

84-1220-12831

9/85

ASSESSMENT REPORT ON A MAGNETOMETER SURVEY

OF THE PAY DAY PROPERTY

PAY DAY MINERAL CLAIM

Lightning Peak Area

VERNON MINING DIVISION, B.C.

NTS: 82E/16W
Latitude: 49°53.5' North
Longitude: 118°29' West
Owner/Operator: K.L. Daughtry
Author: K.L. Daughtry
Date: December 11, 1984

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,831

TABLE OF CONTENTS

SUMMARY	Page 1 /
LOCATION, ACCESS, TOPOGRAPHY	Page 2 /
PROPERTY	Page 3 /
HISTORY	Page 3 /
GENERAL GEOLOGY	Page 5 /
GEOLOGY OF THE PAY DAY SHOWING	Page 6 /
MAGNETOMETER SURVEY	Page 10 /
DISCUSSION AND CONCLUSIONS	Page 11 /
RECOMMENDATIONS	Page 11 /
REFERENCES	Page 12 /
STATEMENT OF COSTS	Page 13 /
STATEMENT OF QUALIFICATIONS	Page 14 /

LIST OF ILLUSTRATIONS

Figure 1	Location Map	Following Page 2 /
Figure 2	Claim Map	Following Page 3 /
Figure 3	Magnetometer Survey	In pocket /
Figure 4	Magnetometer Survey (contoured)	In pocket /

SUMMARY

Heavy sulphide silver-zinc-copper-lead mineralization occurs on the PAY DAY Mineral Claim in the Lightning Peak area of the Vernon Mining Division, B.C. Exploration work has been carried out intermittently from 1929 to the present, but further work is necessary to evaluate the potential for the existence of a significant deposit.

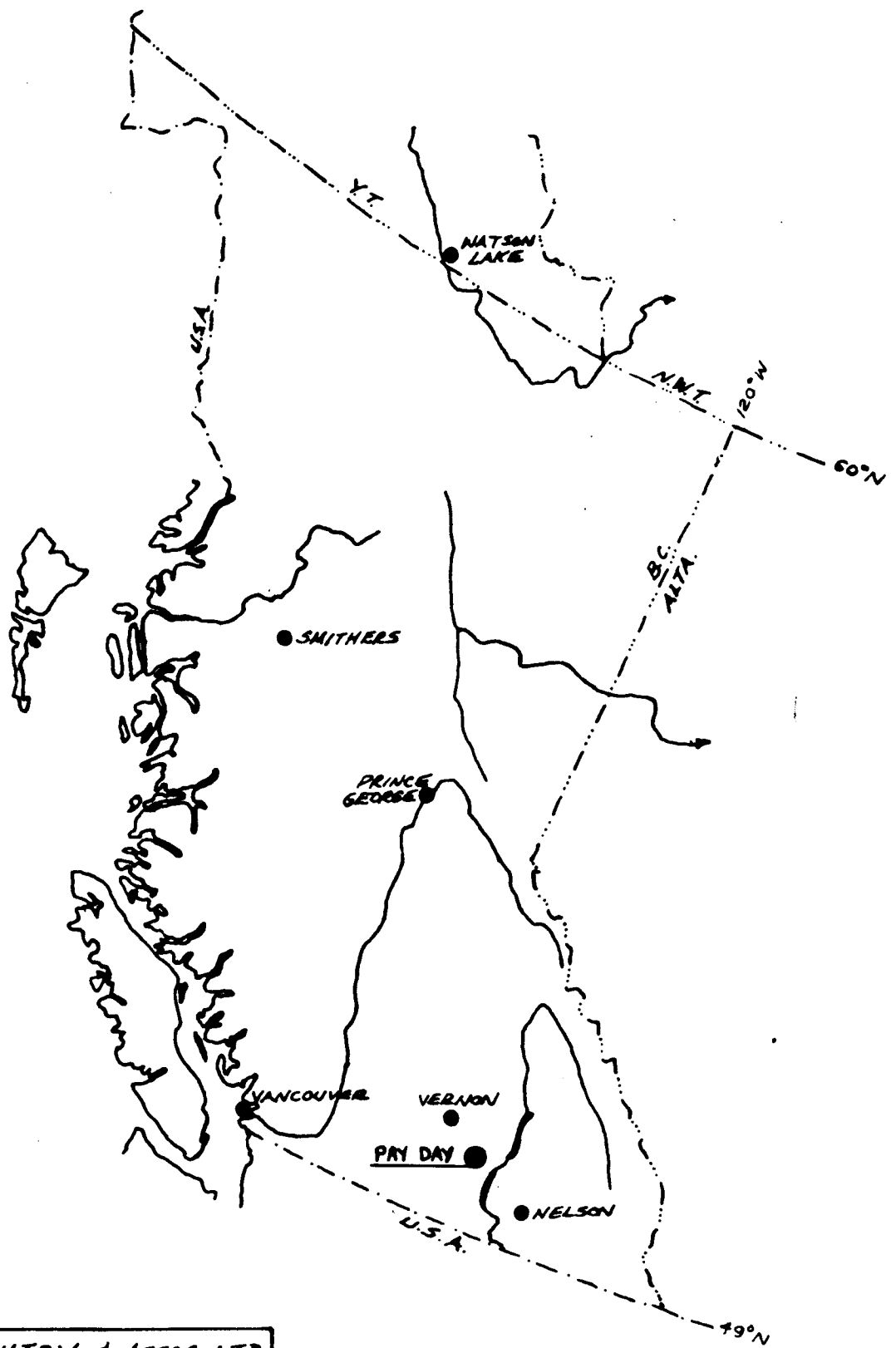
In 1984, a detailed ground magnetometer survey was conducted over the area of the PAY DAY showings. A 50-foot square picket grid totalling 2.1 line-km was established to aid in ground control. The results of this work are presented and discussed in the following report.

