MAGNETOMETER SURVEY REPORT
ON
DIGGER CLAIM – P 41964

MT. NANSEN MAP SHEET
NTS 115 I/3

by

Larry W. Carlyle

120171

This report has been examined by the Geological Evaluation Unit under Section 41 Yukon Placer Mining Act and is recommended as allowable representation work in the amount of $ 755.75.

for Chief Geologist, Exploration and Geological Services Division, Northern Affairs Program for Commissioner of Yukon Territory.

TABLE OF CONTENTS

MAGNETOMETER SURVEY REPORT ON THE DIGGER CLAIM - P 41964

INTRODUCTION:

On March 21, 1997, Larry Carlyle was asked to do a small magnetometer survey for the purpose of assessment work on the Digger Claim. The Digger Claim is a placer claim (P 41964) located on the Mt. Nansen Map Sheet , NTS 115 I/3. The claim is the first claim located on the East Fork of Nansen Creek above its confluence with Summit Creek.

The claim owner, Eugene Curley, had asked Ken Galambos to have some assessment done on the claim to maintain it in good standing. A small magnetometer survey was considered to be the most appropriate thing to do. Mr. Galambos knew that Carlyle had a magnetometer and had performed similar surveys in the past.

The survey was performed on March 25, 1997. This report will summarize the work done during the survey and interpret the results.

PROPERTY ACCESS:

Carlyle and his field assistant, Kelsey Brenton, drove from Whitehorse to Carmacks. From here, they were joined by Larry Tricker with two snow machines. The vehicles could be used until approximately 2 miles past the BYG Mine site. At this point, it became necessary to use the snow machines for the approximately 9.5 km. trip to the claim.

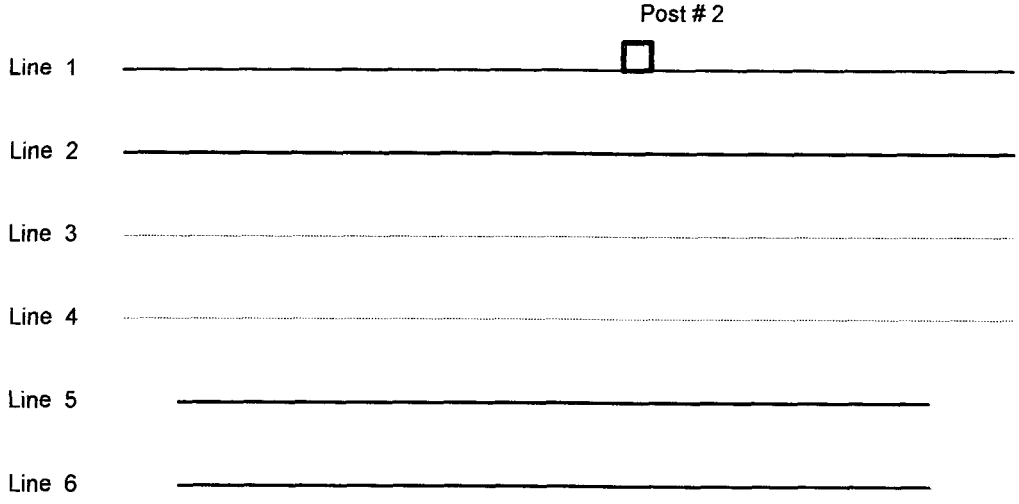

DIGGER P41964
Summit
ROAD
1 MILE
PL9754
TINA
Courtland Cr
P41872
JEN
WIN
P41545
COURT 3
P41693
ANGELA
P41694
GID Fr
P42166
R-31A
C/LS
R-31A
C/LS
Fork
TR. CL. 1 P41919
P41672
WEST VICTORIA
P27516
WEST VICTORIA 3
VICTORIA
VICTORIA CREEK
BASELINE

MAGNETOMETER SURVEY PROCEDURE:

When the claim was reached, it was discovered that severe glaciation had occurred at the site. Glaciation was so extensive that only the #2 Post could be located; the #1 Post was assumed to have been covered by ice. The East Fork of Nansen Creek runs approximately west so the baseline down the claim line ran east-west. Cross-lines running north-south were placed at 100 foot (30 metre) spacings along the baseline with Line 1 running through the #2 Post and line numbers increasing toward the #1 Post (See Magnetometer Survey Lines Sketch). It was decided that readings would be taken every 10 metres (33 feet) along the lines. It was anticipated that 6 lines of surveying could be achieved. The north valley side on the claim sloped at approximately 5 - 10 degrees; while the south valley side sloped at approximately 35 degrees. For this reason, the lines were extended further to the north then to the south in the belief that less overburden is present north than south of the creek. Readings are more accurate when they are not masked by too great a thickness of overburden.

The magnetometer utilized for the survey is a Geometrics G-816 proton magnetometer. This magnetometer has a precision of 1 gamma. It has no base station so it is necessary to take readings in loops to make diurnal corrections. It was expected that 3 loops (Lines 1 & 2, Lines 3 & 4, and Lines 5 & 6) could be achieved. During the survey, it became apparent that, once the ice covered creek bottom was left, the sides of the creek were covered with 4 - 5 feet of snow. Snowshoeing along the lines was greatly assisted by packing down the lines with a snow machine. This allowed for an average of a reading per minute to be taken. This still did not leave enough time to survey all six lines. It was decided that loops on Lines 1 & 2 and 5 & 6 would be done.

