 had >10,000 ppm Cu and 1176 ppm As. These quartz-sulphide veins returned low gold and silver values; they are not considered significant. No evidence was seen for the 9-metre thick chalcopyrite-bearing quartzite reported by Preto (1971) at the headwaters of the Chischa River.

Three days were spent in tributaries of the Racing River, in the western portion of the project area (Figure 3). This work focused on locating several occurrences of apparently stratabound copper mineralization which had been previously reported and on investigating gossans within the Tuchodi Formation. Only one of the reported stratabound copper occurrences was located in the field, five kilometres east of the Churchill Mine on the ridge east of Canyon Creek (Halferdahl, 1986). Sample #626954, with 2660 ppm Cu, was taken from sparse talus of clean quartzite with a few specks of bornite and abundant malachite staining. On the ridge immediately south of (and uphill from) sample #626954, a 300+ metre section of clean quartzite is overlain by sandy dolomite, separated by a 1-2 metre bed of dolomitic conglomerate. The conglomerate is locally coated by thick malachite and rare pebbles of vein quartz or massive chalcopyrite were noted up to 100 metres downslope. The malachite coating on pebbles within the dolomitic conglomerate appeared to be a recent precipitate within a permeable and reactive bed, rather than due to weathering of Proterozoic stratabound copper mineralization.

Sample #626907, with 452 ppm Cu and 1550 ppm Ba, was taken from a 30 centimetre float boulder of carbonate-altered conglomerate, two kilometres south of #626954. Its source could not be located and no similar boulders were noted further up the creek.

Several rock samples were taken from pyritic zones within Tuchodi Formation quartzites on map sheet 94K/11. These returned uniformly low values for all base and precious metals. Sample #626804 was taken from a cobble of quartz-chalcopyrite-graphite veining in road material along the Churchill Mine road on the north side of Delano Creek. It was analyzed to determine a trace element signature for the Churchill-style veining, and showed low values for all metals.

6.0 DISCUSSION AND CONCLUSIONS

Brief reconnaissance within the Middle Proterozoic Tuchodi

Formation failed to reveal significant mineralization or geochemical anomalies. Several reported occurrences of apparently stratabound copper mineralization were investigated, but only one could be located. The Canyon Creek conglomerate occurrence was located but appeared to be due to malachite precipitating along a permeable horizon and not due to weathering of primary stratabound copper mineralization. Silt sampling covered several areas within the Tuchodi Formation, returning low values for all base metals and no detectable gold or silver. No further work is recommended for stratabound copper targets in the Tuchodi basin, due to its rugged terrain, remoteness, the probability that large sections of it will be turned into parks and its lack of encouraging mineralization or geochemical anomalies.

Respectfully submitted,
EQUITY ENGINEERING LTD.

Henry J. Awmack, P.Eng.

Vancouver, British Columbia
October, 1994

APPENDIX A

BIBLIOGRAPHY

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Awmack, H.J. (1991): Tuchodi Lakes Proterozoic Basin: A Stratabound Copper-Silver-Cobalt Exploration Target; Private report for Equity Engineering Ltd. dated September, 1991.

Bell, R.T. (1968): Proterozoic Stratigraphy of Northeastern British Columbia; Geological Survey of Canada Paper 67-68, 75 pp.

Carr, J.M. (1971): Geology of the Churchill Copper Deposit; Canadian Institute of Mining and Metallurgy Bulletin, June 1971, p. 50-54.

Carr, J.M. (1972): Geological Report on Claim Group 'B', Magnum Property, Delano Creek; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #3,535.

Gorham, J.H. (1982): Geological Mapping and Geochemical Traverses on Parts of the Mo 1-14 and the BE 1-15 Claims; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #10,960.

Halferdahl, L.B. (1982): Geochemical Reconnaissance in the Tuchodi Area, Northeastern British Columbia; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #10,504.

Halferdahl, L.B. (1986): Geological and Geochemical Reconnaissance in the Tuchodi Area, Northeastern British Columbia; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #15,090.

Legun, A. (1984): Geologic Reconnaissance of the Wokkpash Park Proposal Area (94K) in Geological Fieldwork 1983; British Columbia Ministry of Energy, Mines an Petroleum Resources Paper 1984-1, p. 146-148.

Legun, A. (1985): Stream Sediment Sampling of the Wokkpash Park Proposal Area (94K/7) in Geological Fieldwork 1984; British Columbia Ministry of Energy, Mines an Petroleum Resources Paper 1985-1, p. 301-302.

Mark, D.G. (1969): Geochemical and Geological Field Report, Shaw Claim Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #2,398.

Mark, D.G. (1973): Geophysical and Geological Report on Magnetometer, VLF-EM and Geological Surveys on the Joan Claim Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #4,639.

McLearn, F.H. and E.D. Kindle (1950): Geology of Northeastern British Columbia; Geological Survey of Canada Memoir 259, 236 pp.

Menzies, M.M. (1951): Geology and Mineralogy of the Strangward Copper Property, South Tetsa River, British Columbia; Unpublished Master's Thesis submitted to the University of British Columbia.

Newell, J.M. (1973): Geological and Geochemical Report on CBC, Hope, CTV and Dodo Claims; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #4,300.

Preto (1971): Lode Copper Deposits of the Racing River - Gataga River Area, in Geology, Exploration and Mining in British Columbia 1971; British Columbia Department of Mines, p. 75-76.

Taylor, G.C. (1963): MacDonald Creek (94 K/10), British Columbia; Geological Survey of Canada Map 28-1963.

Taylor, G.C. (1979): Trutch (94G) and Ware East Half (94F, E1/2) Map Areas, Northeastern British Columbia; Geological Survey of Canada Open File 606.

Taylor, G.C. and D.F. Stott (1971): Tuchodi Lakes Map-Area, British Columbia (94K), Geological Survey of Canada Memoir 373, 37 pp.

Vail, J.R. (1957): Geology of the Racing River Area, British Columbia; Unpublished Master's Thesis submitted to the University of British Columbia, 129 pp.

Williams, M.Y. (1944): Geological Reconnaissance along the Alaska Highway from Fort Nelson, British Columbia, to Watson Lake, Yukon; Geological Survey of Canada Paper 44-28, 33 p.

APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES
TUCHODI REGIONAL PROGRAM
JULY 5-12, 1994

PROFESSIONAL FEES AND WAGES:		
Henry J. Awmack, P.Eng.		
6.875 days @ $400/day	$ 2,750.00	
Bruce Youngman, P.Geo.		
9 days @ $400/day	3,600.00	
Scott Macdougall, Sampler		
8 days @ $225/day	1,800.00	
Marc Rougier, Sampler		
6 days @ $225/day	1,350.00	$ 9,500.00
EXPENSES:		
Materials and Supplies	$ 166.62	
Radio Rentals	262.95	
Automobile Fuel	249.18	
Airfare	949.30	
Helicopter	10,319.97	
Miscellaneous Transportation	43.92	
Meals and Lodging	1,534.22	
Printing and Reproductions	265.50	
Geochemical Analyses	1,271.45	
Communications	67.08	15,130.19
REPORT PREPARATION (estimated)		600.00
TOTAL:		**$ 25,230.19**

APPENDIX C

ROCK SAMPLE DESCRIPTIONS

MINERALS AND ALTERATION TYPES

BI	biotite	BO	bornite	CB	carbonate
CC	chalcocite	CL	chlorite	CP	chalcopyrite
CU	native copper	CV	covellite	CY	clay
EP	epidote	FM	ferromolybdite	FP	feldspar
GA	garnet	GE	goethite	GL	galena
GR	graphite	HE	earthy hematite		
KF	K-feldspar	MC	malachite	MG	magnetite
MN	Mn-oxides	MO	molybdenite	MS	sericite
MU	muscovite	PY	pyrite	QZ	quartz veining
SI	silica	SP	sphalerite	TO	tourmaline

Property : Tuchodi Reconnaissance Program NTS : 94K Date : July 1994

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6484 000 N	Type : Float	Alteration :	90%QZ, 5%GR	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		369 250 E	Strike Length Exp. : m	Metallics :	10%CP						
626804	Elevation:	1110 m	Sample Width : 20 cm	Secondaries:	wMC	<5	0.6	8.	5.	>10000	<2
	Orientation:	/	True Width : m	Host :	Quartz-sulphide vein						

Comments : Float lying on the side of the old Churchill Mine road (and probably derived from Churchill Mine development waste). White quartz with graphite partings and chalcopyrite aggregates.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	N	Type : Float	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		E	Strike Length Exp. : m	Metallics :	8%PY						
626853	Elevation:		Sample Width : 20 cm	Secondaries:		<5	<0.2	<2	0.	52.	4.
	Orientation:	/	True Width : m	Host :	Quartzite						

Comments :

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6465 900 N	Type : Float	Alteration :	10%CA	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		412 600 E	Strike Length Exp. : m	Metallics :	4%CP, 2-3%GL						
626901	Elevation:	5900 ft	Sample Width : 50 cm	Secondaries:		<5	1.6	<2	19.	93.	5558.
	Orientation:	/	True Width : m	Host :	Light brown weathering, light grey siltstone						

Comments : Galena and chalcopyrite in 2-5mm clots, associated with white to light brown, coarse-grained carbonate veining/breccia. 50x50x50cm float boulder to southeast of main creek.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6465 850 N	Type : Float	Alteration :	QZ	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		406 005 E	Strike Length Exp. : m	Metallics :	5-30%PY						
626902	Elevation:	6050 ft	Sample Width : m	Secondaries:	sGE	<5	0.2	4.	47.	147.	52.
	Orientation:	/	True Width : m	Host :	Quartzite to silicified sandstone						

Comments : Pyrite is disseminated to wispy-banded to semi-massive (both paralleling and cutting apparent bedding). Mineralization is either due to high angle fault along gully or due to something further up gully. Abundant rusty talus.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6484 100 N	Type : Float	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		360 550 E	Strike Length Exp. : m	Metallics :	2-5%PY, trBO(?), trCP(?)						
626903	Elevation:	4925 ft	Sample Width : 20 cm	Secondaries:	mGE	10.	<0.2	<2	5.	27.	14.
	Orientation:	/	True Width : m	Host :	Medium-grained white quartzite						

Comments : 20x20x20cm float boulder in same creek as previously reported cupriferous quartzite float. Finegrained disseminated pyrite, locally finely laminated/banded. Quartzite quite clean-looking. No quartz veining in sample.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6484 200 N	Type : Float	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		360 750 E	Strike Length Exp. : m	Metallics :	trCP(?), 2-10%PY						
626904	Elevation:	5500 ft	Sample Width : m	Secondaries:	mGE, mHE, trJA	<5	<0.2	2.	1.	7.	12.
	Orientation:	/	True Width : m	Host :	Fine to medium-grained, white to light grey quartzite						

Comments : Quartzite is quite clean-looking. Pyrite is disseminated and locally concentrated on fracture planes. Carr was probably describing this style of mineralization (not extremely abundant in creek).

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6484 850 N	Type : Float	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		360 015 E	Strike Length Exp. : m	Metallics :	5-7%PY						
626905	Elevation:	5000 ft	Sample Width : 15 cm	Secondaries:	sGE, wJA	<5	<0.2	4.	2.	11.	16.
	Orientation:	/	True Width : m	Host :	Quartzite						

Comments : 15x30cm boulder. Very similar to 626903, 626904.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6496 700 N	Type : Float	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		369 950 E	Strike Length Exp. : m	Metallics :	1%PY						
626906	Elevation:	4950 ft	Sample Width : m	Secondaries:	mGE, trJA	<5	<0.2	<2	<1	3.	2.
	Orientation:	/	True Width : m	Host :	Conglomerate						

Comments : Pyrite and limonite mostly on fractures.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6486 800 N	Type : Float	Alteration :	1%CB	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		364 150 E	Strike Length Exp. : m	Metallics :	<1%CP						
626907	Elevation:	4750 ft	Sample Width : 30 cm	Secondaries:	mGE, wJA, mMC	<5	<0.2	<2	3.	452.	<2
	Orientation:	/	True Width : m	Host :	Conglomerate						

Comments : 30x30x30cm boulder on north side of creek. Similar boulders nearby, with little or no MC. MC mostly on fractures and coating 2-10cm conglomerate fragments. CP is locally disseminated, mostly occurring between conglomerate fragments.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6486 850 N	Type : Float	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		364 450 E	Strike Length Exp. : m	Metallics :	15-20%PY						
626908	Elevation:	5050 ft	Sample Width : m	Secondaries:	mGE	<5	<0.2	<2	6.	9.	4.
	Orientation:	/	True Width : m	Host :	Pyritic quartzite breccia						

Comments : Pyrite forms fine- to medium-grained matrix to sub-angular quartzite breccia fragments. Goethite strongest on fractures. Probably locally derived (at top end of a 200 metres of rusty quartzite).