LOCATION, ACCESS, TOPOGRAPHY

The PAY DAY Claim is at latitude $49^{\circ}53.5'$ N and longitude $118^{\circ}29'$ W, west of the north fork of Rampalo Creek, a tributary of the Granby River, and 3 kilometres northeast of Lightning Peak (Figures 1 & 2). The settlement of Edgewood, on Lower Arrow Lake, is 28 kilometres east-southeast of the property, and the city of Vernon is about 69 kilometres to the northwest.

The property is accessible by travelling south on the main Kettle River road for 10.5 kilometres from its junction with Highway 6 in the Monashee Pass to the beginning of the logging road to Winnifred Creek, then travelling easterly on this road for about 17 kilometres to the bridge across Winnifred Creek, then south on a new road for about 4 kilometres to the junction with the Lightning Peak road at Post Office junction. The PAY DAY property is 4 kilometres south of the junction along a four-wheel drive road.

The property is near the eastern margin of the Interior Plateau, on an upland area deeply incised by river and creek valleys. Elevations on the property vary from 1650 metres above sea level in the valley of Rampalo Creek to over 1850 metres on the upland west of the PAY DAY adit.



K.L. DAUGHTRY & ASSOC. LTD

PAY DAY PROPERTY

LOCATION MAP

December 1984

FIG. NO. 1

PROPERTY

The PAY DAY mineral claim, Record Number 709 in the Vernon Mining Division, was located by K.L. Daughtry of Vernon, B.C., between August 14 and 16, 1979, and recorded on September 14, 1979 in Vernon. This 6-unit claim was located following an abandonment and relocation, pursuant to section 28(1) of the Mineral Act, of the PAY DAY 1-6 2-post mineral claims, Record Numbers 17218, 17219, 17731-34, also owned by K.L. Daughtry.

