

LOG NO: 1103	RD.
ACTION:	
FILE NO:	

FILMED

GEOLOGICAL AND GEOCHEMICAL REPORT  
ON THE  
SUN CLAIM

OMINECA MINING DIVISION

NTS 93L/6

54° 28' N LATITUDE  
127° 12' W LONGITUDE

OWNER: GEOSTAR MINING CORPORATION  
CONSULTANT: CUN MANAGEMENT GROUP INC.

A.J. PARDOE  
OCTOBER 3, 1988

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

17,977

## CONTENTS

	Page
Summary	1
1.0 Introduction	1
2.0 Location & Access	1
3.0 Physiography	3
4.0 Claim Status	3
5.0 History	3
6.0 Regional Geology	5
7.0 Work Program	6
8.0 Property Geology	7
9.0 Geochemistry	8
10.0 Conclusions & Recommendations	9
Statement of Cost	10
References	11
Qualifications	12
Figures	
1. Location	2
2. Claims	4
3. Geology & Sample Locations	in pocket
APPENDIX 1 - Analytical Results	

## SUMMARY

In August of 1988, a program of reconnaissance geological mapping, prospecting and silt sampling was conducted on the Sun property. A total of nine rock samples and nine silt samples were collected in the two day period spent on the property.

Copper-silver mineralization was encountered in small quartz veins and local stockwork systems. A sample from the ore stockpile of an old adit yielded assays of 16.53% copper, 63.11 oz silver/ton and 0.124 oz gold/ton. Samples from other mineralized stringers yielded significant copper (up to 2.73%), silver (up to 1.22 oz/ton) and local anomalous gold (0.009 oz/ton). However, mineralized structures are small, discontinuous and cover a limited area.

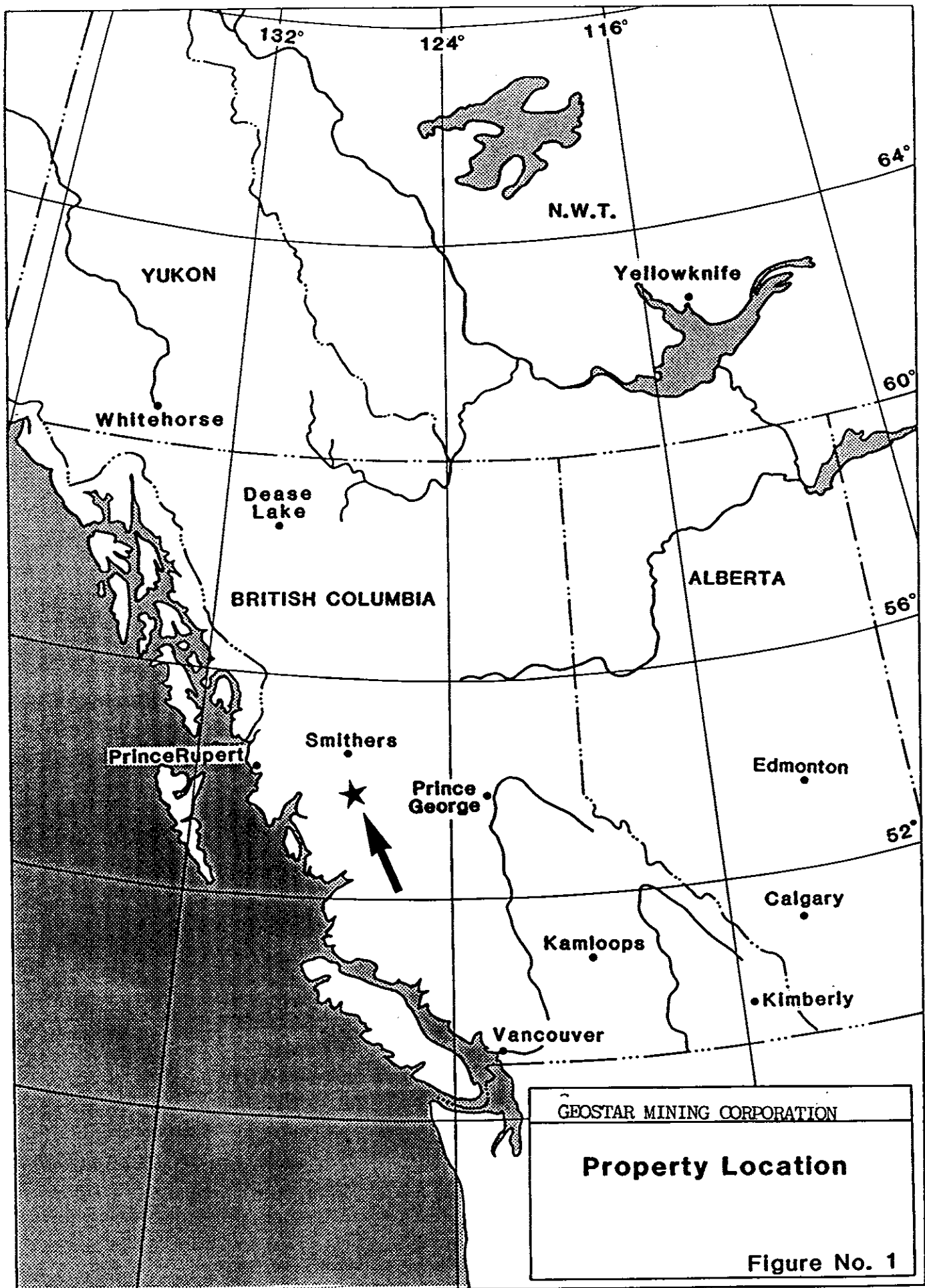
Considering the good rock exposure and the limited extent of mineralization found therein, no further work is recommended on the property.