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6486 800 N	Type : Float	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		364 150 E	Strike Length Exp. : m	Metallics :	3%PY						
626909	Elevation:	4750 ft	Sample Width : 200 cm	Secondaries:	sGE, mHE	<5	<0.2	<2	2.	11.	10.
	Orientation:	/	True Width : m	Host :	Conglomerate						

Comments : 2x2x2.5m boulder. Pyrite disseminated (mostly between fragments, but locally within). Strong GE on fractures and as patches (often adjacent to conglomerate fragments). Often has orange tinge (possibly after Fe-CB?).

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6466 850 N	Type : Float	Alteration :	10%QZ	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		412 300 E	Strike Length Exp. : m	Metallics :	1%PY						
626951	Elevation:	1717 m	Sample Width : 10 cm	Secondaries:	wGE, wMC	<5	2.0	1176.	44.	>10000	18.
	Orientation:	/	True Width : m	Host :	Quartz vein breccia in quartzite						

Comments : 15x25x25cm boulder of Tuchodi Fm. quartzite, brecciated with angular black argillite fragments. Matrix filled by quartz with PY blebs. MC on fractures and as blebs in greenish siltstone fragments.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6456 850 N	Type : Float	Alteration :		(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		420 150 E	Strike Length Exp. : m	Metallics :	5%PY						
626952	Elevation:	1690 m	Sample Width : 15 cm	Secondaries:	sGE, wJA	<5	<0.2	<2	<1	19.	<2
	Orientation:	/	True Width : m	Host :	Fine-grained quartz arenite						

Comments : Grey-brown, clean quartz arenite. Sparse angular glauconitic(?) mud chips. Very fine-grained disseminated PY. Part of >20m rusty bed (most of which has no PY remaining). Two float boulders.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6481 700 N	Type : Float	Alteration :	sSI						
		363 400 E	Strike Length Exp. : m	Metallics :	5%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
626953	Elevation:	1690 m	Sample Width : 100 cm	Secondaries:	mGE, mJA	<5	0.2	6.	1.	13.	34.
	Bedding :	093 / 37 S	True Width : m	Host :	Sylvia Fm. quartz arenite to quartz pebble conglom.						

Comments : Float at base of cliffs. Jarositic bed 15m thick. Light grey, medium-grained quartzite (also beds with uniform 1cm rounded pebbles). Fine-grained disseminated PY throughout. Jarosite on internal fractures.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6488 900 N	Type : Float	Alteration :							
		364 450 E	Strike Length Exp. : m	Metallics :	trBO	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
626954	Elevation:	1900 m	Sample Width : 3 cm	Secondaries:	mMC	<5	0.2	<2	2.	2655.	8.
	Orientation:	/	True Width : m	Host :	Clean quartzite						

Comments : White to medium grey, clean quartzite with a few specks BO. MC on fractures (internal and external). Sample from 2 pieces of float (6 unsampled pieces of dolomitic sandstone float nearby, with thick malachite and neotocite rinds).

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6502 250 N	Type : Grab	Alteration :	trQZ						
		364 700 E	Strike Length Exp. : 10 m	Metallics :	1%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
626955	Elevation:	1678 m	Sample Width : 1.5 m	Secondaries:	mGE, mHE	<5	<0.2	<2	<1	14.	6.
	Bedding :	095 / 30 S	True Width : 1.5 m	Host :	Quartzite						

Comments : Light grey quartzite: clean, well-sorted with 0.2mm quartz grains. Well-indurated. 1% very fine-grained disseminated PY. Blocky jointing @ 000/85E. At base of prominent jarosite/goethite gossan in Tentsi River.

Sample No.						Au	Ag	As	Co	Cu	Pb
	UTM :	6494 400 N	Type : Float	Alteration :	20%Graphite						
		370 700 E	Strike Length Exp. : m	Metallics :	3%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
626956	Elevation:	1525 m	Sample Width : m	Secondaries:	sGE, wJA	10.	<0.2	4.	4.	13.	8.
	Bedding :	160 / 33 W	True Width : m	Host :	Graphitic quartzite						

Comments : Fold nose trends 180. Sample taken from talus immediately below 2-5m thick bed of graphitic quartzite (sampled) underlying >4m bed of pyritic white quartzite.

APPENDIX D

ANALYTICAL CERTIFICATES

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: NORTHERN DYNASTY EXPLORATIONS LTD. **

440 - 800 W. PENDER ST.
VANCOUVER, BC
V6C 2V6

Project : TUCWODI
Comments: CC:EQUITY ENGINEERING LTD.

Page Number :1-A
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Certificate Date: 21-JUL-94
Invoice No. :I9420561
P.O. Number :
Account :LYH

