Treasury Creek Magnetometer Survey

Survey by John Devlin
June 16, 1985
Claim No.9503 [Discovery]
63 48'N, 137 42'W
Sheet 115P-13

120064

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INTRODUCTION

General

On June 15 and 16, myself and Shahab Farhangi traveled to and performed a high-sense magnetometric survey on a discovery claim off Zinc Creek for the owner Tracie Harris and her partner Gordon Chapman. The purpose was to attempt to locate black sand (magnetite) on the property to aid in an evaluation program to carried out during the summer of 1985.

During previous years extensive mining was carried out on the lower reaches of Treasury Creek where it joins Zinc Creek. Since black sands were encountered in the sluce box at that time, it was felt that there was a possibility of further concentrations up-stream, and that a magnetometer survey to locate these concentrations was indicated.

Location

The survey was carried out on the discovery claim P9503 granted to Tracie Harris. The claim is located on what is locally known as Treasury Creek, which flows into Zinc Creek about 1.5 miles above Barlow Creek. The number 1 post is located on ground slightly rising to the west. Directly to the east, the ground falls away sharply through old placer tailings, and into Zinc Creek; a change in elevation of several hundred feet. To the west, and towards the number 2 post, the claim follows wet ground, heavy in willows and moss, though there is no present water channel.

SURVEY PROCEDURE

For survey control, a base line was established on the claim with the origin located at the number 1 post, and extending 1500 ft. west towards the number two post, and following the trend of wet ground. The baseline was cut so as to allow visual sighting along it through some heavy bush. Pickets were placed every 100 ft. to locate survey lines. Survey control along the lines was by compass and hip-chain with stations marked on flagging tape at 20 ft. intervals and extending 500 ft. to the north and south of the baseline.

The equipment used was the EDA ppm 350 and 400 proton magnetometers. These represent the latest generation of geophysical equipment, having solid state internal memories for the storage of data. The system includes the 350 field unit and the 400 base station. The base station was set up on the top of a slight rise, away from the present camp sight. The use of a base station negates the effects of diurnal drift, the phenomenon whereby the earth's magnetic field constantly fluctuates. The base station was set to take a readings every 20 seconds. The reading was automatically recorded along with the precise time of the reading in the machine's memory. The field mag's internal clock was then synchronized with that of the base station and the survey run. At each station, the field mag records in it's memory the mag field reading, the grid location at which the reading was taken, and the exact time of the reading. When the survey is completed, the two machines are connected together, the base station reads each value stored in the field unit and corrects each based on the time the reading was taken and the value of the base reading at that time. Thus any change in the background magnetic field is automatically compensated for. I ran a test pattern several years ago in Northern Saskatchewan where I found that the error in this technique was on the order of .5 gammas.

INTERPRETATION AND CONCLUSIONS

A point of major interest is immediately seen on both the included contour and profile maps. This anomaly rises in excess of 150 gammas above the datum value of 57,900 gammas. In this case, the datum is a value subtracted from all readings so as to make the actual presentation much simpler. To determine the actual magnetic field reading at any point, one needs simpley to add this datum value to the plotted value.

The anomaly extends from line 1+00W to about line 7+00W with the major concentration lying between 1+50W and 6+00W. The anomaly has all the signatures of a fairly shallow source of not high magnetic suseptability. This is seen in the narrow sharp profile curve. It must be noted here, that given the sensativity of the equipment one must be careful not to over emphasize the anomaly. In this case, the peek value of 150 gammas above the datum looks quite large, but only in relation to the surrounding values. Such would be the values I would expect to see over such as a light concentration of black sands. For comparison, anomalies over say, massive sulphides, intrusive dykes or iron ore bodies may range between several hundred gammas to several thousand gammas.

Another interesting feature is the trend of relatively low values extending along the baseline and branching out to the north west of the grid. It was noticed that these low values corresponds quite closely with the observed wet ground and dense willows. As there is no defined stream channels visible on the grid, these are taken to be the present locations of the "stream" bed. Thus the low magnetic trends could be indicative of the former stream channels. When the high anomaly is seen in relation to these lows, we see that it occurs at confluence of the two minor streams, and might be a possible location for deposition.