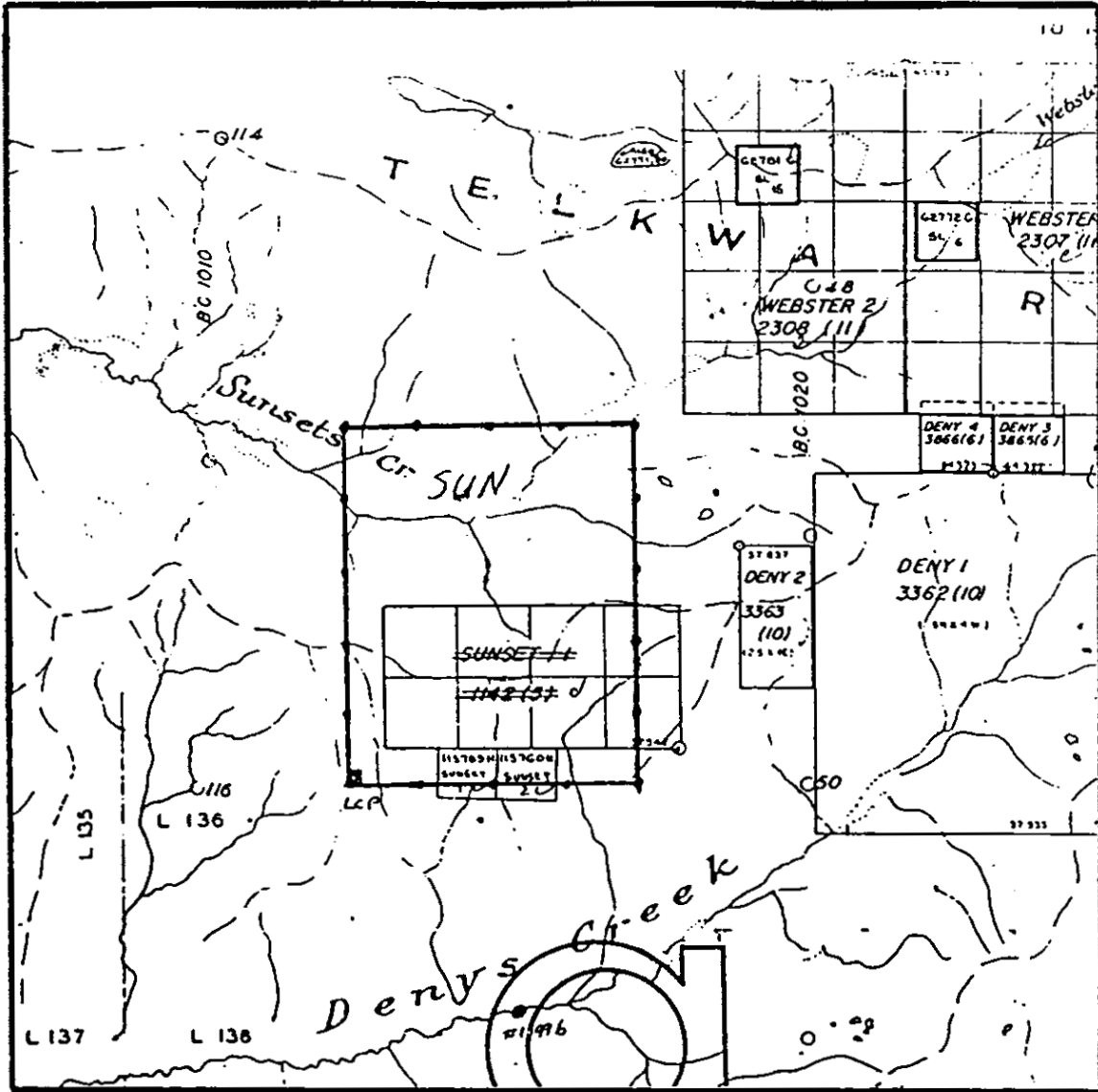
## 1.0 INTRODUCTION

In August of 1988, CUN Management Group Inc., on behalf of Geostar Mining Corporation, conducted a program of reconnaissance geological mapping, prospecting and silt sampling on the Sun property. The purpose of this program was to explore for high grade silver-copper-gold veins. Nine rock samples and nine silt samples were collected in the two day period spent on the property.

## 2.0 LOCATION AND ACCESS

The Sun property is located near the headwaters of Sunsets Creek, 35 km west of Houston and 35 km south of Smithers. The claim area is centered at 54° 28' N latitude and 127° 12' W longitude on NTS map sheet 93L/6 in the Omineca mining division. Access is by helicopter from Houston or Smithers. Recent logging roads, accessed via the Telkwa Old Coal Mine Road, run within 5 km of the claim's northern boundary.





Claim Map  
NTS 93L/6E

Scale 1:50,000

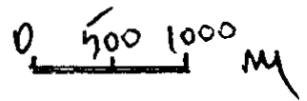


Figure 2

### 3.0 PHYSIOGRAPHY

Topography is mountainous, with steep and rugged slopes on both sides of Sunsets Creek. The south edge of the property is moderately sloping and grass covered. The property is largely above treeline, however Sunsets Creek valley is marshy and covered by low bush with local spruce and pine at the break in slope. Elevations range from 1490 to 1980 m.

Outcrop is plentiful along the steep slopes and upper reaches of Sunsets Creek. Drainage is to the west, however most tributaries to Sunsets Creek flow under talus. Snowfall is heavy but conditions are moderate enough to allow exploration from July to mid-September.

### 4.0 CLAIM STATUS

The property consists of one twenty unit block in the Omineca mining division. NTS 93L/6.

Claim	Record #	Units	Expiry*
Sun	8725	20	August 24/90

The registered owner is:

Geostar Mining Corporation  
325 - 1130 West Pender Street  
Vancouver, B.C. V6E 4A4

\* After application of assessment covered by this report.

### 5.0 HISTORY

Mineralization in the Sunsets Creek area was discovered at the turn of the century with intermittent exploration occurring since. The 1915 B.C. Ministry of Mines Report gives an account of old workings on the south side of Sunsets Creek, consisting of a short tunnel and open cuts on a narrow quartz vein with values up to 18.8% copper, 27.6 oz silver/ton and 0.03 oz gold/ton.

## 5.0 HISTORY (cont.)

To the northeast of the Sun property, claims were staked in 1967 by Noranda, based on anomalous silt geochemical values. These claims covered part of a large granitic stock which was explored as a molybdenum-copper prospect. Geochemical and EM surveys were conducted, followed up by limited (2 to 3 holes) diamond drilling in 1968.

To the southeast in the Dominion Basin area, Falconbridge Nickel Mines Inc. conducted geochemical and S.P. surveys, geological mapping and trenching in the late 1960's. Pack-sack and diamond drilling was also performed for a total of 395 m in 14 holes. Work in the area was continued by Maharajah Minerals Ltd. (later Mecca Minerals) from 1973 to 1984. A limited magnetometer survey, geological mapping, trenching, chip sampling and nine diamond drill holes were completed.

Part of the claim area held by Maharajah Minerals included an area south of Sunsets Creek now within the bounds of the Sun claim. These claims, the Sunset claims, were staked in 1972 and consisted of four adjoining two-post claims. Geological mapping and limited hand trenching were recorded as assessment work in 1973. The claims lapsed in 1976.

The Sun claim was staked in 1987 on the basis of a government geochemical survey which yielded a silt sample from Sunsets Creek anomalous in copper (606 ppm), cobalt (24 ppm), tungsten (8.0 ppm) and weakly anomalous in lead (24 ppm), gold (21 ppb) and antimony (26 ppm).