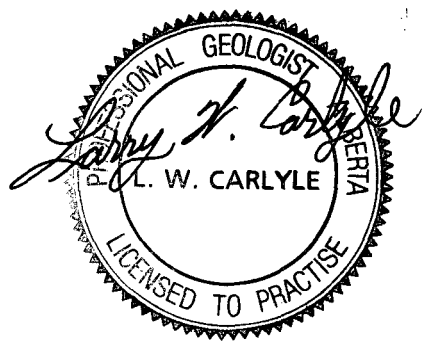
MAGNETOMETER SURVEY LINES
DIGGER CLAIM -- P 41964



Time only permitted Lines 1 & 2 and 5 & 6 to be surveyed.

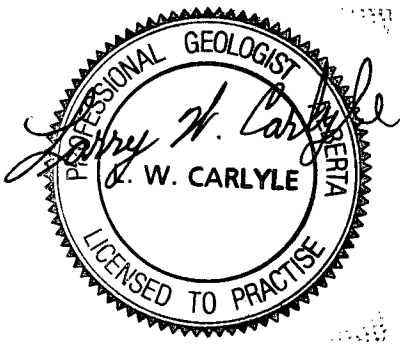
Lines 1 & 2 extend 130 metres south of the baseline and 180 metres north of the baseline.

Lines 5 & 6 extend 100 metres south of the baseline and 160 metres north of the baseline.



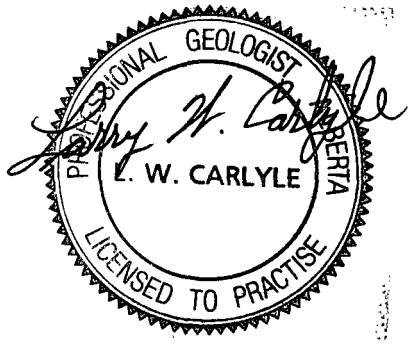
MAGNETOMETER READINGS

Line	Station	Time	Reading Average	Line	Station	Time	Reading Average
1	#2 Post	1:47	57220		130	3:41	395
	10 S	1:50	57282		140	3:42	395
	20 S	1:53	57335	2	150 N	3:45	57418
	30	1:55	321		160	3:47	367
	40	1:57	336		170	3:50	430
1	50 S	1:59	57360	2	180 N	3:51	57413
	60	2:02	387	1	180 N	3:53	57425
	70	2:05	389		170	3:54	429
	80	2:07	457		160	3:55	423
	90	2:09	413	1	150 N	3:56	57425
1	100 S	2:10	57355		140	3:58	425
	110	2:11	344		130	4:00	408
	120	2:12	398		120	4:01	422
1	130 S	2:14	57383		110	4:02	412
2	130 S	2:16	57352	1	100 N	4:03	57389
	120	2:18	327		90	4:03	411
	110	2:20	337		80	4:04	397
2	100 S	2:23	57365		70	4:05	328
	90	2:25	345		60	4:06	363
	80	2:45	446	1	50 N	4:06	57344
	70	2:47	457		40	4:07	394
	60	2:50	387		30	4:08	400
2	50 S	2:51	57388		20	4:10	401
	40	2:53	411		10 N	4:12	430
	30	2:55	439	1	#2 Post	4:14	57449
	20	2:57	387				
	10 S	3:00	393				
2	B.L.	3:03	57358				
	10 N	3:05	378				
	20	3:07	429				
	30	3:09	415				
	40	3:10	439				
2	50 N	3:12	57456				
	60	3:14	453				
	70	3:15	487				
2	80 N	3:30	433				
	90 N	3:32	412				
2	100 N	3:35	57430				
	110	3:37	393				
	120	3:40	390				



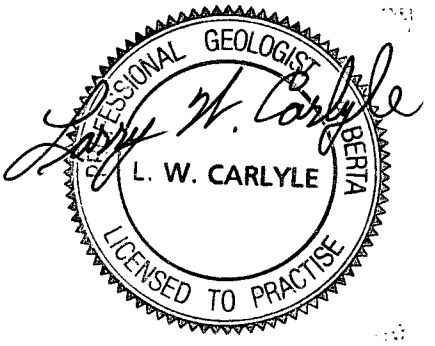
MAGNETOMETER READINGS

Line	Station	Time	Reading Average	Line	Station	Time	Reading Average
5	B.L.	4:25	57455	5	160 N	5:31	57352
	10 S	4:26	230		150 N	5:33	387
	20	4:26	379		140	5:34	396
	30	4:27	363		130	5:35	369
	40	4:28	333		120	5:36	389
5	50 S	4:30	57343		110	5:37	376
	60	4:35	346	5	100 N	5:42	57386
	70	4:37	360		90	5:45	386
	80	4:40	393		80	5:47	383
	90	4:43	424		70	5:48	345
5	100 S	4:45	57427		60	5:49	401
6	100 S	4:50	57406	5	50 N	5:50	57373
	90	4:51	401		40	5:52	391
	80	4:53	406		30	5:53	374
	70	4:55	390		20	5:55	397
	60	4:58	400		10 N	5:56	57420
6	50 S	5:00	57401	5	B.L.	5:57	57369
	40	5:02	388				
	30	5:05	319				
	20	5:07	387				
	10	5:09	376				
6	B.L.	5:10	57375				
	10 N	5:11	386				
	20	5:12	368				
	30	5:13	369				
	40	5:14	343				
6	50 N	5:15	57366				
	60	5:16	379				
	70	5:17	365				
	80	5:18	369				
	90	5:19	368				
6	100 N	5:20	57353				
	110	5:21	355				
	120	5:22	354				
	130	5:23	359				
	140	5:24	370				
	150 N	5:25	370				
6	160 N	5:26	57384				



