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GEOLOGICAL MAPPING and LITHOGEOCHEMICAL SURVEY

IDEAL 2,12 CLAIMS

IDEAL GROUP, DOVE PROJECT

NANAIMO MINING DIVISION

NTS 92F/11E

LATITUDE 49 45', LONGITUDE 125 11'

by

ROBERT L.WRIGHT, P Geo R L WRIGHT & ASSOCIATES

and MURRAY I. JONES WESTMIN RESOURCES LIMITED

> Claim Owner JOSEPH L. PAQUET

Operator WESTMIN RESOURCES EMPTEDMENT REPORT

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1.0 SUMMARY

A limited lithogeochemical survey and structural mapping program was carried out on the Ideal 2 and 12 Claims in 1992. The purpose of the survey was to provide detailed structural and lithogeochemical information in an area which indicated the potential to host significant mineralization in previous work. The Dove Property is presently being explored for high grade, epithermal, precious metal deposits.

The survey identified several significant structures, which could represent a major north-south structure, believed to occur in this area, based on earlier work. Also, the lithogeochemical sampling (17 samples) identified a significant alteration zone at the north edge of the area of interest, which may be a preserved regolith, or possibly a hydrothermally-altered zone.

As a result of this year's survey, it is recommended that the potential for mineralization along the Paquet Fault structure and the north-south lineament be tested by a limited diamond drilling program. Any significant targets identified by this work could then be examined in detail by additional drilling.

