Geological and Geochemical Report on the Knight Claims

Clinton Mining Division
N.T.S. 920-6, 3
Latitude 51°15'N, Longitude 123°15'W
Owner: Inco Limited
Operator: Inco Limited

Dennis M. Bohme, P.Eng.
Project Geologist
November 9, 1990

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1.0 SUMMARY

This report describes the geological and geochemical results of the mapping, prospecting, stream sediment and rock-chip sampling surveys conducted on the Knight claim group between July 3 to September 15, 1990.

The claims are located approximately 120 km southwest of Williams Lake, B.C. near the Dil plateau. As a result of overstaking, Inco Limited only has title to about 54% of the claim area or 1080 ha. The Dil property (40 units) is held by R.M. Durfeld and J.A. McClintock.

The Knight claims are primarily underlain by Lower Cretaceous Taylor Creek Group clastic sedimentary rocks cut by irregularly shaped dykes and stock-like bodies of ?Eocene hornblende feldspar porphyry. Well hornfelsed and fractured lithologies include dark grey argillaceous siltstone, brownish greywacke and chert-volcanic pebble conglomerate.

Gold mineralization was discovered in two localities: along the northern Dil-Knight claim boundary consisting of epithermal-type quartz vein talus; and a discrete pyritic, hydrothermally altered conglomerate occurrence known as the Knob Showing about 200 m inside the claim boundary. Individual high gold assays of between 0.745 g/t to 15.08 g/t Au (4 samples) were obtained from conglomeratic rocks displaying variable degrees of chalcedonic quartz microfracturing, carbonate, limonite, clay, chlorite and pyrite alteration. One panel chip sample over a 1.2 x 0.5 m area assayed 54.53 g/t Au. A localized, ?disseminated concentration of gold mineralization in a more permeable unit is implied.

The Knob Showing represents the most attractive exploration target that warrants further detailed sampling and trenching.

2.0 INTRODUCTION

This report summarizes the geological and geochemical results of the mapping, prospecting, stream sediment and rock chip sampling surveys conducted on the Knight claim group between July 3 to September 15, 1990.

Contract prospectors staked the Knight claims on September 25, 1989 (80 units) on behalf of Inco Limited after recognizing proximal float boulders of vuggy, banded epithermal-type quartz in the Dil Plateau area. It was not clear at the time whether the Dil claims had expired. As it turned out the claims were in good standing and about 46% or 920 ha of the Knight claims is presently covered by the Dil claim group (40 units) jointly held by R.M. Durfeld and J.A. McClintock.

2.1 Location, Access and Topography

The Knight claim block is situated approximately 120 km southwest of Williams Lake, B.C. The property straddles the physiographic boundary between the Chilcotin Plateau and the eastern margin of the Coast Range Mountains (see Figure 1).

Access is currently via helicopter from either Lillooet or Williams Lake. The nearest logging road is about 20 km to the southwest. A winding 4x4 road exists 10 km to the north near Mt. Tom but a large portion of this heavily treed plateau area including the road access is currently under review as a Wilderness Park proposal.

Most of the property lies above tree line and covers the north slope of the Dil Plateau. Elevations range from 1900 m (6300') to 2347 m (7700') towards the southwest corner of the claims. Vegetation, consisting mostly of alpine grasses, moss and scrubby spruce, is patchy but fairly abundant above 1980 m (6500').

Outcrop exposure is excellent although significant portions of the claim area are covered by glacially-eroded residual talus/boulder trains.

2.2 Claim Inventory

The Knight claim group is recorded in the Clinton Mining Division and consists of 80 units (2000 ha). However, due to overstaking, Inco Limited only has title to about 1080 ha or 54% of the staked area (see Figure 2). Details are as follows:

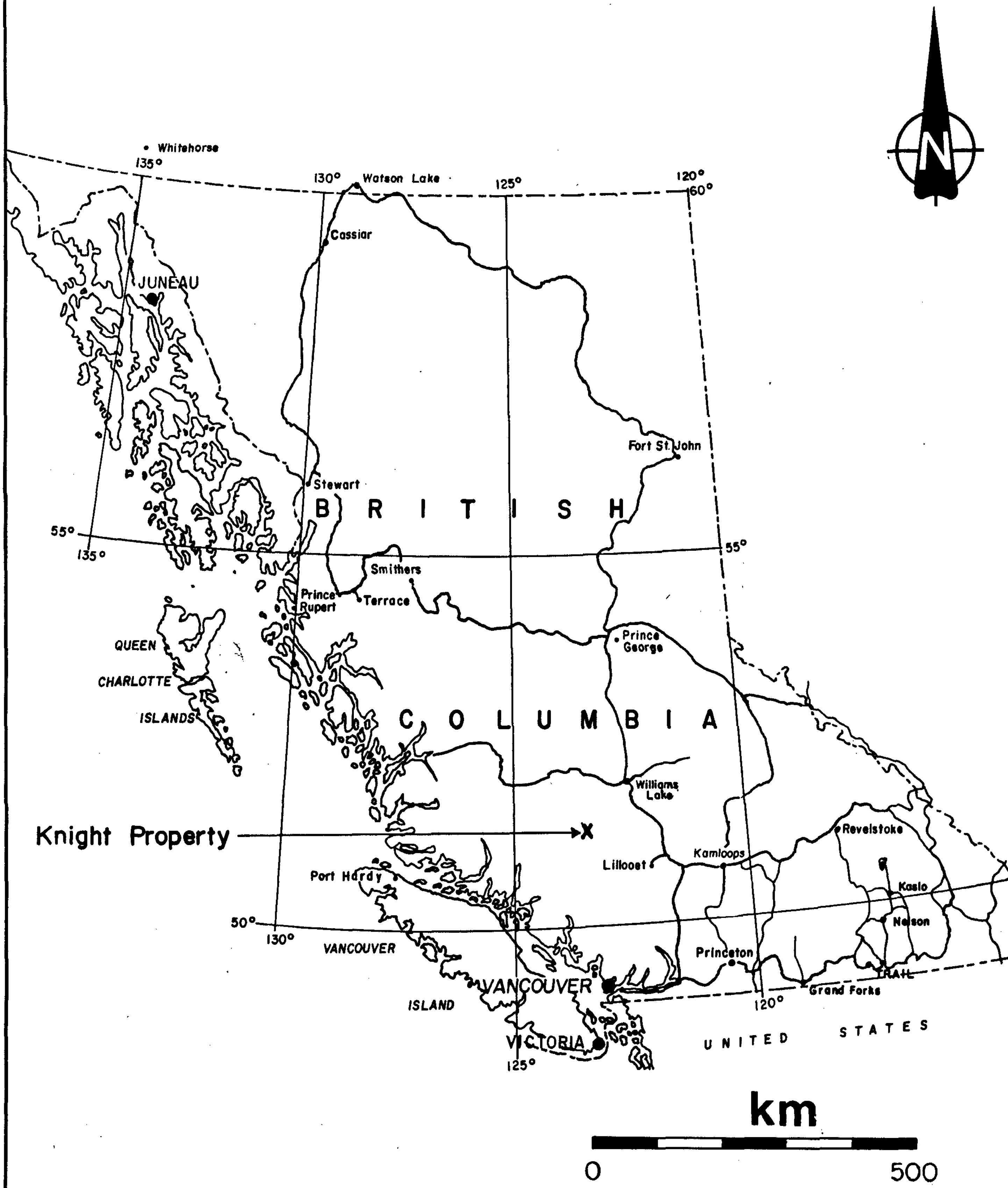
Knight Claim Group

Claim	Units	Record Date	Record No.
Knight 1	20	September 25, 1989	3123
Knight 2	20	September 25, 1989	3124
Knight 3	20	September 25, 1989	3125
Knight 4	20	September 25, 1989	3126

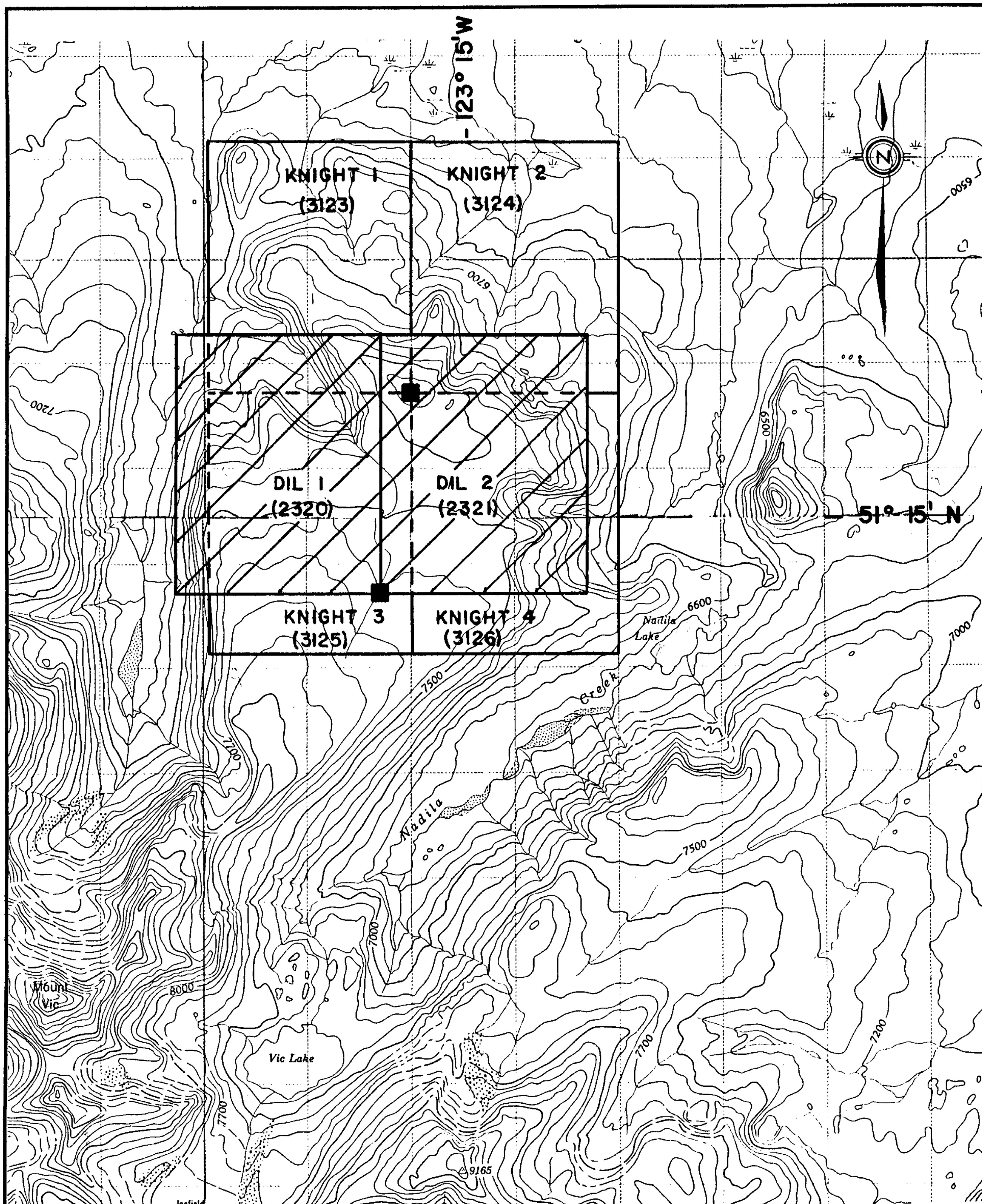
The Knight claims are 100% owned by Inco Limited.