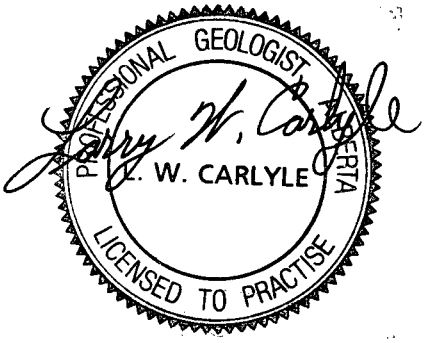
CORRECTED MAGNETOMETER READINGS

Line	Station	Corrected Readings	Line	Station	Corrected Readings
1	#2 Post	57220	2	110 N	57221
	10 S	277		120	214
	20	326		130	217
	30	308		140	216
	40	320	2	150 N	57249
1	50 S	57341		160	180
	60	364		170	238
	70	361	2	180 N	57220
	80	426	1	180 N	57228
	90	379		170	231
1	100 S	57319		160	223
	110	307	1	150 N	57224
	120	359		140	221
1	130 S	57341		130	201
2	130 S	57307		120	213
	120	279		110	201
	110	286	1	100 N	57177
2	100 S	57309		90	199
	90	286		80	183
	80	356		70	113
	70	363		60	146
	60	289	1	50 N	57127
2	50 S	57288		40	176
	40	308		30	180
	30	333		20	178
	20	278		10 N	204
	10 S	279	1	#2 Post	57220
2	B.L.	57239			
	10 N	256			
	20	304			
	30	287			
	40	310			
2	50 N	57323			
	60	317			
	70	350			
	80	272			
	90	248			
2	100 N	57262			