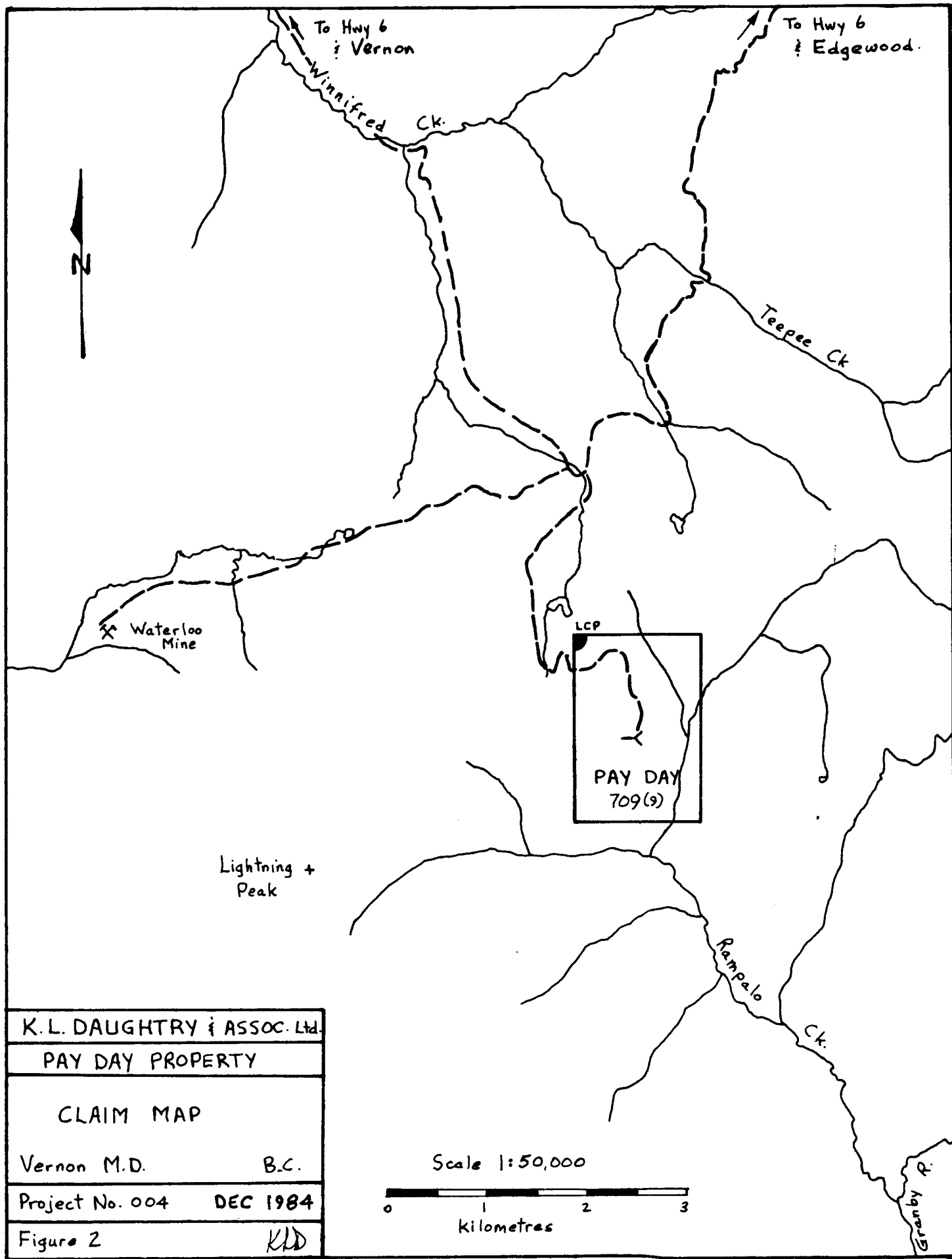
HISTORY

The PAY DAY occurrence was apparently first discovered prior to 1929. In that year, the Annual Report of the Minister of Mines describes a 10-claim group owned by W.B. Johnstone et al on which considerable open-cutting and a crosscut tunnel had been developed on a showing of pyrite, sphalerite, galena and chalcopyrite at the contact between limestone and schist. A nearby high-grade gold/silver showing was also mentioned.

Apparently no further work was done on the PAY DAY showing until 1955, when the Paycheck Mining and Development Co. carried out over 1200 feet of diamond drilling on the PAY DAY and nearby PAYCHECK showings. The results of this drilling are unknown.

In the 1960's the ground was held at times by Bralorne Pioneer Mines and Highland-Bell Mines but there is no record of work on the PAY DAY.

Great Horn Mining Syndicate subsequently blanketed the entire Lightning Peak area with a 200-claim block and conducted a reconnaissance geochemical soil



K.L. DAUGHTRY & ASSOC. Ltd.	
PAY DAY PROPERTY	
CLAIM MAP	
Vernon M.D.	B.C.
Project No. 004	DEC 1984
Figure 2	KLD

Scale 1:50,000

0 1 2 3
Kilometres

survey which included the area of the PAY DAY showings. Additional detailed sampling and a self-potential survey were conducted on the PAY DAY.

K.L. Daughtry staked the PAY DAY area in 1973 and has held the ground continuously to the present. In 1973 the underground geology of the adit was mapped and in 1974 two holes were diamond drilled by A.D. Ross and K. Ross, who held an option on the ground. These holes were apparently collared in the footwall and failed to intersect the mineralized zone. The Rosses also conducted detailed magnetic and electromagnetic surveys of the immediate area of the showings. In 1980, the surface geology of the area of the showing was mapped.

