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SECTION V

MILLIE MACK PROPERTY
BURTON, B.C.

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SECTION V
MILLIE MACK PROPERTY

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SECTION V

MILLIE MACK PROPERTY

INTRODUCTION

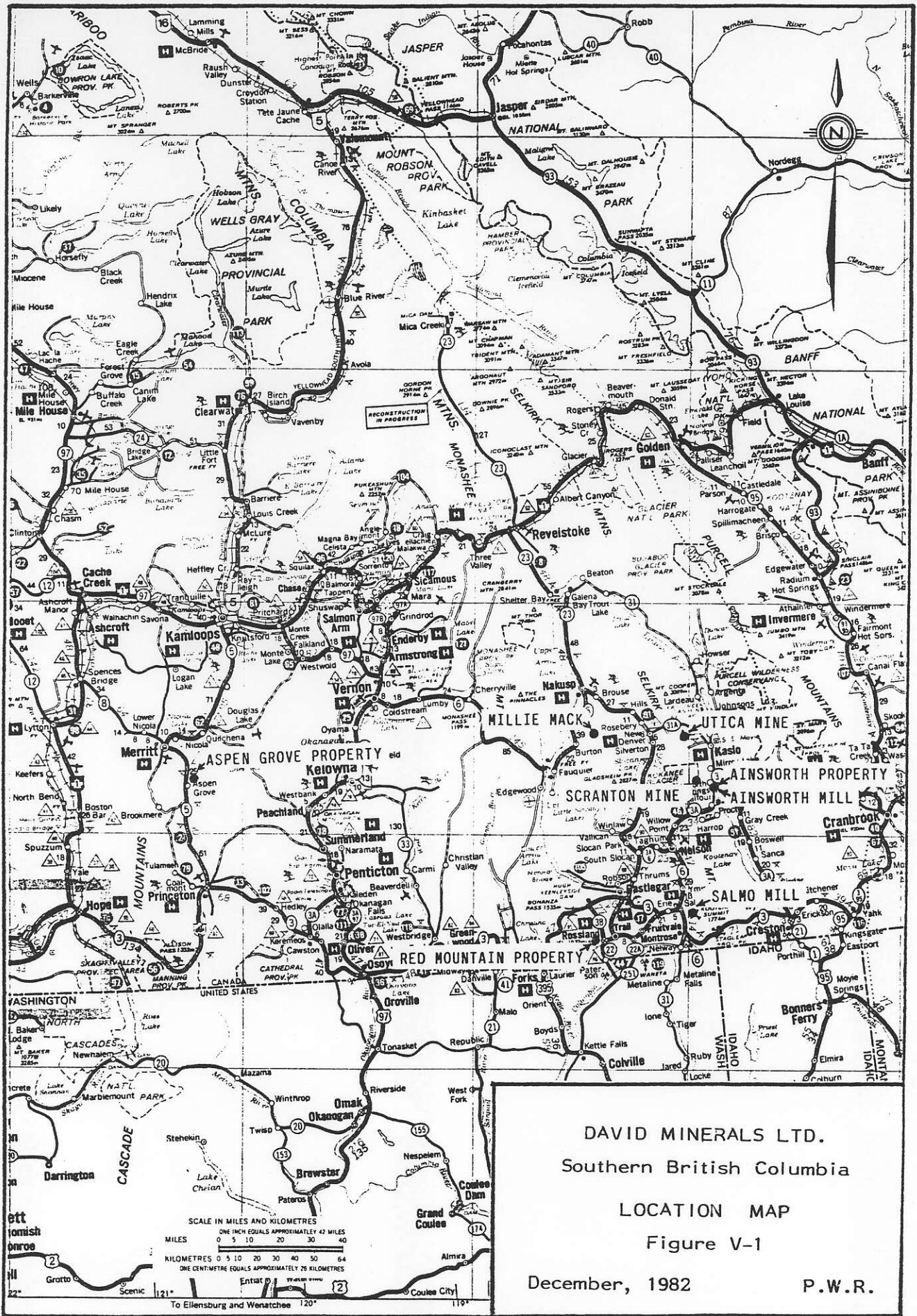
The Millie Mack Property is located in southeastern British Columbia in the Slocan Mining Division, approximately 19 kilometres due east of the town of Burton. The Property is well-known and has been explored since 1895 by the driving of underground headings, trenching and drilling. The shipments of ore made prior to the acquisition of the claims by David Minerals Ltd. contained gold, silver, lead and zinc. A hand-cobbed shipment of 450 tons is reported to have contained 1.0 ounces per ton of gold, 100 ounces per ton of silver, 8 percent lead and 7 percent zinc. In 1980, a geochemical survey and a percussion drifting program were completed by Semper Resources Ltd. The geochemical program indicated 5 anomalous areas of silver mineralization. The drilling intersected the silver-bearing fault zone, but did not confirm the assays received from bulk sampling or those received from the shipments of ore. Additional exploration is warranted to determine the tonnage and grade of the precious metal mineralization which is located in a flat-lying thrust fault on the eastern part of the Millie Mack Property.