2.3 Property History

Soil, silt sampling and very limited rock chip sampling were conducted on the property during the early 1980's by Barrier Reef Resources when the property was known as the Nad claim group. Prior to that there was no record of any work in the immediate area. At least 2 readily identifiable, coincident gold-arsenic-molybdenum anomalies in soils were located on the property now covered by the Knight 1 and 2 claims.



INCO Exploration and Technical Services Inc.		
Location Map		
SCALE 1≈10,000,000	LOCATION	DATE Nov. 5 /90
SURVEY BY	DRAWN BY D. Rawlek	NO. Figure 1



Scale (meters)

250 0 500 1000 2000 m

■ Legal Corner Post

INCO EXPLORATION AND TECHNICAL SERVICES INC.

Claim Location Map

SCALE 1:50,000	LOCATION	DATE Nov. 5 / 90
SURVEY BY	DRAWN BY D. Rawlek	NO. Figure 2

In 1987, the Dil 1 and 2 claims were staked by R. Durfeld of Williams Lake, B.C. to cover several rock and soil anomalies of up to 2.5 g/t Au that were apparently never followed up. Subsequent work identified float of vuggy banded epithermal quartz containing minor fine-grained pyrite, lesser arsenopyrite and stibnite in northeasterly trending boulder trains (McClintock, 1989). Values up to 19.3 g/t Au and 35.4 g/t Ag were reported.

In August 1989, a team of prospectors focused their regional work towards the Dil Plateau area after recognizing proximal float trains and scattered boulders of banded, vuggy epithermal-type quartz. The Dil property was thought to have expired at the time of staking, however, assessment work was filed on the last day while Inco personnel were working in the field and this resulted in a large segment of ground being overstaked by the present configuration of the Knight claims.

2.4 Work Summary

The operator of all work conducted on the Knight claim group is Inco Limited.

Between July 3 to September 15, 1990, the following field work was carried out by 2-4 man-crew led by D. Bohme: geological mapping, prospecting, rock chip sampling, stream sediment sampling and hand trenching. A total of 54 rock samples and 7 silt samples were collected.

It should be noted that 12 rock samples collected prior to the claims being staked are plotted on Maps 2 and 3 (Au, Ag results only) but these samples are not included in the cost statement submitted for assessment credit. Gold-silver results, sample locations and geology were plotted on 1:10,000 scale maps. Approximately 85% or 918 ha of the claim area Inco holds title to was mapped and/or prospected.

A petrographic report on the Knob Showing by C.H.B. Leitch is included in Appendix III.

3.0 REGIONAL GEOLOGY

Regionally, the property lies just south of the Yalakom transcurrent fault zone and was mapped by Tipper as being predominantly underlain by Kingsvale volcanic and sedimentary rocks of Upper Cretaceous age (Open File 534, Tipper). Irregularly shaped dyke-like bodies of feldspar porphyry and larger intrusions of diorite to quartz monzonite composition cut the Mesozoic volcanic and sedimentary sequences throughout this part of the belt southwest of the Yalakom fault. These intrusive rocks are part of the Coast plutonic complex and vary from Late Cretaceous to Eocene in age.

Locally thick piles of Miocene age basalt flows unconformably overlie the Mesozoic strata. These lavas are flat-lying and are usually exposed in areas of high topographic relief.

4.0 PROPERTY GEOLOGY AND ALTERATION

Property geology can be separated into three major divisions: the Lower Cretaceous Taylor Creek Group; the Upper Cretaceous Kingsvale Group; and the biotite to hornblende rich feldspar porphyry intrusive suite of probable Eocene age (see Map 1). Several large outcroppings of Chilcotin basalt caprock were observed in one locality.

The Taylor Creek Group is composed dominantly of clastic sedimentary rocks including dark grey-brown argillite, siltstone, chert-volcanic pebble conglomerate and minor greywacke. These rocks are extensively hornfelsed and usually rusty-brown weathering. Limonite-carbonate alteration, accompanied by minor disseminated or fracture veinlet pyrite mineralization, were commonly observed within the hornfelsed, variably fractured sediments particularly in close proximity to feldspar porphyry intrusions. Dykes cutting the sediments are quite common.

As evidenced in this section, intercalated outcroppings of chert-volcanic pebble conglomerate and argillaceous siltstone are variably altered by secondary silica, fine clay-sericite, carbonate, chlorite, pyrite and limonite usually as weakly to strongly concentrated fracture-controlled alteration. Microfractures of rusty limonite and chalcedonic quartz locally form intense stockworking within the clasts and matrix. Auriferous conglomeratic specimens carry between 1-5% medium-grained pyrite set in a chloritized-calcareous matrix. Some samples display hard, siliceous-looking hornfelsing with a later rusty carbonate overprint largely confined to fractures.

Kingsvale Group rocks were mapped in two localities on the property. At the north end, dark green, purple and grey andesite flow breccia and lapilli tuff predominate. Towards the south, the sedimentary component consists of argillaceous sandstone/argillite greywacke and minor conglomerate. The contact metamorphic effects on these rocks appears to be minimal.

Numerous dykes several metres wide and irregularly shaped feldspar porphyry bodies up to 400 m wide intrude the Taylor Creek lithologies and to a lesser degree, the Kingsvale volcanic sequence. These rocks typically display fine to course-grained feldspar phenocrysts with abundant hornblende and minor biotite set in a greyish/white feldspathic matrix. Chlorite-epidote-iron carbonate and argillic alteration is usually confined to fractures and may be accompanied by secondary quartz or pyrite. The main porphyry body occurs on the Dil claims where it forms irregular masses up to 300 m thick and occupies a 600 m wide northwesterly trending zone (McClintock, 1989). Adjacent sedimentary lithologies, in particular the Taylor Creek Group, are well hornfelsed.

4.1 Structure

The structural geology is highlighted by two northwest trending, steep angle normal faults. The southernmost fault is a major break which down drops Chilcotin Miocene basalt against Taylor Creek Group sediments cut by hornblende feldspar porphyry intrusive. The northernmost contact between the undeformed Kingsvale andesitic flows and the Taylor Creek Group rocks is a less apparent fault zone that is largely obscured by overburden. Some intense fracturing and carbonatization were noted in one locality.

The most apparent fracture development in the hornfelsed sediments trends between 115° - 140°AZ and dips about 50° to the southwest. These fractures are typically barren to strongly ankeritic. The general trend of the feldspar porphyry dykes is also northwest.

A subsidiary fracture set generally trending 20° - 40°AZ and steeply dipping to the southeast transects the Taylor Creek and intrusive rocks and is locally filled by chalcedonic banded to vuggy quartz as evidenced on the Dil property. Many fracture sets on the Knight property carry intense iron-carbonate replacement with some crustiform opaline type quartz, clay-sericite alteration and patchy limonite after pyrite. These narrow fractures are unmineralized except where they are almost entirely occupied by coarse quartz.

4.2 Mineralization

Gold mineralization was discovered in two localities: along the northern Dil-Knight claim boundary consisting of quartz vein float; and a discrete pyritic, hydrothermally altered conglomerate exposure along the eastern slope of a small knob about 200 m inside the claim boundary.

The boulders of vuggy, banded vein material straddling the claim boundary are remnant traces of the more prominent northeasterly trending boulder trains evident on the Dil property. Angular talus boulders exhibit vague banding, coarse hexagonal quartz growth, vuggy centres, minor carbonate and traces of pyrite along vein margins. The best assay out of 7 grab samples from this area was 3.87 g/t Au.

At the Knob Showing, disseminated-type gold mineralization is indicated by the results of several grab and rock chip samples of pyritic, variably siliceous hornfelsed and carbonatized conglomeratic sediments. All sampling was concentrated within a 50 by 30 m area of conglomerate outcroppings immediately upslope from the initial talus discovery of 2.68 g/t Au. The corresponding hand specimen sample re-assayed 9.22 g/t Au (RX 49770).

Semi-continuous rock chip sampling verified a bedrock source to the angular float. One panel chip sample over a 1.2 by 0.5 m area yielded 54.43 g/t Au and 8.3 g/t Ag. Other anomalous elements included Cu, As and Bi. This sample was described as a rusty ankeritic siliceous-looking hornfelsed conglomerate with argillaceous interbeds and minor pyrite. Other chip samples within several metres of this outcropping ranged between 0.036 to 0.421 g/t Au. Five additional talus grab samples were collected near the original discovery along the break in slope. Assays up to 15.08 g/t Au were obtained. Most of the samples exhibited between 2 - 5% pyrite and trace amounts of chalcopyrite. It is not clear from the petrographic report whether the gold mineralization is associated with the late-stage microfracturing event carrying chalcedonic quartz or the significant concentrations of disseminated sulphides and associated hydrothermal alteration.

Elsewhere on the property, samples of narrow, rusty quartz-carbonate-limonite fracture fillings did not yield any significant results. Argillaceous sediments displaying intense fracturing, carbonate replacement, slickensides and minor quartz were sampled on the east end of the property along one of the fault zones but results were negligible.

5.0 GEOCHEMISTRY

All stream sediment and rock samples collected by Inco personnel were prepared and analyzed by Acme Analytical Laboratories of Vancouver, B.C. A total of 54 rock and 7 silt samples were taken. Sample locations and gold-silver values were plotted for the entire data set, including 12 rock samples taken prior to the claims being staked (see Maps 2 and 3). These 12 samples were not included in the cost statement for assessment credit.

The certificates of analysis for all samples is included in Appendix I. A brief description of each rock and silt sample is included in Appendix II.

5.1 Field Procedure

About half of the rock samples copllected were taken over a measured width or area utilizing a chisel and a 1 kg hammer. Shovels and picks were used to excavate several small trenches. The remainder were selected grab samples.

Standard silt sampling techniques were employed using a trowel and a numbered kraft paper envelope.

5.2 Laboratory Procedure

For silt samples analyzed by Acme Labs, samples were dried in their envelopes and sieved to obtain a -80 mesh fraction. Then 0.5 gram sample is digested in 3 ml of 3:1:2 HCl-HNO_3 - H_2O solvent at 95°C for one hour and is then diluted to 10 ml with water. The digested sample is analyzed for 30 elements by inductively coupled argon plasma method (ICP). This leach is partial for Mn, Fe, Ca, P, La, Cr, Mg, Ba, Ti, B, W and limited for Na, K and Al.

For Au, a 10 g sample is ignited at 600°C and digested with 30 mls hot dilute aqua regia. Then 75 mls of clear solution is extracted with 5 mls Methyl Isobutyl Ketone. Gold is determined in the acid leach MIBK extract by graphite furnace Atomic Absorption analysis to a 1 ppb detection limit.

Rock samples were pulverized to -150 mesh and analyzed using the sample procedures outlined above. For Au, however, the 10 gram sample is preconcentrated using fire assay techniques and finished by ICP geochemical analysis.

5.3 Rock and Silt Geochemistry - Discussion

The Knob Showing area could be construed as the source of several gold anomalies obtained in the stream sediment survey. Silt geochemistry from two drainages below the gold occurrence show anomalies of between 10 - 26 ppb Au, 21 - 68 ppm As and 36 - 141 ppm Cu. A somewhat erratic but high background in Cu, As and Bi is recognized for the auriferous pyritic conglomerate showing.

