95-032

GEOLOGICAL INVESTIGATION

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OF THE

FLAT CREEK CLAIMS

NTS 115 O 16

.

138' 20" West 63' 20" North

Work done June 1 through July 21 1995

BY

G.S. HARTLEY P. GEOL.

for Claim Owners

G. Hartley and A. Hartley

SEPTEMBER 21, 1995

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Drill Hole Locations



LOCATION MAP FLAT CREEK PROJECT

PROJECT LANDS: GRR#1 TO #56 HOT#1TO #20

I. Summary

The Flat Creek project claims lie along the Tintina Trench approximately 65 km (35 miles) east of Dawson City. The claim area is bounded by Flat Creek to the south and highway #2 to the North, the claims ajoin the highway.

The claims are approximately 10 km south of the Brewery Creek gold deposit, known to contain 18.9 Million tons at an approximate grade of .042 oz/ton(Northern Miner Press).

The area of the claims contains no outcrop. Geochemical survey data (GSC Open File 1364) indicated the presence of anomalous mercury, arsenic, barium, magnesium, and tin, in an area where strong structural features have been identified (Mortensen et al 1992).

During the 1994 season, a short field program, conducted by the author, yielded encouraging values of 1.1 ppm silver with associated lead, arsenic and mercury, within stream sediment samples.

During 1995, a total of 47 soil samples were collected, access roads and drill sites were also constructed. A short drilling program totaling 250 feet of percussion drilling in six holes was done using an Nodwell mounted Atlas Copco BRE 5701 pneumatic drill. Drilling was supported by a Case 1150 crawler and a Ingersol Rand 750 CFM compressor.

Results of the soil geochemical survey were encouraging, values up to 828 ppm lead occur with associated silver (to 1 ppm), only low gold and arsenic values were returned. In all cases lead was associated with higher silver values. Estimated background values were; lead 18 ppm, silver .1 ppm.

Drilling failed to reach bedrock, however interesting values were found to occur in tills, the best hole returned values in excess of 500 ppm lead and 2 ppm silver over 20 feet within tills.



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PLATE 1: Atlas Copco BRE 5701 Drill and Nodwell



II. History

There is no record of lode or placer claims within the area, old placer workings, possibly well in excess of eighty years old were noted in one location. The Yukon Minfile indicated no known mineralization in the area. GSC Open File 1364 indicated the presence of anomalous levels of mercury, arsenic, barium, magnesium and tin in the area.

III. Location

The claims are located north of Flat Creek, and immediately south of Highway #2, on NTS sheet 115 O 16, near latitude 63'53 North and longitude 138'20 West.

Access to the property is by paved Highway #2 approximately 65 km east of Dawson City. Field crew accommodation during the six week program was established in a trailer parked on the property.

IV. Physiography

The region in dominated by the Tintina Trench. Thick glacial deposits mantle Paleozoic subcrop (Bostock 1964). Outcrops are not present. The area is designated as a continuous permafrost zone. Topography slopes gently to the south.



CLAIM MAP SHOWING

FLAT CREEK PROJECT

LANDS

V. Regional Geology

The Geology of the region, although poorly exposed, is known to consist of Paleozoic carbonates and shales and related rocks of the Earn and Road River groups intruded by felsic dykes and sills, of Cretaceous to Tertiary age (Bostock 1964).

The project lies within the Tintina Trench structural zone. Lineament studies utilizing Landsat TM thermal imagery, indicate a number of well defined fault splays near the property, the study suggests further evaluation of the region for structurally controlled epithermal gold deposits. (Mortensen and Von Gaza 1992).

VI. Geochemistry

Regional stream sediment sampling data (GSC open file 1364) indicated elevated levels of arsenic, barium, cadmium, mercury, and flourine occur on the property. Anomalous values occur along drainage exhibiting strong structural control.