2.0 INTRODUCTION

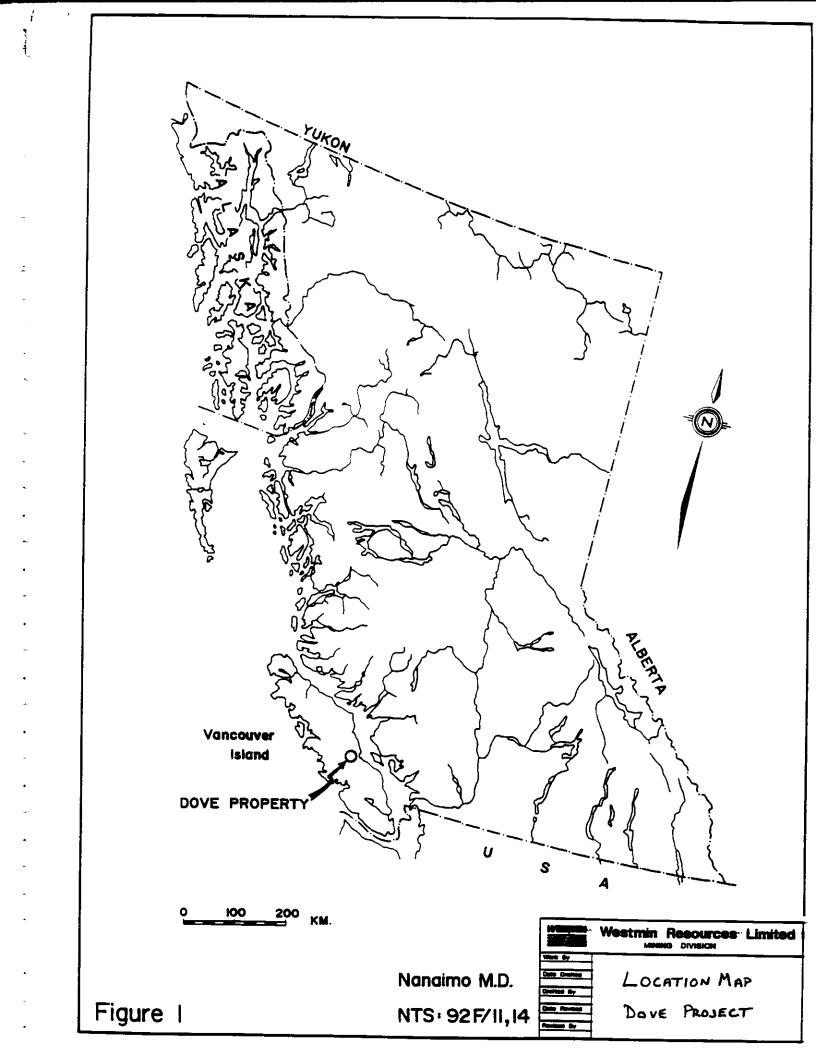
2.1 Objectives

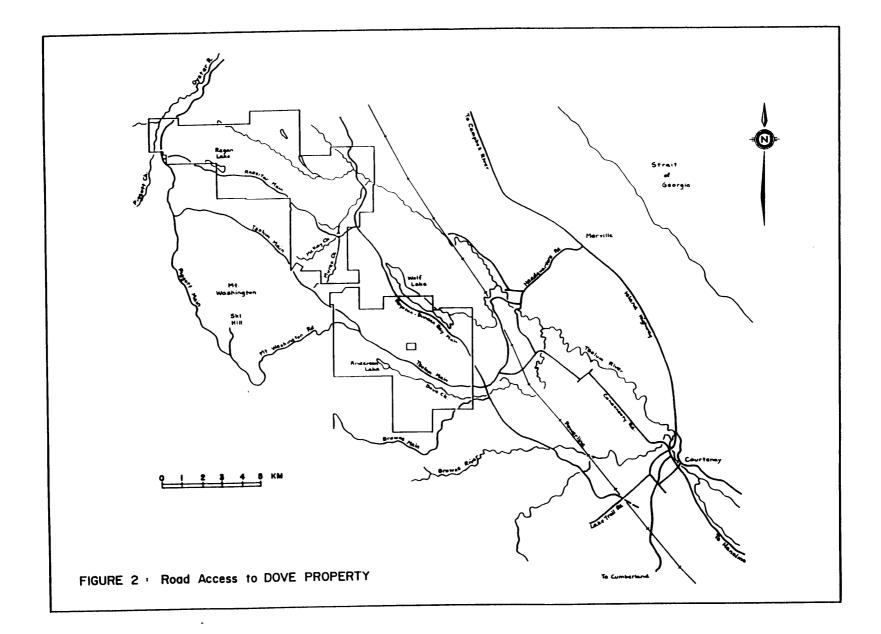
Previous work on the Dove Project in the Paquet Creek area on the Ideal 2 and 12 claims (Wright, 1989) resulted in the discovery of several mineralized showings in the creek. The largest showing is in a prominent fault zone marked by gouge and sheared rock in a seam 35 cm thick, which is veined with carbonate and realgar. Chip samples of this material contain 57 ppb Au, 0.6 ppm Ag, 3.61% As, 95 ppm Sb and insignificant base metals. The footwall of the fault contains several pyrite and realgar-bearing carbonate and quartz veinlets, one of which assayed 2350 ppb Au, 18.4 ppm Ag, 0.3% Cu, 0.2% Pb, 0.8% Zn 0.5% As and 0.5% Sb.

The objectives of the 1992 work program were twofold: to determine the structural control on the mineralization which has been located in previous work, and, to identify, by lithogeochemical sampling, any other mineralized or altered zones in the vicinity which also have potential. R L Wright, assisted by E Radcliffe, was contracted to carry out the survey under the supervision of M I Jones, Project Geologist, of Westmin Resources Limited. The work was completed between the 25th and 31st days of May, 1992.

2.2 Location and Access

The Dove Property is located approximately 15 kilometres northwest of Courtenay, B.C. (Figures 1 and 2). The Ideal 2 and 12 Claims are located near the





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centre of the property in NTS map sheet 92F/11E, just south of Wolf Lake. Access to the property is by paved and gravel roads from Courtenay (20 min.) or from Campbell River (30 min.). Within the property, access is provided by numerous all-weather logging roads, which form a network throughout the area. As all the property has been logged at some point, there are trails to almost every corner of the claims.