In 1984, a 50-foot grid was established and a detailed ground magnetometer survey was carried out. This work is the subject of this report.

GENERAL GEOLOGY

The geology of the Lightning Peak area has been described most recently on Open File Map 637 of the Geological Survey of Canada (Scale 1:250,000) by A.V. Okulitch (Figure 3). A more detailed description of the regional geology is provided in G.S.C. Summary Report 1930, Part a (pp 79 - 115) by C.E. Cairnes.

The various mineral deposits and occurrences of the Lightning Peak area occur in a roof pendant of Upper Paleozoic to Lower Mesozoic age enveloped by granitic rocks of the Mesozoic Nelson batholithic complex. The predominant lithologic types present in the roof pendant include metavolcanic flows, tuffs and breccias of andesitic to dacitic, and in places limy, composition, and metasedimentary crystalline limestone and argillite.

All of the above rocks have been intimately invaded by dykes and small plugs related to the surrounding granitic batholithic rocks. Rock types include granite, quartz diorite, granodiorite, diorite and pegmatite.

The general structure of the roof pendant is that of a westerly plunging syncline. Near the eastern end of the roof pendant, in the area of the PAY DAY property, the lithologies are predominantly flows and tuffs and are gradually succeeded to the west by sedimentary rock types. The limestone may be the youngest rocks.

Lightning Peak proper is underlain by a thin layer of Tertiary basalt and occasional related mafic dykes occur.

GEOLOGY OF THE PAY DAY SHOWING

The PAY DAY claim is underlain by a succession of folded and faulted metamorphic rocks of volcanic and sedimentary origin. The contact of the enclosing Nelson granitic rocks is a short distance east and north-east of the main showings .

The rocks near the main showings are metamorphosed dark greenish to greenish-grey finely crystalline flows, tuffs and sediments. The main zone of sulphide mineralization strikes northerly and is exposed in surface trenches for about 50 metres, extending both north and south of the adit.

The predominant lithologic unit is a dark greenish-grey fine grained crystalline rock of intermediate composition (Unit 1). The approximate average mineralogical composition is quartz 20%, white feldspar 30%, hornblende 15%, biotite 30%, carbonate-magnetite-pyrite 5%. The rock is tentatively classified as a dacite, although individual layers within the unit contain variable amounts of quartz and hornblende indicating compositions varying from andesite to rhyodacite.

Tuffaceous horizons are common within the sequence. In places, these horizons are up to 15 metres thick and have been mapped as a distinct unit (Unit 2). The tuffs comprise crystal and lithic fragments, the latter ranging in size to over 2 cm in diameter and generally having the same composition as the surrounding rocks.

Several outcrops of a rusty weathering, siliceous very-fine grained light grey rock were mapped (Unit 3). This rock contains about 60% quartz, 30% feldspar, and 10% metallic minerals (pyrite, sphalerite and magnetite), and has

been called a siliceous rhyolite.

One outcrop of grey limestone (Unit 4) was mapped in a bulldozer trench south of the adit. The rocks at the portal of the adit are calcareous and have been tentatively correlated with this unit, but may actually be limy tuffs or the product of carbonate alteration of volcanic rocks.

Numerous dykes of medium-grey, medium grained granodiorite intrude the above rocks in the area mapped (Unit 5). These dykes vary from 1 metre to over 6 metres in width and appear to occur at varying attitudes. They are presumably related to the nearby batholithic plutons. One outcrop of a white, fine-grained aplite was mapped.

The volcanic and sedimentary rocks generally strike NW and dip about 60 southwest. Attitudes were taken on distinct tuffaceous layers within the volcanic units.

Strong faulting and fracturing has disrupted the rocks in the area of the showing. The general attitude of most faults is northerly and steep. Previous underground mapping revealed the main faults to be parallel or sub-parallel to the trend of the volcanic rocks.

Heavy sulphide mineralization occurs in a zone of intensely altered and fractured volcanic rock. The host rocks are variably siliceous and calcareous, but generally appear similar to rocks of Units 2 and 3. Fragmental textures are common, with fragments of quartz, feldspar, various lithic types and sulphide minerals ranging in size from less than one millimetre to over one centimetre in diameter.

Metallic minerals identified include varying amounts of pyrite, sphalerite, magnetite, galena and chalcopyrite. These minerals occur as discrete grains and

fragments, or as clots and discrete layers up to 15 cm wide. On surface, the main mineralized zone is up to 2 m wide and has been traced along a strike length of about 50 m by hand trenching.