Following an initial stream sediment survey conducted by the author in 1994, the Hot Creek area was targeted for further investigation, an additional 47 soil samples at 30 meter spacing were collected. soils were analyzed by Northern Analytical Laboratories of Whitehorse. Analysis was for the elements gold, silver, lead, and arsenic, all by atomic adsorption (Maps 3a through 3d).

The sample data indicates uniformly low gold and arsenic values and a strong correlation between high leads (maximum value was 828 ppm) and high silvers (maximum value was 1 ppm).









VII. Drilling

In order to evaluate the significance of geochemical results of the 1994 program, an Atlas Copco BRE 5701 percussion drill was mobilized to the property.

The drilling method involves driving 3.5 inch casing, tipped with a hollow ring bit, large enough to allow a conventional 2 inch carbide insert bit on the end of standard drill steel to drill inside the casing as well as passing through the ring bit to drill ahead of the casing string. The sample is lifted to the surface, between the drill rods and the casing using compressor air.

The casing was advanced by a combination of pneumatic hammering with rotation. The rods and 2 inch bit were them lowered in the hole and the chips in the casing were drilled out. Drilling then continued ahead of the casing until sample return was insufficient, and the process was repeated.

The drill was mounted on a Flextrack Nodwell carrier. Air pressure for the system, was provided by a trailer mounted, Ingersol Rand compressor, powered by a 6V71 diesel engine, capable of producing 750 cfm.

Drill site construction, compressor moves and service functions were accomplished using a Case 1150 crawler tractor. Personnel were transported using a GMC Surburban.

The drill program consisted of 250 feet of drilling in six holes, no hole exceeded 50 feet in depth. Wet conditions in some holes served to limit sample recovery and total depth. Much time was required to drill and later recover casing, using this method.

Samples were collected at 10 foot intervals using a shallow tub and split to a manageable size (approximately 2 kilograms). The excess sample was panned to evaluate the placer gold potential of the tills.

Samples were sent to Northern Analytical Laboratories of Whitehorse for analysis. Assays for gold, silver, lead, and arsenic were done using the atomic adsorption method.



VIII. Conclusions

The extent of the geochemical study consists of one line of samples along a linear drainage feature. Due to the limited nature of the survey and the thick glacial deposits of this region, the data may not lend itself to conventional interpretation, for this reason calculation of background and threshold values must be regarded as speculative. The soil survey confirmed the presence of unusually high values of lead and silver indicated in 1994.

Based on the very limited nature of the data, only the following observations can be made. Soil geochemical sample data from the claims indicates only very low values of gold and arsenic are present in the area, coincident "above average" values of silver, lead, occur along a well defined, linear drainage feature.

It is interesting to note that soil sample SS-95-1 containing lead (828 ppm) and silver (.3 ppm) is located approximately 5000 feet west of Hole 95-1 where 875 ppm lead and 4.1 ppm silver was recovered from a 10 foot sample of till, and that the adjacent drill hole 95-3 located 300 feet west of 95-1 also returned 202 ppm lead and 384 ppb gold from till.

Soil samples, (SS-95-7 through 19), between the two high leads appear to be above average, containing lead to 96 ppm and silver to 1 ppm.

Drill samples were pulverized and treated as rock chips by the lab thus it is not known if the values obtained represent true geochemical dispersion or the unique result of distant glacial transport of detrital minerals, upgraded somewhat by fluvial action.

In general the property contains only very low arsenic and gold values, thus a direct analogy to the Brewery Creek lode gold deposit is unlikely.

Further work should be directed toward evaluation of the property as a lead silver target and should include a hammer siesmic survey, to establish depth to bedrock, and additional deep overburden drilling, if warranted.

IX. Statement of Expenditure

Truck travel in the Yukon (5000 km)	1500.00
Food and consumables	500.00
Assay costs	1247.14
Access road and drill site preparation 100 hr@	\$120.00/hr
	12000.00
P. Geol fees \$500/day/10 days	5000.00
Drilling 250 hr @ \$100/hr	25000.00
Trucking(mob and demob)	5000.00
Report preparation	

\$50747.14

References

Bostock, H.S., 1964. Geology, McQuesten, Yukon territory. Geological Survey of Canada, Map 1143A.

