

**SUB-RECORDER  
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**VANCOUVER, B.C.**

PROSPECTING REPORT

on the

ASITKA CLAIM GROUP  
Omenica Mining Division  
British Columbia

N.T.S. 94D/9W  
Latitude: 56° 36' North  
Longitude: 126° 24' West

<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>	<u>Date of Record</u>
Asitka 1	2	10226	March 18, 1989
Asitka 3	1	10228	March 18, 1989
Asitka 4	9	10229	March 18, 1989
	12		

Owner, Operator: K.V. Campbell  
Author: K.V. Campbell  
Date: April 30, 1990

LOG NO: 0518	RD.
ACTION:	
FILE NO:	

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**20,006**

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## 1 INTRODUCTION

The Asitka Claim Group was staked during 1989 to cover a widespread copper occurrence, delineated by Nomad Mines during 1973-74 and described by Dawson (1973) as a typical porphyry copper environment.

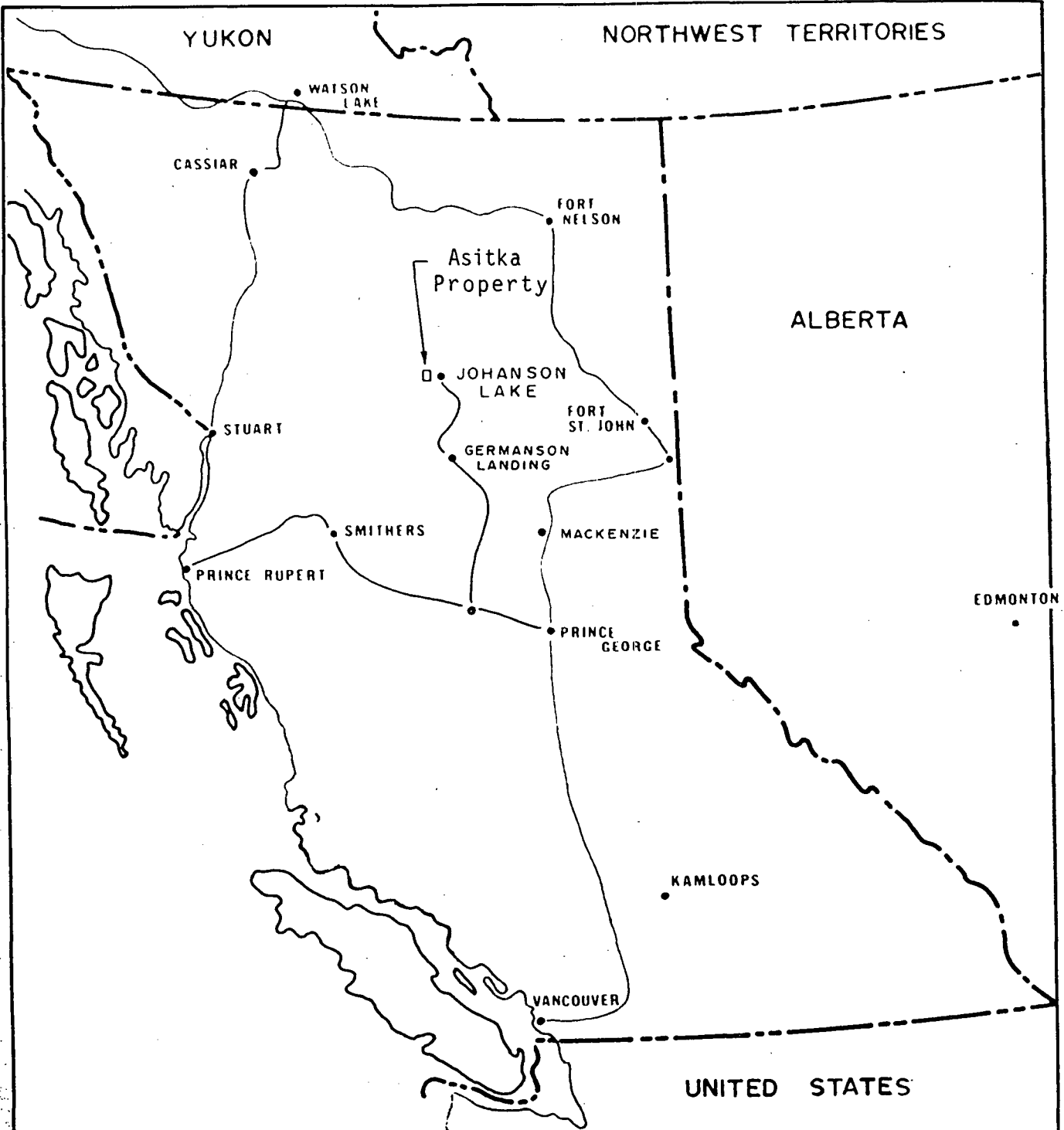
The claims cover an area of known copper and copper-molybdenum mineralization which has never been adequately tested for gold content. As many of the copper porphyry systems discovered and tested during the 1970's are now known to have significant associated gold content, the 1989 work program was initiated in an attempt to so test the Asitka porphyry system.