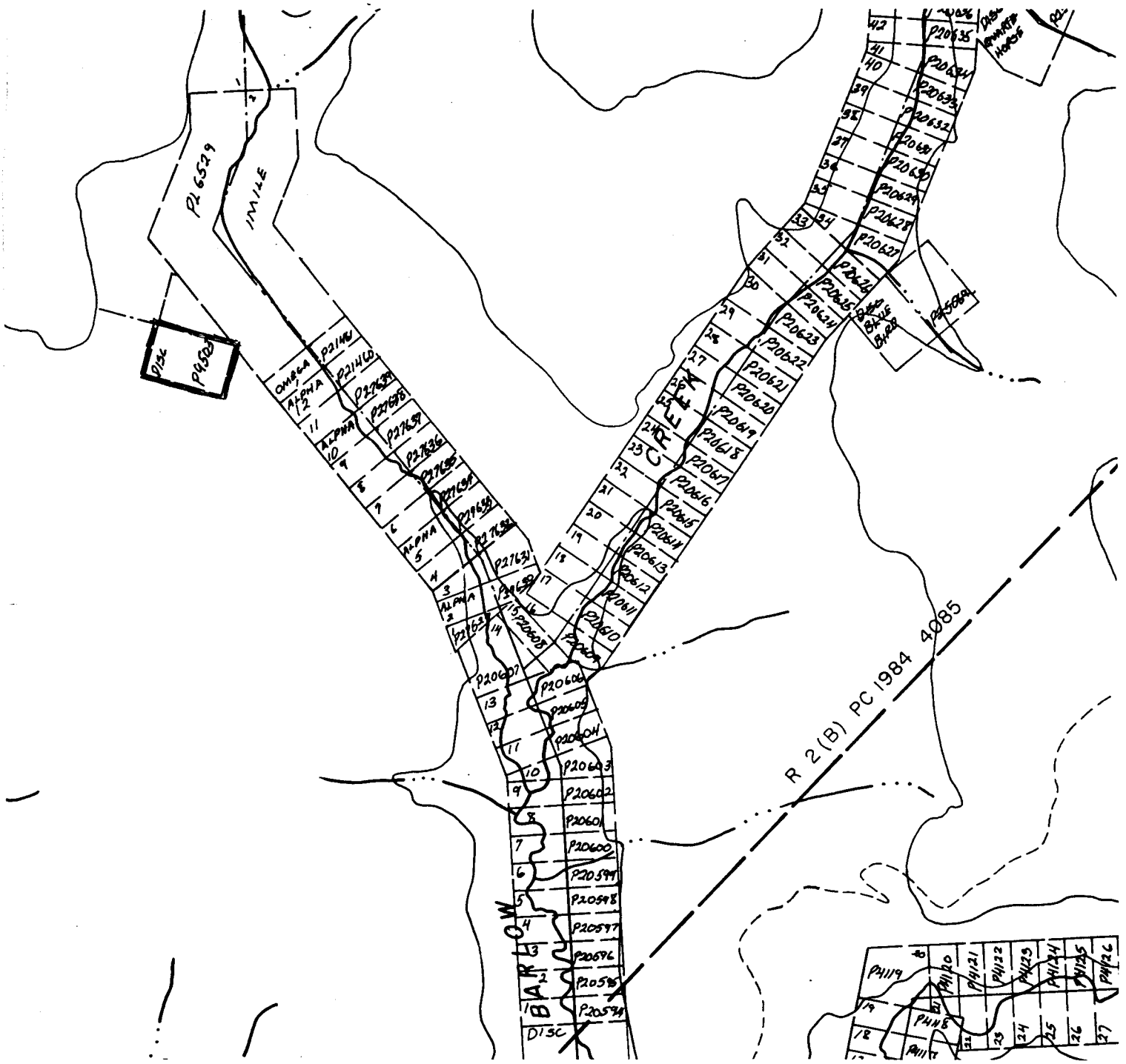
The observed magnetic high also is on strike with deposits mined in the previous several years, down stream of the number 1 post.

There are several extremely high values in the north east portion of the grid, but these occur in close proximity to large pieces of iron or metalic equipment left on the site in years past. As such, they are disregarded in terms of interpretation and contour lines not placed around them.

RECOMMENDATIONS

The anomaly should be tested, preferabley by trenching across it. Though there is no depth estimate available at this time, the anomaly signature is not that of an overly deep source. Trenches parallel to the survey lines or running due north-south could be placed starting 200 ft. west of post number 1 and extending 50' on either side of the anomaly at station 2+00S. Further trenches could be placed as needed along the anomaly to fully test its source and to see if it is indeed it is caused by black sands. To fully test the geophysical response the grid could be extended to the south but the expense of doing so might not be justified by the additional data.

