272

GEOPHYSICAL REPORT

MAGNETOMETER SURVEY OF THE TIGAR GROUP

(Tigar Nos. 1-8, 10 miles northeast of Creston, B.C.)

(116° 20' west longitude - 49° 05' north latitude)

Work Completed - September, 1958

Magnetometer Readings by	R. E. Renshaw, Consulting Geologist
Calculations by	R. E. Renshaw, Consulting Geologist
Maps by	Franklin L.C. Price, P. Eng.
Report by	Franklin L.C. Price, P. Eng.

October 15, 1958

GEOPHYSICAL REPORT

MAGNETOMETER SURVEY OF THE TIGAR GROUP

Purpose of the Survey

The survey was carried out to determine if there were any magnetic anomolies on the Tigar Group of Mineral Claims, resulting from the presence or absence of magnetic minerals. Large areas of overburden along the flat near the Goat River masking most of the bedrock along that area prevented a thorough geological analysis. A detailed study of the structure could be completed better with the results of the magnetometer survey.

The survey was intended to be of a reconnaissance nature only to be followed by a more detailed (closer spaced) survey if any anomolies were indicated.

GENERAL GEOLOGY OF THE AREA

The rocks in the vicinity of Kitchener are late PreCambrian in age. These Proterozoic sediments were laid down in a belt 60 to 100 miles wide and extended from California to the Artic Ocean. Two great systems have been identified, the Windermere series and the Purcell series separated by an unconformity. A table of formations is given below.

Table of Formations

Paleozoic	Cambrian	Cranbrook formation
Proterozoic (late Pre Cambrian)	Windermere	greenstone, limestone, conglomerate
	Unconformity	
	Upper Purcell	Purcell intrusives Mount Nelson formation Dutch Creek formation.
	Lower Purcell	Kitchener-Siyeh formation Creston formation Aldridge formation

On the Tiger Claims and vicinity, only the Lower Purcell represented by the Aldridge formation and sills of the Upper Purcell are present.

General Geology of the Area (cont'd)

The Aldridge formation is composed mainly of grey to brownish grey, rusty weathering argillite and argillaceous quartzite, the latter in beds generally about one foot thick but in some places as much as ten feet thick.

The Purcell sills are widely distributed in all formations of the Lower Purcell. They vary in size from thin sheets to tabular bodies 700 feet or more thick. The sills are composed of dark green, crystalline rock varying in composition from gabbro to quartz-diorite.

On the western boundary of Tigar 1, one of the sills is mineralized with varying amounts of pyrite, chalcopyrite, and pyrrhotite. The latter mineral is sometimes nickeliferous. The dyke is well fractured and the sulphides are present as disseminations in the sill or as fillings in the fractures. A few small quartz-calcite veinlets are also present.

Several open cuts have been made in the sill without cutting commercial mineralization. The object of this magnetometer survey was to try and determine if any commercial mineralization could be present in the sill but masked with overburden or if the sill itself could be traced. The survey did not indicate any anomoly to show the presence of any such ore body.

Equipment

The magnetometer used for this survey was manufactured by the Radar Exploration Co. of Toronto, and has a scale constant of 17.4 gammas per division of the micrometer scale. This instrument is very light and portable and requires no locking of the motion before being moved along the line. With practice a trained operator can set up and take a reading in about two minutes. The instrument has no auxiliary magnets but has an adjustment that permits allowance for a background magnetic constant which in the case of this survey has been set at the arbitrary constant of 10,000 gammas.

Method of Survey

A base line was established along the road that parallels the Goat River. This base line was surveyed with a Brunton compass and the Tigar Claims were run in by the same survey. A base point or home station was established at the junction of the road where the magnetometer was checked into each morning and night in order to complete the diurnal .

Stations were then chained every three hundred feet along this base line. These control stations were to be established as cross lines in the grid. Magnetometer stations were then chained as the survey was being made every 100 feet along these

Method of Survey (cont'd)

lines. The lines were parallel to each other and about at 90° to the Goat River. The lines extended from the bank of the river to the top of the hill to the west of the main showing.

The magnetometer readings were taken by two men, Price & Renshaw who measured in the station, cut the line, and made the readings as the cross lines were established.