This report describes a short prospecting and sampling program conducted by the author during September 1989.

### 1.1 Location, Access and Topography

The Asitka property is located approximately 140 km northwest of Germanson Landing, just east of Sustut Lake (Figure 1). The claims cover the northeastern slopes of Asitka Peak, extending in a northwesterly direction to within 2 km of Johanson Creek.

The property is road accessible from Germanson Landing via the Johanson Creek road, however, the bridge originally spanning the creek has long since disappeared and access from that point is by foot, a distance of approximately 2 km. A jeep trail accesses the showings. It should be mentioned that Johanson Creek was forded by the author in late season using a log to span the current. This might not be possible earlier in the year when high runoff expands the creek.



ASITKA CLAIM GROUP			
LOCATION MAP			
PROJECT 89-134	DRAWN C. Ditson	DATE April 1990	FIGURE <b>1</b>
Revised		N.T.S. 94D/9W	
K.V. CAMPBELL & ASSOCIATES LTD.			

Helicopter access, which is preferable for short visits, might become necessary at certain times of the year.

Elevations on the property range from approximately 1360m to 2000m near Asitka Peak. The claims are dominated by a northerly trending mountain ridge with steep talus covered slopes and east-facing cliffs. Most of the property is above tree line.

### 1.2 Claim Ownership and Status

The Asitka Property, as staked in 1989, was composed of 4 modified grid system claims, Asitka 1-4, totalling 80 units. On March 19, 1990, the Asitka 1, 3 and 4 claims were reduced to a total of 12 units, then grouped ("Asitka Group"). Asitka 2 was allowed to lapse. The claims are shown in Figure 2 and summarized below.