If the anomaly does prove to be a black sand concentration, then further magnetometer work is indicated in the area to test both the old workings for total recovery and new areas upstream of the present claim for further depositions.



Section of Yukon Placer sheet 115P-13, showing the location of the treasury creek claim just up from Zinc Creek.

STATEMENT OF VALUE FOR WORK PERFORMED

Travel to and from property: 600 mi. @ $.50/mi.	300.00
1 Day J.Devlin + equipment	400.00
1 Day helper	100.00
1 Day report and maps	400.00
Total:	1200.00

As per agreement with Tracie Harris and for services and future consideration, actual amount billed is $600.00

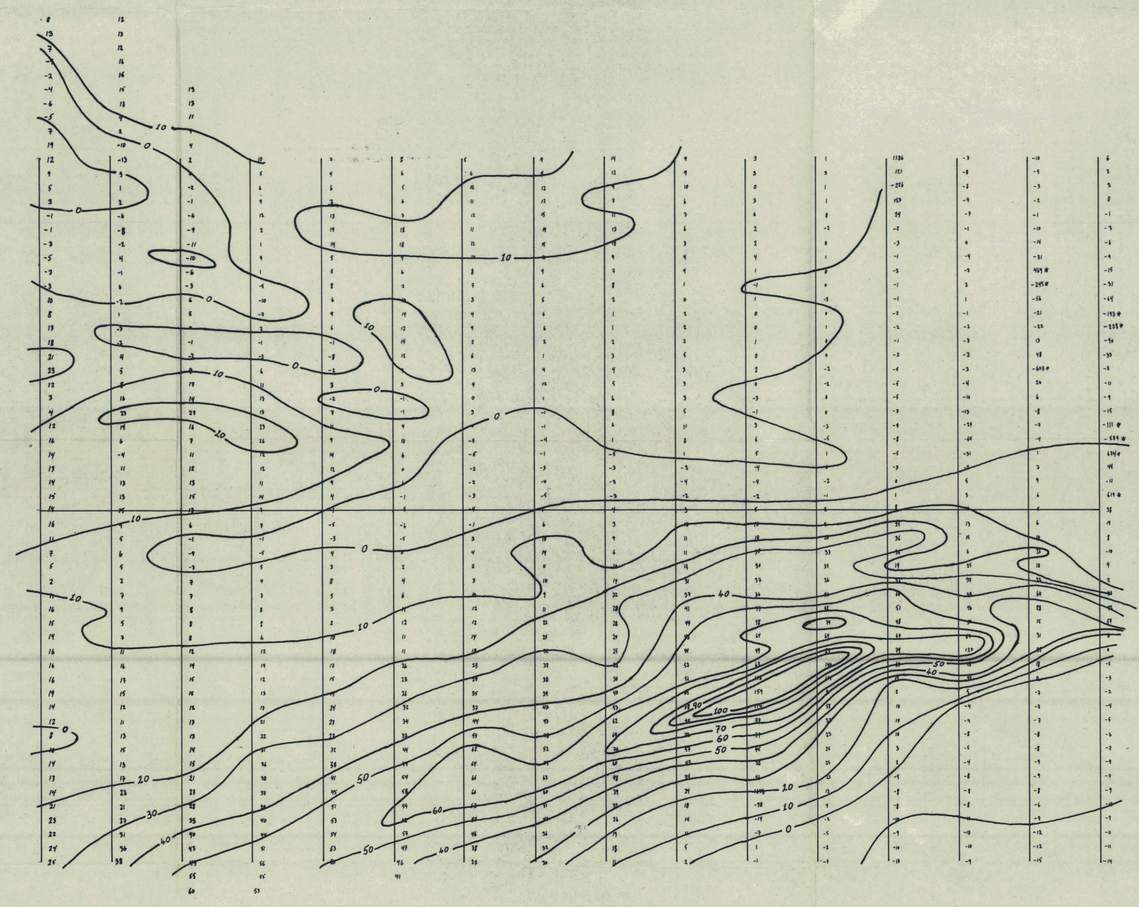
Respectfully submitted:

John Devlin

500 N

BASELINE

500 S



L 15 W

L 10 W

L 5 W

L 0 W

N

TREASURY CREEK MAGNETOMETER SURVEY

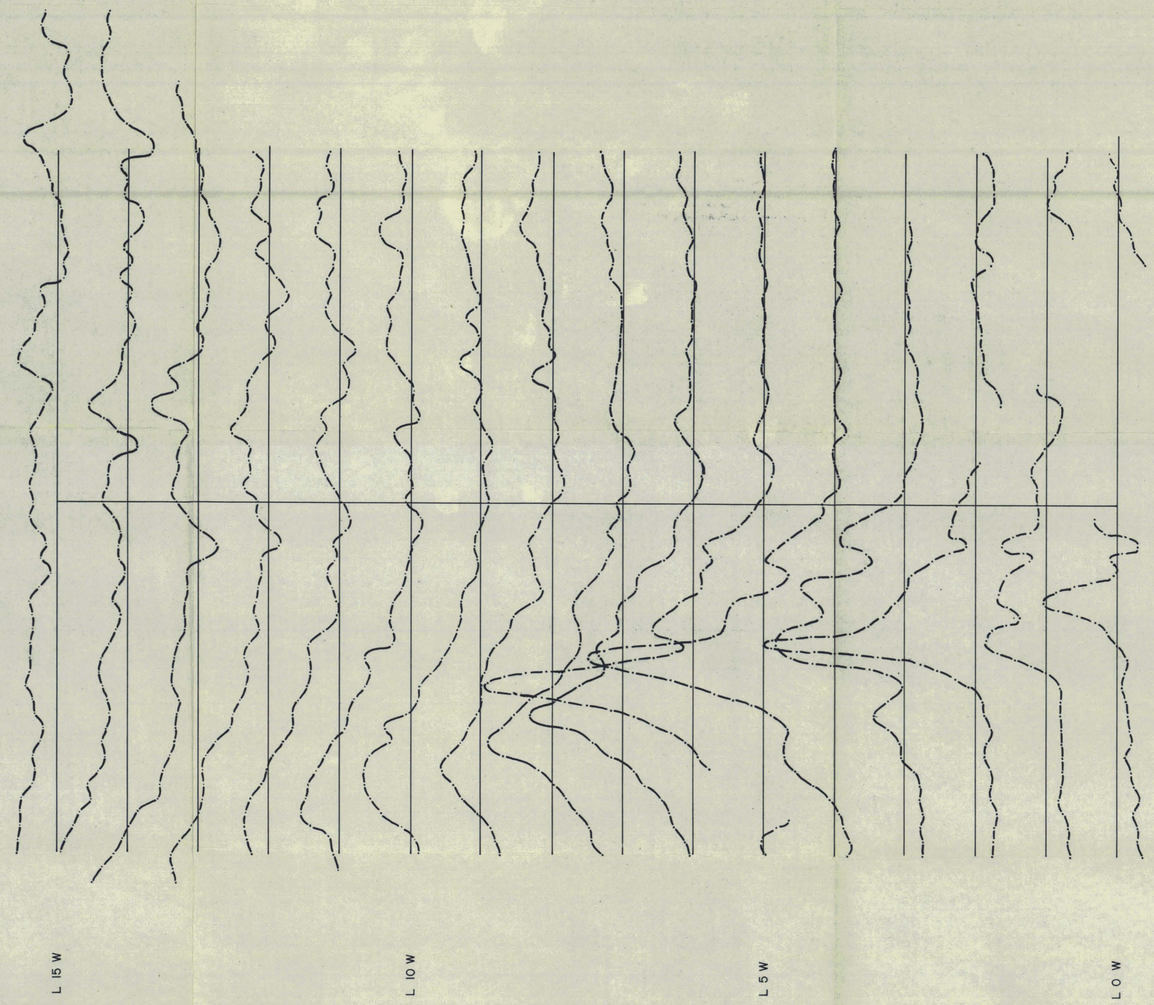
SURVEY BY JOHN DEVLIN DATE: JUNE 16, 1985

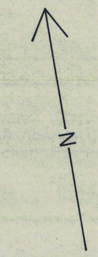
INSTRUMENT: EDA PPM 350 PROTON MAGNETOMETER
PPM 400 BASE STATION

CONTOUR INTERVAL: 10 γ

SCALE: 1" = 100'

120064 (15)





TREASURY CREEK
MAGNETOMETER SURVEY

SURVEY BY JOHN DEVLIN DATE: JUNE 16, 1985

INSTRUMENT: EDA PPM 350 PROTON MAGNETOMETER
PPM 400 BASE STATION

PROFILE: 1" = 40 ɣ DATUM: 57,900 ɣ

SCALE: 1" = 100'

120064 (16)