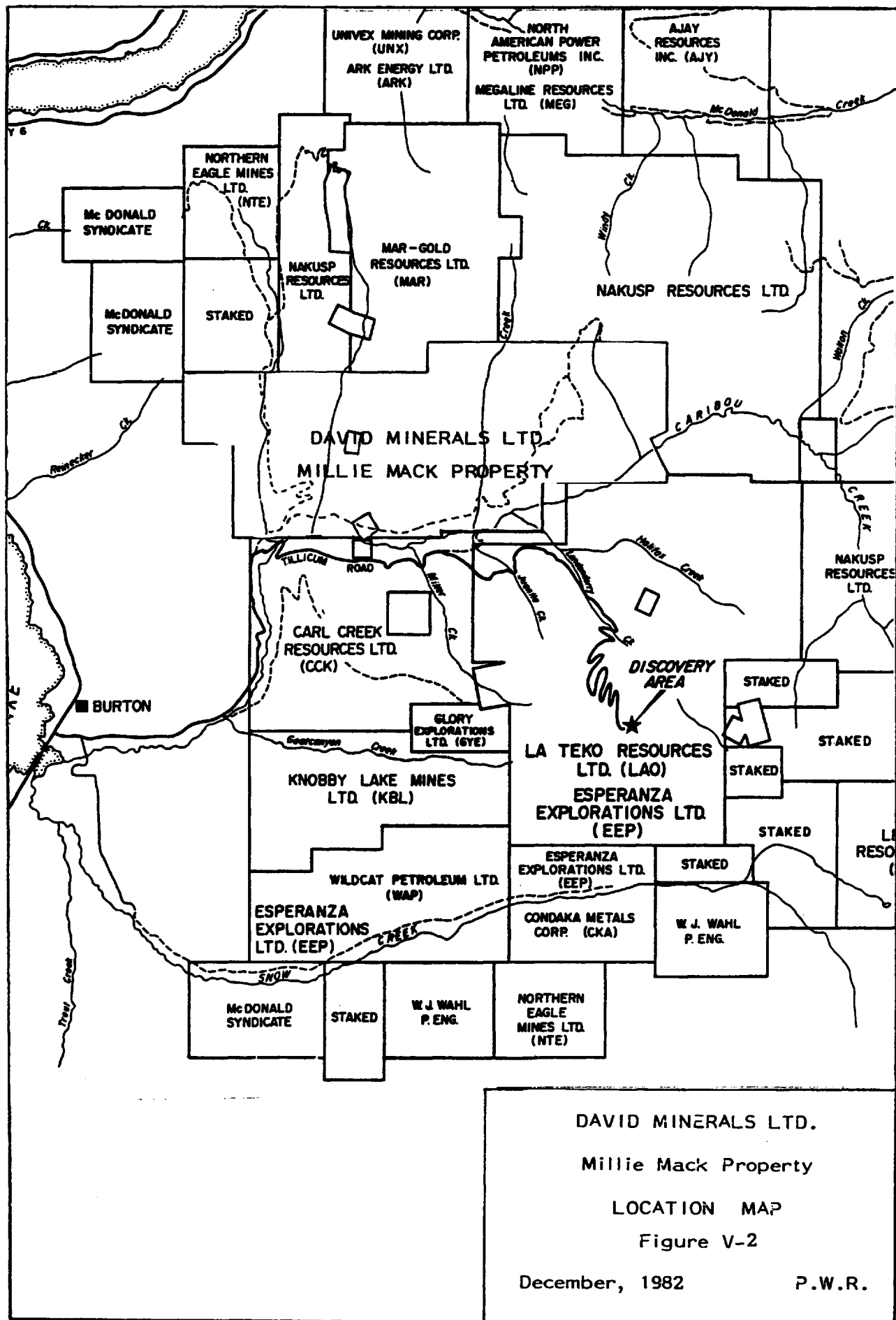
In addition, reconnaissance geological mapping, prospecting and trenching are warranted to investigate the west half of the Property where five geochemical anomalies have been found.