CERTIFICATE OF ANALYSIS A9420561

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
94MR-01	201	229	< 5	< 0.2	0.31	4	270	< 0.5	< 2	8.52	< 0.5	2	10	9	1.02	< 10	< 1	0.09	< 10	5.18	320
94MR-02	201	229	< 5	< 0.2	1.30	4	250	< 0.5	< 2	1.80	< 0.5	7	19	14	1.96	< 10	< 1	0.27	20	1.19	420
94MR-03	201	229	< 5	< 0.2	0.39	2	80	< 0.5	< 2	8.77	< 0.5	3	9	7	0.69	< 10	< 1	0.12	< 10	5.63	200
94MR-04	201	229	< 5	< 0.2	0.58	12	260	< 0.5	< 2	0.32	< 0.5	3	8	30	2.65	< 10	< 1	0.39	10	0.23	80
94MR-05	201	229	< 5	< 0.2	0.69	8	200	< 0.5	< 2	4.15	< 0.5	4	15	30	1.37	< 10	< 1	0.17	10	2.41	260
94MR-06	203	205	< 5	< 0.2	0.84	10	110	< 0.5	< 2	0.22	< 0.5	4	111	21	1.30	< 10	< 1	0.32	10	0.59	205
94MR-07	201	229	< 5	< 0.2	1.00	4	360	< 0.5	< 2	7.60	< 0.5	7	18	20	1.60	< 10	< 1	0.24	10	2.50	255
94MR-08	201	229	< 5	< 0.2	1.01	4	40	< 0.5	< 2	9.78	< 0.5	6	20	11	1.54	< 10	< 1	0.23	10	1.47	205
94MR-09	201	229	< 5	< 0.2	1.34	< 2	40	< 0.5	< 2	12.75	< 0.5	6	27	10	1.70	< 10	< 1	0.30	10	1.61	200
94MR-10	201	229	< 5	< 0.2	1.26	8	360	< 0.5	< 2	8.21	< 0.5	5	19	24	1.87	< 10	< 1	0.35	10	2.95	315
94MR-11	201	229	< 5	< 0.2	1.80	6	280	< 0.5	< 2	0.85	< 0.5	15	27	51	3.06	< 10	< 1	0.56	20	1.35	465
94MR-12	201	229	< 5	< 0.2	0.14	< 2	170	< 0.5	< 2	14.70	< 0.5	2	9	3	0.55	< 10	< 1	0.05	< 10	9.63	165
94MR-13	201	229	< 5	< 0.2	0.91	2	30	< 0.5	< 2	0.23	< 0.5	7	12	16	1.61	< 10	< 1	0.22	20	0.89	210
94MR-14	201	229	< 5	< 0.2	0.18	< 2	340	< 0.5	< 2	14.95	< 0.5	< 1	7	2	0.34	< 10	< 1	0.06	< 10	9.11	70
94MR-15	201	229	< 5	< 0.2	0.80	2	90	< 0.5	< 2	3.25	< 0.5	5	12	13	1.33	< 10	< 1	0.19	10	2.59	170
94MR-16	201	229	< 5	< 0.2	0.73	< 2	160	< 0.5	< 2	3.20	< 0.5	3	13	10	0.98	< 10	< 1	0.13	10	2.53	105
94MR-17	201	229	< 5	< 0.2	0.19	4	180	< 0.5	< 2	13.95	< 0.5	1	9	6	0.49	< 10	< 1	0.07	< 10	9.13	145
94MR-18	201	229	< 5	< 0.2	0.46	2	230	< 0.5	< 2	10.60	< 0.5	4	13	11	0.96	< 10	< 1	0.19	< 10	6.81	200
94MR-19	201	229	< 5	< 0.2	0.39	4	120	< 0.5	< 2	9.39	< 0.5	2	12	8	0.93	< 10	< 1	0.20	< 10	3.92	170
94MR-20	201	229	< 5	< 0.2	0.93	4	100	< 0.5	< 2	0.44	< 0.5	4	12	21	0.96	< 10	< 1	0.37	20	0.45	130
94MR-21	201	229	< 5	< 0.2	0.17	< 2	130	< 0.5	< 2	13.75	< 0.5	1	10	8	1.16	< 10	< 1	0.06	< 10	8.93	165
94MR-22	201	229	< 5	< 0.2	0.14	< 2	150	< 0.5	< 2	12.75	< 0.5	2	13	5	1.64	< 10	< 1	0.06	< 10	7.63	245
94MR-23	201	229	< 5	< 0.2	0.33	2	180	< 0.5	< 2	11.95	< 0.5	2	11	8	0.90	< 10	< 1	0.10	< 10	7.62	170
94MR-24	201	229	< 5	< 0.2	0.13	< 2	620	< 0.5	< 2	>15.00	< 0.5	< 1	8	4	0.42	< 10	< 1	0.04	< 10	10.10	110
94MR-25	201	229	< 5	< 0.2	0.31	2	440	< 0.5	< 2	10.45	< 0.5	3	12	13	0.97	< 10	< 1	0.10	< 10	6.59	220
94MR-26	201	229	< 5	< 0.2	0.07	2	180	< 0.5	< 2	>15.00	< 0.5	1	7	5	0.49	< 10	< 1	0.02	< 10	10.15	170
94SAM-01	201	229	< 5	< 0.2	0.87	< 2	90	< 0.5	< 2	1.72	< 0.5	4	15	17	1.37	< 10	< 1	0.28	10	1.42	365
94SAM-02	201	229	< 5	< 0.2	1.45	6	120	< 0.5	< 2	3.17	< 0.5	9	21	56	1.53	< 10	< 1	0.48	20	2.02	335
94SAM-03	201	229	< 5	< 0.2	1.42	4	90	< 0.5	< 2	3.75	< 0.5	7	21	29	1.42	< 10	< 1	0.51	20	2.26	315
94SAM-04	201	229	< 5	< 0.2	0.73	< 2	30	< 0.5	< 2	1.80	< 0.5	3	11	13	0.92	< 10	< 1	0.24	10	1.41	190
94SAM-05	201	229	< 5	< 0.2	0.77	2	40	< 0.5	2	1.62	< 0.5	3	13	11	1.01	< 10	< 1	0.27	10	1.31	225
94SAM-06	203	205	< 5	< 0.2	1.11	< 2	60	< 0.5	< 2	1.47	< 0.5	4	113	11	1.13	< 10	< 1	0.50	20	1.24	255
94SAM-07	201	229	< 5	< 0.2	0.41	2	120	< 0.5	< 2	12.65	< 0.5	1	11	10	0.69	< 10	< 1	0.15	< 10	7.43	195
94SAM-08	201	229	< 5	< 0.2	1.02	2	60	< 0.5	< 2	8.91	< 0.5	8	21	23	1.62	< 10	< 1	0.24	10	2.93	270
94SAM-09	201	229	< 5	< 0.2	0.93	6	40	< 0.5	< 2	8.16	< 0.5	8	18	32	1.54	< 10	< 1	0.21	10	3.58	295
94SAM-10	201	229	< 5	< 0.2	0.81	2	60	< 0.5	< 2	14.15	< 0.5	4	19	10	1.27	< 10	< 1	0.17	10	4.81	225
94SAM-11	201	229	< 5	< 0.2	0.89	2	60	< 0.5	< 2	11.85	< 0.5	6	18	12	1.61	< 10	< 1	0.28	10	3.02	290
94SAM-12	201	229	< 5	< 0.2	0.68	4	80	< 0.5	< 2	5.02	< 0.5	4	13	5	2.17	< 10	< 1	0.25	10	1.77	490
94SAM-13	201	229	< 5	< 0.2	0.18	4	280	< 0.5	< 2	>15.00	< 0.5	1	10	3	0.65	< 10	< 1	0.07	< 10	9.58	180
94SAM-14	201	229	< 5	< 0.2	2.08	4	340	< 0.5	< 2	3.04	< 0.5	10	28	30	2.62	< 10	< 1	0.41	20	2.95	430

CERTIFICATION: Hart Bichler

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To: NORTHERN DYNASTY EXPLORATIONS LTD. **

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V6C 2V6

Project : TUCWODI
Comments: CC:EQUITY ENGINEERING LTD.