## 6.0 REGIONAL GEOLOGY

The Sun property lies in the Intermontaine Belt of the Canadian Cordillera, near the eastern edge of the Coast Crystalline Complex. The area is largely underlain by subaerial to submarine volcanic, volcanoclastic and sedimentary rocks of the Hazelton Group. The Hazelton Group, an island arc assemblage deposited in Early to Middle Jurassic time, is divided into three formations.

## 6.0 REGIONAL GEOLOGY (cont.)

The oldest, the Telkwa Formation, consists of calc alkaline volcanics largely of subaerial origin with lesser subaqueous volcanics. Conformably to disconformably overlying the Telkwa Formation are fine grained clastic and tuffaceous assemblages of the Nilkitkwa Formation. Disconformably above the Nilkitkwa are fossiliferous sandstones, siltstones and intercalated felsic tuffs of the Smithers Formation.

The Telkwa Formation has been divided into five distinctive facies belts of which the Howson Subaerial facies is considered to underlie the Sun property (Richards, Tipper, 1976). Strata of the Howson Subaerial facies are well bedded, red to green colored, basalt to rhyolite, pyroclastic, flow and sedimentary rocks deposited in a terrestrial environment. The most common strata are andesite to dacite pyroclastics. The facies has been extensively altered and has mineral assemblages belonging to the subgreenschist zeolite regional metamorphic facies.

To the east of the Sun property Hazelton Group rocks are intruded by a monzonite stock of Late Cretaceous age, thought to be related to the Bulkley intrusions.

## 7.0 WORK PROGRAM

On August 10 and 11, 1988, a program of reconnaissance geological mapping, prospecting and silt sampling was conducted on the Sun property. A crew consisting of two geologists and two assistants was used. A total of nine rock samples and nine silt samples were collected and analyzed by geochemical and assay methods.

The target for this program was small high grade silver-copper-gold vein systems.



## 8.0 PROPERTY GEOLOGY

The Sun property is underlain by well bedded red and green andesite tuffs and minor flows. Bedding strikes slightly west of north and dips  $25^{\circ}$  to  $40^{\circ}$  to the west. Minor amounts of grey rhyolitic tuff outcrop in a small cirque east of the property and a large granitic stock lies to the northeast at the headwaters of Sunsets Creek.

Alteration occurs as moderately strong, patchy epidote and prehnite in the bedded tuffs. This alteration appears to be a regional phenomenon, unrelated to mineralization. Northeast of the property a halo of silicified, pyritic volcanics outcrops around the granitic pluton.

Mineralization occurs in outcrop south of Sunsets Creek and locally in float elsewhere. Andesite hosts quartz and minor carbonate in stringers and veins containing varying amounts of malachite, azurite, tetrahedrite, bornite, chalcopyrite, pyrite and native copper. An epithermal character is suggested in veining as they are often vuggy and contain subangular to angular andesite breccia with drusy quartz in open spaces. Veins and stringers are discontinuous and generally randomly orientated. The largest vein found was 0.35 m in width and approximately 12 m in length. Veining dominantly occurs as stringers, 1 to 4 cm in width, which anastomize and rapidly pinch out.

An old adit is located on the south side of Sunsets Creek at approximately 1,615 m elevation. Access into the tunnel was blocked by a large snow patch, however an irregular, mineralized quartz stringer, 10 to 15 cm wide and striking  $017^{\circ}/53^{\circ}$  SE, extends for 3 to 4 m above the tunnel entrance. A sample from this stringer (JR88-29) yielded 0.57% copper and 1.21 oz silver/ton. Near the adit, a grab sample (JR88-30) from a small ore stock pile yielded 16.53% copper, 63.11 oz silver/ton and 0.124 oz gold/ton. Directly above the adit a 0.35 m wide vein, striking  $028^{\circ}/58^{\circ}$  SE, outcrops at 1737 m elevation. Sample JR88-24, from this vein, assayed 0.92% copper and 0.97 oz silver/ton.

## 8.0 PROPERTY GEOLOGY (cont.)

Samples JR88-25, 27 and 28 and TB88-108 were taken from mineralized stringers (2 to 4 cm width) on the south side of Sunsets Creek. Assays ranged from 0.30 to 2.73% copper and 0.15 to 1.22 oz silver/ton. The only significant gold value came from JR88-25 which yielded 0.009 oz gold/ton.

On the north side of Sunsets Creek, north of the Sun claim, a sample of angular float was taken from around 1980 m elevation. Locally non-mineralized quartz stockworks are present, however sample TB88-109 contained massive specular hematite, malachite and minor quartz veinlets. The sample assayed 2.05% copper, 1.69 oz silver/ton, 10.75% iron and 0.047 oz gold/ton. The source of the float was not located.