The magnetometer was oriented with a compass so that the side of the instrument marked "N" faced directly toward magnetic north, the machine was then levelled. Then the micrometer scale knob was turned until the indicating needle coincided exactly with the centre of the cross hairs. The number of the station, the micrometer reading and the exact time of the reading were recorded on the calculation sheet.

The base station, at the junction of the road, was used to balance the readings of the entire survey as readings were taken there daily. Each day base stations were established with reference to this main base and check readings were taken at the daily base station every hour to establish the diurnal variation and to check for any other variation due to magnetic storms. This necessity of having a second instrument read at a permanent base station at intervals during the day.

Calculations and Plottings

The calculations of the readings were done by R. E. Renshaw. The preparation and plottings on the map was done by Franklin Price. The daily base was balanced against the main base, then the readings were adjusted for the daily variation according to the sample calculation page attached to this report.

Since this instrument has not been calibrated to read the exact amount of the earth's vertical magnetic field, it was used to measure the variation in vertical intensity only, and for this reason an arbitrary constant of 10,000 gammas was subtracted from the product of the scale reading and the scale constant of 17.4 gammas per scale division.

A daily constant calculated from the daily reading at the main base station was applied in order to have each days readings on the same basis as the other days readings.

Interpretation of the Magnetometer Survey

While it is recognized that the instrument used is not accurate enough to define small variations in magnetic intensity and that the spacing of the stations could be large enough to allow small anomolies to go undetected, one may safely conclude that there are no anomolies large enough to warrant further exploration

Special care and closely spaced readings were taken across the main showing or outcrop along the western boundary of Tigar No. One. The machine gave off-scale plus readings directly over the showing, but did not continue for any length. The machine gave normal readings within 200 feet in every direction, therefore it may be concluded that the outcrop was small and local.

Conclusions

No interesting magnetic anomolies were located on the Tigar Group of mineral claims.

A more detailed or closer magnetometer survey is not warranted.

Respectfully Submitted,

Franklin L.G. Price, R.P.E.

TABLE OF CONTENTS

#1 Magnetometer Survey of Sigar Claims 1" = 200 feet

#2 Sketch map of Sigar Group 1" = 1000 feet

MAGNETOMETER SURVEY
TIGAR GROUP

Creston, B.C.

Magnetometer Survey Readings	2 men	22 days @$15.00 day	$660.00
Supervision of Survey		4 days @$35.00 day	140.00
Calculation and Map Preparation and report		6 days @$15.00 day	90.00
			$890.00

(2)

DATE: [illegible]