2.3 Physiography and Vegetation

The property lies on the east and north flanks of Mt. Washington, at elevations between 100 and 790 metres. Slopes are low to moderate except for the banks of deeply-incised creeks. The area is covered by an extensive glacial till blanket, up to 20 metres thick. Rock exposures are mostly confined to creeks and in low-lying areas to the east. Several outcrop ridges do occur in the western part of the property separated by drift-filled valleys. The entire property is covered by second growth fir, hemlock, and cedar. Alder has overgrown old roads and cleared areas.

In the Ideal 2 and 12 claim area, topography is moderately steep, sloping downward from the swampy plateau at the headwaters of Paquet Creek to the shore of Wolf Lake. Paquet Creek forms a steep, narrow gulley around the showings, where exposure is virtually continuous, but at the base of the escarpment, the creek forms a debris fan which is actually above the surrounding terrain. Elevations in this area range from 150 to 300 metres.

2.4 Exploration History

The history of exploration in the area of the Dove Claims began in the 1940's and has continued to the present day. Early exploration concentrated on high-grade Au-bearing quartz veins. For the next three decades the area received intensive exploration for low-grade or porphyry-style copper deposits with little attention given to the high-grade veins. This work led eventually to the formation of the Mt. Washington Copper Co. Ltd. which mined close to 400,000 tons of ore from two small pits, 4.5 kilometres west of the Dove Property. This ore had an average recovered grade of 1.16% Cu, 0.01 oz. Au/ton, and 0.5 oz. Ag/ton. In the mid-70's, Esso Minerals began work on the Meadows Zone, also on Mt. Washington, and by 1982 they had outlined 0.5 to 1.0 million tons of material grading 0.5% Cu.

The 1980's saw a return to exploration for epithermal, high-grade precious metal deposits. Better Resources Ltd. approached the Meadows Zone (now called the West Grid Zone) as such a target. In 1987, they had outlined almost 980,000 tons of drill-indicated reserves at 0.142 oz. Au/ton and 0.67 oz. Ag/ton in the Lakeview-West Grid and Domineer Zones. This project included some underground development consisting of 300 metres of adits and cross-drifts.

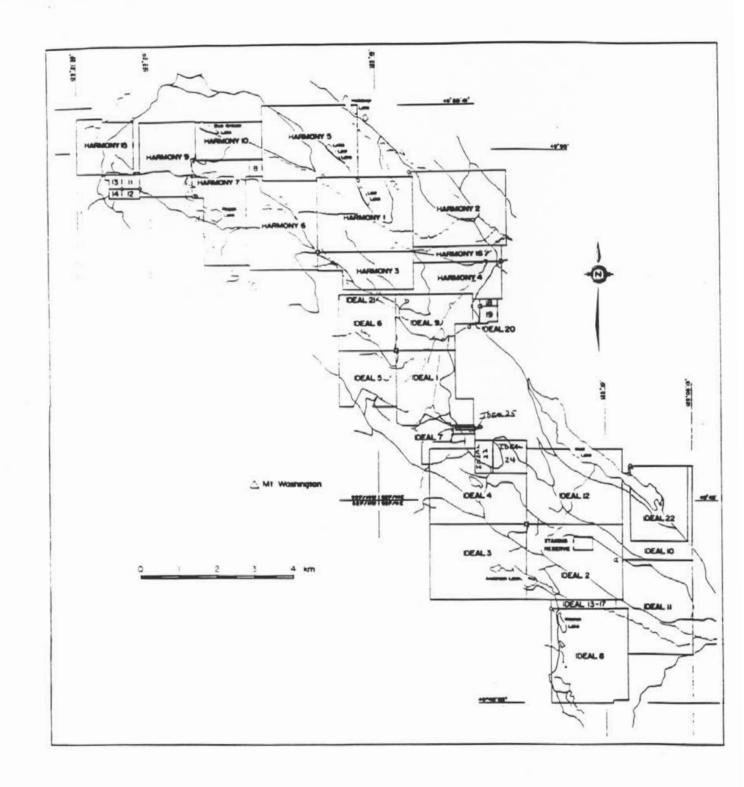
Better Resources also drilled the upper Murex Creek Breccia, a magnetite-Cu body, located just west of the Dove Property. They drilled one intersection of 15.9 m of 0.178 oz. Au/ton, plus 2.7 m of 0.08 oz. Au/ton and 3.0 m of 0.11 oz. Au/ton. The Dove property itself has had sporadic exploration throughout the history of exploration in the area. Since 1987 Westmin Resources Ltd. (previously in joint-venture with Visible Gold Inc.) has conducted several exploration programs on the property. These programs have involved airborne geophysical surveys, systematic geological mapping, linecutting, induced polarization, VLF-EM ground surveys, soil geochemistry and diamond drilling. The Ideal 2 and 12 claims were examined cursorily in this initial pass, with one diamond drill hole completed at that time along strike from the Paquet Creek showing. Follow-up programs, including more diamond drilling, have concentrated on specific areas of interest, the M^cDonald Creek (NS Grid) and Tailings Pond (Main Grid) areas (Wright, 1989). In general, the diamond drilling has turned up narrow zones of reasonable grade precious metal mineralization. Enhancement of these zones has been frustrated by the lack of understanding of the structural controls on the mineralization. The bedrock exposure necessary to development an appreciation of the important structures in the drilled areas is not available due to the extensive glacial drift cover on the property.