## 9.0 GEOCHEMISTRY

A total of 9 silt samples were collected from streams on and proximal to the Sun property. Four samples are from Sunsets Creek, one from a small tributary joining Sunsets Creek from the south and the remaining samples are from a creek draining to the south of the property. All samples were placed in kraft paper bags, dried and shipped to Acme Analytical Labs Ltd. in Vancouver to be analyzed for 30 elements using an aqua regia digestion and ICP (inductively coupled argon plasma) technique.

Analysis of the silts yielded generally low, non-anomalous values, except samples taken from Sunsets Creek. These samples (TB88-112 and AP88-19, 20, 21) recorded high copper and anomalous molybdenum and tungsten values. The molybdenum and tungsten values likely originate from the granitic stock at the headwaters of Sunsets Creek. The higher copper values in AP88-19, 20 and 21 likely reflect input from streams draining the south cliff face where known copper mineralization occurs.

## 9.0 GEOCHEMISTRY (cont.)

One rock sample (TB88-110), from silicified and pyritic volcanics proximal to the granitic stock, was also sent to Acme for 30 element ICP analysis. No significant anomalies resulted from the analysis.

## 10.0 CONCLUSIONS AND RECOMMENDATIONS

Despite encouraging assays from rock samples, the potential of the Sun property is limited by a lack of continuity and strength of mineralized structures.

The use of soil geochemistry to test for mineralized structures in the Sunsets Creek valley is inhibited by a lack of soil. Slopes are largely talus, locally covered by a thin organic layer which increases in thickness to form a marshy valley bottom. The grassy slope above and to the south of the mineralization offers some potential for discovery of mineralization through geochemical methods. However a lack of mineralized structures and/or alteration in outcrop exposed in creeks cutting this slope, diminishes the probability of mineralized structures along Sunsets Creek continuing to the south.

Based on the small size, discontinuous nature and lack of alteration associated with mineralized structures, the writer does not recommend further work be done on the property.

STATEMENT OF COSTS

Wages		
Project Geologist	3 days @ \$225/day	\$ 675.00
Geologist	2 days @ \$150/day	300.00
Field Assistants	4 days @ \$150/day	600.00
Analyses		
10 geochemical analyses		
(9 silt, 1 rock)		100.75
8 rock assays @ \$28.75/sample		230.00
Camp Costs		
8 man days @ \$20/day		160.00
Transportation		
Truck rental	2 days @ \$50/day	100.00
Gas for truck		40.00
Helicopter (1.9 hrs & fuel) @ \$650/hour		1,235.00
Equipment and supplies		
(stove fuel, sample bags, flagging, SBX-11 rental, maps)		150.00
Report Writing		
Project Geologist	3 days @ \$225/day	675.00
Drafting & Reproduction		250.00
Clerical		50.00
		<u>\$ 4,340.75</u>

## REFERENCES

- Allen, D.G. (1981). Geological and Geochemical Report on the Sunsets Creek Property. B.C. Assessment Report #9770.
- Church, B.N. (1969). B.C. Department of Mines and Petroleum Resources, G.E.M. report, p. 87 to 91.
- Dirom, G.E. (1967). Report on Electromagnetic Survey on the Fog Mineral Claims of Noranda Exploration Company Ltd. B.C. Assessment Report #1189.
- Kenyon, J.M. (1980). Geological Summary Report of Webster 1 and 2 mineral claims. B.C. Assessment Report #8444.
- Kikuchi, T. (1985). Geophysical and Geochemical Report for the Dominion East Showing, Deny Claims. B.C. Assessment Report #13191.
- Richards, T.A. and Tipper, H.W. (1976). Smithers map sheet, 93L, G.S.S. Open File 351.
- Tipper, H.W. and Richards, T.A. (1976). Jurassic Stratigraphy and History of North Central British Columbia, Geological Survey of Canada, Bulletin 270.
- Woolverton, R.W. (1968). A Geological, Geophysical and Geochemical Report on the Fog, S.L. and Sherry Groups. B.C. Assessment Report #1922.

STATEMENT OF QUALIFICATIONS

I, Alison Jill Pardoe, of Telkwa, B.C. hereby certify that:

I am a graduate of the University of Saskatchewan (1988) and hold a Bachelor of Science (Honours) degree in Geology.

I am a consulting geologist currently working under contract with CUN Management Group Inc., of 325 - 1130 West Pender Street, Vancouver, B.C.

I have been employed in my profession by various companies over the past seven years.

The information contained in this report was obtained as a result of field work carried out by CUN Management Group Inc. under my supervision in 1988.