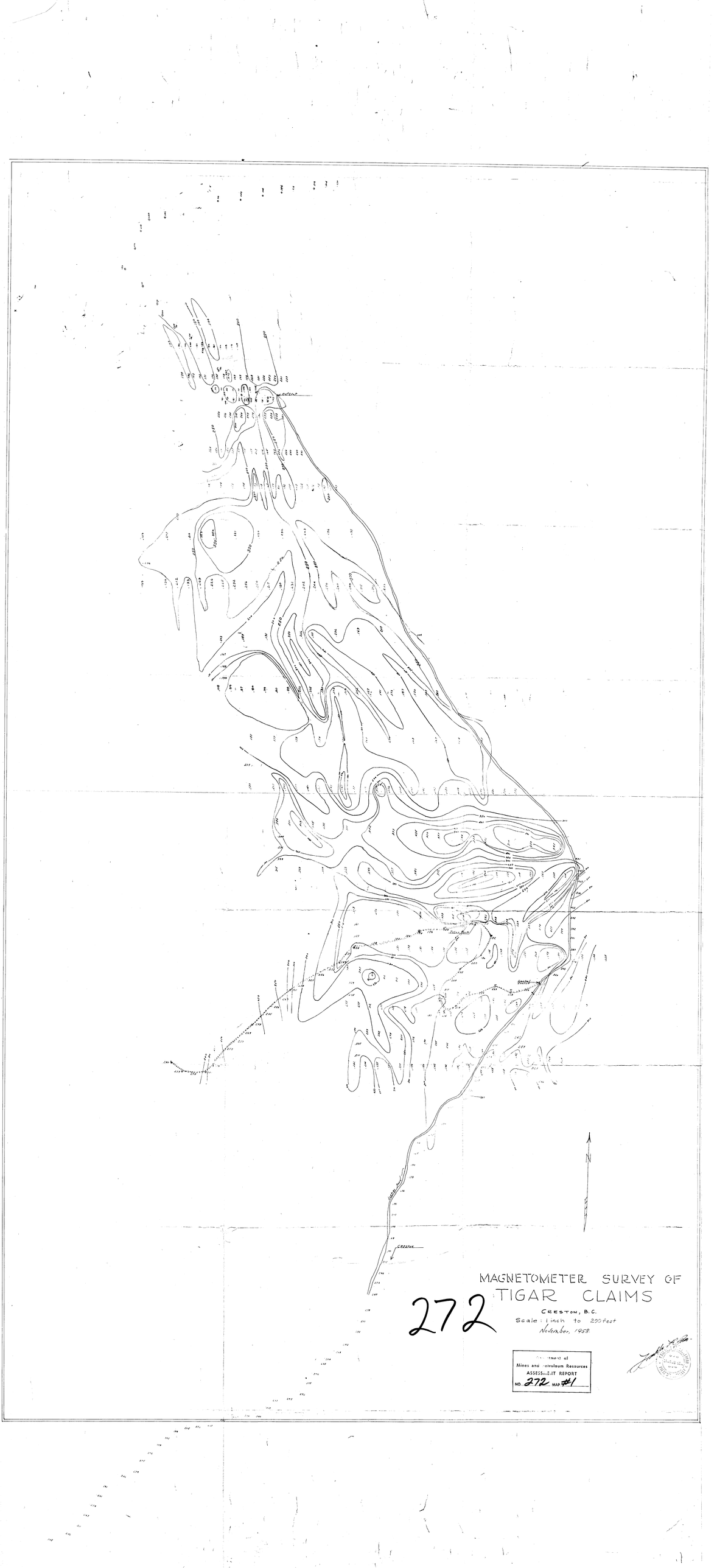
LINE: MAG SURVEY ON B-4
R FAST
L HILL

(2)

C-10,000

STAT	HEAD	VALUE	TIME	DIUR	V-D	VI-C	REMARKS
XXX11	651	11,327	00	0	11327	962	C = 365
LINE B 4	656	11,414	05	8	11422	1057	
B-4-1	645	11,223	08	13	11236	871	
B-4-2	640	11,136	12	19	11155	790	
B-4-3	640	11,136	14	22	11159	793	
B-4-4	640	11,136	18	29	11165	801	
B-4-5	635	11,049	21	33	11082	717	
B-4-6	653	11,362	24	38	11420	1033	
B-4-7	642	11,170	27	43	11213	848	
B-4-8	650	11,310	30	48	11353	993	
B-4-9	650	11,310	33	52	11362	997	
B-4-10	650	11,310	36	57	11367	1002	
B-4-11	645	11,223	40	64	11287	922	
B-4-12	645	11,223	43	69	11292	927	
B-4-13	645	11,223	47	75	11298	933	
B-4-14	643	11,188	55	89	11276	911	
B-3-1300	635	11,049	60	96	11145	780	
B-3-12	630	10,962	65	104	10966	601	
B-3-11	645	11,223	70	112	11335	970	
B-3-10	640	11,136	75	119	11255	890	
B-3-9	655	11,397	77	123	11520	1155	
B-3-8	645	11,223	81	129	11352	987	
B-3-7	646	11,240	86	137	11377	1012	
B-3-6	640	11,136	89	140	11276	911	
B-3-5	640	11,136	92	146	11282	917	
B-3-4	635	11,049	96	153	11202	837	
B-3-3	630	10,962	100	159	11121	756	
B-3-2	640	11,136	103	164	11300	935	
B-3-1	650	11,310	108	173	11483	1118	
B-3	660	11,484	113	180	11664	1299	
XXX11	640	11,136	120	191	11327	962	
XXX00	650	11,310	145	231	11542	1077	

Note: This sheet is to illustrate only and is not an exact copy of the field notes for the Tiger Claims as the notes of the Tiger were not on hand.



MAGNETOMETER SURVEY OF TIGAR CLAIMS

CRESTON, B.C.