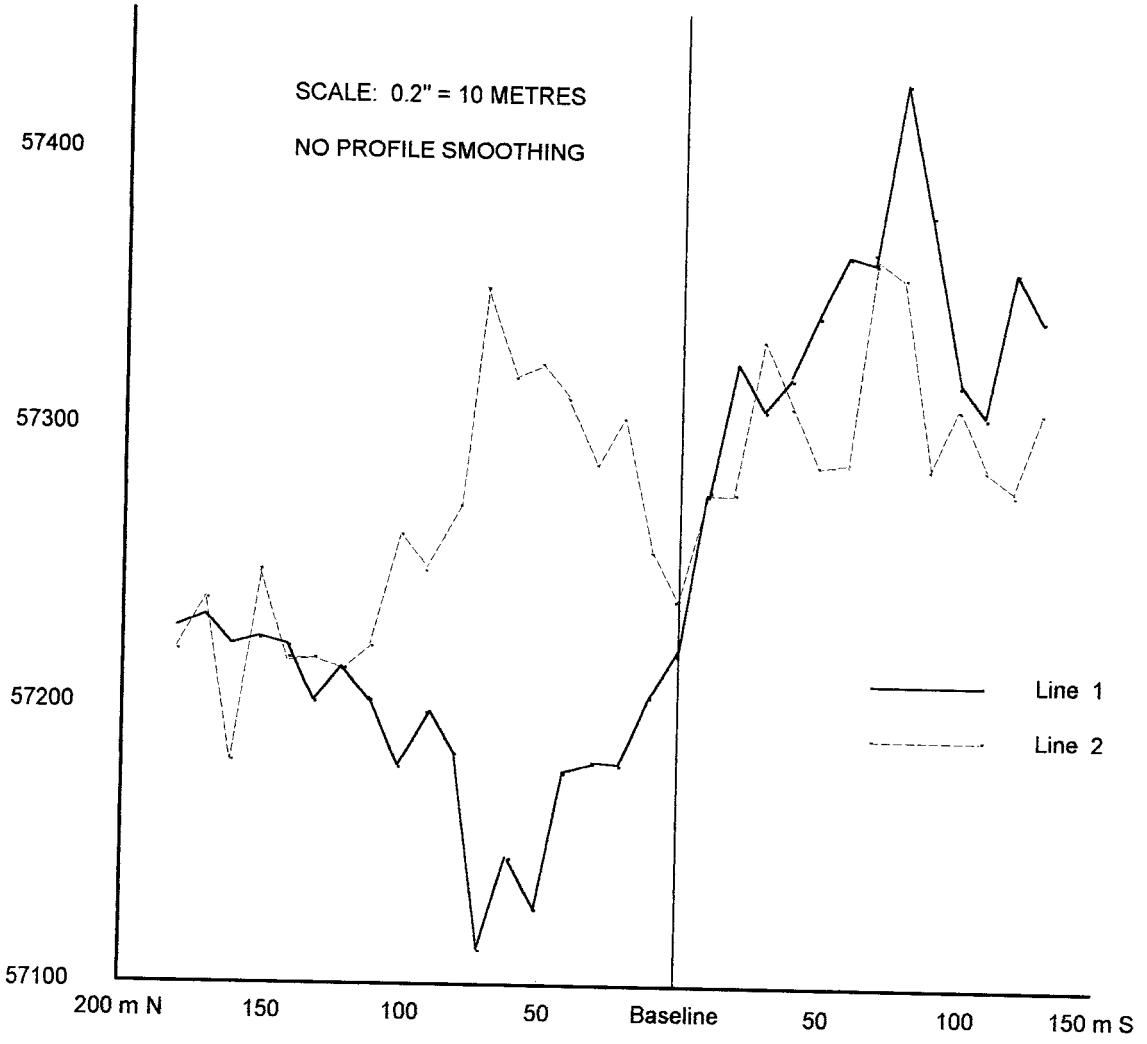


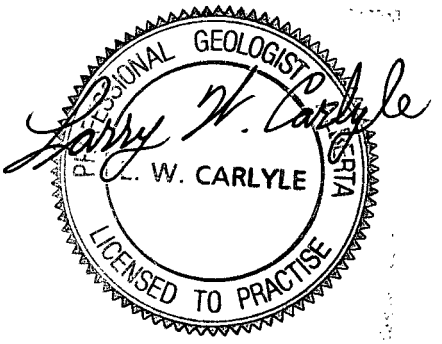
CORRECTED MAGNETOMETER READINGS

Line	Station	Corrected Readings	Line	Station	Corrected Readings
5	B.L.	57455	5	160 N	57413
	10 S	231		150 N	57450
	20	380		140	460
	30	365		130	434
	40	336		120	455
5	50 S	57348		110	443
	60	355	5	100 N	57458
	70	371		90	460
	80	407		80	459
	90	441		70	422
5	100 S	57446		60	479
6	100 S	57429	5	50 N	57452
	90	425		40	472
	80	432		30	456
	70	418		20	481
	60	431		10 N	505
6	50 S	57434	5	B.L.	57455
	40	422			
	30	356			
	20	426			
	10 S	417			
6	B.L.	57417			
	10 N	429			
	20	412			
	30	414			
	40	389			
6	50 N	57412			
	60	426			
	70	413			
	80	418			
	90	418			
6	100 N	57404			
	110	407			
	120	407			
	130	413			
	140	425			
	150 N	57426			
6	160 N	57441			