I have no interest, direct or indirect in the property described nor in the securities of Geostar Mining Corporation.

I am the author of this report.

A.J. Pardoe  
A.J. Pardoe

**APPENDIX 1**

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716

## ASSAY CERTIFICATE

- SAMPLE TYPE: ROCK

DATE RECEIVED: AUG 17 1988

DATE REPORT MAILED: Aug 29 / 88

ASSAYER: C. Long D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

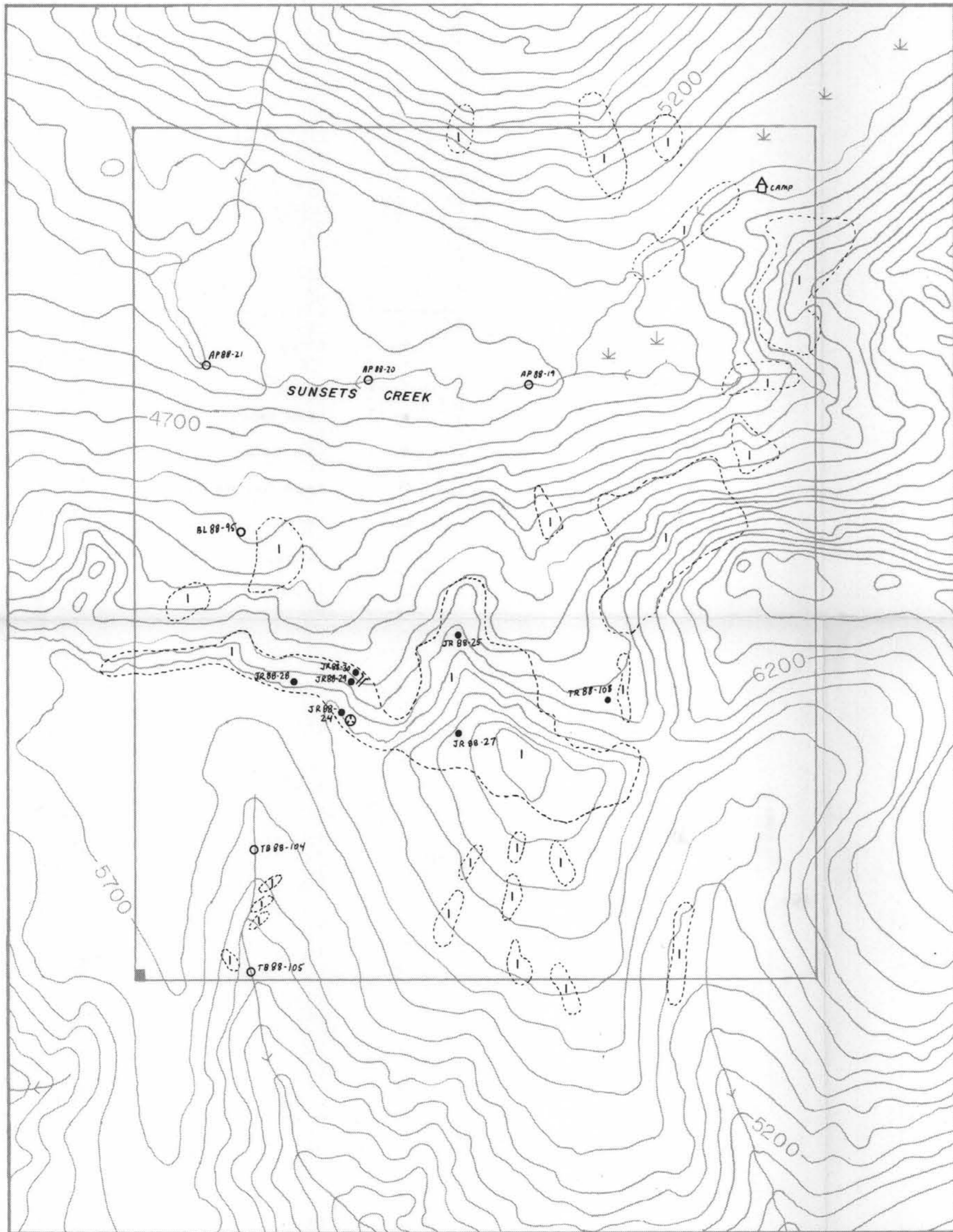
CUN MANAGEMENT INC.