LOCATION AND ACCESS

The Millie Mack Property is located on Blue Grouse Mountain, a distance of 16 kilometres northeast of the town of Burton, B.C. (Figure V-1).

Access to the Property is by Highway 6 to Burton and by a gravel road along the north side of Cariboo Creek. This road traverses all of the claims except the Ruby and SGC. The road climbs from an elevation of 825 metres in the valley of Cariboo Creek to an elevation of 2040 metres at the upper workings on the Blue Grouse Mountain (Figure V-2).





CLAIMS (Figure V-3)

The Millie Mack Property comprises 9 Crown-Granted mineral claims and fractions and 8 staked claims for a total of 140 units and a grand total of 149 units, claims and fractions as follows:

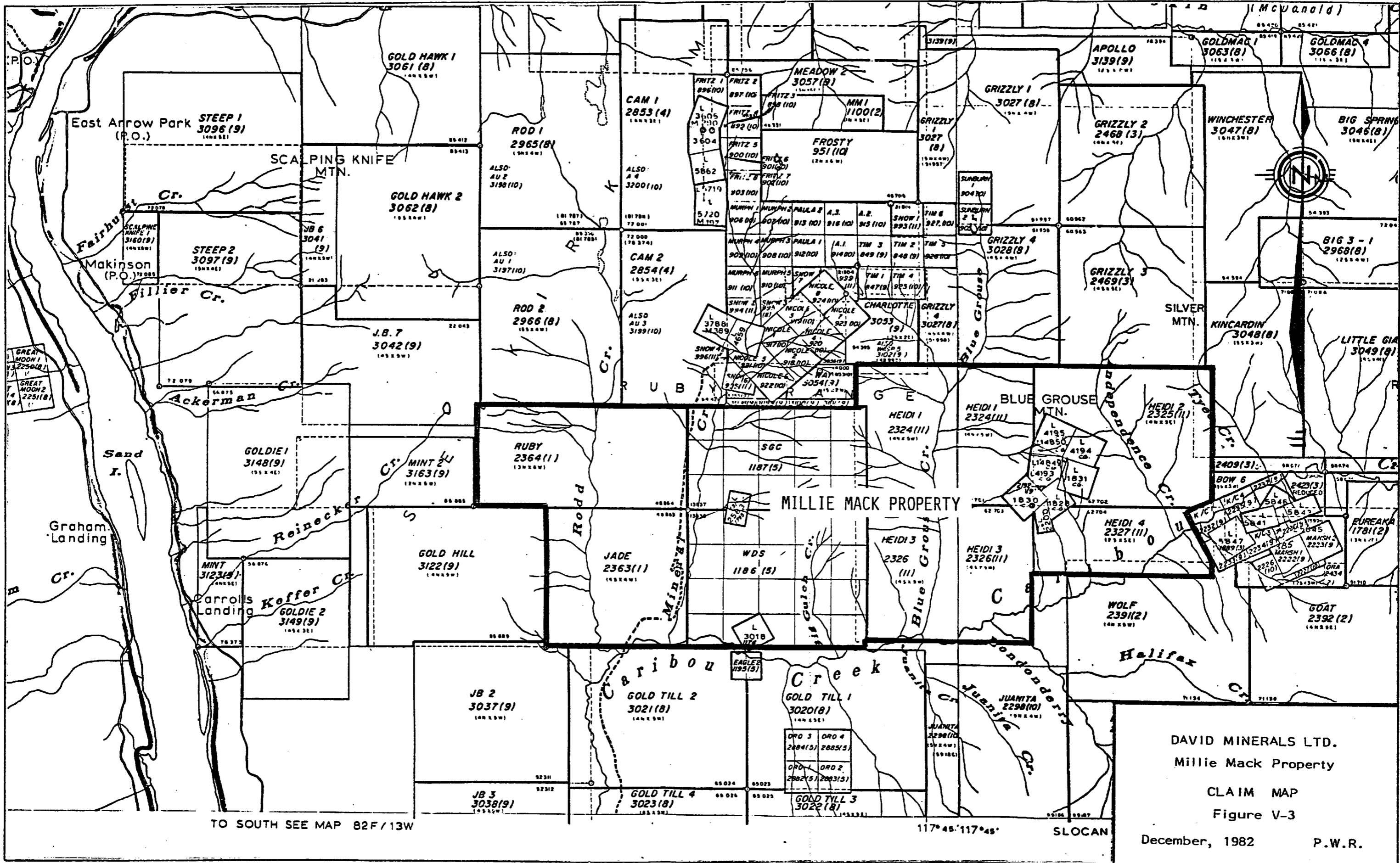
<u>CLAIM</u>	<u>RECORD NO.</u>	<u>UNITS</u>	<u>LOT NO.</u>	<u>EXPIRY DATE</u>
Jade	2363	16		January 26, 1985
Ruby	2364	18		January 26, 1985
Juanita Fraction	2192	1		Sept. 9, 1992
Heidi 1	2324	20		Nov. 20, 1992
Heidi 2	2325	20		Nov. 20, 1992
Heidi 3	2326	20		Nov. 20, 1992
Heidi 4	2327	10		Nov. 20, 1992
WDS	1186	20		May 10, 1985
SGC	1187	15		May 10, 1985