Scale: 1 inch to 200 feet

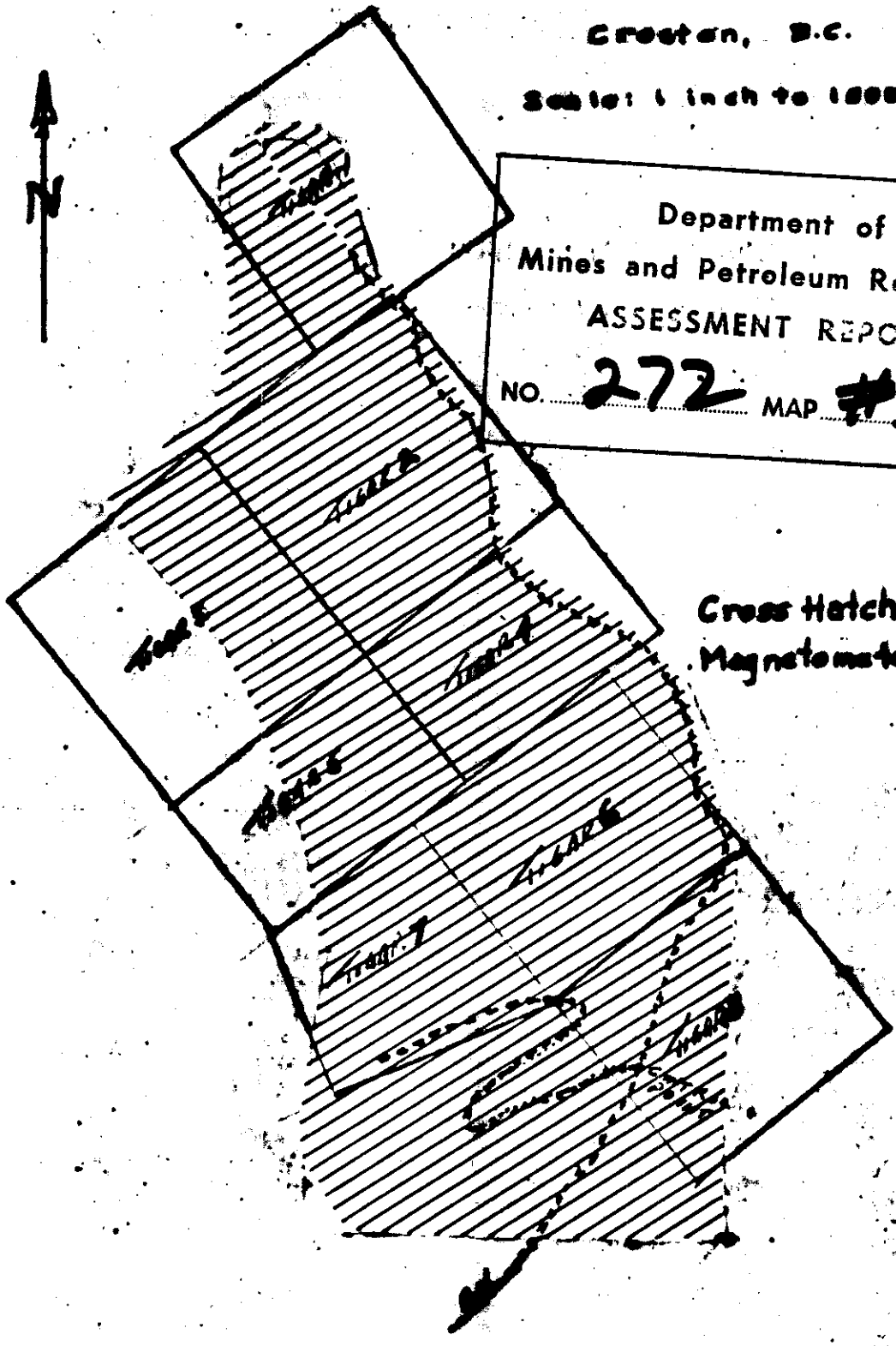
November, 1958

272

SKETCH MAP OF TIGAR GROUP

Creston, B.C.

Scale: 1 inch to 1000 feet



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 272 MAP #2

Cross Hatch area is
Magnetometer Survey

Franklin Price P.Eng
Nov 68.