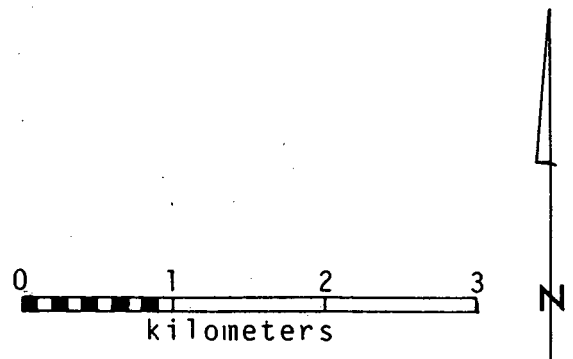
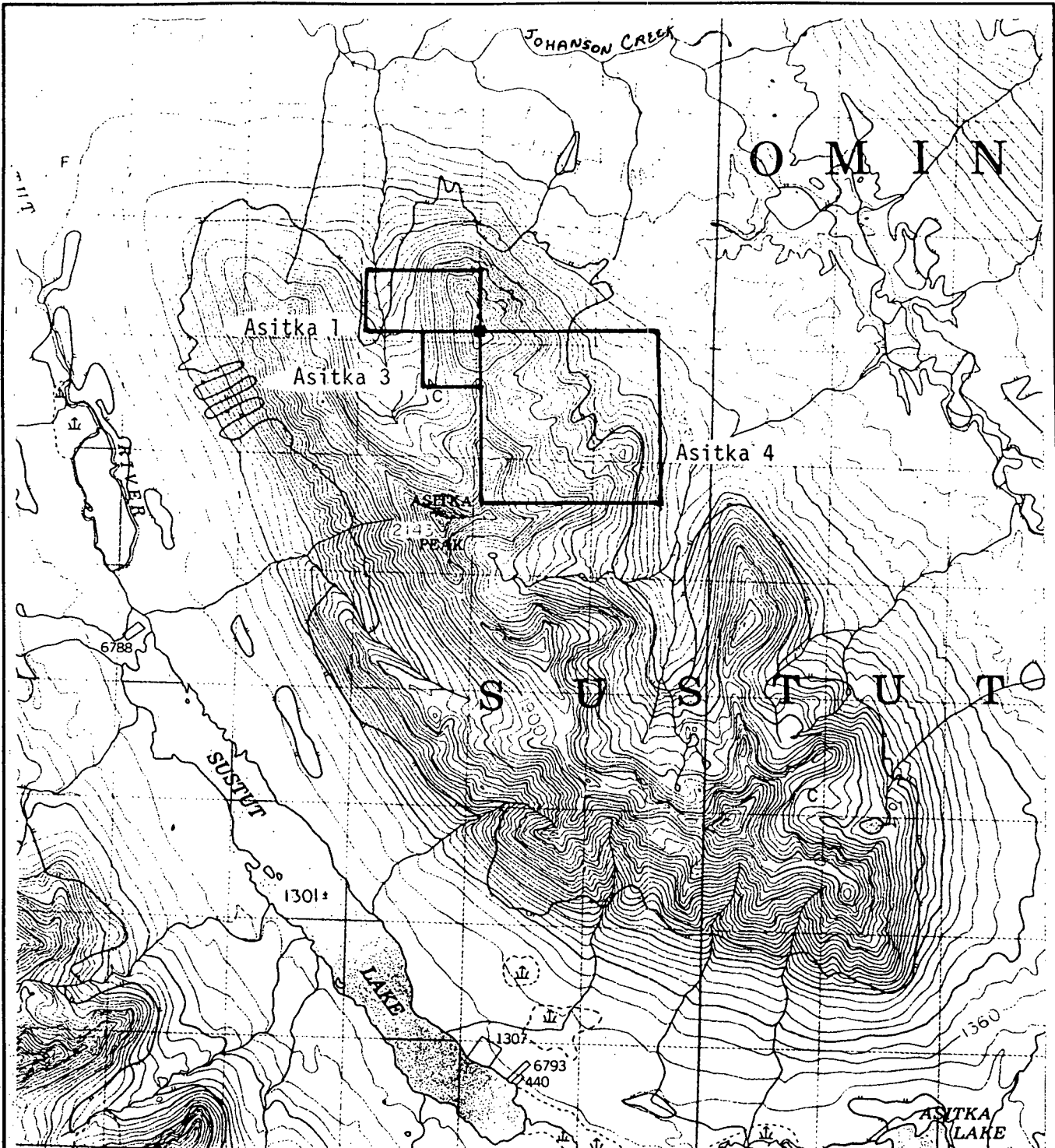
<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>	<u>Date of Record</u>
Asitka 1	2	10226	March 18, 1989
Asitka 3	1	10228	March 18, 1989
Asitka 4	<u>9</u>	10229	March 18, 1989
	12		

All claims are registered to K.V. Campbell by a Bill of Sale recorded April 24, 1989.

Claims are located in the Omenica Mining Division and are shown on British Columbia Department of Energy, Mines and Petroleum Resources claim map number 94D/9W.

### 1.3 Previous work

During the 1940's, C.S. Lord of the G.S.C. mapped the



ASITKA CLAIM GROUP			
CLAIM PLAN			
PROJECT 89-134	DRAWN C. Ditson	DATE April 1990	FIGURE <b>2</b>
Revised		N.T.S. 94D/9w	
K.V. CAMPBELL & ASSOCIATES LTD.			