2.5 Claims

The Dove Property currently consists of two groups of claims (Figure 3): the Harmony Claims, and the Ideal Claims, both having been optioned from Mr. Joseph Paquet, of Campbell River, B.C.. The Harmony Group consists of 7 claims for a total of 95 units. The Ideal Group consists of 23 claims for a total of 222 units. The claims, their record numbers, number of units, staking dates and expiry dates are listed in Tables 1 and 2

3.0 REGIONAL GEOLOGY

The geology of the area of the Dove Property has been mapped and described by Muller and Carson (1969) and Carson (1973) with revisions and detailing by Benvenuto (1986) and Wright (1987). The area is underlain by tholeiitic basalts of the Triassic Karmutsen Formation of the Vancouver Group, which is unconformably overlain by sediments (including coal measures) of the Upper Cretaceous Nanaimo Group. The Nanaimo Group consists of the basal Benson Conglomerate, the Comox Formation (sandstones, siltstones, shales, coal measures) and the Trent River Formation. The Quatsino Limestone normally overlies the Karmutsen basalts but is absent in the area surrounding the Dove Property. This indicates a long period of erosion preceding the deposition of the Nanaimo Group sediments. There is evidence for significant topographic relief on the unconformable contact. As well, where intersected in drill holes, the unconformable contact is commonly composed of clayaltered material, which is interpreted as an alteration feature, but may in fact represent regolith (Wright, 1989). All of these formations are intruded by Tertiary sub-volcanic igneous rocks (dacite porphyry, quartz diorite) and diatreme breccias, composed of clasts of intrusive and country rocks. The intrusions occur as dykes, small stocks, sills and laccoliths. K-Ar dating of a late quartz diorite on Mt. Washington has given an age of 35 Ma.



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Figure 3. Claim Map: Ideal and Harmony Claims.

		TABLE	1 	
		HARMONY C	LAIMS	
Claim	Tenure No.	No. of Units	Record Date	Expiry Date
Harmony 3	230029	10	September 2, 1986	September 2, 1994
Harmony 4	230032	10	September 10, 1986	September 10, 1994
Harmony 6	230092	20	March 16, 1987	March 26, 1994
Harmony 7	230094	18	April 3, 1987	April 3, 1996
Harmony 9	230102	12	April 16, 1987	April 16, 1996
Harmony 16	230177	5	August 4, 1987	August 4, 1994
Harmony #17	230782	20	October 21, 1989	October 21, 1993
		95		