Other stream sediment samples show that gold and other indicator elements are below anomalous levels. On the Dil property, the auriferous quartz boulder trains show the best trace element correlation with antimony with poorer correlations occurring with arsenic, lead and mercury (McClintock, 1989). Limited sampling on the Knight Property of the talus quartz float indicates similar anomalous levels of antimony, lead, arsenic and molybdenite.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Individual high gold assays up to 54.43 g/t Au were obtained from fractured, pyritic, pebble conglomerate exposures of the Lower Cretaceous Taylor Creek Group. Variable degrees of hydrothermal alteration as noted in thin section include intense microfracturing and stockworking carrying chalcedonic quartz, carbonate and limonite, quartz-sericite altered felsic clasts, siliceous hornfelsing and chlorite-hydrobiotite-pyrite alteration all apparently related to the erratic gold mineralization. The Knob Showing occurs very close to an intrusive heat source and may represent a localized, ?disseminated concentration of gold in a more permeable unit.

It is recommended that the Knob Showing area be exploited further by more detailed chip sampling, mapping, hand trenching and possible blasting. Prospecting and sampling other pyrite bearing, hydrothermally altered, conglomeratic exposures is also warranted.

The northeasterly trending epithermal-type quartz float boulder trains that barely extend onto the Knight Property are not considered a viable exploration target at the present time.

7.0 REFERENCES

Dawson, J.M. (1981): Geological and Geochemical Report on the NAD Claims, Clinton Mining Division, B.C., Assessment Report No. 8891.

McClintock, J.A., (1988): Geological Report on the Dil Claim Group, Clinton Mining Division, B.C., Assessment Report 16879.

McClintock, J.A. (1988): Geological Report on the DIL Claims, Clinton Mining Division, B.C., Assessment Report No. 18007.

McClintock, J.A. (1989): Geological and Geochemical Report on the Dil Claim Group, Clinton Mining Division, B.C.

McLaren, G.P. (1990): A Mineral Resource Assessment of the Chilco Lake Planning Area, B.C.M.E.M.P.R. Bulletin 81.

Tipper, N.W., Geological Survey of Canada Open File 534.

8.0 COST STATEMENT - Knight Claims

Personnel		
D. Bohme, Project Geologist July 3-September 15, 1990 18 days @ $200/day	$3600	
H. Klatt, Geologist July 3-July 14, 1990; 4 days @ 150/day	600	
I. Casidy, Assistant August 28-30, 1990 2 days @ 175/day	350	
D. Rawlek, Geologist July 3-September 15, 1990 16 days @ 116/day	1856	
S. Porter, Assistant July 3 - July 14, 1990 4 days @ $94/day	376	$6782
Geochemical Charges		
54 rock samples @ $14.00/sample	756	
7 silt samples @ $9.00/sample	63	819
Transportation		
Helicopter 206B 10.2 hrs. @ 690/hr including fuel	7038	
4x4 truck rental 5 days @ $90/day including fuel	450	7488
Contract Work		
Petrographic descriptions		960
Accommodation		
Motels		584
Meals and Groceries		1020
Field Supplies		
Flagging, bags, camp gear, etc.	733	
Reproductions, airphotos	346	
Typing, drafting, copying	900	1979
	TOTAL	$19,632

9.0 STATEMENT OF QUALIFICATIONS

I, Dennis Martin Bohme, of the City of Vancouver, in the Province of British Columbia, do hereby certify that:

1. I reside at 57 East 40th Avenue, Vancouver, British Columbia, V5W 1L3.

2. I am a graduate of the British Columbia Institute of Technology with a Diploma in Mining Technology, 1980.

3. I am a graduate of the Montana College of Mineral Science and Technology, in Butte, Montana, with the degree of Bachelor of Science in Geological Engineering, 1985.

4. I have been employed in mining exploration as a technician and a geological engineer with Newmont Exploration of Canada Limited from May 1980 until February 1989, except for 18 months when I was attending university.

5. I am a registered Professional Engineer in the Province of British Columbia.

6. I am a Project Geologist with Inco Exploration and Technical Services Inc. with offices at 512-808 Nelson Street, Vancouver, B.C., V6Z 2H2.

7. I personally carried out and supervised much of the work described in this report.

PROFESSIONAL PROVINCE OF DENNIS M. BOHME BRITISH COLUMBIA ENGINEER

Dennis M. Bohme, P.Eng.
November 9, 1990
Vancouver, B.C.

APPENDIX I

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
SX 074512	5	141	7	51	.1	32	12	301	3.51	68	5	ND	2	61	.2	11	2	68	.42	.077	9	50	.68	110	.08	4	2.40	.02	.07	1	26
SX 074513	4	112	7	67	.1	30	12	425	3.61	67	5	ND	1	86	.2	9	3	70	.53	.086	9	48	.72	93	.06	4	2.10	.02	.07	1	10
SX 074514	1	36	15	104	.1	39	14	561	3.66	21	5	ND	2	70	.2	2	2	55	.64	.071	9	38	.87	71	.09	4	2.27	.03	.05	2	25
SX 074515	1	32	14	115	.1	38	15	710	3.64	17	5	ND	2	48	.2	3	2	56	.47	.071	9	39	.85	63	.07	3	2.36	.02	.06	2	1
SX 074516	1	40	10	126	.1	53	19	1155	5.43	28	5	ND	4	60	.2	2	2	60	.55	.087	14	37	.78	93	.01	3	1.83	.02	.08	1	3
SX 074523	1	25	7	72	.1	12	9	542	3.65	4	5	ND	3	186	.2	2	2	84	1.17	.058	6	17	.56	128	.02	2	3.32	.07	.06	1	5
SX 074529	2	101	13	126	.1	43	22	1038	5.31	51	5	ND	3	64	.2	4	2	64	.52	.080	12	39	1.04	105	.01	2	2.67	.02	.07	1	6

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Inco Expl. & Tech. Services PROJECT BC 90-01 File # 90-2469 Page 1

P.O. Box 12134, 512 - 808 Nelson St., Vancouver BC V6Z 2H2 Submitted by: D. BOHME

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
RX 047180	2	15	8	126	.1	20	16	895	4.06	51	5	ND	1	338	1.5	4	2	74	13.30	.017	2	10	1.20	101	.01	5	.17	.01	.02	1	6
RX 047181	2	336	17	42	.2	42	15	359	5.53	98	5	2	1	56	.2	3	3	48	.65	.048	6	40	.70	82	.03	2	2.26	.17	.14	1	2683
RX 047207	3	55	4	28	.1	41	14	292	3.64	5	5	ND	2	62	.2	2	4	102	1.00	.053	12	62	1.26	49	.01	5	2.63	.19	.07	1	9
RX 047208	4	4	2	30	.1	36	10	425	3.63	7	5	ND	2	59	.7	2	4	78	.97	.061	12	42	1.45	62	.04	3	2.22	.08	.20	1	1
RX 047209	1	7	5	29	.1	9	7	1266	4.62	27	5	ND	1	397	2.4	4	4	43	15.02	.017	4	14	4.59	154	.01	4	.24	.02	.03	1	31
RX 047210	1	11	2	27	.1	6	6	1448	4.62	38	5	ND	1	577	3.0	2	3	34	16.00	.013	3	8	5.98	54	.01	6	.31	.02	.03	1	1
RX 047211	4	19	4	21	.1	5	4	1278	4.81	22	5	ND	1	416	3.5	2	2	27	17.40	.008	3	7	6.04	209	.01	3	.14	.02	.02	1	7
RX 047212	1	4	9	13	.1	5	2	958	3.17	13	5	ND	1	499	2.2	2	2	25	12.37	.004	2	7	4.99	212	.01	2	.10	.01	.01	1	1
RX 047213	1241	3087	2	51	8.2	10	11	162	5.83	56	5	ND	1	25	.3	4	8	63	.18	.042	5	26	1.03	35	.01	8	1.24	.05	.07	1	144
RX 047214	79	14	117	16	.9	4	1	41	.64	41	5	ND	1	2	.2	10	2	3	.01	.002	2	5	.01	10	.01	2	.03	.01	.01	1	74
RX 047215	158	10	124	26	1.7	11	1	50	.48	57	5	ND	1	4	.2	17	2	5	.01	.002	2	10	.01	6	.01	2	.04	.01	.01	1	82
RX 047216	103	19	241	44	1.0	6	1	40	1.01	51	5	ND	1	4	.2	18	2	5	.01	.004	2	5	.01	5	.01	3	.06	.01	.01	1	3872
RX 047217	650	11	363	65	5.5	12	2	80	.70	157	5	ND	1	8	.5	53	2	6	.01	.002	2	10	.01	23	.01	2	.02	.01	.01	1	450
RX 047218	243	40	147	16	5.2	6	1	133	.62	43	5	ND	1	5	.2	20	2	6	.02	.003	2	6	.01	19	.01	2	.05	.01	.01	1	998
RX 047219	41	17	73	7	.5	10	1	90	.54	58	5	ND	1	4	.2	6	2	5	.02	.003	2	9	.01	6	.01	2	.04	.01	.01	1	45
RX 047220	38	33	128	16	.4	7	1	62	.60	62	5	ND	1	4	.2	9	2	3	.06	.002	2	5	.02	1	.01	2	.03	.01	.01	1	33
RX 047221	1	62	4	21	.1	39	16	284	4.47	12	5	ND	1	92	1.5	5	2	88	1.04	.057	5	47	1.54	137	.11	3	3.57	.25	.68	1	1
STANDARD C/AU-R	18	59	41	132	7.2	71	32	1027	4.12	41	18	6	36	51	18.4	16	22	56	.53	.097	35	57	.92	181	.08	34	1.94	.05	.14	12	513

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

DATE RECEIVED: JUL 12 1990 DATE REPORT MAILED: July 17/90 SIGNED BY.......... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
RX 047226	2	13	6	19	.1	8	8	371	2.57	19	5	ND	1	42	.2	2	2	39	.70	.062	2	6	1.12	8	.03	4	1.86	.18	.03	1	4
RX 047227	1	34	5	34	.1	30	13	1293	3.92	22	5	ND	1	218	.7	6	2	39	6.23	.023	3	14	1.92	19	.01	4	.36	.01	.03	1	5
RX 047228	5	13	8	27	.1	186	18	1370	8.02	10	5	ND	1	10	.2	2	2	73	.03	.012	2	12	.03	192	.01	2	.09	.01	.01	1	2
RX 047229	1	24	8	71	.1	17	9	784	3.58	6	5	ND	1	90	.7	2	2	60	4.13	.067	4	19	.71	43	.12	2	5.31	.27	.04	1	5

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Inco Expl. & Tech. Services PROJECT BC 90-01 File # 90-4031