McConnell Creek sheet and noted several copper occurrences, two of which lay approximately 3 km southeast of Asitka Peak. Old claim posts located by Nomad Mines indicate that undocumented exploration occurred on the Asitka property during the late 1940's or early 1950's.

In 1965, Black Giant Mines Ltd. staked 185 claims in the area. Although their claims covered the present Asitka ground, their exploration focused on an area to the south (Dawson, 1973).

Black Giant's ground lapsed in 1968 and no further exploration was conducted until 1973 when Nomad Mines Ltd. performed geologic mapping and prospecting with geochemical and magnetometer surveys. Copper mineralization was recognized to be associated with several geologic environments, including shear related quartz veins and stockworks, skarn zones and a typical porphyry copper environment. Porphyry copper mineralization was associated with a large copper-molybdenum anomaly in the vicinity of the Asitka 1 and 3 claims and with a series of spotty copper anomalies on the south half of Asitka 4. This discovery instigated continued exploration, culminating in 4 diamond drill holes. Results were disappointing and due to problems with bulldozers, diamond drill and crews, work was discontinued without completing the drill program.

During August 1980, A. deQuadros and J. Mirko spent 5 man-days conducting a preliminary reconnaissance program on the Asitka claim area. The pair performed some geologic mapping and deQuadros observations relative to lithology and alteration are extremely helpful. Their sampling, however, was scant. The three rock samples they analyzed do indicate the presence of silver and gold associated with anomalous copper mineralization.

#### 1.4 1989 Work Summary

A soil and silt sampling traverse was made up the main drainage north of Asitka Peak. Eighteen soil and silt samples were collected. Six samples of granodiorite were taken from the eastern slopes in the vicinity of the 1973 geochemical anomaly. See Figure 4 for sample locations.

## 2 GEOLOGY

### 2.1 Regional

The Asitka claims are located along the eastern margin of the Stikine terrane, a northwesterly trending assemblage of late Paleozoic to middle Jurassic oceanic sediments and volcanics which evolved independently of the North American craton. Takla Group volcanics, which are exposed within the claim area, represent an island arc assemblage which collided with and accreted to the continent during the upper Jurassic and Cretaceous (Richards, 1988). The Asitka Stock was intruded during the early Jurassic and later exposed with uplift of the Omenica Crystalline Belt.

The claims are sandwiched between the Ingenika and Moose Valley faults, approximately 15 km north of their mapped juncture (Richards, 1975).

Regional geology, by T. Richards (1975) is shown in Figure 3.

### 2.2 Property

The Asitka claims cover a portion of the northwesterly trending Asitka Peak Stock. Work by Dawson (1973-4), shown





REGIONAL GEOLOGY LEGEND

to accompany Figure 4  
Regional Geology  
after Richards  
(1975)

Early Jurassic, Intrusive Rocks



ASITKA PEAK STOCK: quartz diorite

Upper Triassic, Takla Group Stratified Rocks







SAVAGE MOUNTAIN FORMATION: basic augite porphyry  
basalt flow, breccia, pillow breccia, tuff and  
interbedded bladed feldspar porphyry.

in Figure 4, indicates the intrusives to be granodiorite to quartz diorite in composition. DeQuadros (1981), however, describes intrusive rocks exposed on the Asitka 3 area as quartz monzonite. These rocks are bordered on the northeast and southwest by intermediate volcanic flows, pyroclastics and epiclastics of the Takla Group. Dawson observed abundant calcite cementing some of the coarser tuffs which most likely accounts for numerous skarn occurrences reported at intrusive contacts.