140

Rainbow Quartz	4193
Triumph	4194
Impregnable	4195
Gold Ring	1828
Wolf	1830
Millie Mack	1831
Hef Fraction	14849
Black Bear Fraction	14850
Great Western	2200

9 claims

Grand Total 149 units



TO SOUTH SEE MAP 82F/13W

117° 45' 117° 45'

SLOCAN

DAVID MINERALS LTD.
 Millie Mack Property
 CLAIM MAP
 Figure V-3
 December, 1982 P.W.R.

HISTORY

A good history of the Property was written by M. Mooney, P.Eng. and B. Hicks, P.Eng., and excerpts are quoted below:

"Mineral exploration was initiated in the Millie Mack Crown Grant area about 1895, leading to the early location of the above-mentioned nine Crown Grants. A review of the early history shows:

1. Acquisition by Kamloops Gold Mining and Development Co. with some shipments starting in 1899.
2. Property was purchased by H. Forster who carried out intermittent development over the next 30 years. Approximately 800 metres of drifting and raising was carried out. According to Mr. Forster's report, 450 tons were produced grading as follows:

Au 1.02 oz/ton; Ag 100 oz/ton; Pb 8%/ ; Zn 7%

In 1960, there is a recorded production of 13.9 tons grading:

Au 0.44 oz/ton; Ag 9.8 oz/ton; 3.7% combined PbZn

In 1967, Richwood Silver acquired the property and carried out an exploration program covering geological mapping, bulldozer trenching, channel sampling of trenches, and dump samples. Richwood Silver shipped 24.4 tons grading:

Au 0.22 oz/ton; Ag 9.0 oz/ton; 3.3% combined PbZn

In 1968, a programme of trenching and sampling was carried out on behalf of Richwood Silver Mines Ltd. by J.A. Mitchell P.Eng., and subsequently reported upon by Mr. Mitchell and by H.D. Forman, P.Eng. A total of 305 samples were channeled in areas of exposed fault. The reports stress that difficulty was experienced in exposing the bottom contact of the fault in many places and, in general, that it was not possible everywhere to obtain fully representative cuts across the formation. Additionally, it is noted that "high-grade boulders"

were excluded from the samples although it appears probable that a substantial proportion of the mineralization occurs therein. Nevertheless, gold and silver values were found at all of the points tested, the most interesting being located at the Millie Mack and Black Bear showings.

Richwood Silver Mines Ltd. carried out a geophysical survey over the Millie Mack and Black Bear areas in 1971 but the results provide little information. A geochemical survey and some underground work is stated to have been done at the same time but no records are available.

Semper Resources, in 1980, expended approximately \$400,000 in a programme comprising road rehabilitation, camp construction, soil sampling, trenching, sampling, and drilling of five diamond drill and 54 Becker drill holes with respective aggregate lengths of 1,891 and 4,233 feet.

Drilling was successful in defining the location of the thrust fault, but the values returned were, in general, below economic grade. While some assays of up to 8 ounces per ton silver were recorded, the general average was below one ounce.