P.O. Box 12134, 512 - 808, Vancouver BC V6Z 2H2 Submitted by: D. BOHME

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
RX 046234	2	84	9	151	.3	72	13	462	3.47	12	5	ND	1	41	1.1	2	6	86	.82	.059	4	96	.88	45	.12	2	1.84	.18	.19	1	11
RX 046235	1	24	3	36	.2	15	8	1236	5.16	1003	5	ND	2	610	.3	3	2	68	9.19	.037	8	34	2.14	13	.01	10	1.50	.03	.05	2	11
RX 046236	1	198	5	40	.2	40	13	395	4.16	2	5	ND	1	60	.3	2	2	70	.69	.049	5	55	.87	135	.07	2	2.45	.21	.25	1	22
RX 046237	1	117	10	62	.2	51	15	577	4.51	27	5	ND	2	71	.2	2	2	83	.72	.054	7	58	1.13	79	.07	3	2.75	.12	.15	1	21
RX 046238	1	30	6	31	.1	47	12	486	3.13	4	5	ND	1	69	.2	2	2	70	.94	.066	6	55	.82	269	.04	3	2.41	.22	.07	1	1
RX 046239	2	39	3	68	.1	48	16	523	4.36	7	5	ND	1	84	.2	2	2	72	.58	.073	10	39	1.02	209	.07	2	3.08	.17	.18	1	6
RX 046240	2	32	2	43	.1	50	17	468	4.62	16	5	ND	1	56	.2	2	2	59	.34	.053	9	40	1.27	132	.07	3	2.96	.09	.21	1	15
RX 046241	1	57	8	28	.1	50	14	398	3.78	21	5	ND	2	38	.2	2	2	70	.40	.070	8	54	.94	168	.03	3	2.30	.11	.10	1	6
RX 046242	1	36	7	33	.1	50	15	473	4.19	11	5	ND	1	40	.2	2	2	67	.34	.071	9	50	.98	234	.07	3	2.43	.08	.21	1	8
RX 046243	1	195	4	16	.1	54	12	145	2.98	11	5	ND	1	22	.2	2	2	72	.26	.052	8	68	.97	112	.04	2	1.38	.08	.22	1	5
RX 046244	1	185	4	17	.1	56	12	146	2.75	2	5	ND	1	29	.2	2	2	79	.49	.135	9	73	.99	127	.04	3	1.48	.10	.23	1	1
RX 046245	1	173	8	17	.1	52	11	164	3.04	13	5	ND	2	45	.3	2	2	98	.42	.061	8	81	1.18	186	.11	2	2.03	.15	.53	1	4
RX 046246	1	246	2	16	.1	47	12	156	3.20	15	5	ND	2	43	.3	2	2	82	.38	.065	8	71	.94	141	.08	4	1.89	.15	.38	1	8
RX 046247	2	133	7	37	.5	32	10	447	7.71	61	5	ND	2	65	.3	2	3	81	.30	.084	12	33	1.36	67	.02	3	2.76	.09	.16	1	42
RX 046248	1	53	3	40	.1	50	15	568	4.40	33	5	ND	1	69	.2	2	2	65	.37	.051	9	40	1.08	84	.04	3	2.62	.11	.19	1	20
RX 046249	2	82	4	29	.1	49	12	445	3.62	173	5	ND	1	47	.2	2	2	53	.34	.063	7	40	.73	102	.02	2	1.78	.09	.10	1	130
RX 046250	2	210	4	17	.1	18	7	201	6.57	240	5	ND	1	72	.2	2	2	57	.14	.059	7	36	.35	107	.01	3	1.18	.08	.11	1	163
RX 046251	1	393	3	60	8.3	35	9	405	5.78	147	5	48	1	58	.2	2	62	43	.42	.048	4	24	.30	48	.01	5	.72	.04	.06	1	54435
RX 046252	1	28	6	53	.1	54	13	508	3.73	4	5	ND	1	77	.3	2	2	65	.54	.062	10	43	.92	76	.02	2	2.33	.16	.10	1	36
RX 046253	1	40	4	68	.1	50	15	682	4.06	17	5	ND	1	39	.2	2	2	50	.28	.047	8	40	.94	97	.02	2	2.06	.07	.10	1	421
RX 046254	1	92	3	84	.1	52	17	470	5.13	42	5	ND	1	65	.2	2	2	54	.32	.059	8	41	.92	54	.01	2	2.49	.08	.10	1	20
RX 046255	1	59	5	60	.1	50	17	741	4.18	8	5	ND	1	69	.2	2	2	68	.93	.075	7	42	.87	38	.01	3	2.11	.13	.04	1	48
RX 046256	1	50	4	61	.1	49	14	411	4.59	19	5	ND	1	43	.2	2	2	43	.23	.064	9	30	1.02	66	.01	3	2.46	.06	.14	1	8
RX 046257	1	230	5	29	.1	29	16	296	6.66	75	5	ND	1	49	.2	2	2	57	.34	.083	7	39	.59	78	.01	3	1.77	.09	.06	1	173
RX 046258	1	21	4	52	.1	47	15	425	5.00	10	5	ND	1	84	.2	2	2	62	.45	.050	7	37	1.08	82	.03	2	2.77	.13	.14	1	2
RX 046259	1	77	4	49	.1	40	13	486	4.95	42	5	ND	1	49	.2	2	2	57	.38	.057	6	37	.80	63	.01	2	2.28	.11	.06	1	42
RX 046260	1	91	7	85	.1	53	17	677	5.12	10	5	ND	1	55	.2	2	2	84	.57	.061	7	60	1.07	49	.02	4	2.93	.13	.03	1	16
RX 046261	1	380	2	28	.3	30	11	323	4.67	52	5	ND	1	53	.3	2	2	65	.48	.044	5	44	.68	159	.05	2	1.94	.16	.22	1	745
RX 046262	5	858	5	48	.7	60	41	333	11.66	8	5	13	1	29	.6	2	20	50	.39	.039	3	47	.69	15	.03	5	2.17	.08	.09	1	15075
RX 046263	1	31	3	63	.1	53	9	725	3.30	18	5	ND	1	43	.2	2	2	65	.45	.064	9	46	.92	73	.04	2	1.90	.11	.08	1	71
RX 046264	2	31	2	25	.1	48	16	385	3.46	8	5	ND	1	40	.3	2	2	66	.43	.061	6	49	.81	274	.05	3	1.71	.13	.15	1	263
RX 046265	1	17	2	29	.1	50	10	550	3.02	5	5	ND	1	57	.3	2	2	72	.58	.069	8	49	.96	416	.07	2	1.98	.17	.28	1	18
STANDARD C/AU-R	19	60	38	132	7.1	73	31	1045	3.95	42	21	7	39	52	19.0	16	20	59	.51	.096	40	60	.89	183	.09	37	1.89	.06	.14	11	491

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

DATE RECEIVED: AUG 31 1990 DATE REPORT MAILED: Sept 7/90. SIGNED BY.......... .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
RX 049770	3	807	9	50	.6	51	37	320	10.38	9	5	8	1	33	.2	2	9	46	.49	.042	3	54	.77	31	.04	6	2.35	.10	.18	1	9216
STANDARD C	19	57	39	130	7.1	72	32	1051	3.95	38	25	6	38	53	18.4	16	22	56	.51	.096	38	58	.89	181	.07	35	1.88	.06	.14	12	-

APPENDIX II

INCO GOLD

TRAVERSE NUMBER ____________ **PROJECT** KNIGHT Claims **GEOLOGIST(S)** H. Klatt

N.T.S. 920-6 **AREA** Dil Plateau Area, B.C. **DATE** July 9, 1990

SAMPLE NUMBER	SAMPLE TYPE RX Rock, Talus	SX Stream Silt, Soil	Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (Elev.)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (p.p.m. / % /oz. per ton) Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Zn ppm
SX 74529		Silt		6500'	51°15' 123°17'	Good silt, low organics, creek is about 1 m wide.	6	.1	51	4	2	101	126

INCO GOLD

TRAVERSE NUMBER

N.T.S. 920-6

PROJECT KNIGHT Claims

AREA Dil Plateau Area, B.C.

GEOLOGIST(S) H. Klatt

DATE July 9, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SX Stream Silt, Soil	Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (Elev.)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION: Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (p.pm. / % /oz. per ton) Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Zn ppm
SX 74523		Silt		6850'	51°15' 123°14'	Sandy silt, no organics, creek is about 0.5 m wide.	5	.1	4	2	1	25	72

INCC GOLD

TRAVERSE NUMBER

N.T.S. 920-6

PROJECT KNIGHT Claims

AREA Dil Plateau Area, B.C.

GEOLOGIST(S) H. Klatt

DATE July 9, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (elev.)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Zn ppm
SX 74512		Silt		6840'	51°16' 123°16'	Good sandy silt, low organics, creek is about 1 m wide.	26	.1	68	11	5	141	51
SX 74513		"		6590'	51°16' 123°15'	Good sandy silt, low organics, creek is about 1 m wide.	10	.1	67	9	4	112	67
SX 74514		"		6580'	" "	Good sandy silt, low organics, creek is about 1.5 m wide.	25	.1	21	2	1	36	104
SX 74515		"		6780'	" "	Good sandy silt, no organics, creek is about 1 m wide.	1	.1	17	3	1	32	115
SX 74516		"		6490'	51°16' 123°14'	Good sandy gravelly silt, low organics, creek is about 1 m wide.	3	.1	28	2	1	40	126

RESULTS (ppm. / % /oz. per ton)

INCO GOLD

TRAVERSE NUMBER

N.T.S. 920-6

PROJECT KNIGHT Claims

AREA Dil Plateau Area, B.C.

GEOLOGIST(S) H. Klatt

DATE August 21, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION: Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % /oz. per ton): Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Fe %
RX 49770	Talus		Grab		51°16' 123°15'	Hand specimen from Harvey's previous sample RX 47181 of pyritized chert pebble conglomerate.	9216	.6	9	2	3	807	10.38

INCO GOLD

TRAVERSE NUMBER ______
N.T.S. 920-6

PROJECT CLINTON Project
AREA Knight Claim, Dil Plateau, B.C.

GEOLOGIST(S) D. Bohme
DATE August 29, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (metres)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION: Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % /oz. per ton) Au ppb	Ag ppm	Cu ppm			
RX 46234	Talus		Grab	0.2x0.3		Compact chert pebble conglomerate, minor pyrite.	11	.3	84			
RX 46235	Rock		Chip	0.5x0.5		Rusty carbonatized feldspar intrusive, ankerite veinlets.	11	.2	24			
RX 46236	Talus		Grab	0.5 x 1		Weakly pyritic chert pebble conglomerate.	22	.2	198			
RX 46237	"		"	0.3x0.3		Grey/black matrix hornfelsed conglomerate.	21	.2	117			
RX 46238	Rock		Chip	1.5		Weakly pyritic fine-grained chert pebble conglomerate.	1	.1	30			
RX 46239	"		"	"		Dark grey matrix hornfelsed conglomerate, minor siltstone.	6	.1	39			
RX 46240	"		"	"		Grey fine-grained pyritic hornfelsed siltstone, minor conglomerate.	15	.1	32			
RX 46241	"		"	"		Grey/black matrix chert pebble conglomerate, minor pyrite.	6	.1	57			
RX 46242	"		"	"		As Above	8	.1	36			
RX 46243	Talus		Grab	0.5x 1		Bleached, siliceous, pebble conglomerate, fine pyrite, arsenopyrite throughout.	5	.1	195			
RX 46244	"		"	" "		Bleached, siliceous conglomerate, fine-grained grey matrix, pyritic fractures.	1	.1	185			

INCO GOLD

TRAVERSE NUMBER ______ PROJECT CLINTON Project GEOLOGIST(S) D. Bohme

N.T.S. 920-6 AREA Knight Claim, Dil Plateau, B.C. DATE August 29, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (metres)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (p.pm. / % /oz. per ton) Au ppb	Ag ppm	Cu ppm			
RX 46245	Talus		Grab	0.5 x 1		Grey/black conglomerate with hairline fractures of pyrite + pods.	4	.1	173			
RX 46246	"		"	0.5 x 1		Moderately pyritic conglomerate, grey/black matrix.	8	.1	246			
RX 46247	Rock		Chip	1.5		Rusty manganese stained conglomerate, chloritized matrix.	42	.5	133			
RX 46248	"		"	"		Mostly hornfelsed siltstone, minor pyrite.	20	.1	53			
RX 46249	"		"	"		Hornfelsed pyritic pebble conglomerate.	130	.1	82			
RX 46250	"		"	1		Fine to medium-grained pods of pyrite in greenish pebble conglomerate.	163	.1	210			
RX 46251	"		"	1.2		Strongly carbonatized conglomerate, ankeritized.	54435	8.3	393			
RX 46252	"		"	1.8		Weakly pyritized chert pebble conglomerate.	36	.1	28			
RX 46253	"		"	1.7		As Above	421	.1	40			
RX 46254	"		"	1.2		Wispy layers of conglomerate in carbonatized siltstone.	20	.1	92			
RX 46255	"		"	1.5		Fine-grained pyrite in pebble conglomerate.	48	.1	59			
RX 46256	"		"	2		Bleached grey, carbonatized siltstone, minor pyrite.	8	.1	50			

INCO GOLD

TRAVERSE NUMBER
N.T.S. 920-6

PROJECT CLINTON Project
AREA Knight Claim, Dil Plateau, B.C.