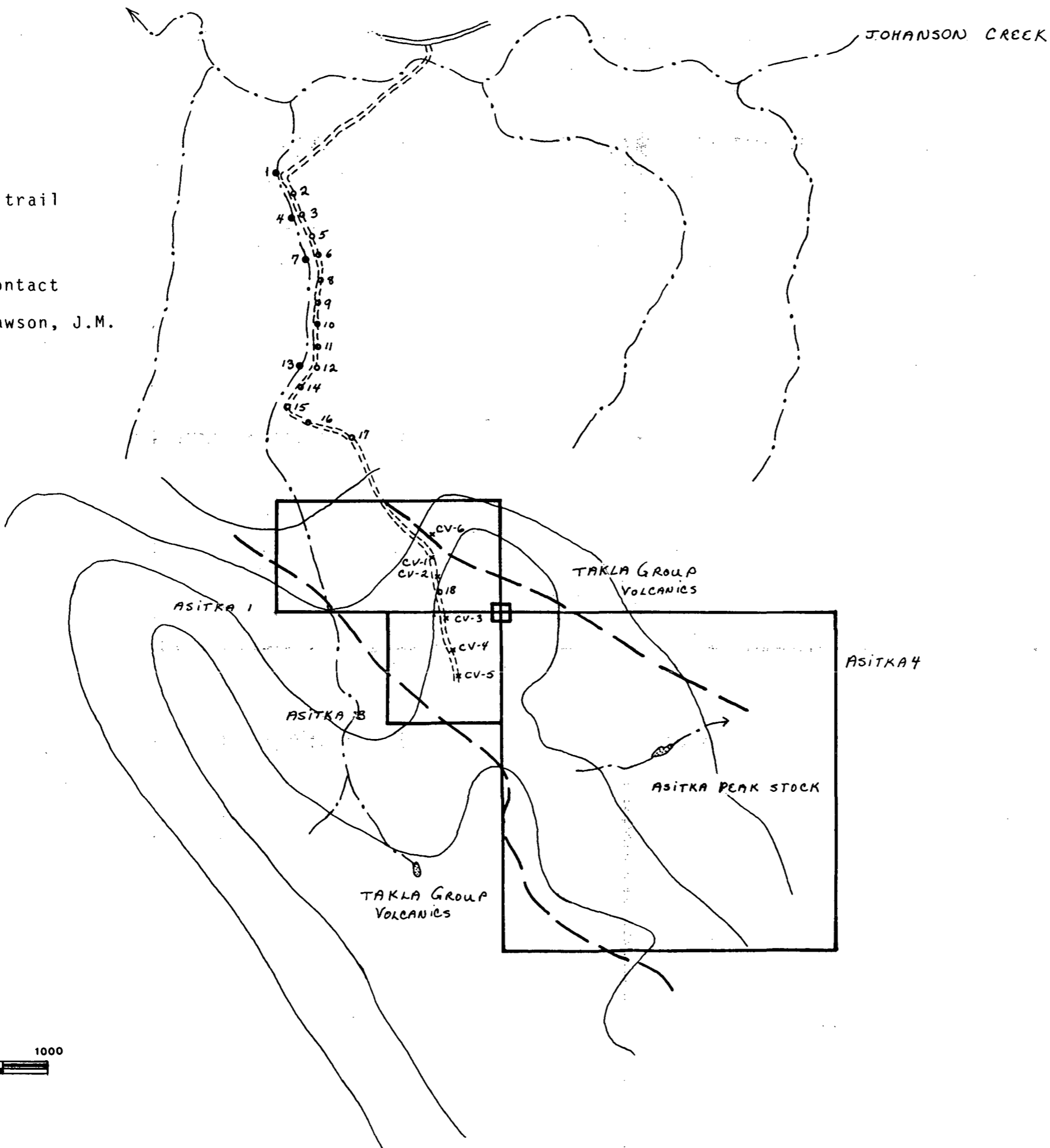
Alteration within the pluton is variable, apparently ranging from light to moderate propylitization, with extensive local pyritization, on the Asitka 4 claim to strong phyllic alteration on Asitka 1 and 3. DeQuadros also noted sericitic alteration envelopes and kaolinization in the latter region. Takla volcanics appear to be only light propylitic.