Underground, two distinct zones occur: the narrower eastern band corresponds to the surface zone; the western band, up to 6 m wide, appears to be cut off by faulting and does not appear on surface. The mineralized zones appear to be stratabound but structural and stratigraphic relationships are complicated by the faulting.

Two holes were diamond drilled in the adit area in 1974 (Figure 4). Hole 74-1 was drilled to a depth of 202 feet (61.6 m) at an azimuth of 245° and an angle of -40° . Hole 74-2 was drilled to 151 feet (46 m) at an azimuth of 260° and an angle of -25° .

Both holes encountered several fault zones, but it was not possible to correlate these intersections with specific faults mapped in the adit. The rocks beneath the adit are generally altered flows and tuffs similar to those seen in outcrop, but the alteration is generally more intense. Disseminated pyrite, pyrrhotite and chalcopyrite occur over wide zones of greenish and reddish rock which has undergone intense fracturing, carbonate veining and brecciation. Sulphide content ranges up to 15%, but the character of the mineralization is entirely different from that seen on surface. No heavy sulphide mineralization was encountered.

Attitude of layering in tuffs and flow laminae suggest that the volcanic rocks dip westerly at attitudes of about 65° . This generally agrees with observed dips of 60° west on surface and 50° to 55° west on the mineralized zones underground.

Both alteration and sulphide content are greater in the shallower hole 74-2 than in the steeper hole 74-1. It seems probable that the main mineralized zone at the face on the adit, if undisturbed by faulting, would not have been intersected by either drill hole. Hole 74-2 cut more intensely altered and sulphide-bearing rock, and may have passed close to the footwall of the heavy sulphide zone. Alternatively, the mineralized zone may have been so dislocated by faulting that neither drill hole achieved an intersection.

MAGNETOMETER SURVEY

In September 1984, a detailed ground magnetometer survey was conducted over the area of the PAY DAY showing. The sulphide zone at the PAY DAY adit has a significant content of magnetite and the magnetometer survey was conducted to evaluate the technique as a means of tracing the mineralized zone through areas with little or no rock exposure.

A picket-grid was installed with stations at intervals of 50 feet along east-west lines spaced 50 feet apart. A total of 6800 feet of grid was chained and picketed.

A Geometrics Unimag II model G-846 proton magnetometer was used for the survey. Readings were taken at the 50-foot stations along each grid line and readings were also taken at a base station at intervals of not more than 30 minutes. Diurnal variation was noted and all readings were corrected. The maximum variation noted was 38 gammas.

Figure 3 is a plot of the corrected readings for each station. The plotted readings are of total magnetic field in gammas above 57000 gammas (i.e. a reading of 57936 gammas is plotted as 936 gammas). Figure 4 is a contoured map of the values.

The magnetic response varied from a low of 57657 gammas to a high of 59417 gammas. Most of the grid area exhibits a relatively subdued magnetic relief of less than 100 gammas. A strong positive anomaly occurs above the adit and extends about 175 feet to the southwest. A second stronger positive anomaly occurs in the extreme southwestern corner of the grid, where a local magnetic relief of over 1700 gammas is indicated.

A general south-southeasterly trend of the magnetic contours is probably related to the trend of the stratigraphic units.

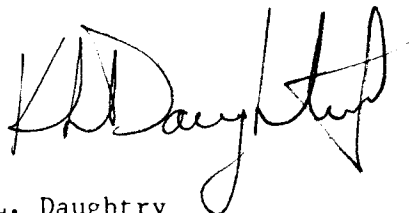
DISCUSSION AND CONCLUSIONS

The detailed ground magnetometer survey of the PAY DAY adit area indicated that this technique may prove useful in exploration for extensions of the known sulphide zone and for discovery of new mineralized zones. The association of the known mineralization with a magnetic high, and the occurrence of at least two other prominent magnetic highs in the vicinity suggests that an extended survey followed by trenching is warranted.

RECOMMENDATIONS

A grid should be established over a large part of the PAY DAY property and an extended detailed ground magnetometer survey conducted. Anomalous areas should subsequently be explored by trenching.

Respectfully submitted

A handwritten signature in black ink, appearing to read 'K.L. Daughtry', written in a cursive style.

K.L. Daughtry

Vernon, B.C.