GEOLOGIST(S) D. Bohme
DATE August 29, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (metres)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION: Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (p.p.m. / % /oz. per ton): Au ppb	Ag ppm	Cu ppm				
RX 46257	Rock		Chip	0.6x0.2		Between 1-2% pyrite in chloritized rusty conglomerate.	173	.1	230				
RX 46258	"		"	1.5		Slightly bleached hornfelsed manganese-stained siltstone.	2	.1	21				
RX 46259	"		"	2		Narrow rusty conglomerate layer, pyritized patches.	42	.1	77				
RX 46260	"		"	1.3		Wispy patches of pebble conglomerate in greyish rusty siltstone.	16	.1	91				
RX 46261	Talus		Grab	0.2x0.2		Between 1-2% pyrite in chloritized pebble conglomerate.	745	.3	380				
RX 46262	"		"	" "		By RX 47181, 1-3% pyrite in chloritized pebble conglomerate.	15075	.7	858				
RX 46263	"		"	" "		By RX 47181, minor pyrite in chert pebble conglomerate.	71	.1	31				
RX 46264	"		"	" "		By RX 47181, about 1% pyrite in chloritic pebble conglomerate.	263	.1	31				
RX 46265	"		"	" "		By RX 47181, less than 1% pyrite, manganese stained chloritized chert pebble conglomerate.	18	.1	17				

INCO GOLD

TRAVERSE NUMBER

N.T.S. 920-6

PROJECT KNIGHT Claims

AREA Dil Plateau Area, B.C.

GEOLOGIST(S) H. Klatt

DATE July 8, 1990

SAMPLE NUMBER	SAMPLE TYPE RX Rock, Talus	SX Stream Silt, Soil	Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % / oz. per ton) Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Zn ppm
RX 47180	Talus		Grab		51°16' 123°14'	Chalcedonic quartz in Fe-carbonate breccia, no sulphides.	6	.1	51	4	2	15	126
RX 47181	"		"		51°16' 123°15'	Talus boulders of rusty weathering chert pebble conglomerate mixed with feldspar porphyry, pyrite is about 2%.	2683	.2	98	3	2	336	42

INCO GOLD

TRAVERSE NUMBER ______ PROJECT KNIGHT Claims GEOLOGIST(S) D. Bohme

N.T.S. 920-6 AREA Dil Plateau Area, B.C. DATE July 8, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (metres)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Pb ppm
RX 47207	Rock		Grab	5 x 5	51°16' 123°16'	Mn-Fe stained siliceous siltstone, minor network of quartz.	9	.1	5	2	3	55	4
RX 47208	"		Chip	0.3	" "	Hornfelsed, siliceous, pyritic contact with feldspar porphyry.	1	.1	7	2	4	4	2
RX 47209	Talus		Grab	2 x 2	51°16' 123°17'	Ferroan dolomite veinlets with crustiform quartz, thin laminae.	31	.1	27	4	1	7	5
RX 47210	Rock		Chip	1	" "	Shear related iron-carbonate zone, some quartz replacement.	1	.1	38	2	1	11	2
RX 47211	"		Grab	0.3	" "	Quartz rich fracture zone, banded quartz, some rusty carbonate.	7	.1	22	2	4	19	4
RX 47212	Talus		"	1 x 1	" "	Finely banded chalcedonic quartz, vuggy, minor carbonate.	1	.1	13	2	1	4	9
RX 47213	Rock		Chip	0.2	" "	Narrow fracture with pyrite, minor quartz-carbonate.	144	8.2	56	4	1241	3087	2
RX 47214	Talus		Grab	0.2	51°16' 123°16'	Coarse-crystalline banded quartz, vuggy crystals.	74	.9	41	10	79	14	117
RX 47215	"		"	0.3	" "	Coarse quartz, possible amethystine quartz, hexagonal crystals.	82	1.7	57	17	158	10	124
RX 47216	"		"	0.3	" "	Radiating mosaic of hexgonal quartz crystals banding.	3872	1.0	51	18	103	19	241

INCO GOLD

TRAVERSE NUMBER

N.T.S. 920-6

PROJECT KNIGHT Claims

AREA Dil Plateau Area, B.C.

GEOLOGIST(S) D. Bohme

DATE July 8, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SX Stream Silt, Soil	Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (metres)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION: Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % /oz. per ton): Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Pb ppm
RX 47217	Talus		Grab	0.3	51°16' 123°16'	Cellular, banded quartz; brecciated fragments.	450	5.5	157	53	650	11	363
RX 47218	"		"	0.2	" "	Minor pyrite in banded coarse-crystalline quartz, rusty vugs.	998	5.2	43	20	243	40	147
RX 47219	"		"	0.2	" "	Banded, fine to coarse-grained quartz.	45	.5	58	6	41	17	73
RX 47220	"		"	0.4	" "	Large boulder, rusty quartz, vugs to thin laminated quartz.	33	.4	62	9	38	33	128
RX 47221	"		"	0.5x0.5	51°16' 123°15'	Gossaneous pyritic sediment, hornfelsed siltstone.	1	.1	12	5	1	62	4

INCO GOLD

TRAVERSE NUMBER

N.T.S. 920-6

PROJECT KNIGHT Claims

AREA Dil Plateau Area, B.C.

GEOLOGIST(S) D. Bohme

DATE July 8, 1990

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA (metres)	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Zn ppm
RX 47226	Talus		Grab	0.3x0.3	51°15' 123°14'	Grey cherty quartz-rich feldspar-pyritic porphyry.	4	.1	19	2	2	13	19
RX 47227	Rock		Chip	0.5	" "	Carbonatized sediment with polished slickensides, minor quartz.	5	.1	22	6	1	34	34
RX 47228	Talus		Grab	0.2x0.2	" "	Cherty vein segregations in bleached greywacke.	2	.1	10	2	5	13	27
RX 47229	"		"	0.2x0.2	51°15' 123°17'	White, fine-grained quartz veinlets, weak stockwork in siltstone.	5	.1	6	2	1	24	71

INCO LIMITED

TRAVERSE NUMBER

N.T.S. 920-6, 3

PROJECT KNIGHT Claims

AREA Dil Plateau, B.C.

GEOLOGIST(S)

DATE October 2, 1990

SAMPLE NUMBER	SAMPLE TYPE RX Rock, Talus	SX Stream Silt, Soil	Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % /oz. per ton) Au ppb	Ag ppm	As ppm	Sb ppm	Mo ppm	Cu ppm	Pb ppm
BD 246	Talus		Grab		51°15' 123°14'	Pyritic andesite porphyry.	11	0.1	537	4	1	47	5
BD 247	"		"		" "	Ankeritic - quartz, in felsenmeer.	6	0.1	2	6	1	23	2
BD 248	"		"		" "	Proximal, banded quartz vein, minor pyrite, malachite noted.	10	0.6	6	58	5	353	4
TR 628	"		"		" "	Fine grained pinkish, crystalline sugary quartz, veined by cox-comb quartz.	145	1.8	83	21	152	39	184
TR 629	"		"		" "	Fine-grained, banded quartz, fine-grained sugary, micro - to finely vuggy.	66	0.9	126	18	75	23	202
TR 630	"		"		" "	Bleached argillaceous sediments.	3	0.2	73	11	16	123	3
TR 631	"		"		" "	Chips off small gossanous rubble exposures of hornfelsed sediments.	13	0.1	107	8	29	187	5
PS 801	"		"		" "	Calcite-carbonate breccia.	4	0.4	7	3	2	15	42
PS 802	"		"		" "	Fine-grained silica-carbonate vein material.	13	0.7	11	6	7	14	118
PS 803	"		"		" "	Cherty quartz filled breccia, no sulphides.	5	0.6	9	9	3	22	8
PS 804	"		"		" "	Banded, fine-grained quartz float boulder.	139	0.9	14	32	162	64	466
PS 805	"		"		" "	Sugary quartz, minor pyrite float boulder.	277	3.2	15	69	206	25	141

APPENDIX III

PETROGRAPHIC REPORT ON EIGHT THIN SECTIONS FROM THE KNIGHT CLAIMS, SOUTHERN CHILCOTIN, B.C.

Report for: Dennis Bohme, P. Eng. Invoice attached
Project Geologist
INCO Exploration
Suite 512, 808 Nelson Street
Vancouver, B.C.
V6Z 2H2

Sept. 19, 1990

Samples submitted: RX 46249, 46250, 46251, 46257, 46261, 46262, 46263, 46264.

SUMMARY:

The rocks of this suite are all rusty-weathering clast-supported (matrix-poor) conglomerates characterized by well rounded light grey "chert" pebbles that are actually composed of intensely silicified and chalcedonic quartz vein stockworked ?felsic volcanic. Remnant spherulitic or phyric textures are apparent in places, and the lack of mafic or abundant Fe-Ti oxide relics suggests a former felsic composition. There are also common smaller, more angular clasts of mafic-intermediate volcanic composed of typical scattered relic mafic and plagioclase phenocrysts in a matrix of fine plagioclase microlites, chlorite, opaque oxide and clay-sericite, and rare clasts of plutonic igneous rock (diorite and ?granite), or foliated quartz clasts that could be from a metamorphic terrane. Shards of clear (non-chalcedonic) and clouded (chalcedonic) quartz and lesser plagioclase are common in most samples, averaging about 0.5 to 1 mm in diameter. In some samples, there are moderate to large (1 mm to 2 cm) clasts of volcanic wacke, composed of fine detrital quartz, twinned plagioclase, and chloritized mafic shards in a fine chloritic (rarely incipiently biotite hornfelsed) matrix.

The intense chalcedonic quartz stockworking in the felsic clasts does not contain any sulfide or oxidized sulfide, and does not appear to correlate with Au values. Instead, the limonite fracturing, with associated coarse (0.1-0.2 mm) chlorite-hydrobiotite-muscovite-pyrite-rare epidote and calcite, appears to be related to the gold mineralization. However, no actual grains of gold were found in the one (highly pyritic) polished thin section cut (46262, 15 g/t Au). Possibly 46251 (54 g/t Au) would be a logical choice if the locus of the gold is to be further investigated. In response to your questions, I would not normally associate Bi (or substantial Au, for that matter) with a porphyry system except, as you note, where it is associated with a skarn system. The Bi contents are actually not very high (almost 1:1 Bi:Au) and may indicate the presence of Au-Bi tellurides. If so, they might have a negative implication for recovery of the Au.

46251: LIMONITIC QUARTZ-VOLCANIC PEBBLE CONGLOMERATE

Rusty-weathering grit/conglomerate containing varied clasts of sedimentary and volcanic rocks (chert pebbles, etc.) up to 1 cm diameter. It is strongly anomalous in As (173 ppm but contains only 130 ppb Au and 82 ppm Cu. The rock is hard (indurated), not magnetic and does not react to cold dilute HCl. In thin section, the mineralogy is dominated by quartz:

Quartz (partly secondary)	45%
Feldspar (mainly plagioclase, partly albitized)	30%
Chlorite	10%
Limonite	5%
Sericite (muscovite)	5%
Clay	5%
Carbonate	<1%

This rock is composed of a large variety of clasts, ranging from almost entirely quartz (mainly secondary, veins and stockworked) to volcanic. The matrix, which accounts for about 10-15% of the rock, is made up of smaller fragments of the same and extremely fine-grained chlorite, sericite, ?clay, quartz, and limonite. It is virtually opaque in thin section, and has an average grain size of about 5 microns.