Certificate Date: 21-JUL-94
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P.O. Number :
Account :LYH

CERTIFICATE OF ANALYSIS A9420561

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
94MR-01	201	229	< 1	0.01	7	400	8	< 2	2	37	< 0.01	< 10	< 10	10	< 10	28
94MR-02	201	229	< 1	0.01	15	620	16	< 2	4	15	< 0.01	< 10	< 10	23	< 10	52
94MR-03	201	229	< 1	0.01	7	220	8	< 2	1	40	< 0.01	< 10	< 10	9	< 10	20
94MR-04	201	229	< 1	< 0.01	8	470	10	< 2	2	7	< 0.01	< 10	< 10	7	< 10	14
94MR-05	201	229	< 1	0.01	9	560	14	2	3	22	< 0.01	< 10	< 10	13	< 10	28
94MR-06	203	205	< 1	< 0.01	11	270	4	< 2	3	3	< 0.01	< 10	< 10	14	< 10	14
94MR-07	201	229	< 1	0.01	12	560	6	< 2	3	87	< 0.01	< 10	< 10	15	< 10	30
94MR-08	201	229	< 1	0.01	10	600	4	< 2	3	139	< 0.01	< 10	< 10	18	< 10	30
94MR-09	201	229	< 1	0.01	13	810	4	< 2	4	179	< 0.01	< 10	< 10	13	10	40
94MR-10	201	229	< 1	0.01	13	490	12	< 2	4	106	0.01	< 10	< 10	23	< 10	50
94MR-11	201	229	1	0.01	23	690	16	< 2	8	16	< 0.01	< 10	< 10	42	< 10	54
94MR-12	201	229	2	0.02	3	70	8	< 2	1	71	< 0.01	< 10	< 10	9	10	10
94MR-13	201	229	< 1	< 0.01	9	230	< 2	< 2	3	6	0.02	< 10	< 10	24	< 10	14
94MR-14	201	229	2	0.01	4	40	6	< 2	< 1	81	< 0.01	< 10	< 10	10	10	40
94MR-15	201	229	1	0.01	8	190	6	< 2	3	23	0.02	< 10	< 10	24	< 10	14
94MR-16	201	229	< 1	< 0.01	9	200	4	< 2	2	26	0.01	< 10	< 10	25	< 10	18
94MR-17	201	229	3	0.02	5	80	12	< 2	1	66	< 0.01	< 10	< 10	10	10	30
94MR-18	201	229	2	0.02	8	290	12	< 2	2	51	< 0.01	< 10	< 10	13	10	32
94MR-19	201	229	< 1	0.01	6	280	2	< 2	2	61	< 0.01	< 10	< 10	11	< 10	8
94MR-20	201	229	< 1	< 0.01	8	290	4	< 2	4	12	< 0.01	< 10	< 10	19	< 10	22
94MR-21	201	229	1	0.02	7	110	22	< 2	1	68	< 0.01	< 10	< 10	10	10	44
94MR-22	201	229	1	0.02	7	160	18	< 2	2	58	< 0.01	< 10	< 10	10	10	28
94MR-23	201	229	1	0.01	7	210	14	< 2	1	62	< 0.01	< 10	< 10	10	10	62
94MR-24	201	229	1	0.02	4	70	8	< 2	< 1	80	< 0.01	< 10	< 10	10	10	20
94MR-25	201	229	1	0.01	6	140	8	< 2	2	52	< 0.01	< 10	< 10	13	10	14
94MR-26	201	229	2	0.02	3	< 10	12	< 2	< 1	92	< 0.01	< 10	< 10	8	10	14
94SAM-01	201	229	< 1	0.01	10	350	4	< 2	4	7	< 0.01	< 10	< 10	15	< 10	30
94SAM-02	201	229	< 1	0.01	11	350	16	2	5	19	0.01	< 10	< 10	23	< 10	46
94SAM-03	201	229	< 1	0.01	11	290	8	< 2	5	16	0.01	< 10	< 10	23	< 10	32
94SAM-04	201	229	< 1	< 0.01	7	190	2	< 2	3	5	0.01	< 10	< 10	15	< 10	14
94SAM-05	201	229	< 1	< 0.01	8	240	2	< 2	3	7	< 0.01	< 10	< 10	14	< 10	18
94SAM-06	203	205	< 1	0.01	10	210	< 2	< 2	3	8	< 0.01	< 10	< 10	16	< 10	14
94SAM-07	201	229	1	0.02	6	160	10	< 2	1	68	< 0.01	< 10	< 10	11	10	32
94SAM-08	201	229	< 1	0.01	11	590	6	2	3	96	< 0.01	< 10	< 10	16	< 10	30
94SAM-09	201	229	< 1	0.01	9	480	6	< 2	3	69	< 0.01	< 10	< 10	19	< 10	20
94SAM-10	201	229	1	0.01	8	550	6	< 2	2	150	< 0.01	< 10	< 10	11	10	34
94SAM-11	201	229	< 1	0.01	13	670	4	2	3	140	< 0.01	< 10	< 10	13	10	30
94SAM-12	201	229	< 1	0.01	8	270	4	2	3	58	0.02	< 10	< 10	24	< 10	18
94SAM-13	201	229	2	0.02	4	80	10	< 2	1	77	< 0.01	< 10	< 10	9	10	12
94SAM-14	201	229	< 1	0.01	16	310	12	< 2	6	23	0.02	< 10	< 10	38	< 10	56

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CERTIFICATE OF ANALYSIS A9420561