GEOLOGY (Figure V-4)

The oldest rocks on the Millie Mack Claim Group are a series of Lower Jurassic and/or Upper Triassic argillite shales, siltstones and tuffs. A complete section of this sedimentary sequence is not exposed on the claim group or in the area. Located above the argillite - tuff sequence is a series of tuffs and flows which vary in composition from basalt to dacite. These formations have been intruded by stocks, dykes and sills, which vary in composition from diorite to syenite. The rocks on the top of Blue Grouse Mountain are a plate of the Triassic argillites which have

been moved to this position by a fault. The thrust fault can be traced completely around Blue Grouse Peak (Figure V-4).

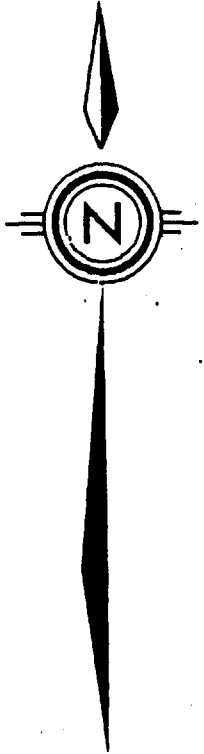
MINERALIZATION (by Brodie Hicks, P.Eng.)

The mineralization of economic interest is associated with quartz and sulphides contained within a relatively flat-lying thrust fault in the graphitic argillites (Figure V-5). The fault zone has an estimated thickness of from 60 to 100 feet and cuts through Blue Grouse Mountain at an average elevation of about 6,000 feet, outcropping around the full circumstances. It has an area of approximately 270 acres.

The genesis of the fault has not been determined and various theories have been proposed by examining geologists. The most generally accepted view is that underlying andesites and basalts of the Rosland and Slocan groups have been overthrust by older graphitic slates and argillites of Slocan age. It has also been postulated, however, that the overlying rocks are in fact younger and that only a normal depositional sequence is present with later movements creating the faulting. Insofar as the Millie Mack deposit proper is concerned, the matter is perhaps academic, but it could prove important in guiding exploration elsewhere on the property and thus deserves further study.

The fault zone dips at 10° - 15° to the east. In past years, a number of development and small-scale production openings were driven at several points around the periphery and the estimates of thickness cited above were based on these. All are now inaccessible. Evidence from recent surface work, however, indicates a minimum thickness of 20 feet at three separate locations, the Millie Mack, Black Bear, and Great Western.

The nature of the mineralization suggests that quartz, calcite, and sulphides, with associated metallic content, were originally present in the argillites as veins which were shattered by the overthrust shearing and/or by subsequent movement on the same plane. As a result, mineralization is now found as broken fragments, ranging in size from several feet in diameter to one-quarter inch or smaller, irregularly scattered through the fault zone.



BLACK BEAR
AREA

3478
3479
3480

Calc 0.022/01. 567 Area

3481

*Calc 03/086
GRV.R.
10 0-1/09*

MILLIE MACK
AREA

GREAT WESTERN
AREA

3482
3483

1" = 400'

DAVID MINERALS LTD.
Millie Mack Property
PLAN OF THRUST OUTCROP
Figure V-5
December, 1982 P.W.R.

x1.

x2.

x3.

x17.

x16.

x15.

x18.

x14.

x13.

x12.

x10.

x11.

x9.

x8.

x6.

x7.

x4.

x5.

SOIL SAMPLES

	<u>ppm. Ag</u>
1.	0.30
2.	0.90
3.	3.50
4.	0.40
5.	0.60
6.	0.40
7.	0.80
8.	0.20
9.	0.20
10.	1.35
11.	0.25

The sulphide mineralization consists of pyrrhotite, pyrite, galena, sphalerite, chalcopyrite, arsenopyrite, tetrahedrite, argentite, native silver, cosaltite, and gold associated with the silver.

It does not appear that mineralization extends into either the overlying or underlying rocks."

NOTES ON THE MINERALIZATION OF THE MILLIE MACK AREA (Figure V-6)

The precious metal mineralization in the Burton area is silver and gold. On the Millie Mack claims, the precious metal values are silver associated with low values of gold, lead and zinc. These values appear to be related to a thrust fault.

On the property owned by Esperanza Explorations Ltd. located immediately to the southeast, the precious metal values are in gold. On the Esperanza Property, the drilling and trenching completed in 1982 has indicated that gold occurs in narrow high-grade zones and as disseminations of low-grade mineralization. The gold-bearing zones contain silver, lead, zinc and tungsten.