Many of the quartz-rich clasts consist mainly of a stockwork of quartz veins that make up 10 to 90% of the fragment. These veins are from 0.02 to 2 mm thick and have a bladed cockscomb texture in places suggestive of epithermal deposits. Abundant zonally distributed (primary) fluid inclusions give a chalcedonic appearance to the quartz. The veins are distinctly cut off at the fragment boundaries, so there does not appear to be any veining after conglomerate formation. The host rock to these veins appears in most cases to be a highly altered felsic volcanic, with vaguely defined 0.1 mm clots of secondary silica (?after former plagioclase) in a fine quartz-feldspar-chlorite-sericite matrix.

The volcanic clasts range widely in texture and composition, from relatively coarse-grained mafic-intermediate (0.5 mm long plagioclase laths and chloritized ?mafic relics) possible dyke or sill rocks to very fine-grained felsic (0.5 mm quartz and plagioclase phenocrysts in a fine feldspathic matrix) flow or tuffaceous rocks. Parts of the latter are strongly sericitized. Some have vaguely spheroidal texture and were probably extrusive flows; the quartz stockworking is particularly noticeable in these. In places, they have a strong alteration to a pale, vaguely brownish mica that could be either limonit-stained muscovite or bleached secondary biotite. It is too fine-grained (10-20 micron diameter) to be sure. There is also some hydrobiotite mixed with chlorite in places. Carbonate forms rare anhedral grains to 0.05 mm diameter. In summary, the alteration appears to be largely pre-conglomerate formation, and is mainly quartz-sericite-chlorite in type. There is no evidence to suggest what the traces of Au are associated with in this sample: either quartz veining or limonite.

<u>46250: PYRITE-LIMONITE VEINED, QUARTZ-SERICITE-HYDROBIOTITE ALTERED CONGLOMERATE OF QUARTZ STOCKWORKED VOLCANIC PEBBLES</u>

Rusty-weathering, relatively coarse pebble conglomerate with clear grey quartz-rich (extensively silicified and stockworked) and grey-white (less altered ?felsic volcanic) clasts up to 2 cm diameter. This sample has similar geochemistry to 46249, containing anomalous As (240 ppm), Cu (210 ppm) and Au (163 ppb). It has abundant limonitic fractures, some of which are seen to contain remnant sulfide (?mainly pyrite). There are also scattered grains of pyrite and fine dark blue-grey patches that could contain sulfide. In thin section, the mineralogy is:

Quartz (mainly secondary)	55%
Sericite (muscovite)	25%
Relict ?feldspar	5%
Limonite (goethite, ?minor jarosite)	5%
Fe-Ti oxides (leucoxene)	5%
Hydrobiotite	3%
Sulfide (?pyrite)	2%

The make-up of this sample is similar to that of 46249, with quartz-rich (intensely stockworked and silicified) former ?volcanic fragments and some less-altered very fine-grained volcanic fragments. There are also some fragments that appear to be fine grits or sandstones (wackes), with prominent amounts of detrital quartz and altered feldspar grains of 0.1 mm diameter.

The ?volcanic clasts are composed principally of extremely fine-grained quartz and minor ?relict feldspar (grains are anhedral and tightly interlocking, 5-20 micron diameter). There are minor amounts of sericite and/or clay, although chlorite is not evident in this sample (suggesting a lack of mafic clasts). However, fine Fe-Ti oxides (10-30 microns) are scattered in some of the clasts, suggesting that mafic minerals may have been completely replaced by silica, clay and sericite.

The quartz vein stockworking in the clasts is the same as that described for the previous sample: veinlets range from 0.025 to almost 1 cm thick, with quartz grains up to 1 mm diameter characterized by abundant fluid inclusions. The matrix of the rock consists of quartz and strongly sericitized feldspar shards and comminuted material.

The substantial difference between this sample and the previous (46249) is that there is obvious hydrothermal veining (quartz-muscovite) ± pyrite-limonite cutting the fabric of the rock. The later quartz tends to be relatively clear compared to that in earlier veining; muscovite is coarse (up to 0.1 mm diameter) and hydrobiotite forms subhedral flakey masses with strong greenish-brown (partly due to limonite stain) colour and 0.05 mm diameter. This veining is clearly later than the early (extensive) quartz stockworking that is cut off at the clast boundaries and does not contain sulfide, limonite or muscovite. It is most likely that the gold values are associated with this latest stockworking.

46251: GOLD-RICH PEBBLE CONGLOMERATE, ALTERED TO CHLORITE-SERICITE

Rusty-weathering "chert-pebble conglomerate" with grey cherty clasts to 1.5 cm diameter in a brown limonitic matrix. There are a few grains of cubic sulfide (?pyrite) scattered in the matrix (none in the cherty clasts) but not obviously controlled along fractures or veins. This sample has highly anlomalous gold (54 g/t) and silver (8.3 g/t). plus weakly anomalous Cu (400 ppm) and As (150 ppm). In thin section, the mineralogy is as follows:

Quartz (partly secondary)	35%
Feldspar (mainly plagioclase)	35%
Chlorite	10%
Sericite (muscovite)	10%
Limonite	5%
Carbonate (mainly calcite)	3%
Sulfide (?pyrite)	2%

Clasts evident in thin section include "chert" (actually silicified volcanic), feldspar porphyry, and quartz-feldspar wacke. There are many single-mineral clsts (shards) of quartz and feldspar. The matrix makes up to about 30% of this rock and appears to be similar to that of 46249: very fine-grained, almost opaque, chlorite, sericite, ?quartz and limonite. The limonite grains are rounded and 0.025 mm in diameter; they may represent former Fe-Ti oxides or sulfide. In the former case, it would imply a volcanic matrix to the rock, i.e. a lapilli tuff; I am not sure this would be correct.

The fine-grained, "cherty" clasts are strongly quartz-sericite altered ?felsic volcanic rocks, with variable amounts of the same chalcedonic stockworking seen in the previous two samples. Vaguely discernible porphyritic and tuffaceous textures are evident. The obvious volcanic clasts are composed of strongly albitized and sericitized plagioclase laths (microlites or phenocrysts) up to 0.5 mm long plus abundant opaque oxide grains (to 0.1 mm diameter) in a fine matrix of sericite and quartz. They may have been of intermediate composition. The wackes are composed of detrital quartz nad relatively unaltered (fresh, twinned plagioclase) feldspar shards of 0.1 mm average diameter.

Fracture-controlled hydrothermal alteration seems to be much more limited in this specimen compared to 46250, in spite of the enormously elevated Au content. Possibly this merely indicates a strong "nugget" effect that would disappear on re-sampling. In this sample there is widespread pervasive sericitic alteration, but there are only thin scattered veinlets of carbonate (calcite) and limonite that mainly rim and only rarely cut across the clasts. These are not obviously connected with the scattered sulfide grains, which are probably mainly pyrite as anhedral to subhedral grains up to 0.5 mm across. For the small additional charge, a polished thin section of this Au-rich sample might have elicited some information on the locus of the gold; it is not obvious where it is located.

46257: RUSTY SERICITE-CHLORITE ALTERED REWORKED CONGLOMERATE

This is a rusty weathering, reworked conglomerate that contains clasts composed of finer clasts. The composite clasts contain fragments similar to those found outside them, especially cherty pebbles of 0.5 to 1.5 cm diameter. However, the composite clasts are typically green, and have a more varied clast composition, including highly foliated clasts that must be derived from a metamorphic terrain. There is no reaction to either cold dilute HCl or a hand magnet, and no sulfides are visible (but 1-2% pyrite described in field notes). It contains anomlaous Au (173 ppb), Cu (230 ppm), and As (75 ppm). In thin section, the mineralogy is approximately as follows:

Quartz (largely secondary)	45%
Sericite (muscovite)	20%
Feldspar (largely albite)	10%
Chlorite	10%
Clay (?)	5%
Hydrobiotite	5%
Fe-Ti oxides, limonite	5%

This rock consists of about 30% large rounded to subrounded clasts in a matrix of about 30% smaller sub-angular clasts and shards (single mineral grains) and 30% extremely fine material.

Some clasts are made up of highly quartz stockworked, silicified ?felsic volcanic rock, as described for the previous slides, accounting for almost 20% of the slide.

Other important large clasts are different from those in the other slides: they are much coarser and therefore presumably of deeper origin. One is strongly foliated, almost 100% quartz as elongated anhedral grains up to 1.5 mm long. They are intensely strained, with undulose extinction and sutured boundaries, plus strong sub-grain development. Another clast is made up of almost 100% irregular, criss-crossed quartz veins of 0.05 to 0.3 mm thickness. The original rock type is completely unrecognizable. Another similar clast contains "cores" of intensely silicified, sericitized rock between the veins.

The smaller, interstitial, more angular clasts (0.5 mm average diameter) are mainly intensely sericitized or silicified fragments of ?former igneous rock. There are also abundant clear quartz shards up to 0.5 mm across (? from volcanic rocks) as well as smaller plagioclase shards as seen in the arkoses or wackes in previous slides.

The matrix is made up of extremely fine (10 micron or less) chlorite, sericite, ?clay, and Fe-Ti oxides (limonite and ? leucoxene), suggesting a volcanic provenance for the detritus composing this conglomerate.

Thin irregluar fractures cutting the conglomerate fabric contain coarse (up to 0.2 mm) muscovite, chlorite and minor hyudrobiotite, plus some limonite that is probably after former pyrite. This is most likely to be the locus of the gold mineralization.

46261: CHLORITE-HYDROBIOTITE-SERICITE ALTERED CONGLOMERATE

Grey conglomerate with large cherty pebbles and smaller white, grey and green ?altered igneous rock clasts. There are well-developed pyritic fracture fillings, mostly oxidized to limonite. This sample contains 745 ppb Au and 380 ppm Cu, plus 52 ppm As. In thin section, the mineralogy is as follows:

Quartz (mainly secondary)	40%
Chlorite	25%
Hydrobiotite	10%
Sericite (muscovite)	10%
Limonite	5%
Relict feldspar	5%
Epidote	3%
Opaque (mainly pyrite)	2%

This sample contains about 50% large (1-3 cm diameter) rounded clasts and 10-15% small (1-3 mm) more angular clasts in a strongly chloritic matrix.

The large clasts include quartz stockworked, very fine grained, possibly former felsic-intermediate volcanic fragments, coarse grained intensely veined and silicified fragments, and relict mafic-intermediate volcanic flow rocks. The largest clasts look cherty in hand specimen, but in thin section they have a vaguely spherulitic texture sugestive of former volcanics. They are composed mainly of extremely fine (10 micron) highly interlocking secondary silica, sericite, chlorite and perhaps some remnant feldspar, cut by the thin (0.02 to 1 mm thick) quartz veinlets. In places, former ?mafic phenocrysts up to 0.5 mm across are replaced by coarse (0.05 mm) quartz, hydrobiotite and chlorite with some pyrite. This appears to be part of the hydrothermal assemblage associated with emplacement of the gold mineralization, since pyrite (largely oxidized to limonite) is also found in thin veins and along fractures with hydrobiotite, chlorite, and sericite. The hydrobiotite has deep green colour but much higher birefringence than the chlorite, which has pale Berlin blue anomalous interference colour and is probably Fe-rich. Minor amounts of epidote as subhedral grains up to 0.05 mm long, lacking pleochroism, are found associated with some chlorite-hydrobiotite patches. There are traces of carbonate also, but it is not clear if these are associated with the hydrothermal alteration.