File # 88-3701A

SAMPLE#	Mo %	Cu %	Pb %	Zn %	Ag OZ/T	Ni %	Co %	Mn %	Fe %	As %	U %	Th %	Cd %	Sb %	Bi %	Au OZ/T
	.001		.01	.01		.01	.01	.12	3.49	.01	.002	.01	.01	.01	.01	.001
JR88 24	.001	.92	.01	.01	.97	.01	.01	.04	1.40	.01	.003	.01	.01	.01	.01	.001
JR88 25	.001	2.73	.02	.01	1.22	.01	.01	.05	.86	.01	.002	.01	.01	.01	.01	.009
JR88 27	.001	.30	.01	.01	.15	.01	.01	.03	.68	.01	.002	.01	.01	.01	.01	.001
JR88 28	.001	1.30	.01	.01	.16	.01	.01	.03	1.83	.02	.002	.01	.01	.01	.01	.001
JR88 29	.001	.57	.01	.01	1.21	.01	.01	.04	.90	.01	.002	.01	.01	.01	.01	.001
JR88 30	.001	16.53	.07	.01	63.11	.01	.01	.02	1.55	.01	.002	.01	.01	.01	.01	.124
	.001		.01	.01		.01	.01	.38	3.52	1.19	.002	.01	.01	.01	.01	.001
TR88 108	.001	.60	.01	.01	.14	.01	.01	.02	1.44	.01	.004	.01	.01	.01	.01	.001



SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Tb 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 %	V PPM
→ BL88 5555	1	34	15	98	.1	6	12	1435	5.27	13	5	ND	1	73	1	2	2	76	1.48	.101	10	12	.86	148	.05	7	2.99	.02	.03	1
JS88 13	1	117	21	258	.3	25	15	4993	4.96	61	5	ND	1	59	1	2	2	94	1.00	.121	8	42	1.62	525	.10	4	3.11	.05	.95	2
JS88 14	1	73	19	205	.1	25	15	4026	4.96	34	5	ND	1	47	1	2	2	96	1.21	.094	6	49	1.89	222	.14	7	3.23	.06	.06	1
JS88 15	1	94	20	222	.2	27	16	5789	5.08	39	5	ND	1	53	1	2	2	96	1.35	.102	6	51	1.95	315	.14	5	3.52	.11	.07	1
JS88 16	1	165	25	291	.5	27	17	5995	5.35	72	5	ND	1	55	2	2	2	94	.57	.124	9	42	1.63	714	.09	4	3.28	.03	.04	1
JS88 17	1	202	25	257	.4	30	19	4992	5.44	60	5	ND	1	59	2	2	2	112	.90	.107	8	54	1.89	425	.12	4	3.18	.02	.06	1
JS88 18	1	58	20	227	.1	39	26	2813	5.38	26	5	ND	1	56	1	2	2	115	1.04	.080	4	76	2.48	154	.19	8	3.53	.03	.06	1
JS88 19 P	1	432	18	189	1.0	23	13	8234	5.47	39	5	ND	1	45	3	2	2	115	.77	.071	6	46	2.09	459	.12	7	3.37	.03	.06	1
JS88 20 P	1	91	16	176	.1	27	17	13656	4.67	74	5	ND	1	64	1	2	2	108	.84	.066	7	57	1.53	1057	.14	7	2.75	.04	.10	1
JS88 21 P	1	211	21	204	.4	24	22	49464	4.81	311	32	ND	4	51	1	11	2	124	.92	.052	4	68	1.44	4758	.11	13	2.97	.02	.09	1
→ TB88 104 P	1	56	19	152	.1	52	23	1824	6.31	7	5	ND	1	53	1	2	2	148	1.06	.042	5	100	2.23	124	.16	9	4.16	.02	.03	1
→ TB88 105 P	1	49	21	115	.1	32	15	2093	5.84	11	5	ND	1	46	1	2	2	124	1.18	.049	7	56	1.74	144	.17	5	3.57	.02	.04	1
TB88 106 P	1	42	13	81	.1	49	20	926	4.87	6	5	ND	1	77	1	2	2	114	2.36	.035	4	69	2.00	80	.15	6	4.33	.04	.05	1
TB88 107 P	1	57	19	111	.1	57	26	1410	6.31	2	5	ND	1	83	1	2	3	135	1.30	.033	5	88	2.99	93	.17	4	5.03	.04	.08	1
JS88 112 P	15	226	15	47	.1	7	4	285	3.16	6	5	ND	10	41	1	2	2	51	.17	.056	13	15	.74	238	.13	4	1.70	.04	.36	5
JS88 113 P	1	41	19	367	.1	9	20	3312	7.15	10	5	ND	1	35	1	2	2	170	.52	.061	7	12	1.64	1622	.17	5	2.67	.02	.07	1
JS88 114 P	1	27	11	136	.1	13	10	1110	4.04	6	5	ND	1	19	1	2	2	67	.58	.041	7	27	.95	195	.09	12	1.50	.02	.05	1
JS88 115 P	1	26	14	137	.1	15	11	1146	4.16	5	5	ND	1	25	1	2	2	71	.79	.043	8	31	1.03	209	.09	13	1.68	.02	.06	1
