To W.M. Sirola From J.W. Murton

PAYDAY PROPERTY - Owned by Ken Daughtry 82E-16w/ February 15th, 1979.
Subject
I have gone over the data that Ken gave us last week while we were
in Vernon, and have the following comments:

1. I believe you are absolutely correct in relating the ground magnetic anomaly to sulfide mineralization containing magnetite. Without being able to see or test the "diorite dykes" logged by Daughtry in diamond drill hole \#74-1 and \#74-2, I am unable to rate their magnetic potential. From a cross section plot of the drill holes, the diorite dykes do appear to be erratic in distribution and probably are not the cause of the magnetic anomaly.
2. The ground EM work that was done showed up several weak anomalies which may reflect mineralization, but also may reflect heavy faults in the area. There are many fault zones mapped in the tunnel and the diamond drill holes have up to $10 \%$ pyrite which has been noted in sporadic sections.
3. The intense faulting has disrupted future DDH intersections provided they could be located. The intense faulting may account for the poor correlation between ground magnetics and the mineralization on surface. There is however, a weak EM anomaly that appears to parallel the surface mineralization.
4. The two diamond drill holes have adequately tested at depth the larger potential of the magnetic anomaly and it must be concluded that the anomaly reflects near surface mineralization. I suggest that mineralization is more closely related to faulting, quartz veining, and hydrothermal alteration. The fact that 10 to $15 \%$ magnetite occurs throughout both samples examined in thin sections, would seem to bear this out.
5. I believe this property does not have the potential for a "massive sulfide" deposit, and we should not pursue an option with Ken Daughtry.


It would be interesting to
K how if his deposit
Can be tread northward using magnetics.
Wirer ask Ken -f
escaurning option (IWK)
Would be granted.
Merit of properly is
$\rightarrow$ Silver content
Sort M massive sulphides.



- Payday

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\begin{aligned}
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& \text { RHYOLITIC LIKE ROCKS }
\end{aligned}
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## SPECIMEN ND: 96387

## Mineralogy and Mode:

40\% Ganque:
20\% Carbonate: $<0.1-0.5 \mathrm{~mm} ., 0.1 \mathrm{~mm} .$, anhedrel, interstitial to sulfides and oxides, $x-$ ray determination indicates the carbonate is mainly siderite. Minor calcite is also present.

5\% Chalcedony and Quartz: $<0.1-0.3 \mathrm{~mm} ., 0.1 \mathrm{~mm}$., anhedral spherulitic aggregates of chalcedony and less commonly larger individual quartz grains, interstitial.

15\% Magnetite: $<0.1-0.2 \mathrm{~mm} ., 0.1 \mathrm{~mm}$., brownish-grey in polish section, unusual sheaf-like habit resembling biotito foils (replacement?), concentrated in one band.

60\% Sulfides:
$35 \%$ Chalcopyrite: $<0.1-5 \mathrm{mm.}, \mathrm{D.3mm.}, \mathrm{anhedral}, \mathrm{yellow}$.
24t Dyrite: $<0.1$ - 3 mm ., subhedral to euhedral, yellowish-white, variable habit in different bands, ranges from fine-grained aggregates to euhedral crystals up to 3 mm . in diameter.

1\% Sphalerite: <0.1mm., anhedral, grey, small grains enclosed within chalcopyrite.

## Remarks:

Banded copper ore with associated carbonate (siderite) - quartz magnetite gangue. Mineral percentages vary considerably among bands. X-ray diffraction traces verify the presence of quartz, chalcopyrite, pyrite, siderite, and sphalerite. Galena was also detected in an area not represented in either the polish or thin section. Chalcopyrite associated with magnetite bands is a deeper yellow colour than in chalcopyrite - pyrite rich bands. This may reflect different copper content in the chalcopyrite.

## SPECIMEN NO: <br> 96388

## Mineralogy and Mode:

## 65\% Gangue:

35\% Quartz: $<0.1$ - 1 mm ., 0.2 mm ., anhedral to suhedral, variable grain size and texture, small amounts of fine-grained chalcedony associated with carbonate.
$20 \%$ Carbonate: $<0.1-0.5 \mathrm{~mm},<0.1 \mathrm{~mm}$., anhedral, colourless to yellow-brown, poorly developed colloform structure, x-ray determination indicates the carbonate is siderite. Carbonate in thin cross-cutting veinlets is probably calcite.