December 11, 1984

REFERENCES

- Cairnes, C.E. 1931 Lightning Peak Area, Osoyoos District, B.C. Geol. Surv. Can. Summ. Rep. 1930 part A, pp 79A-115A
- Daughtry, K.L. 1974 Underground Geology of the Pay Day Adit. Assessment Report No. 4857
- 1980 Report on the Surface Geology of the Pay Day showing. Assessment Report No. 8565
- Freeland, R.B. 1933 "Lightning Peak Area" in Annual Report of the Minister of Mines, B.C., for the year 1933. pp 149-153
- Lea, E.R. 1947 Mineralogy of the Pay Check Property, Lightning Peak Area, B.C. Bachelor's Thesis, U.B.C.
- McMullin, J.M. 1970 Geological Report on the Lightning Peak Group of Claims. Assessment Report No. 2330
- Riley, C. 1962 Program of Development on the Lightning Creek Properties of Coast Explorations Ltd.
- Ross, K. 1974 Diamond Drill Report on the Pay Day Property. Assessment Report No. 5528
- Tindale, J.L. 1969 Geochemical and Topographic Report on the Peak Claim Group. Assessment Report No. 1812
- Weeks, J.P. 1966 Geochemical Report on the Hope Group. Assessment Report No. 801

STATEMENT OF COSTS

Professional Services

K.L. Daughtry
Mag Survey & report writing
Sept. 10, 11, 12, Dec. 11, 1984
4 days @ \$300/day \$1200.00

Expenditures & Disbursements

Grid Establishment & Mag Survey
Jesmex Developments Ltd.
Sept. 10, 11, 12
2.5 days @ \$175/day 437.50

Transport

4 X 4 vehicle usage 3 days @ \$40/day 120.00
260 km @ \$.40/km 104.00

Mag rental 2 days @ \$15.00/day 30.00

Camp, food, field supplies 62.50

Secretarial, prints 140.00

\$2094.00

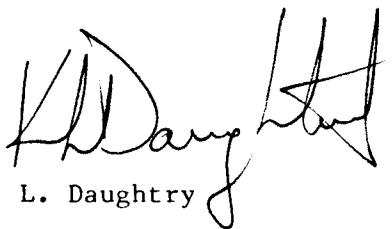
STATEMENT OF QUALIFICATIONS

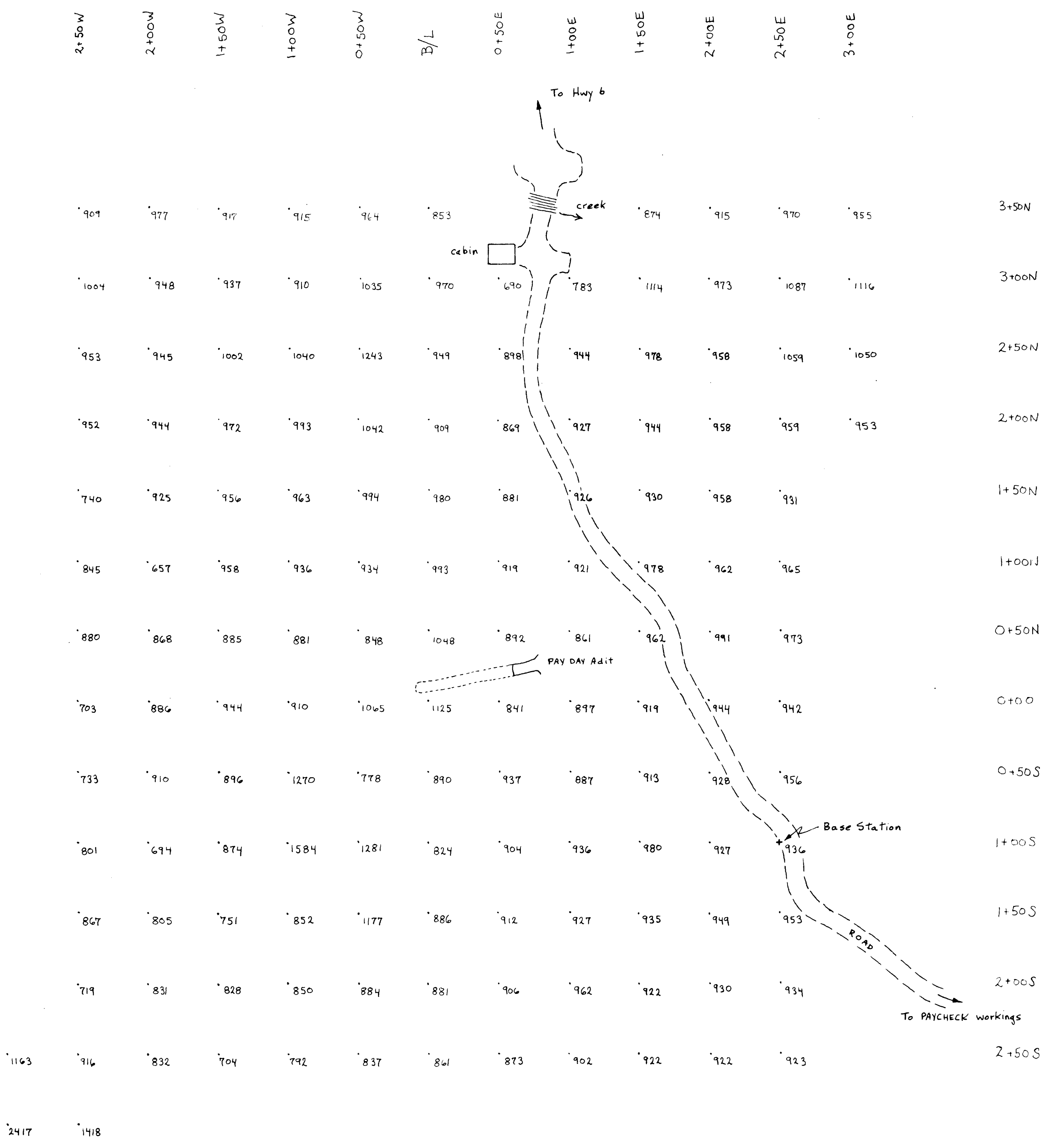
I, KENNETH L. DAUGHTRY, of R.R. #4, Vernon, British Columbia, DO HEREBY CERTIFY that:

1. I am a Consulting Geologist in mineral exploration.
2. I have been practising my profession for twenty years in Canada, the United States and Ireland.
3. I am a graduate of Carleton University, Ottawa, with a Bachelor of Science degree in Geology and Chemistry.
4. I am a member of the Associations of Professional Engineers of British Columbia, Ontario, and Yukon Territory, and a Fellow of the Geological Association of Canada.
5. This report is based upon knowledge of the PAY DAY property gained from examination, mapping and sampling of the property, from the study of numerous reports on the Lightning Peak area, and from the conduct of the work herein described.
6. I have a beneficial interest in the property.

Vernon, B.C.

December 11, 1984.


K. L. Daughtry



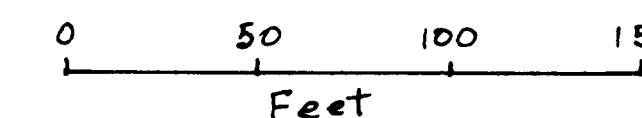
INSTRUMENT: Geometrics Unimag II Proton Magnetometer
Model G-846

• 946 Grid station with reading in gammas > 57,000 γ
(ie 946 = 57,946 gammas)

Total field measurements corrected for diurnal variation.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,831



K.L. DAUGHTRY & ASSOC. LTD.