RESERVES

There are no developed reserves of any category but it is possible to consider potential geological reserves. P.J. Santos, P.Eng. (bibliography) assumes a thickness of 20 feet for the entire area of the fault, arriving at a figure of approximately

20,000,000 tons. The grade of the silver mineralization on the thrust fault plane is unknown despite the fact that there has been percussion, diamond drilling and and trenching programs. The most valid sample taken to date was a bulk sample of 30,000 pounds taken from the surface in the area of previous production. The bulk sample was sent to the smelter at Trail for treatment. The smelter assay of this shipment was as follows:

Au	-	0.02	oz/t
Ag	-	3.30	oz/t
Cu	-	0.03	%
Pb	-	0.60	%
Zn	-	0.40	%
S	-	1.40	%
SiO ₂	-	58.60	%

EXPLORATION

Two areas of exploration warrant further investigation on the Millie Mack group of claims - the five silver-bearing anomalies located on the four western claims; the Ruby, the SGC, WDS and the Jade, and the thrust fault silver mineralization located on the 9 eastern Crown-Granted Mineral Claims (Figure V-5). In order to determine the source of the silver anomalies (Figure V-7) it will be necessary to complete prospecting, geological mapping and trenching for an estimated expenditure of \$25,000.

An exploration program to evaluate the silver mineralization related to the thrust plate (Figure V-5) has been outlined by B. Hicks, P.Eng., as follows:

"It is proposed that surface bulk sampling be commenced at the three locations on which past work has exposed mineralization, viz. the Millie Mack, Black Bear, and Great Western. The whole periphery of the outcrop has a length of approximately 15,000 feet, and there are no doubt other areas equally accessible, but it is reasonable to work out from the known to the unknown.

At each of these locations, it is proposed to excavate six trenches, 100 feet apart, by bulldozer and backhoe, and to concentrate the material excavated through a sampling plant. Completion of the total of 18 trenches is expected to require two months and provision is made below to cover expenditures for three months if, as seems probable, results suggest extension of the programme in one or more areas.

For the underground bulk sampling, it will be necessary to prepare suitable openings and this will best be done by rehabilitation of old adits. As their condition is not known, the cost of rehabilitation is conjectural and the figure cited below is of order-of-magnitude only.

Rehabilitation of the old workings will not, in itself, provide material for bulk sampling which will be provided by driving horizontal and vertical openings from them. It will probably be best to contract this work. Allowance is made herein for 500 feet of advance with the material again being processed through the sampling plant. This will be scheduled to take place after completion of the surface sampling programme.

An allowance has been made for prospecting and geological reconnaissance of the extensive areas of the property outside of the main fault zone. Other showings of gold and silver mineralization have been reported in the past. The sum allowed should suffice to allow preliminary trenching of any favourable areas located.

At the end of the season results should be reviewed in order to determine if further work is justified.

B U D G E T

1. Surface Bulk Sampling

Bulldozer and backhoe rental \$160/hr. for three months	-	\$115,000	
Truck rental, \$40/hr. for three months	-	29,000	
Sampling Plant, \$200/day for three months	-	18,000	
Labour, three men @ \$150/day		<u>40,000</u>	\$202,000

2. Underground Bulk Sampling

Rehabilitation	-	50,000	
500 feet advance @ \$160/ft.	-	80,000	
Sampling Plant, one month	-	6,000	
Sampling Plant Labour	-	13,000	
Truck, one month	-	<u>10,000</u>	159,000

3. Supervision, assaying, travel, consulting, etc.	-		20,000
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4. Camp services, board, etc.	-		10,000
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5. Allowance for General Prospecting	-		<u>40,000</u>
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\$431,000

or say, \$450,000"

The total expenditure for the first step
in the evaluation of the Millie Mack claims is estimated to cost \$475,000.

BIBLIOGRAPHY FOR MILLIE MACK PROPERTY

1. Santos, P.J., "Report on the Property Examination of the Millie Mack Property, Slocan Mining District, 1980"
2. Hicks, H.B., "Millie Mack Property", January 29, 1981
3. Mooney, M.G., "Drilling Work Program on the Millie Mack Claim" Assessment Report, February 18, 1981.
4. Mooney, M.G., "Physical Work Program on the Millie Mack Claim" Assessment Report, February 18, 1981
5. Mooney, M.G., "Soil Geochemistry Programme on the WDS, SGC, Ruby, and Jade Claims, Millie Mack Property", Assessment Report, December, 1981.