10\% Magnetite: $<0.1$ - $1 \mathrm{~mm} .,<0.1 \mathrm{~mm}$., anhedral, disseminated grains closely associated with fine-grained carbonate.
$35 \%$ Sulfides:
22\% Sphalerite: $<0.1-2 \mathrm{~mm}, 0.5 \mathrm{~mm}$., anhedral, grey in polish section, translucent brown in thin section.

3\% Galena: $<0.1-0.5 \mathrm{~mm},<0.1 \mathrm{mm}$. , subhedral to anhedral, white in polish section, (triangular pits along cleavage), closely associated with sphalerite, commonly occurs as small grains on the margins of sphalerita.
$7 \%$ Dyrite: $<0.1-0.5 \mathrm{mm.}<,0.1 \mathrm{~mm} .$, euhedral to anhedral, yellowishwhite, concentrated in irregular veinlets.
$3 \%$ Chalcopyrite: $<0.1-1 \mathrm{mm.}<,0.1 \mathrm{~mm}$., anhedral, associated with pyrite, occurs in centre of pyrite-rich veinlets and in one late crosscutting veinlet.

## Remarks:

Weakly banded zinc-copper-lead ore with associated carbonate (siderite), quartz, and magnetite gangue. Mineral percentages are highly variable. X-ray diffraction traces varify the presence of quartz, sphalerite, galena, and siderite. The mineralogy is identical to specimen 96387 although the proportions and textures differ considerably. The nature of the original host rock can not be ascertained in either specimen.
that while high grade native silver does occur in the Waterloo vein, its inconsistency and the overall low grade do not point to commercial grade ore nor to a mineable tonnage.

Zinc mineralization is more consistent and extensive but the low price of zinc does not permit consideration of development for this metal either alone or in conjunction with the silver.

Payday area - Our knowledge of this mineral occurrence has not increased since 1968 and this showing remains as a potential ore body. However it is thought to be very small and is unlikely to be economic unless developed with other and preferably larger ore bodies. No such ore bodies are known at this time.

Lightning Peak area - Further sampling on the vein may show a better grade of lead/silver mineralization than indicated by the very limited sampling undertaken during 1969. However the vein is narrow and appears to be no larger than 700 feet. Its tonnage potential is poor.

## RECOMMENDATIONS

The exploration program undertaken on the Lightning Peak properties during 1969 was concentrated almost entirely on the Waterloo vein as this was thought to have the best potential both in terms of grade and tonnage. Very rich values were discovered in the vein and the vein was shown to be more extensive than formerly thought but the overall picture is not of an economic ore body.

Consequently recommendations for further work on the area would have no viable justification. The whole of the Lightning Peak roof pendant is an interesting area with many mineral showings but extensive exploration of the whole area carried out during two seasons has failed to come up with anything new and has shown the deposit with the best potential to be uneconomic so it must be recommended that no further work be undertaken by the company.

Respectfully submitted:

J. McMullin, B.Sc.,

Geologist.


Sheet No...... $1 . . .$.


Core stored with K.L. Daughtry, R.R.4, Vernon, B.C.
Sheet No. .......................
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$\times$
$\times$

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\underbrace{c_{5}^{2}}_{c_{a x}^{5}}
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| Co-Ords: $0+21 \mathrm{~N}, \quad 0+71 \mathrm{E}$ |
| :--- | :--- |
| Azimuth: $\quad 270^{\circ}$ |


| Dip: $\quad-25^{\circ}$ | Drill Type E Size: BBS-1 BX | Location: West of head of east fork |
| :---: | :---: | :---: |
|  |  | of Rampalo Creek |
| Elevation: | Dip Tests: | Date Started: Oct. 13/74 |
|  |  | Date Completed: Oct. 15/74 |
| Lerethe 151 |  | Logged By: K.I. Daughtry |
| Section: |  | Date Logged: June 12, 1975 |
| Purpose: | $\square$ |  |





Sheet No. . 2. ....................


Sheet No. 3......................