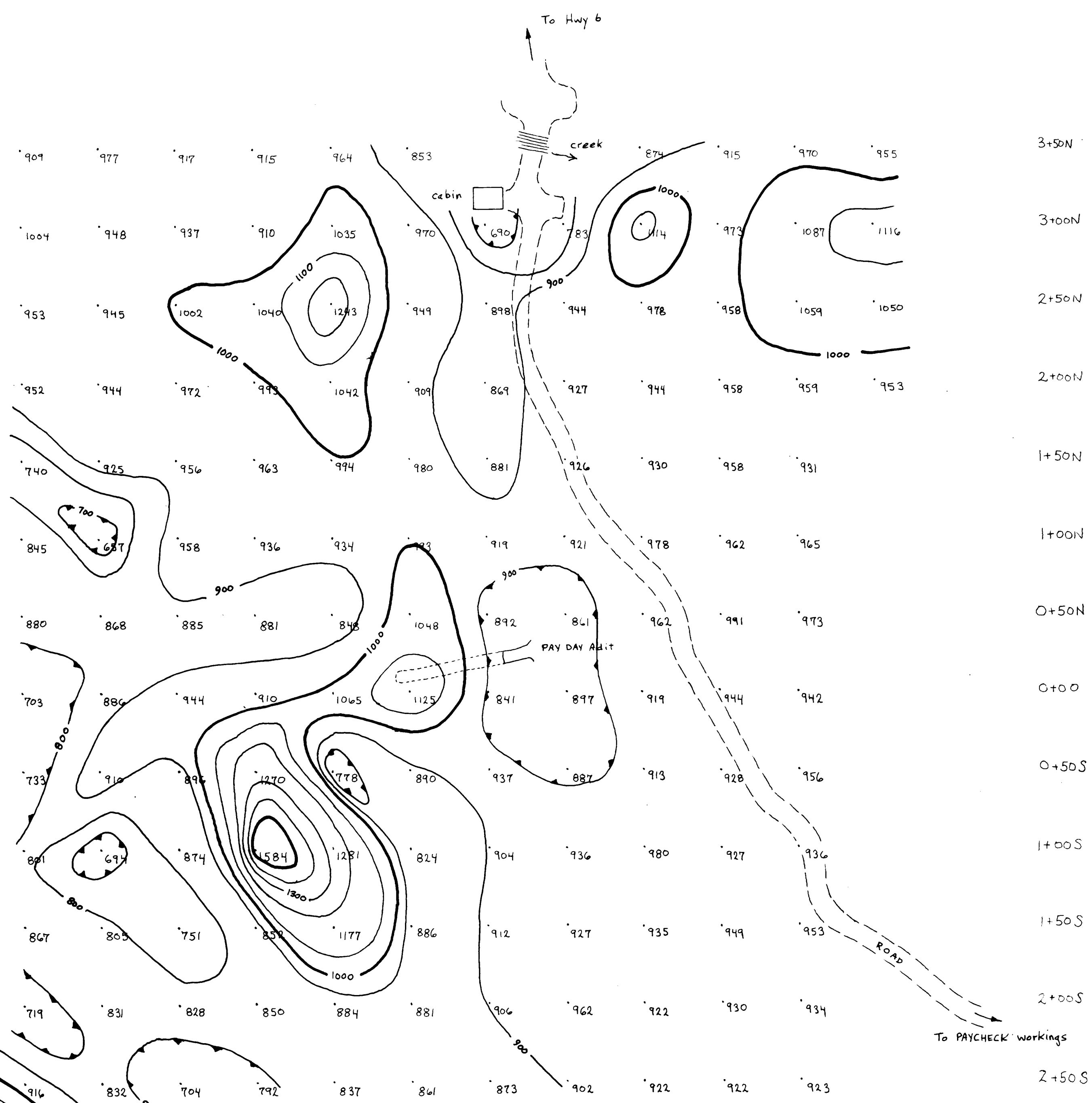
PAY DAY PROPERTY
GROUND MAGNETOMETER SURVEY

Vernon M.D. 8ZE/16W

Scale: 1 inch = 50 feet December 1984

Drawn by KAD Proj. No 004 Figure No 3

2+50W 2+00W 1+50W 1+00W 0+50W B/L 0+50E 1+00E 1+50E 2+00E 2+50E 3+00E

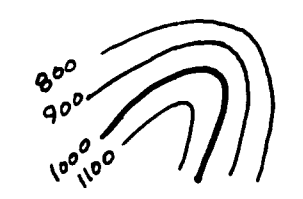


3+50N
3+00N
2+50N
2+00N
1+50N
1+00N
0+50N
0+00
0+50S
1+00S
1+50S
2+00S
2+50S

INSTRUMENT: Geometrics Unimag II Proton Magnetometer Model G-846

• 946 Grid station with reading in gammas > 57,000 γ (ie 946 = 57,946 gammas)

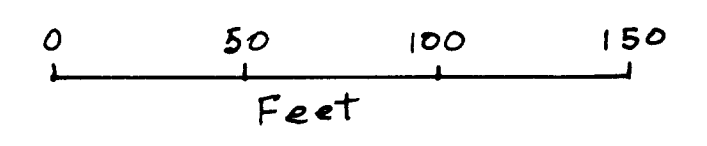
Total field measurements corrected for diurnal variation.



Contoured at 100 gamma intervals

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,831



K.L. DAUGHTRY & ASSOC. LTD.	
PAY DAY PROPERTY GROUND MAGNETOMETER SURVEY	
Vernon M.D (Contoured)	82E/lw
Scale: 1 inch = 50 feet	December 1984
Drawn by KRD	Proj. N° 004 Figure N° 4