Geological Survey of Canada " Open file 1364" Stream Sediment Geochemistry NTS 115 N,0.

Mortensen, J and G. Von Gaza 1992. Application of Landsat TM thermal Imagery to Structural Interpretations of the Tintina Trench. In Yukon Geology, Vol.3; EGSD, Yukon, Indian and Northern Affairs Canada, p.214-222

CERTIFICATE

I, Glenn S. Hartley of 7302-118 A street Edmonton, hereby state that:

- 1. I am a graduate of the University of Alberta, Department of Geology (B. Sc. Specialization 1977).
- 2. I am a registered Professional Geologist in the province of Alberta.
- 3. Since 1970, I have been employed by various exploration firms and have conducted field programs in Alberta, British Columbia, Saskatchewan, Northwest Territories, and the Yukon.
- 4. I have a direct interest in the lode claims of this report.

Respectfully submitted,

Glenn S. Hartley, P. Geol.

Appendix I

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28/07/95

Assay Certificate

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Glenn Hartley

WO#27994

Sample #		Au ppb	Ag ppm	Pp ppm	As ppm	
SS-95-1		<5	0,3	828	<10	
SS-95-2		12	0.4	44	19	
SS-95-3		<5	<0.1	15	<10	
SS-95-4		<5	<0.1	23	<10	
SS-95-5		<5	<0.1	20	<10	
- SS-95-6		6	<0.1	11	<10	
💼 SS-95-7		I.S.	0.7 -	60	<10	
SS-95-8		I.S.	0.4	96	<10	
SS-95-9		<5	<0.1	20	<10	
SS-95-10		<5	0.2	24	<10	
SS-95-11		<5	0.4	25	< 10	
SS-95-12		<5	0.4	20	<10	
SS-95-13		I.S.	0.3	25	<10	
SS-95-14		<5	0.4	18	15	
SS-95-15		<5	02	18	11	
SS-95-16		<5	0.3	17	<10	
SS-95-17		<5	0.1	19	< 10	
SS-95-17.5		6	0.3	22	13	
SS-95-18		6	03	17	11	
SS-95-19	æ	<5	1.0	20	11	
SS-95-20		8	<0 1	10	<10	
SS-95-21		8	01	13	<10	
SS-95-22		<5	C 1	16	<10	
SS-95-23		<5	0.1	16	< 10	
SS-95-23.5		6	01	12	<10	
SS-95-24		<5	0.1	13	10	
SS-95-25		<5	0.1	13	<10	
SS-95-26		<5	01	17	10	
SS-95-27		10	0.2	25	15	
SS-95-28		<5	0.1	18	15	
SS-95-29		< 5	<0.1	10	<10	
SS-95-30		<5	<0.1	11	<10	
SS-95-31		<5	<01	13	<10	
∽ SS-95-50		<5	<01	11	<10	

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28/07/95

Assay Certificate

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Glenn Hartley

WO#27994

Sample #	Au ppb	Ag ppm	Pb ppm	As ppm	
SS-95-51	5	<0.1	16	<10	
SS-95-52	່ <5	<0.1	7	< 10	
SS-95-53	<5	<0.1	6	< 10	
SS-95-54	<5	<0.1	8	<10	
SS-95-55	<5	<0.1	14	<10	A.
SS-95-56	13	<0.1	12	10	2
SS-95-57	<5	0.1	7	<10	
SS-95-58	<5	<0.1	9	<10	
SS-95-59	<5	<0.1	12	11	
SS-95-60	<5	<0 1	12	<10	
SS-95-61	<5	0.1	17	<10	
SS-95-62	<5	<0.1	11.	< 10	
SS-95-63	9	<0.1	13	<10	

Note: I.S. means insufficient sample (fines) for analysis.