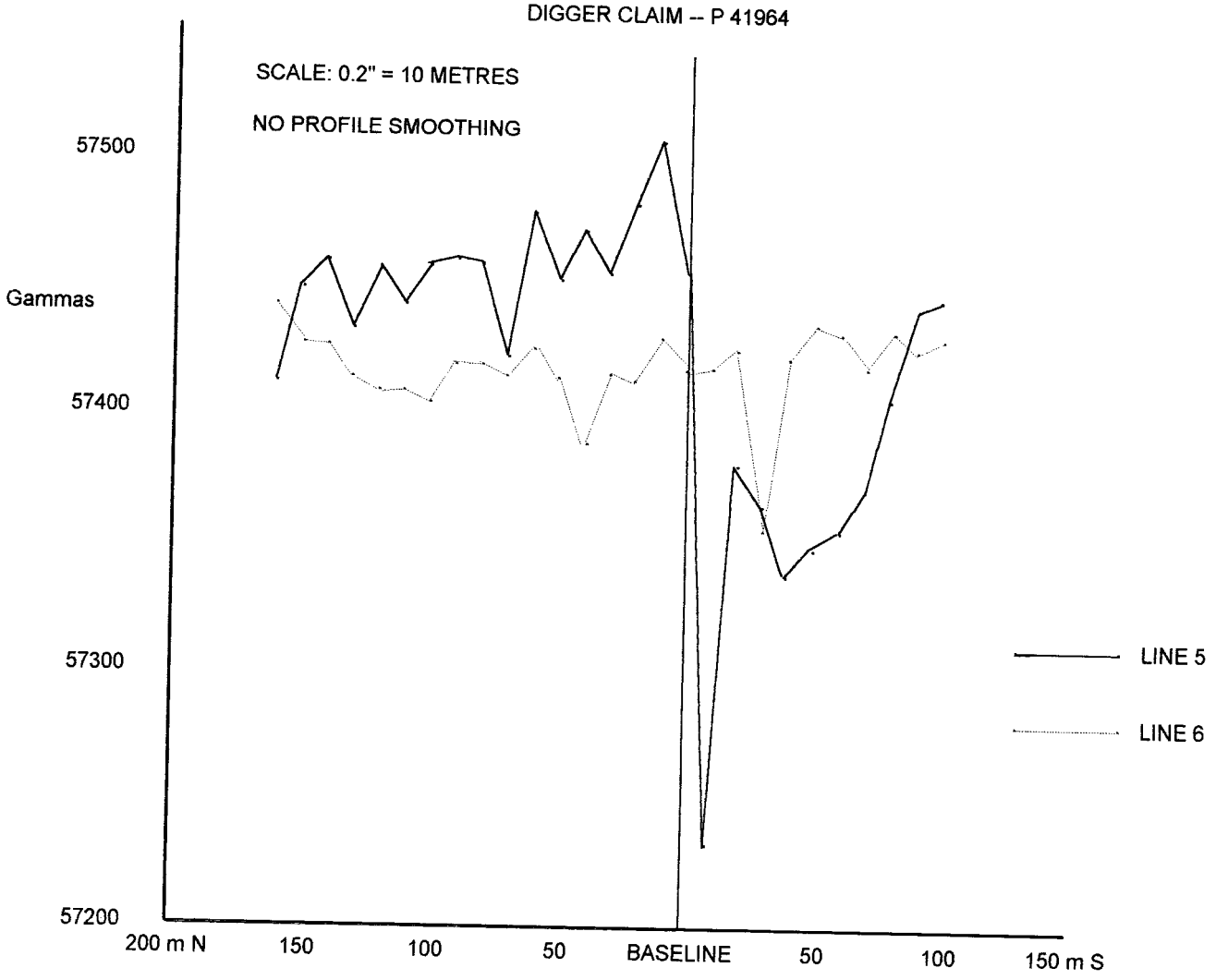


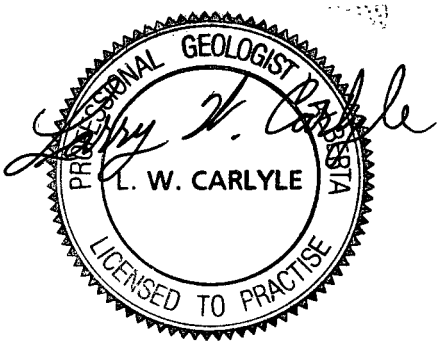
MAGNETOMETER SURVEY PROFILES
LINES 1 & 2
DIGGER CLAIM -- P 41964





MAGNETOMETER SURVEY PROFILES
LINES 5 & 6
DIGGER CLAIM -- P 41964





At each reading station, three readings were taken since each reading only requires a couple of seconds and the average of three readings gives a more accurate determination. The times and reading averages for the Lines 1 & 2 and Lines 5 & 6 loops are given in tables entitled "Magnetometer Readings". These data have had diurnal corrections calculated and are presented in tables entitled "Corrected Magnetometer Readings". These corrected data have been presented in graphical form as "Magnetometer Survey Profiles" with no profile smoothing.

3-Point Weighted Average Smoothing:

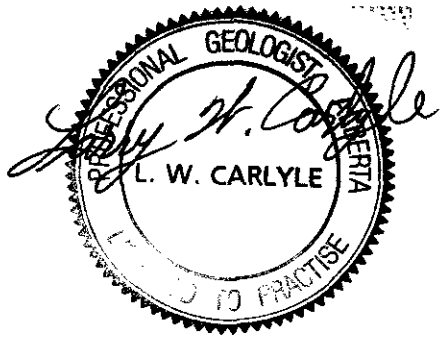
The corrected magnetometer readings were treated with a 3-point weighted average smoothing calculation. This calculation is performed by taking each reading and multiplying it by two, then adding the reading from either side of it, and dividing the result by four. In using this technique, a reading is lost from both ends of each line. The data from these calculations are presented in tables entitled "3-Point Weighted Average Calculations" and the smoothed data is presented in graphs entitled "3-Point Weighted Average Profiles".

PLACER DEPOSITS AND GLACIATION:

Placer gold was first found on Nansen Creek near the mouth of Discovery Creek by Henry S. Back, in July, 1899. No work was done until he returned in the spring of 1907. The pay lies on bedrock or on a layer of blue boulder clay where it exists. It is reported that no gold is found on bedrock where the blue clay occurs. Bostock reports that most of the gold had been obtained from the upper half of Nansen Creek, its tributaries entering from the east entering this part of Nansen Creek, and Back Creek; as well as the tributaries which enter Victoria Creek from the west.