JS88 116 P	1	34	13	143	.1	14	11	1085	4.19	4	5	ND	1	26	1	2	2	66	.66	.042	8	28	.93	254	.08	6	1.59	.02	.06	1
JS88 117 P	1	34	13	132	.2	14	11	1047	4.26	6	5	ND	1	28	1	2	2	67	.72	.046	8	31	.95	183	.09	11	1.62	.02	.07	1
JS88 118 P	1	20	10	115	.1	6	7	914	4.20	2	5	ND	1	11	1	2	3	38	.29	.044	12	10	.33	352	.03	7	.99	.02	.09	1
JS88 119 P	1	29	13	173	.1	19	12	1160	4.08	2	5	ND	1	26	1	2	2	71	.72	.041	6	41	1.24	136	.11	4	1.87	.03	.07	1
JS88 122 P	1	90	14	123	.1	29	20	6145	4.62	235	5	ND	1	30	1	2	2	111	.73	.053	4	69	1.97	430	.16	6	2.99	.02	.04	1
JS88 123 P	1	119	11	126	.1	26	21	14822	4.52	349	5	ND	1	38	1	4	2	119	.99	.042	3	56	1.76	861	.15	8	2.71	.02	.05	1
JS88 124 P	1	59	14	124	.1	39	21	4848	5.49	89	5	ND	1	37	1	2	2	141	1.47	.058	4	66	2.35	328	.21	12	3.61	.03	.02	1
JS88 125 P	1	111	15	147	.4	22	17	15074	5.15	231	5	ND	1	49	1	4	2	133	1.32	.046	4	46	1.70	879	.17	10	3.25	.03	.04	1
JS88 126 P	1	112	16	182	.5	20	17	5861	5.14	109	5	ND	1	39	1	2	2	119	.98	.049	5	41	1.61	689	.14	4	3.08	.03	.03	1
JS88 128 P	1	42	7	121	.1	31	22	2118	5.60	28	5	ND	1	29	1	2	6	126	1.58	.063	6	50	2.40	141	.20	9	3.23	.03	.08	1
JS88 131 P	1	41	10	200	.1	26	17	1875	4.89	15	5	ND	1	36	1	2	5	95	.82	.066	5	37	1.77	132	.17	5	2.36	.03	.12	1
→ AP88 19 P	6	461	14	146	.1	16	28	853	2.93	15	5	ND	3	26	1	2	3	52	.37	.044	10	13	.59	109	.09	4	1.43	.03	.13	5
→ AP88 20 P	10	487	14	159	.3	17	31	1286	3.30	18	5	ND	6	31	1	2	2	52	.32	.046	12	14	.65	149	.10	5	1.53	.04	.21	4
→ AP88 21 P	9	363	12	129	.1	14	21	808	2.68	11	5	ND	6	26	1	2	4	42	.27	.039	10	11	.55	126	.09	4	1.22	.04	.19	4
AP88 40 P	1	28	43	281	.1	7	10	1440	4.73	12	5	ND	1	17	2	2	2	75	.44	.058	5	11	1.13	252	.14	5	1.76	.02	.08	1
STD C	18	57	36	130	6.6	66	28	1052	3.77	40	19	7	37	48	17	16	21	55	.48	.087	38	55	.89	172	.06	33	1.89	.06	.14	12

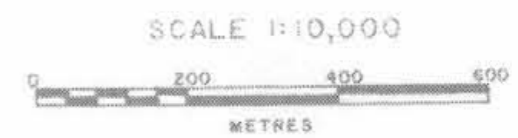
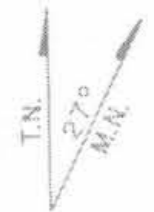


LEGEND

- Claim Line
- Claim Post
- \* Swamp
- Rock Sample
- Silt Sample
- ⊙ Hand Trenched Pit
- || Adit
- Outcrop
- - - Andesite Tuff, Minor Flows

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

17,977



GEOSTAR MINING CORPORATION

**SUN CLAIM  
GEOLOGY &  
SAMPLE LOCATIONS**