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
94SAM-15	203	205	< 5	< 0.2	0.76	2	670	< 0.5	< 2	3.86	< 0.5	4	110	8	1.42	< 10	< 1	0.30	10	2.51	190
94SAM-16	201	229	< 5	< 0.2	0.21	2	150	< 0.5	< 2	12.80	< 0.5	2	8	7	0.54	< 10	< 1	0.08	< 10	8.40	135
94SAM-17	201	229	< 5	< 0.2	0.16	< 2	250	< 0.5	< 2	>15.00	< 0.5	1	9	2	0.45	< 10	< 1	0.04	< 10	10.70	145
94SAM-18	201	229	< 5	< 0.2	0.41	4	260	< 0.5	< 2	10.45	< 0.5	4	15	45	1.38	< 10	< 1	0.17	< 10	6.52	195
94SAM-19	201	229	< 5	< 0.2	0.11	< 2	180	< 0.5	< 2	>15.00	< 0.5	1	8	1	0.32	< 10	< 1	0.03	< 10	10.85	115
94SAM-20	201	229	< 5	< 0.2	0.23	2	80	< 0.5	< 2	12.80	< 0.5	2	10	6	0.83	< 10	< 1	0.10	< 10	8.13	190
94SAM-21	201	229	< 5	< 0.2	0.37	2	70	< 0.5	< 2	0.84	< 0.5	2	6	5	0.63	< 10	< 1	0.16	10	0.56	80
94SAM-22	201	229	< 5	< 0.2	0.71	2	80	< 0.5	< 2	0.16	< 0.5	4	10	11	0.84	< 10	< 1	0.26	20	0.29	135
94SAM-23	201	229	< 5	< 0.2	0.97	8	390	< 0.5	< 2	2.51	< 0.5	7	11	28	2.17	< 10	< 1	0.25	20	1.98	360
94SAM-24	201	229	< 5	< 0.2	1.78	8	200	< 0.5	< 2	1.77	< 0.5	9	17	29	2.19	< 10	< 1	0.61	20	2.28	675
94BY-01	201	229	< 5	< 0.2	1.61	6	250	< 0.5	< 2	0.27	< 0.5	6	28	40	2.24	< 10	< 1	0.41	20	0.77	105
94BY-02	201	229	< 5	< 0.2	0.47	4	320	< 0.5	< 2	1.40	< 0.5	8	7	8	1.53	< 10	< 1	0.23	10	0.83	165
94BY-03	201	229	< 5	< 0.2	1.77	8	240	< 0.5	< 2	10.75	< 0.5	7	29	14	1.90	< 10	< 1	0.41	10	2.59	185
94BY-04	201	229	< 5	< 0.2	1.42	2	400	< 0.5	< 2	11.05	< 0.5	6	25	17	1.83	< 10	< 1	0.33	10	2.88	235
94HA-01	201	229	< 5	< 0.2	0.99	4	80	< 0.5	< 2	1.04	< 0.5	7	15	31	1.43	< 10	< 1	0.25	10	1.21	350
94HA-02	201	229	< 5	< 0.2	1.08	< 2	80	< 0.5	< 2	0.51	< 0.5	8	16	28	1.54	< 10	< 1	0.27	10	1.13	395
94HA-03	201	229	< 5	< 0.2	1.14	2	260	< 0.5	2	0.29	< 0.5	8	19	27	1.88	< 10	< 1	0.34	20	0.65	390
94HA-04	201	229	< 5	< 0.2	1.18	8	330	< 0.5	< 2	0.25	< 0.5	2	16	14	1.09	< 10	< 1	0.47	10	0.36	85
94HA-05	201	229	< 5	< 0.2	1.03	2	200	< 0.5	< 2	0.29	< 0.5	6	15	14	1.38	< 10	< 1	0.38	10	0.56	330
94HA-06	201	229	< 5	< 0.2	0.98	< 2	110	< 0.5	< 2	5.29	< 0.5	6	15	11	1.74	< 10	< 1	0.40	20	2.27	555
94HA-07	201	229	< 5	< 0.2	0.14	6	80	< 0.5	< 2	14.45	< 0.5	< 1	8	4	0.47	< 10	< 1	0.03	< 10	9.56	140

CERTIFICATION: Ian H Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: NORTHERN DYNASTY EXPLORATIONS LTD.

440 - 800 W. PENDER ST.
VANCOUVER, BC
V6C 2V6

Project : TUCWODI
Comments: CC:EQUITY ENGINEERING LTD.

Certificate Date: 21-JUL-94
Invoice No. : I9420561
P.O. Number :
Account :LYH

CERTIFICATE OF ANALYSIS A9420561

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
94SAM-15	203	205	< 1	0.01	7	250	2	< 2	3	27	< 0.01	< 10	< 10	20	< 10	16
94SAM-16	201	229	2	0.02	5	80	6	< 2	1	68	< 0.01	< 10	< 10	9	10	12
94SAM-17	201	229	1	0.03	2	30	8	< 2	< 1	82	< 0.01	< 10	< 10	8	10	8
94SAM-18	201	229	< 1	0.02	8	220	12	2	2	52	< 0.01	< 10	< 10	11	10	16
94SAM-19	201	229	< 1	0.03	2	10	< 2	< 2	< 1	64	< 0.01	< 10	< 10	7	10	6
94SAM-20	201	229	2	0.02	6	210	10	< 2	2	63	< 0.01	< 10	< 10	10	10	68
94SAM-21	201	229	< 1	< 0.01	4	210	< 2	< 2	2	6	< 0.01	< 10	< 10	6	< 10	20
94SAM-22	201	229	< 1	< 0.01	7	230	4	< 2	3	4	< 0.01	< 10	< 10	14	< 10	16
94SAM-23	201	229	1	0.01	15	520	12	< 2	6	29	< 0.01	< 10	< 10	19	< 10	68
94SAM-24	201	229	1	0.01	15	430	8	< 2	5	15	< 0.01	< 10	< 10	22	< 10	54
94BY-01	201	229	1	< 0.01	16	450	8	< 2	10	6	< 0.01	< 10	< 10	34	< 10	34
94BY-02	201	229	< 1	< 0.01	14	400	12	< 2	2	19	< 0.01	< 10	< 10	6	< 10	74
94BY-03	201	229	1	0.01	13	830	2	< 2	4	147	< 0.01	< 10	< 10	22	< 10	42
94BY-04	201	229	< 1	0.01	12	720	8	< 2	4	141	0.01	< 10	< 10	21	10	36
94HA-01	201	229	< 1	< 0.01	11	270	10	< 2	4	4	< 0.01	< 10	< 10	17	< 10	20
94HA-02	201	229	< 1	< 0.01	12	270	8	< 2	4	2	< 0.01	< 10	< 10	20	< 10	18
94HA-03	201	229	< 1	< 0.01	11	370	2	< 2	8	5	< 0.01	< 10	< 10	29	< 10	20
94HA-04	201	229	< 1	< 0.01	7	330	4	< 2	5	4	< 0.01	< 10	< 10	18	< 10	12
94HA-05	201	229	< 1	< 0.01	9	260	6	< 2	5	4	< 0.01	< 10	< 10	30	< 10	12
94HA-06	201	229	< 1	0.01	9	410	6	2	3	54	< 0.01	< 10	< 10	17	< 10	18
94HA-07	201	229	4	0.02	4	40	10	< 2	< 1	74	< 0.01	< 10	< 10	8	10	12

CERTIFICATION: Jan Buchler

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221

To: NORTHERN DYNASTY EXPLORATIONS LTD.

440 - 800 W. PENDER ST.
VANCOUVER, BC
V6C 2V6

Project : TUCWODI
Comments: CC:EQUITY ENGINEERING LTD.