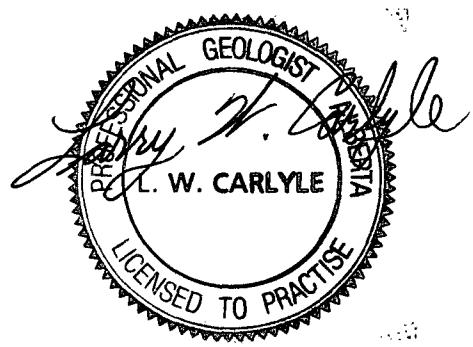
3 - POINT WEIGHTED AVERAGE CALCULATIONS

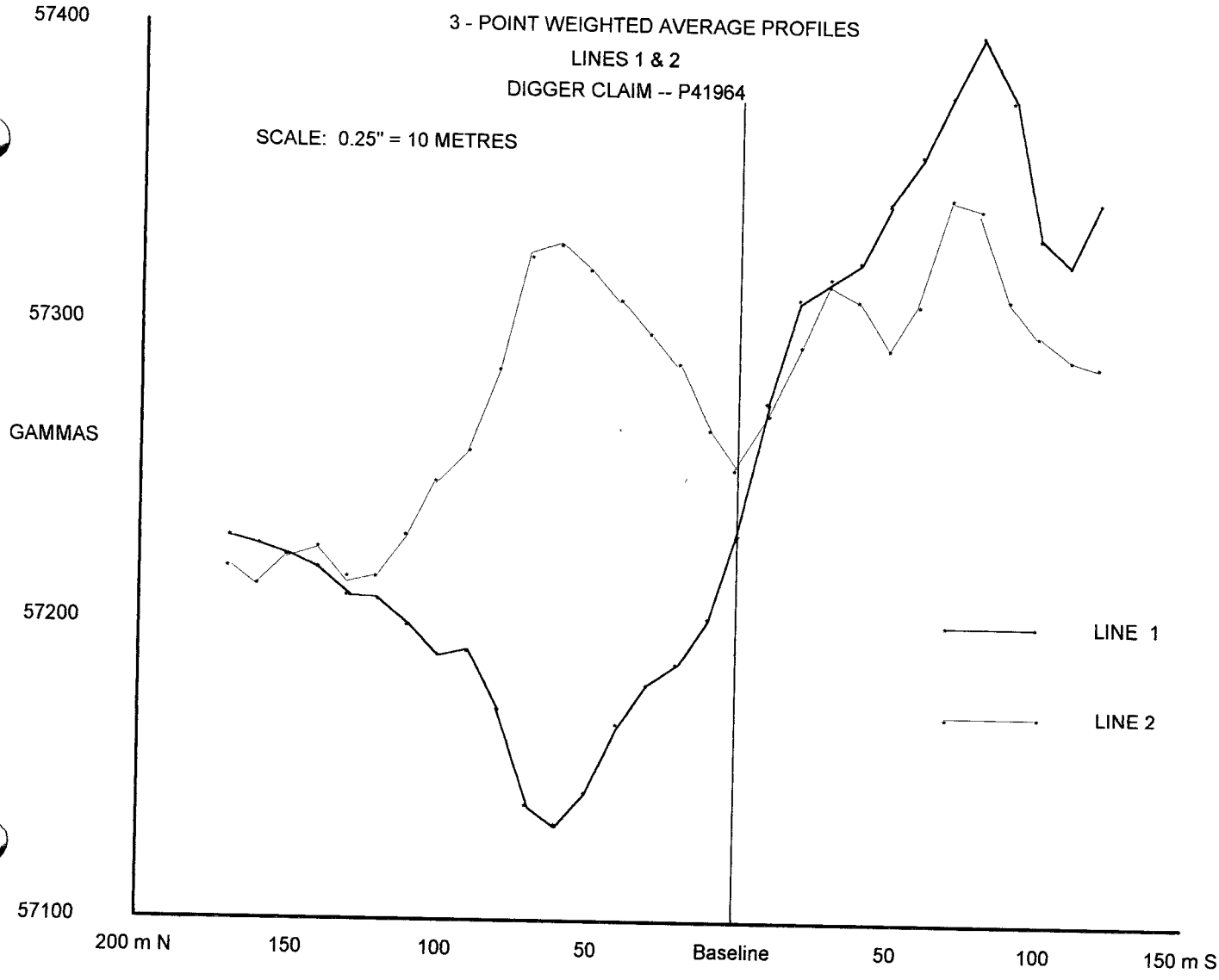
Line	Station	3 - Point Weighted Average	Line	Station	3 - Point Weighted Average
1	170 N	57228	2	170 N	57219
	160	225		160	212
	150 N	57223		150 N	57224
	140	217		140	225
	130	209		130	216
	120	207		120	217
	110	198		110	230
1	100 N	57189	2	100 N	57248
	90	190		90	258
	80	170		80	286
	70	139		70	322
	60	133		60	327
	50 N	57144		50 N	57318
	40	165		40	308
	30	179		30	297
	20	185		20	288
	10 N	202		10 N	264
1	#2 Post	57230	2	B.L.	57253
	10 S	275		10 S	269
	20	309		20	292
	30	316		30	313
	40	322		40	309
	50 S	57342		50 S	57293
	60	358		60	307
	70	378		70	343
	80	398		80	340
	90	376		90	309
1	100 S	57331	2	100 S	57298
	110	323		110	290
	120	342		120	288

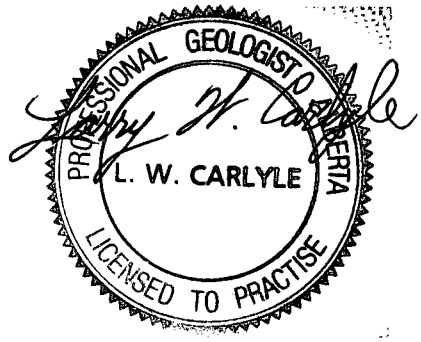


3 - POINT WEIGHTED AVERAGE CALCULATIONS

Line	Station	3 - Point Weighted Average	Line	Station	3 - Point Weighted Average
5	150 N	57443	6	150 N	57430
	140	451		140	422
	130	446		130	415
	120	447		120	409
	110	450		110	406
	100 N	57455		100 N	57408
	90	459		90	415
	80	450		80	417
	70	446		70	418
	60	458		60	419
5	50 N	57464	6	50 N	57410
	40	463		40	401
	30	466		30	407
	20	481		20	417
	10 N	487		10 N	422
5	B.L.	57412	6	B.L.	57420
	10 S	324		10 S	419
	20	339		20	406
	30	362		30	390
	40	346		40	409
	50 S	57347		50 S	57430
	60	357		60	429
	70	376		70	425
	80	407		80	427
5	90 S	57434	6	90 S	57428