Although Dawson (1973) described three different regimes of mineralization, only the porphyry style occurrences are of immediate interest to the writer. Geochemical work by Nomad Mines during 1973 and 1974 delineated a series of strong, spotty copper anomalies on the southern portion of Asitka 4 and a large coincident copper-molybdenum anomaly associated with the phyllic-altered quartz monzonite body on Asitka 1 and 3. The diamond drilling program by Nomad Mines unfortunately commenced on the isolated copper anomalies where host rocks were only lightly altered. The larger copper-molybdenum anomaly, which coincides with the adjudged center of alteration (deQuadros, 1981) was, unfortunately, never tested. None of Nomad's surface geochemical samples were analyzed for gold and only selected core samples from two holes were tested for gold. DeQuadros, during 1980, did analyze for gold but took only three samples.

**LEGEND**

-  Road, jeep trail
-  Creek
-  Pond
-  Geologic Contact

Geology after Dawson, J.M. (1973)



**1989 SAMPLES \***

- Silt
- Soil
- x Rock

\* soil, silt samples prefixed by 134-  
rock samples prefixed by CV-134-

**ANALYTICAL VALUES**

Sample Number	Copper (ppm)	Molybdenum (ppm)	Gold (ppb)
134-1	294	1	3
134-2	34	1	3
134-3	13	1	1
134-4	260	1	2
134-5	74	2	1
134-6	33	6	2
134-7	301	2	5
134-8	39	1	2
134-9	50	6	39
134-10	32	1	2
134-11	94	4	3
134-12	69	6	2
134-13	212	1	3
134-14	81	4	7
134-15	192	9	4
134-16	68	2	2
134-17	59	4	3
134-18	781	61	8
CV-134-1	881	8	7
CV-134-2	2392	18	30
CV-134-3	1404	23	10
CV-134-4	75	2	2
CV-134-5	333	55	3
CV-134-6	6986	2	5

ASITKA CLAIM GROUP			
REGIONAL GEOLOGY AND SAMPLE LOCATIONS			
Job # 89-134	Drawn by: C.Ditson	Date: April 1990	Figure No. <b>4</b>
		N.T.S. 94D/9w	
CAMPBELL & ASSOCIATES			



### 3 RESULTS OF PROSPECTING

Sample locations are shown in Figure 4. Analyses were performed by ACME Analytical Laboratories of Vancouver, B.C. Thirty element ICP and geochemical analysis for gold by atomic absorption were done on all samples. The analytical certificate is given in Appendix I, the analytical procedure is noted on the certificate.

#### 3.1 Silt Sampling

Conventional silt sampling practices were followed, a 4x6" Kraft paper bag being filled with fines. Silt sample numbers are 134-1,4,7 and 13. An attempt was made to sample every 200m along the creek draining the north slope of Asitka Peak but there were few places where sufficient fines could be found.

None of the silts carried significant gold. All contained over 200ppm Cu.

#### 3.2 Soil Sampling

Conventional soil sampling practices were followed. Holes to 1m deep were dug with a shovel and the BF or B soil horizon sampled at a depth of 15 to 25cm. Materials were placed in 4x6" Kraft paper bags. The parent materials are a variety of glaciofluvials; sand and gravel.

One sample, 134-9, from a site about mid-way up the slope carried anomalous gold (39ppb). In a very crude way, copper and molybdenum contents increase up slope. The highest copper value reported is 781ppm and the highest molybdenum value is 61ppm from sample 134-18, collected from a rusty soil overlying talus of pyritized granodiorite.

### 3.3 Rock Sampling

A brief description of the samples follows.

CV-134-1: Float; pyritic granodiorite, fine to medium grained, equigranular, rusty weathering with a few % of fine disseminated pyrite. (8ppm Mo, 881ppm Cu, 7ppb)

CV-134-2: Float; gossanous granodiorite. (18ppm Mo, 2392ppm Cu, 30ppb Au)

CV-134-3: Float; pyritic granodiorite, fine to medium grained, equigranular, rusty weathering with a few % fine disseminated pyrite. (23ppm Mo, 1404ppm Cu, 10ppb Au)

CV-134-4: Outcrop; fine grained granodiorite. (2ppm Mo, 75ppm Cu, 2ppb Au)

CV-134-5: Float; gossanous fine grained granodiorite. (55ppm Mo, 333ppm Cu, 3ppb Au)

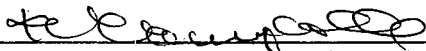
CV-134-6: Subcrop; feldspar porphyry andesite, copper stained. (2ppm Mo, 6986ppm Cu, 5ppb Au).