The coarser clasts may simply be more highly altered versions of the clasts described above, but I doubt it. They may represent highly quartz veined and silicified former plutonic rocks (grain size is 0.1 to 1 mm).

Relict mafic volcanic fragments are composed of relict feldspar microlites or laths up to 0.2 mm long (now completely pseudormorphed by sericite), with interstitial chlorite after mafics. Other clasts are composed of 0.5 mm clots of chlorite and opaque plus fine-grained (0.02 mm) quartz ?fragments in a matrix of 10 micron chlorite, quartz and sericite±clay.

<u>46262: PYRITE-HYDROBIOTITE-CHLORITE-EPIDOTE ALTERED "GRIT"</u>

This is a highly pyritic, grit or fine conglomerate with average clast size less than 0.5 cm. The pyrite is mostly confined to blebs replacing the matrix of the conglomerate, not the clasts. The clasts form about 75% of the rock (it would be described as clast-supported). They are subrounded to subangular and highly varied in composition. The geochemistry is strongly anomalous in Au (15 g/t), with a trace of Ag (0.7 g/t), Cu (860 ppm) but <u>not</u> in As (only 8 ppm). In the polished thin section, the mineralogy is approximately:

Quartz (partly secondary)	35%
Pyrite, chalcopyrite (covellite, chalcocite)	20%
Chlorite	15%
Hydrobiotite	15%
Relict feldspar (plagioclase)	10%
Epidote	5%
Apatite	<1%

The clasts in this rock are mainly either highly silicified ?felsic volcanics or else highly chlorite-hydrobiotite altered ?mafic volcanics. There are roughly equal amounts of each. As in the previous slide, the felsic clasts are now mainly secondary quartz, either relatively coarse (0.1 to 0.2 mm) or very fine (10-30 microns) and mixed with abundant similar sized hydrobiotite and possibly minor remnant feldspar. The mafic clasts are composed of relict plagioclase microlites up to 0.2 mm long and small (0.3 mm) relict mafic phenocrysts now pseudomorphed by biotite, epidote, chlorite and pyrite.

The matrix is composed almost entirely of secondary (hydrothermal) minerals: hydrobiotite, epidote, chlorite, quartz and pyrite. This is by far the strongest development in these slides of this hydrothermal alteration, that is probably associated with the Au mineralization. The epidote forms subhedral to anhedral crystals up to 0.3 mm long with mild yellow pleochroism, indicating moderate Fe content. The hydrobiotite has brownish green colour, almost a true brown (magnesian) biotite in places, although most is Fe-rich "hydrobiotite". It forms flakes up to 0.02 mm diameter. Chlorite has pale green pleochroism and pale blue anomalous interference colours, implying moderate Fe content. The pyrite forms subhedral to anhedral grains up to 0.5 mm diameter, aggregating up to blebs 1 cm long. Most of it is partly replaced by limonite with bright orangey-red internal reflections (goethite), especially at its margins. An significant amount of Cu-minerals (chalcopyrite, as anhedral grains up to 0.2 mm across, and altered to chalcocite and covellite) are present. In my experience, this often correlates well with elevated Au contents. However, in spite of detailed search of the surface of the polished section, no grains of gold could be located (this is common in searches of this type at 15 g/t Au contents; more polished surfaces need to be examined, or SEM examination is necessary).

<u>46263: CLAST-SUPPORTED CONGLOMERATE OF SUBROUNDED MAFIC AND FELSIC VOLCANIC FRAGMENTS, WITH CHLORITE-SERICITE ALTERATION</u>

Dark brownish green chert pebble conglomerate characterized by scattered rounded grey siliceous clasts of up to 1 cm diameter. The proportion of matrix looks higher than average in this specimen; it appears to be matrix-supported in hand specimen. The geochemistry is only barely anomalous (71 ppb Au, 18 ppm As, 31 ppm Cu). In thin section, however, the rock is seen to be crowded with small fragments that commonly touch each other, so in reality it is clast-supported. The minerals are:

Quartz (partly secondary)	30%
Relict feldspar (plagioclase mainly)	30%
Chlorite	20%
Sericite, clay	10%
Opaque (mainly limonite)	5%
Hydrobiotite	3%
Carbonate (calcite)	2%

The clast mix in this sample is much as in the others, with about 20% large (to 1.5 cm) highly silicified ?felsic volcanic fragments that have variable amounts of thin quartz stockworking (varying from 0 to 100% of the clast replaced). Other prominent fragment types include mafic-intermediate volcanics, coarse plutonic igneous rocks, and shards of quartz and less commonly feldspar.

The volcanic fragments are mainly composed of fine microlites of plagioclase in varying stages of alteration to sericite, clay and a little carbonate. The microlites are about 0.1 to 0.2 mm long; in places there are remnants of plagioclase phenocrysts up to 1 mm long. The matrix is composed of fine opaques (0.02 mm diameter Fe-Ti oxides) and even finer (10 micron) chlorite. The plutonic fragments are composed of 60% coarse (up to 2 mm long) subhedral plagioclase crystals that are <u>bent</u> by deformation. The negative relief compared to quartz and extinction angle of about 17 degrees for Y^010 suggest a composition of albite, An_{0-5}. The grains are slightly altered to fine sericite and hydrobiotite. The other major constituent is bright green chlorite with lesser opaque oxides, forming patches up to 1 mm across that are after former mafics. There is no quartz in these fragments, so they were probably diorite originally. Shards of minerals include quartz (either very clear, probably phenocrysts from felsic volcanic rocks) or strongly clouded, probably chalcedonic quartz from veins. There are also glassy clear (almost unaltered) feldspar shards, mainly finely twinned plagioclase but a few with low relief and no twinning may be K-feldspar. The matrix is composed of finer (comminuted) material of the same make-up as described above, and extremely fine chlorite-opaques-?clay-sericite. There is relatively little hydrobiotite in this sample, and no late coarse vein quartz, epidote or muscovite as seen in 46262. This correlates with much lower sulfide contents and no gold. Rare thin calcite fractures cross the rock but are volumetrically unimportant.

46264: COARSE CONGLOMERATE CONTAINING ROUNDED PEBBLES OF SILICIFIED ?FELSIC VOLCANIC AND VOLCANIC WACKE

Relatively coarse pebble conglomerate containing large strongly rounded clasts of dark green sandstone or volcanic wacke up to several cm across, plus smaller (1-2 cm) clasts of white to purplish brown silicified stockworked ?volcanic in a reworked conglomerate clast. Thin (2-3 mm) lightly bleached alteration envelopes can be seen in hand specimen crossing the wacke portion of the rock; these fractures have limonite along their centers. Most of the limonite, however, appears to be along the rims and boundaries of felsic clasts. The mineralogy is similar to that of previous slides of this conglomerate:

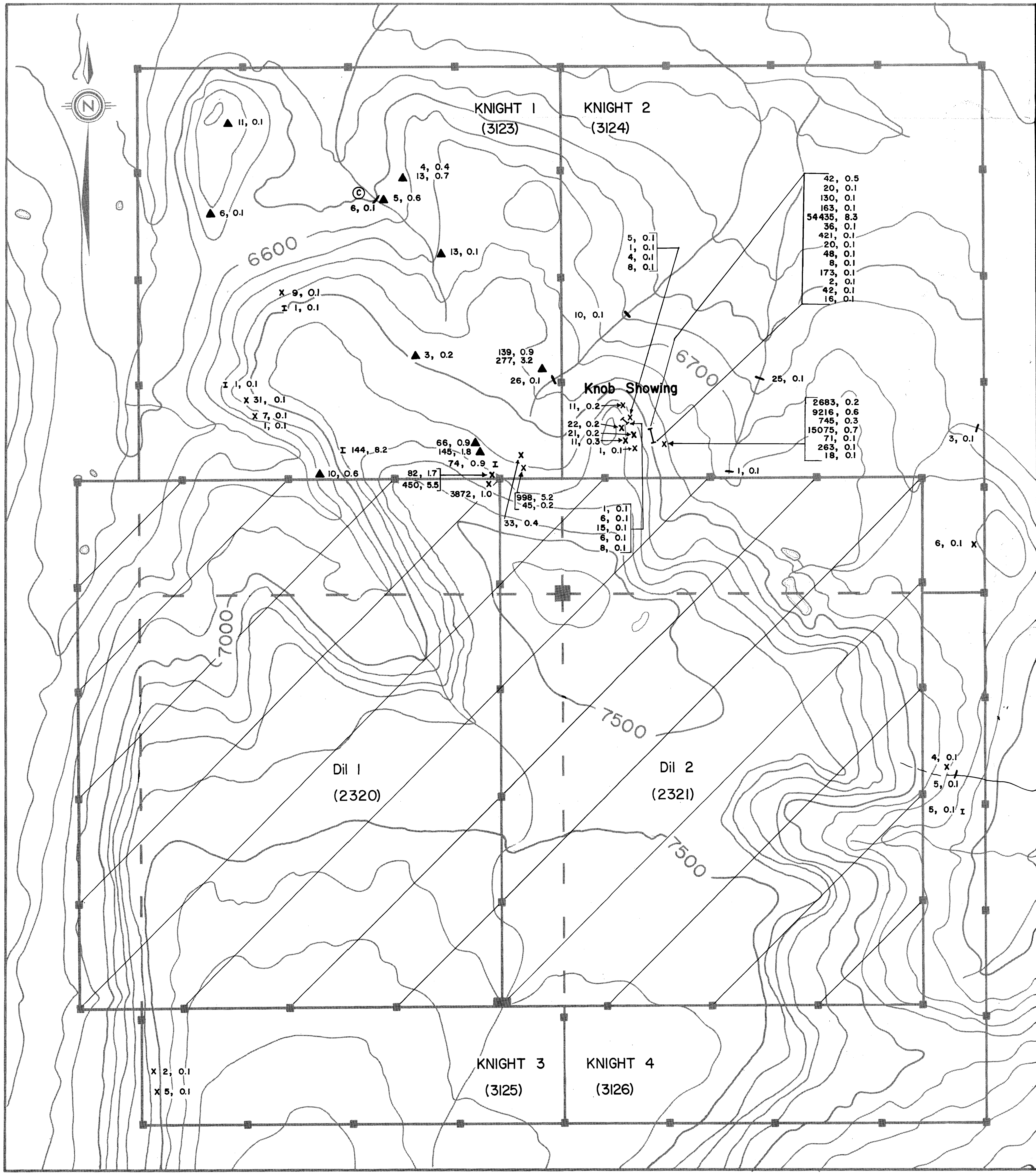
Quartz (detrital and secondary)	40%
Plagioclase (detrital and relict)	20%
Chlorite	20%
Sericite	10%
Biotite, hydrobiotite	5%
Opaque (oxides: limonite mainly)	5%

In thin section, the large clasts are of the ?felsic volcanic, composed of extremely fine secondary quartz, sericite, hydrobiotite or biotite (some is quite brown, almost secondary biotite), relict ?feldspar and clay, and strongly to moderately stockworked by thin to thick chalcedonic quartz veins. These veins lack any sulfide or opaque oxides, and so are probably not associated with mineralization (only 263 ppb Au in this specimen).

The large ?clast of sandstone or wacke is composed of about equal proportions of 0.1 mm diameter detrital quartz, feldspar and chlorite shards in a chlorite-hydrobiotite matrix. The quartz and feldspar tend to be clear, with fine twinning in the plagioclase and relief about that of quartz suggesting a composition around oligoclase (An_{20}). Chloritic shards probably represent the alteration of former mafic shards. The biotite in the matrix is similar to that in the fine felsic clasts, almost brown (magnesian) and suggesting that a hornfelsing intrusive is nearby. The derivation of most of the material in this conglomerate is probably from an adjacent eroded volcanic terrane.