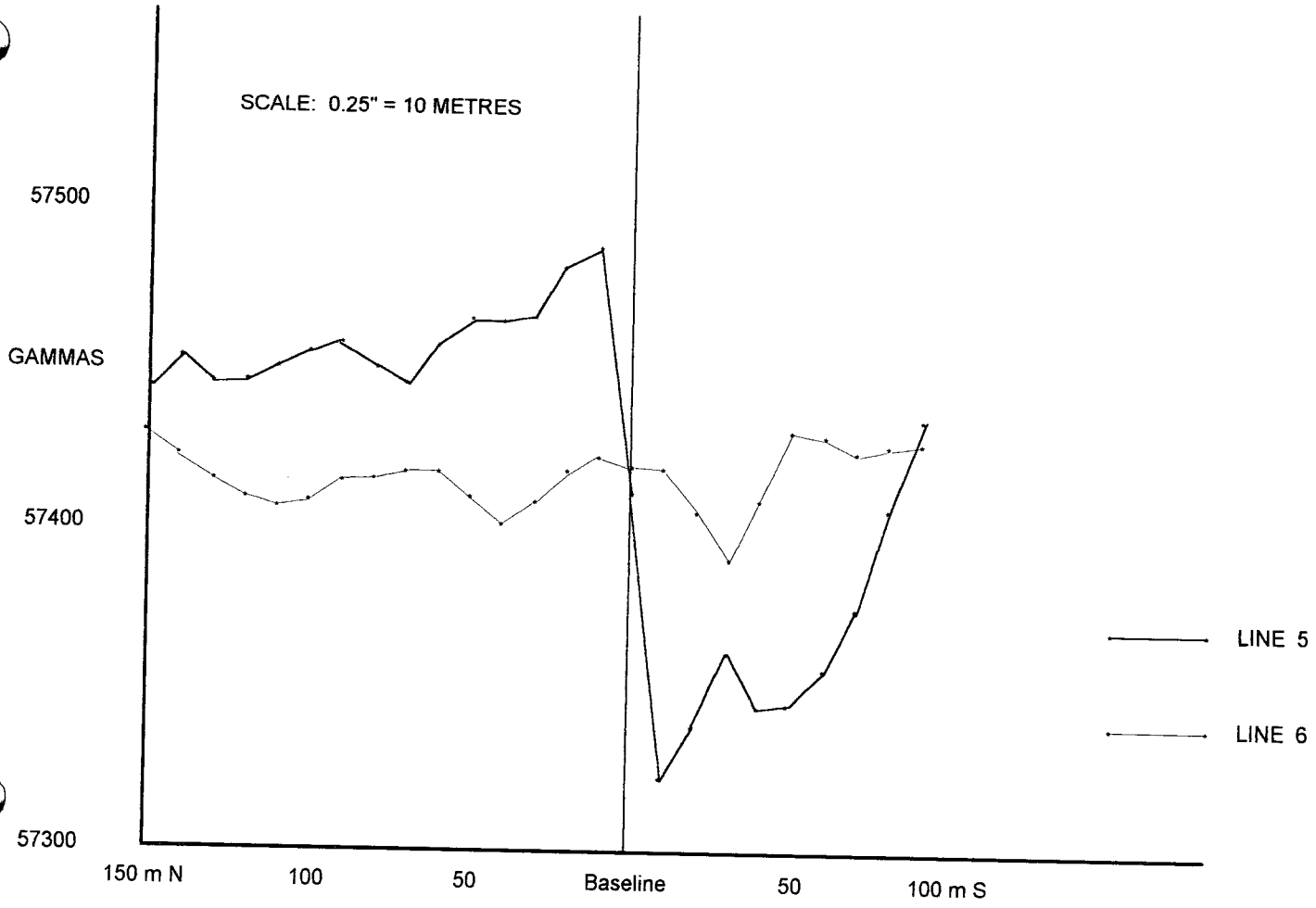

3 - POINT WEIGHTED AVERAGE PROFILES
LINES 1 & 2
DIGGER CLAIM -- P41964
SCALE: 0.25" = 10 METRES
57400
57300
GAMMAS
57200
57100
LINE 1
LINE 2
200 m N
150
100
50
Baseline
50
100
150 m S

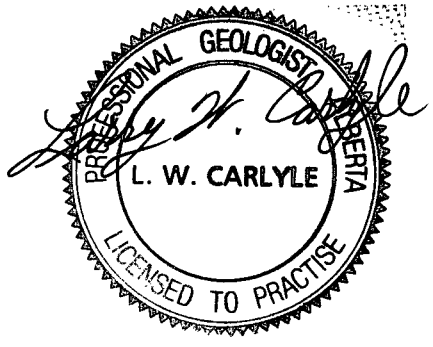

PROFESSIONAL GEOLOGIST
ALBERTA
L. W. CARLYLE
LICENSED TO PRACTISE

3 - POINT WEIGHTED AVERAGE PROFILES

LINES 5 & 6

DIGGER CLAIM - P41964





The courses of these streams begin in or are close to areas of Tertiary acid intrusive rocks which in many places carry disseminated pyrite. These features strongly suggested to him that the source of the gold is associated with the acid intrusives. Magnetite is reported to occur with some of the placer deposits; this could also have come from the acid intrusives. The gold in the lower placers on Nansen Creek is largely fine, but in lower parts of some of the tributaries a fair proportion of coarse, rounded gold has been reported. In the upper parts of the tributaries it is reported to be fine, rough, or, occasionally, wiry. Galena, barite, pyrite, and sphalerite are reportedly commonly caught in the sluice boxes.