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28/08/95

Assay Certificate

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Glenn Hartley

WO#15323

Sample #		Au Sbp	Ag ppm	Pp opm	As ppm	
CBD 95-1	0-10	8	4.1	875	13	
BOBD 95-1	10-20	3	0.2	162	23	
OBD 95-1	20-30	<5	<0 1	24	<10	
OBD 95-1	30-40	5	<0.1	30	20	
-CBD 95-1	40-50	<\$	< 0.1	19	10	
080 95-2	0-10	16	<0.1	23	27	
OBD 95-2	10-20	9	<0.1	30	< 10	
OBD 95-2	20-30	8	<0.1	34	13	
_ CBD 95-2	30-40	ŝ	<0.1	16	19	
OBD 95-3	0-10	<5	<0 1	19	13	
CBD 95-3	10-20	5	<0 1	202	< 10	
🕳 CBD 95-3	20-30	384	<0.1	18	19	
OBD 95-3	30-40	16	<0.1	21	14	
OBD 95-3	40-50	12	<01	19	14	
💼 OBD 95-4	0-10	10	<0.1	23	13	
OBD 95-4	10-20	7	<0.1	67	17	
- OBD 95-4	20-30	5	<0 1	16	20	
OBD 95-4	30-40	15	<0.1	16	17	
OBD 95-5	0-10		0.1	20	16	
CBD 95-5	10-20	5	<0.1	18	28	
OBD 95-5	20-30	14	<0 1	16	12	
GBD 95-6	0-20	16	0 1	30	14	
CED 95-6	20-30	10	<0.1	24	11	
OBD 95-8	30-40	5	<0 1	21	<10	

Note These soil samples (?) contained insufficient fine material for analysis so were pulverized.

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Appendix II

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GRR,HOT,DAD, and WET CLAIMS

OVERBURDEN DRILLING PROGRAM 1995

SAMPLE DESCRIPTIONS AND ASSAY DATA

Flat Ceek project nts 115 O 16

SAMPLE	FROM (FT)	TO (FT)	Rock Description		Au ppb	Pb ppm	Ag ppm	As ppm
OBD 95-1	0	10	gray to brown gravels,	ND colors in pan HMC	8	875	4.1	13
	10	20	H	m	8	162	0.2	23
	20	30	14		ব	24	<0.1	<10
	30	40	10	n	5	30	<0.1	20
	40	50	"	"	ব	19	<0.1	10
OBD 95-2	0	10	Brown gravel		16	23	<0.1	27
	10	20	"	trace colors in pan HMC	9	30	<0.1	<10
	20	30	11	ND colors in HMC	8	34	<0.1	13
	30	40	"	R	5	16	<0.1	19
OBD 95-3	0	10	Brown gravels	ND colors in pan HMC	ব	19	<0.1	13
	10	20	gray to brown gravels,	trace colors in HMC	5	202	<0.1	<10
	20	30	**	**	384	18	<0.1	19
	30	40	99	••	16	21	<0.1	14
	40	50	"	ND colors in HMC	12	19	<0.1	14
OBD 95-4	0	10	Brown gravels,	ND colors in pan HMC	10	23	<0.1	13
	10	20	grey gravels	**	7	67	<0.1	17
	20	30	**	Ħ	5	16	<0.1	20
	30	40	*	H	15	16	<0.1	17
OBD 95-5	0	10	grey gravels	ND colors in pan HMC	7	20	0.1	16
	10	20	n	"	5	18	<0.1	28
	20	30	*	*	14	16	<0.1	12
OBD 95-6	0	20	grey brown gravels	ND colors in pan HMC	16	30	0.1	14
	20	30	"		10	24	<0.1	11
	30	40		11	5	21	,0.1	,10

Au ppb Pb ppm Ag ppm As ppm