Page Number : 1-A
Total Pages : 1
Certificate Date: 26-JUL-94
Invoice No. : I9420562
P.O. Number :
Account : LYH

CERTIFICATE OF ANALYSIS A9420562

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
626804	205	294	< 5	0.6	0.86	8	< 10	< 0.5	< 2	2.71	< 0.5	5	237	>10000	3.91	< 10	< 1	0.02	< 10	1.05	235
626853	205	294	< 5	< 0.2	0.37	< 2	100	< 0.5	< 2	0.03	< 0.5	< 1	406	52	2.50	< 10	< 1	0.22	< 10	0.04	15
626901	205	294	< 5	1.6	1.64	< 2	30	< 0.5	< 2	8.03	0.5	19	41	93	2.02	< 10	< 1	0.44	< 10	5.92	1995
626902	205	294	< 5	0.2	1.31	4	10	< 0.5	< 2	0.16	< 0.5	47	99	147	10.10	10	< 1	0.87	< 10	0.14	35
626903	205	294	10	< 0.2	0.11	< 2	20	< 0.5	< 2	0.36	< 0.5	5	462	27	1.17	< 10	< 1	0.11	< 10	0.20	70
626904	205	294	< 5	< 0.2	0.06	2	40	< 0.5	< 2	0.01	< 0.5	1	382	7	1.29	< 10	< 1	0.09	< 10	< 0.01	15
626905	205	294	< 5	< 0.2	0.21	4	40	< 0.5	< 2	0.02	< 0.5	2	632	11	1.81	< 10	< 1	0.24	< 10	0.02	25
626906	205	294	< 5	< 0.2	0.51	< 2	30	< 0.5	< 2	0.01	< 0.5	< 1	274	3	0.46	< 10	< 1	0.31	< 10	0.04	10
626907	205	294	< 5	< 0.2	0.36	< 2	1550	< 0.5	< 2	0.12	< 0.5	3	360	452	0.75	< 10	< 1	0.28	< 10	0.04	15
626908	205	294	< 5	< 0.2	0.17	< 2	70	< 0.5	< 2	0.01	< 0.5	6	326	9	1.23	< 10	< 1	0.10	< 10	0.02	15
626909	205	294	< 5	< 0.2	0.48	< 2	120	< 0.5	< 2	0.04	< 0.5	2	318	11	2.00	< 10	< 1	0.33	< 10	0.06	25
626951	205	294	< 5	2.0	1.11	1175	170	0.5	< 2	0.09	< 0.5	44	108	>10000	1.66	< 10	< 1	0.72	10	0.19	5
626952	205	294	< 5	< 0.2	0.64	< 2	120	< 0.5	< 2	0.02	< 0.5	< 1	306	19	2.48	< 10	< 1	0.43	< 10	0.05	10
626953	205	294	< 5	0.2	0.11	6	20	< 0.5	< 2	< 0.01	< 0.5	1	339	13	1.98	< 10	< 1	0.12	< 10	0.01	10
626954	205	294	< 5	0.2	0.05	< 2	10	< 0.5	< 2	1.36	< 0.5	2	453	2660	0.64	< 10	< 1	0.02	< 10	0.76	85
626955	205	294	< 5	< 0.2	0.46	< 2	100	< 0.5	< 2	0.01	< 0.5	< 1	282	14	0.68	< 10	< 1	0.28	< 10	0.04	10
626956	205	294	10	< 0.2	0.65	4	170	< 0.5	< 2	0.30	< 0.5	4	193	13	1.39	< 10	< 1	0.41	< 10	0.07	15

CERTIFICATION: Stewart Buchan

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221

To: NORTHERN DYNASTY EXPLORATIONS LTD. **

440 - 800 W. PENDER ST.
VANCOUVER, BC
V6C 2V6

Project : TUCWODI
Comments: CC:EQUITY ENGINEERING LTD.

Page Number : 1-B
Total Pages : 1
Certificate Date: 26-JUL-94
Invoice No. : I9420562
P.O. Number :
Account : LYH

CERTIFICATE OF ANALYSIS A9420562

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
626804	205	294	1	0.03	11	860	< 2	< 2	2	64	< 0.01	< 10	< 10	9	< 10	12
626853	205	294	< 1	< 0.01	6	80	4	< 2	< 1	3	< 0.01	< 10	< 10	4	< 10	< 2
626901	205	294	< 1	0.01	10	210	5560	2	4	29	< 0.01	< 10	< 10	20	10	62
626902	205	294	< 1	0.01	60	140	52	< 2	4	2	< 0.01	< 10	< 10	84	< 10	< 2
626903	205	294	< 1	0.01	10	10	14	< 2	< 1	3	< 0.01	< 10	< 10	2	< 10	< 2
626904	205	294	1	< 0.01	6	10	12	< 2	< 1	3	< 0.01	< 10	< 10	1	< 10	< 2
626905	205	294	2	0.01	8	20	16	< 2	< 1	4	< 0.01	< 10	< 10	2	< 10	36
626906	205	294	< 1	< 0.01	3	60	2	< 2	< 1	4	< 0.01	< 10	< 10	3	< 10	< 2
626907	205	294	< 1	0.01	6	490	< 2	< 2	< 1	65	< 0.01	< 10	< 10	52	< 10	< 2
626908	205	294	< 1	< 0.01	15	10	4	< 2	< 1	2	< 0.01	< 10	< 10	3	< 10	< 2
626909	205	294	< 1	0.01	7	50	10	< 2	1	3	< 0.01	< 10	< 10	16	< 10	< 2
626951	205	294	11	0.01	77	210	18	8	1	2	< 0.01	< 10	< 10	15	< 10	6
626952	205	294	< 1	< 0.01	4	20	< 2	< 2	< 1	2	< 0.01	< 10	< 10	9	< 10	< 2
626953	205	294	4	0.01	6	10	34	< 2	< 1	2	< 0.01	< 10	< 10	2	< 10	< 2
626954	205	294	1	0.01	7	30	8	< 2	< 1	5	< 0.01	< 10	< 10	3	< 10	< 2
626955	205	294	< 1	< 0.01	3	20	6	< 2	< 1	< 1	< 0.01	< 10	< 10	3	< 10	< 2
626956	205	294	< 1	< 0.01	13	230	8	< 2	1	10	< 0.01	< 10	< 10	12	< 10	20

CERTIFICATION: Stewart Buchler

APPENDIX E

ENGINEER'S CERTIFICATE

ENGINEER'S CERTIFICATE

I, HENRY J. AWMACK, of 12-1348 Nelson Street, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Consulting Geological Engineer with offices at Suite 207, 675 West Hastings Street, Vancouver, British Columbia.

2. THAT I am a graduate of the University of British Columbia with an honours degree in Geological Engineering.

3. THAT I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.

4. THAT this report is based on a limited reconnaissance exploration program carried out by the author in July 1994

DATED at Vancouver, British Columbia, this 14th day of October, 1994.