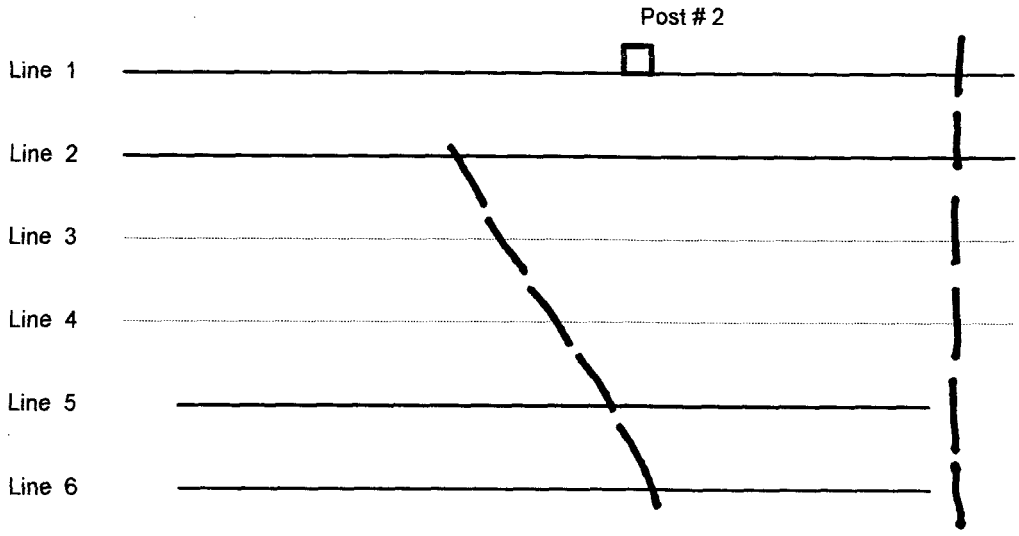
It is believed that the area of the East Fork of Nansen Creek where the Digger Claim is located lies outside the limit of the last period of glaciation. The importance and extent of the earlier glaciations are not fully known. However, since the placers of the area lie in part on top of the blue boulder clay, they must have been formed since the earlier glaciations. Mr. Tricker (per. comm.) indicates that the best gold on the East Fork of Nansen Creek is found along the south side of the creek. This would suggest that the placer deposits have been protected from erosion by becoming covered with material eroding from the steep banks on this side of the creek.

SURVEY INTERPRETATION:

In a magnetic survey, the expression of the old creek channel is expected to show up as a magnetic high spike as a result of magnetite concentrations.

The 3 - point weighted average profiles show a sharp spike on Lines 1 & 2 at approximately 80 metres south of the claim line. A similar spike seems to be occurring just past the south end of Line 5. The profile for Line 6 seems to be relatively flat; this

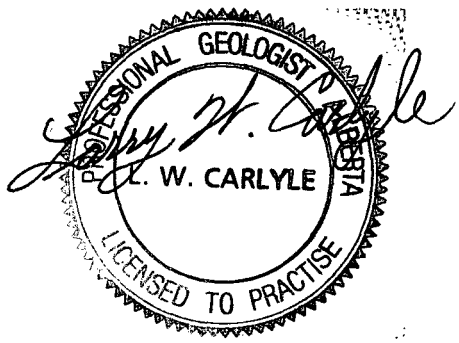
MAGNETOMETER SURVEY LINES
DIGGER CLAIM -- P 41964



Time only permitted Lines 1 & 2 and 5 & 6 to be surveyed.

Lines 1 & 2 extend 130 metres south of the baseline and 180 metres north of the baseline.

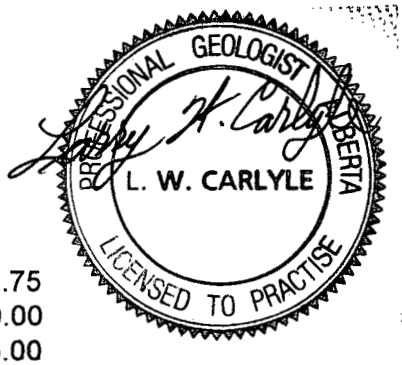
Lines 5 & 6 extend 100 metres south of the baseline and 160 metres north of the baseline.



may be the result of masking by increased overburden depth. This spike would indicate that there is, in fact, an old channel along the south side of the creek valley.

The survey also seems to demonstrate the presence of a short concentration of magnetite extending from the spike 60 metres north of the claim line at Line 2, through the spike at 10 metres north of the claim line at Line 5, and, possibly, to the claim line at Line 6.

Areas where an old channel are interpreted to be present are marked as thick black dashed lines on the "Magnetometer Survey Lines" drawing.



STATEMENT OF SURVEY COSTS:

Vehicle Kilometerage (485 km @ $0.15/km) (YTG Rate)	$ 72.75
Field Assistant Wages	$100.00
Meals	$ 63.00
Magnetometer Rental	$100.00
Report Writing (2 days @ $200./day)	$400.00
Telephone, Photocopying, & Office Supplies	$ 20.00
	$755.75

REFERENCES:

Bostock, H.S., (1956) "Carmacks District, Yukon" GSC Memoir 189

Breiner, S., (1973) "Applications Manual for Portable Magnetometers" for Geometrics 395 Java Drive Sunnyvale, California 94086

STATEMENT OF QUALIFICATIONS

I, LARRY W. CARLYLE, do certify:

1. That I am a professional geologist; resident at 74 Tamarack Drive, Whitehorse, Yukon Y1A 4Y6.

2. That I hold a B. Sc. Degree in geology from the University of British Columbia (1970).

3. That I am a Fellow of the Geological Association of Canada (F - 4355).

4. That I am a Registered Professional Geologist in the Association of Professional Engineers, Geologists, and Geophysicists of the Province of Alberta (41097).

5. That I have practiced my profession as a mine and exploration geologist for nineteen years.

6. The conclusions and recommendations in the attached report are based on work I supervised on the property, calculations I made on data from the survey performed on the property, and on a review of the references cited.

DATED at Whitehorse, Yukon, this 30th day of March, 1997.