The sample with the highest copper value (CV-134-6) was from a broken outcrop of volcanics near their contact with the granodiorite. Sample CV-134-2, which had the most gold (30ppb), lay within the boundaries of the granodiorite near the north contact. In a general way, copper values in the granodiorite decrease toward the center of the intrusive with distance inwards.

4 ITEMIZED COST STATEMENT

K.V. Campbell, Ph.D. 6 days @ \$150.00 .....	\$ 900.00
Maps, air photos .....	41.49
Truck rental 6 days @ \$55.00 .....	330.00
2180 km @ \$0.15/km .....	327.00
Gas .....	150.28
Meals and groceries .....	121.93
Assays .....	291.30
Courier, fax, telephone .....	<u>18.61</u>
	<u>\$ 2,180.61</u>

April 30, 1990

  
\_\_\_\_\_  
K.V. Campbell, Ph.D.

## 5 BIBLIOGRAPHY

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Geology of the McConnell Creek Map Area (94D/E). Geological Survey of Canada, Department of Energy, Mines and Resources open file 342.
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Geologic Setting of the Stikine Terrane. Geology and Metallogeny of Northwestern B.C., Smithers Exploration Group, G.A.C. Cordilleran Section Workshop October 16-19, 1988.




6 CERTIFICATE

I, KENNETH VINCENT CAMPBELL, resident of Vancouver, Province of British Columbia, hereby certify as follows:

- 1) I am a Consulting Geologist with an office at #8 - 84 Lonsdale Ave., North Vancouver, British Columbia.
- 2) I graduated with a degree of Bachelor of Science, Honours Geology, from the University of British Columbia in 1966, a degree of Master of Science, Geology, from the University of Washington in 1969, and a degree of Doctor of Philosophy, Geology, from the University of Washington in 1971.
- 3) I have practised my profession for 23 years. I am a Fellow of the Geological Association of Canada (F0078).
- 4) This report, dated April 30, 1990, is based on my examination of available reports and site visit made between August 30 and September 4, 1990.

Dated at Vancouver, Province of British Columbia,  
this 30th day of April, 1990.

  
\_\_\_\_\_  
K.V. Campbell, Ph.D., F.G.A.C.  
Geologist

APPENDIX I

Analyses Certificate and Analytical Method

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO<sub>3</sub>-H<sub>2</sub>O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN PB 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: P1 SOIL/SILT P2 ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: SEP 12 1989

DATE REPORT MAILED: *Sept 18/89*SIGNED BY: *C. Long* . . . D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