Henry J. Awmack, P.Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
H. J. AWMACK

ASSESSMENT REPORT

24,603

TUCHODI PROJECT

MAP SHEETS 94K/1, 94K/2, 94K/7, 94K/8
LIARD MINING DIVISION, BRITISH COLUMBIA
JULY 1994 REGIONAL PROGRAM
SCALE 1:50,000

LEGEND

□ ■ Rock Sample (float, outcrop)

\+ Silt Sample

SILT SAMPLES

Sample Number	Au (ppb)	Ag (ppm)	As (ppm)	Ba (ppm)	Co (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
94MR -1	<5	<0.2	4	270	2	9	8	28
94MR -2	<5	<0.2	4	250	7	14	16	52
94MR -3	<5	<0.2	2	80	3	7	8	20
94MR -4	<5	<0.2	12	260	3	30	10	14
94MR -5	<5	<0.2	8	200	4	30	14	28
94MR -6	<5	<0.2	10	110	4	21	4	14
94SAM -1	<5	<0.2	<2	90	4	17	4	30
94SAM -2	<5	<0.2	6	120	9	56	16	46
94SAM -3	<5	<0.2	4	90	7	29	8	32
94SAM -4	<5	<0.2	<2	30	3	13	2	14
94SAM -5	<5	<0.2	2	40	3	11	2	18
94SAM -6	<5	<0.2	<2	60	4	11	<2	14
94BY -1	<5	<0.2	6	250	6	40	8	34
94HA -1	<5	<0.2	4	80	7	31	10	20
94HA -2	<5	<0.2	<2	80	8	28	8	18
94HA -3	<5	<0.2	2	260	8	27	2	20
94HA -4	<5	<0.2	8	330	2	14	4	12
94HA -5	<5	<0.2	2	200	6	14	6	12

ROCK GEOCHEMICAL SAMPLES

Sample Number	Au (ppb)	Ag (ppm)	As (ppm)	Ba (ppm)	Co (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
626901	<5	1.6	<2	30	19	93	5558	62
626902	<5	0.2	4	10	47	147	52	<2
626951	<5	2.0	1176	170	44	>10000	18	6
626952	<5	<0.2	<2	120	<2	19	<2	<2

Note: Geology summarized from Taylor and Stott (1971).

TUCHODI PROJECT

MAP SHEETS 94K/6, 94K/11
LIARD MINING DIVISION, BRITISH COLUMBIA
JULY 1994 REGIONAL PROGRAM
SCALE 1:50,000

LEGEND

□ ■ Rock Sample (float, outcrop)

\+ Silt Sample

SILT SAMPLES

Sample Number	Au (ppb)	Ag (ppm)	As (ppm)	Ba (ppm)	Co (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
94MR -7	<5	<0.2	4	360	7	20	6	30
94MR -8	<5	<0.2	4	40	6	11	4	30
94MR -9	<5	<0.2	<2	40	6	10	4	40
94MR -10	<5	<0.2	8	360	5	24	12	50
94MR -11	<5	<0.2	6	280	15	51	16	54
94MR -12	<5	<0.2	<2	170	2	3	8	10
94MR -13	<5	<0.2	2	30	7	16	<2	14
94MR -14	<5	<0.2	<2	340	<2	2	6	40
94MR -15	<5	<0.2	2	90	5	13	6	14
94MR -16	<5	<0.2	<2	160	3	10	4	18
94MR -17	<5	<0.2	4	180	1	6	12	30
94MR -18	<5	<0.2	2	230	4	11	12	32
94MR -19	<5	<0.2	4	120	2	8	2	8
94MR -20	<5	<0.2	4	100	4	21	4	22
94MR -21	<5	<0.2	<2	130	1	8	22	44
94MR -22	<5	<0.2	<2	150	2	5	18	28
94MR -23	<5	<0.2	2	180	2	8	14	62
94MR -24	<5	<0.2	<2	620	<2	4	8	20
94MR -25	<5	<0.2	2	440	3	13	8	14
94MR -26	<5	<0.2	2	180	1	5	12	14
94SAM -7	<5	<0.2	2	120	1	10	10	32
94SAM -8	<5	<0.2	2	60	8	23	6	30
94SAM -9	<5	<0.2	6	40	8	32	6	20
94SAM-10	<5	<0.2	2	60	4	10	6	34
94SAM-11	<5	<0.2	2	60	6	12	4	30
94SAM-12	<5	<0.2	4	80	4	5	4	18
94SAM-13	<5	<0.2	4	280	1	3	10	12
94SAM-14	<5	<0.2	4	340	10	30	12	56
94SAM-15	<5	<0.2	2	670	4	8	2	16
94SAM-16	<5	<0.2	2	150	2	7	6	12
94SAM-17	<5	<0.2	<2	250	1	2	8	8
94SAM-18	<5	<0.2	4	260	4	45	12	16
94SAM-19	<5	<0.2	<2	180	1	1	<2	6
94SAM-20	<5	<0.2	2	80	2	6	10	68
94SAM-21	<5	<0.2	2	70	2	5	<2	20
94SAM-22	<5	<0.2	2	80	4	11	4	16
94SAM-23	<5	<0.2	8	390	7	28	12	68
94SAM-24	<5	<0.2	8	200	9	29	8	54
94BY -2	<5	<0.2	4	320	8	8	12	74
94BY -3	<5	<0.2	8	240	7	14	2	42
94BY -4	<5	<0.2	2	400	6	17	8	36
94HA -6	<5	<0.2	<2	110	6	11	6	18
94HA -7	<5	<0.2	6	80	<2	4	10	12

ROCK GEOCHEMICAL SAMPLES

Sample Number	Au (ppb)	Ag (ppm)	As (ppm)	Ba (ppm)	Co (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
626804	<5	0.6	8	<2	5	>10000	<2	12
626903	10	<0.2	<2	20	5	27	14	<2
626904	<5	<0.2	2	40	1	7	12	<2
626905	<5	<0.2	4	40	2	11	16	36
626906	<5	<0.2	<2	30	<2	3	2	<2
626907	<5	<0.2	<2	1550	3	452	<2	<2
626908	<5	<0.2	<2	70	6	9	4	<2
626909	<5	<0.2	<2	120	2	11	10	<2
626953	<5	0.2	6	20	1	13	34	<2
626954	<5	0.2	<2	10	2	2660	8	<2
626955	<5	<0.2	<2	100	<2	14	6	<2
626956	10	<0.2	4	170	4	13	8	20

Note: Geology summarized from Halferdahl (1986) and Taylor and Stott (1971).

Scale 1:50 000
Miles 1 0 1 2 3 Miles
Metres 1000 0 1000 2000 3000 4000 Metres