Thin zones of coarser hydrobiotite, muscovite and limonite are mainly concentrated around the rims of the alrger pebbles in this specimen; in general they do not cross the felsic clasts. It is likely that the minor gold values are associated with this weak, late fracture controlled alteration. The limonite is probably after pyrite that was associated with this alteration.

Craig H.B. Leitch, Ph.D, P.Eng.
(604) 921-8780 or 666-4902



GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,428

LEGEND

▲ 5, 0.1 Rock Au (ppb), Ag (ppm) taken in 1989
(Sample costs not included for assessment credit)

X 1, 0.1 Silt Au (ppb), Ag (ppm) taken in 1990

x 31, 0.1 Rock Au (ppb), Ag (ppm) taken in 1990

I 74, 0.9 Chip Au (ppb), Ag (ppm) taken in 1990

Contour lines
Contour interval - 100 feet

Creek

© Camp

■ Corner and Identification post (ID)

■ Legal corner post (LCP)

Claims staked by hip chain and compass

Scale 1:10000

0 100 200 300 400 500 600 700 800 900 1000 m

Map 3

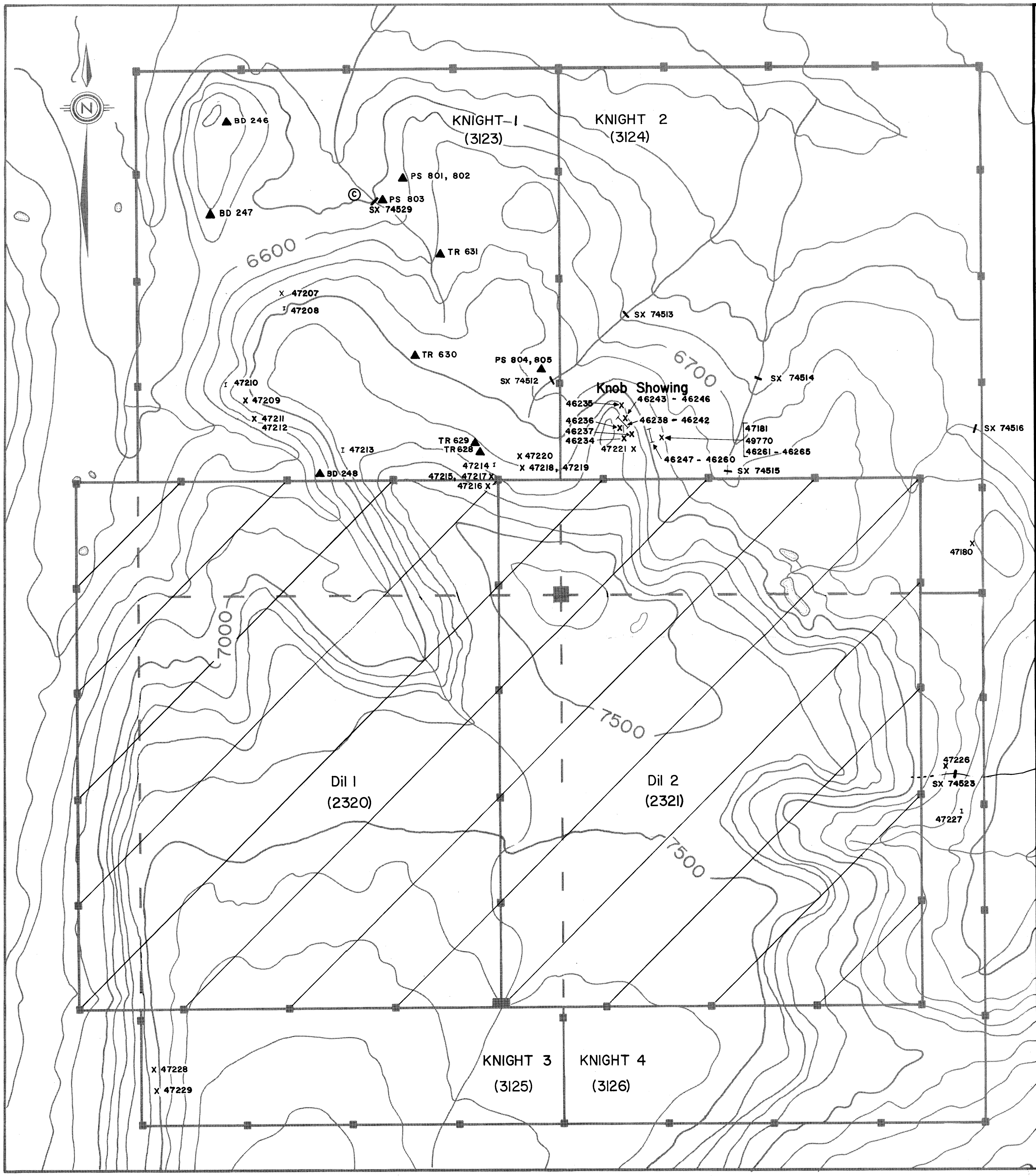
INCO EXPLORATION AND TECHNICAL SERVICES INC.

Project: Clinton	Area: Dil Plateau

KNIGHT PROPERTY

Rock and Silt Au, Ag Geochemistry

Drawn by: D. Rawlek	Date drawn Oct. 18/90	Revised: 10/24/90
Scale: 1:10 000	Map #: 3	N.T.S. 92 O/6,3



GEOLOGICAL BRANCH
ASSESSMENT REPORT

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LEGEND

▲ PS 801 Rock sample location, number taken in 1989
(Sample costs not included for assessment credit)

SX 74513 Silt sample location, number taken in 1990

X 47220 Grab sample location, number taken in 1990 (prefixed by RX)

I 47210 Chip sample location, number taken in 1990 (prefixed by RX)

Contour lines

Contour interval - 100 feet

Creek

© Camp

■ Corner and Identification post (ID)

■ Legal corner post (LCP)

Claims staked by hip chain and compass

Scale 1:10000

0 100 200 300 400 500 600 700 800 900 1000 m

Map 2

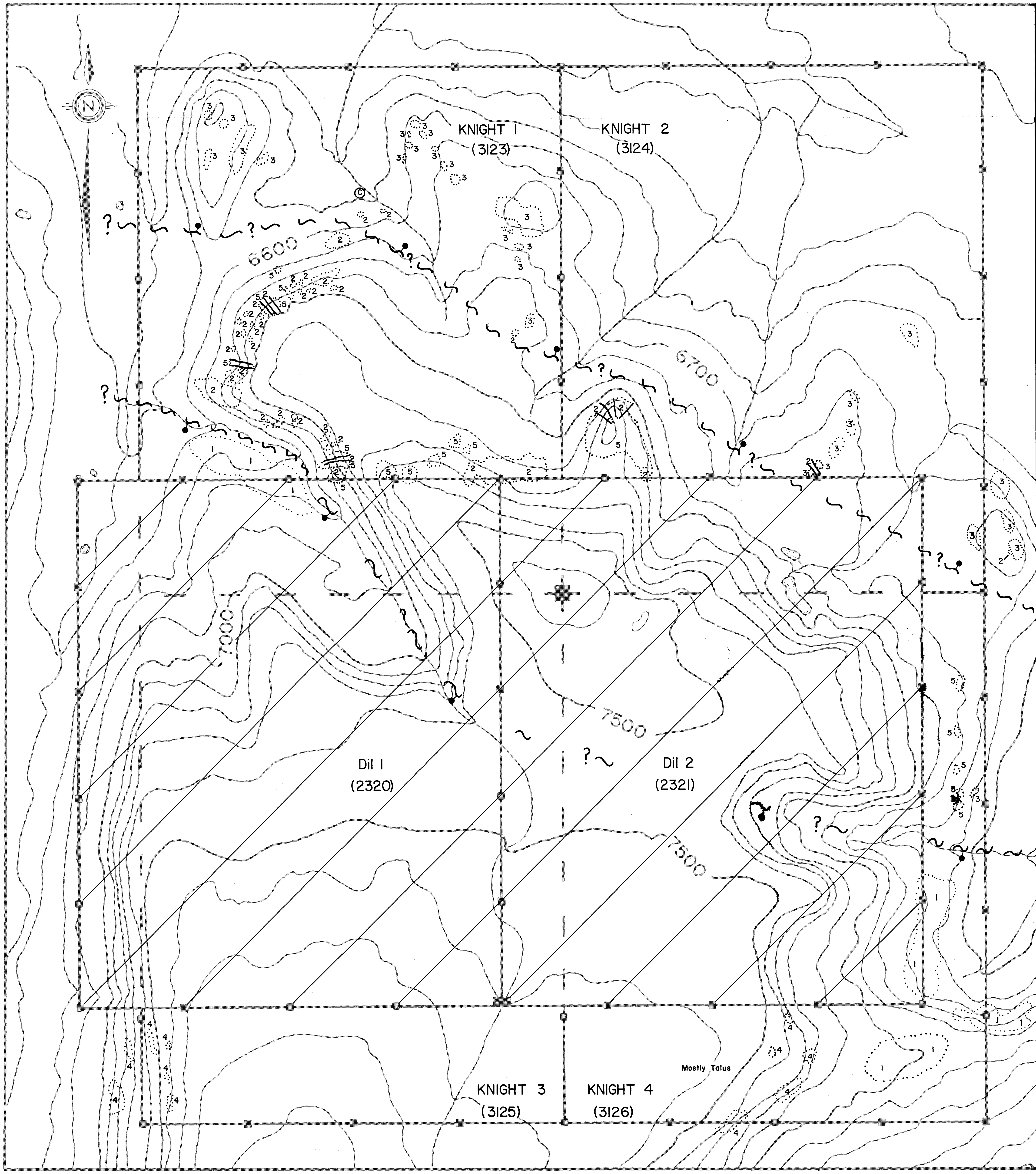
INCO EXPLORATION AND TECHNICAL SERVICES INC.

Project: Clinton	Area: Dil Plateau

KNIGHT PROPERTY

Rock and Silt Sample Locations

Drawn by: D. Rawlek	Date drawn Oct. 18/90	Revised: 10/24/90
Scale: 1:10 000	Map #: 2	N.T.S. 92 O/6.3



GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,428

LEGEND

MIOCENE (?)

1	Plateau basalt, vesicular

EOCENE (?)

2	Feldspar - hornblende porphyry, felsite dykes

UPPER CRETACEOUS - Kingsvale Group

3	Andesite flow breccia, lapilli tuff, volcanic agglomerate
4	Argillaceous sediments, arkose, greywacke, and minor conglomerate

LOWER CRETACEOUS - Taylor Creek Gp.

5	Chert - volcanic pebble conglomerate, brown argillite and siltstone; minor andesite flows

Contour lines, contour interval - 100 feet

Geologic Contact

Creek

© Camp

Fault, downdropped side indicated

■ Corner and Identification post (ID)

■ Legal corner post (LCP)

Claims staked by hip chain and compass

Scale 1:10 000

0 100 200 300 400 500 600 700 800 900 1000 m

Map 1

INCO EXPLORATION AND TECHNICAL SERVICES INC.

Project: Clinton	Area: Dil Plateau

KNIGHT PROPERTY

GEOLOGY

Drawn by: D. Rawlek	Date drawn Oct. 18/90	Revised: 10/31/90
Scale: 1:10 000	Map #: 1	N.T.S. 92 O/6,3