CAMPBELL &amp; ASSOCIATES PROJECT 89-134 File # 89-3602 Page 1

SAMPLE#	Mn	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM
* 134-1	1	294	14	98	.2	48	23	537	4.50	7	5	ND	1	55	1	2	2	96	1.13	.067	4	147	1.91	59	.15	5	2.24	.01	.03	1	3
134-2	1	34	14	63	.3	19	9	332	5.63	7	5	ND	1	21	1	2	2	123	.27	.130	4	96	.68	50	.18	2	4.96	.31	.02	1	3
134-3	1	13	10	45	.2	19	6	216	5.74	2	5	ND	1	23	1	2	2	201	.24	.077	8	100	.43	51	.44	3	1.56	.01	.02	1	1
* 134-4	1	250	21	94	.3	45	22	576	4.93	3	5	ND	1	55	1	3	2	107	1.10	.065	5	180	1.86	63	.16	7	2.14	.01	.03	1	2
135-5	2	74	2	108	.1	31	13	321	6.49	4	5	ND	1	21	1	2	2	199	.28	.058	2	101	1.38	49	.19	6	4.00	.01	.01	1	1
134-6	6	33	7	98	.2	19	11	422	5.72	3	5	ND	1	33	1	2	2	153	.53	.025	4	97	.92	71	.22	4	2.23	.01	.02	1	2
* 134-7	2	301	2	97	.2	45	24	596	4.41	2	5	ND	1	60	1	2	2	98	1.18	.068	4	133	1.93	66	.15	16	2.31	.01	.03	2	5
134-8	1	39	14	51	.3	24	10	334	6.12	2	5	ND	1	28	1	2	2	166	.41	.076	4	137	.90	55	.22	2	3.47	.01	.02	1	2
134-9	5	50	2	83	.4	24	11	337	7.66	3	5	ND	1	30	1	1	2	190	.31	.055	4	121	1.00	57	.31	2	2.84	.01	.02	1	39
134-10	1	32	15	55	.2	22	10	294	5.16	2	5	ND	1	32	1	2	2	134	.35	.076	4	109	.92	50	.24	13	2.43	.01	.02	1	2
134-11	4	94	15	62	.2	28	12	482	4.30	4	5	ND	1	42	1	2	2	101	.54	.068	4	89	1.15	77	.16	14	2.39	.01	.02	1	3
134-12	6	69	11	79	.2	30	14	412	3.80	7	5	ND	1	48	1	2	2	96	1.12	.057	4	85	1.27	112	.16	7	2.46	.01	.03	1	2
* 134-13	1	212	11	88	.2	54	25	624	5.00	3	5	ND	1	56	1	3	2	109	1.15	.068	4	133	2.29	46	.19	7	2.25	.03	.04	1	3
134-14	4	81	4	54	.2	30	14	555	4.66	2	5	ND	1	44	1	2	2	114	.89	.049	6	149	1.22	65	.13	5	2.85	.01	.02	1	7
134-15	9	192	8	74	.5	29	16	636	4.32	3	5	ND	1	63	1	2	2	93	1.09	.053	7	90	1.26	108	.15	6	2.40	.01	.04	2	4
134-16	2	68	16	71	.6	26	12	367	5.68	5	5	ND	1	38	1	4	2	130	.43	.046	7	88	1.10	86	.20	12	3.49	.01	.02	1	2
134-17	4	59	13	72	.3	28	12	386	4.09	5	5	ND	1	46	1	2	2	104	.90	.042	5	68	1.30	96	.15	3	2.70	.01	.03	1	3
134-18	61	781	12	50	.4	15	16	434	4.89	4	5	ND	1	62	1	2	2	88	.59	.099	5	53	.96	129	.11	3	4.79	.01	.03	1	8
STD C:AU-S	18	62	37	133	6.9	66	31	1025	4.08	45	20	6	36	48	19	15	22	59	.48	.099	38	56	.90	177	.07	37	2.01	.06	.13	12	53

\* Silt samples

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	Hg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
CV-134-1	8	391	10	15	.6	5	12	209	3.02	4	5	ND	6	53	1	2	2	50	.71	.042	5	9	.68	55	.15	2	1.47	.04	.08	2	7
CV-134-2	18	2392	6	48	4.0	53	22	314	27.58	38	5	ND	5	34	1	2	17	112	.25	.070	2	54	.57	9	.17	2	1.99	.01	.10	4	30
CV-134-3	23	1404	11	27	1.2	4	17	137	3.63	8	6	ND	6	26	1	2	2	67	.96	.052	5	7	1.00	47	.18	2	1.64	.02	.10	1	10
CV-134-4	2	75	11	30	.5	6	3	291	3.20	3	5	ND	3	59	1	2	2	37	.72	.057	6	27	.95	127	.11	2	1.53	.04	.07	4	2
CV-134-5	55	323	5	13	1.1	5	13	89	3.46	2	5	ND	4	16	1	2	2	21	.15	.024	3	7	.35	65	.08	2	.64	.01	.16	1	3
CV-134-6	1	6986	15	119	1.8	57	50	593	3.92	10	5	ND	3	495	1	2	2	199	2.91	.116	3	43	2.32	87	.15	2	3.88	.02	.02	5	5