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TABLE 2								
IDEAL CLAIMS								
Claim	Tenure No.	No. of Units	Record Date	Expiry Date				
Ideal 1	229976	16	June 2, 1986	June 2, 1993				
Ideal 2	229977	20	June 3, 1986	June 3, 1995				
Ideal 3	229978	20	June 3, 1986	June 3, 1994				
ideal 4	229979	20	June 3, 1986	June 3, 1994				
Ideal 5	229980	9	June 3, 1986	June 3, 1993				
Ideal 6	229981	9	June 4, 1986	June 4, 1993				
Ideal 7	229999	6	June 13, 1 986	June 13, 1994				
ldeal 8	230023	20	August 6, 1986	August 6, 1995				
Ideal 9	230011	12	July 29, 1986	July 29, 1993				
ideal 10	230075	20	February 20, 1987	February 20, 1995				
ideal 11	230076	20	February 13, 1987	February 13, 1995				
Ideal 12	230098	20	April 7, 1987	April 7, 1994				
Ideal 13	230103	1	April 16, 1987	April 16, 1995				
Ideal 14	230104	1	April 16, 1987	April 16, 1995				
Ideal 15	230105	1	April 16, 1987	April 16, 1995				
Ideal 16	230106	1	April 16, 1987	April 16, 1995				
ldeal 17	230107	1	April 16, 1987	April 16, 1995				
Ideal 20	230178	2	August 4, 1987	August 4, 1993				
Ideal 21	230179	4	August 4, 1987	August 4, 1993				
Ideal 22	230290	12	June 17, 1988	June 17, 1995				
Ideal #23	231336	2	April 11, 1991	April 11, 1993				
Ideal #24	230896	4	February 28, 1990	February 28, 1993				
ideal #25	231427	1 1	November 23, 1990	November 23, 1992				
		222						

Several mineral deposits occur in the area of the Dove Project. The Mt Washington Copper Mine, as mentioned in the exploration history, occurs just west of the property and is associated with the Mt. Washington igneous system. mineralization consisted of a flat-lying drusy quartz-sulphide vein, up to 7.6 m thick, containing chalcopyrite, bornite, arsenopyrite, pyrite, realgar, and molybdenite. Host rock is biotite-altered, quartz diorite sills interlayered with Nanaimo Group sediments. Late sericite-chlorite alteration is also evident. A low-grade, disseminated sulphide zone, 600 x 150 metres, is associated with the mine as well, but reserves have not been estimated. The Domineer-West Grid-Lakeview Zones of Better Resources represent various exposures of a prominent, shallow-dipping vein on the east ridge of Mt. Washington. The vein occupies fault zones locally and lies within igneous rocks and sedimentary rocks of the Comox Formation. Pyrite and arsenopyrite are the principle minerals in auriferous veins but numerous other sulphide minerals are reported. The Murex Breccia Zone is a low grade Cu deposit consisting of disseminated pyrite, chalcopyrite and pyrrhotite and is estimated to contain 2 million tons of 0.40% Cu within brecciated Karmutsen basalt.

Several other showings are present in the region, mostly having mineral assemblages indicative of epithermal, precious metal mineralization. These showings are characterized by realgar, orpiment, calcite and sulphides such as sphalerite, galena, arsenopyrite, and pyrite. The showings generally occur in narrow structures of variable attitude.

On Mt. Washington and elsewhere, the unconformity between the Karmutsen basalts and the Nanaimo Group sediments seems to be important for the localization of mineralization. This is particularly true where the unconformity coincides with a major structural element, such as a fault.

4.0 **PROPERTY GEOLOGY** (Figure 4)

4.1 Geology

The oldest unit on the Dove Property is the Karmutsen Formation. These rocks are primarily composed of commonly porphyritic, massive to pillowed basalt and andesite flows, indicative of the lower part of the Karmutsen Formation. This evidence confirms the deep level of erosion of the Quatsino-Karmutsen succession prior to deposition of the Nanaimo Group sediments. Interbedded with the flows are andesitic lapilli tuff. Finally, the sequence has been intruded by gabbros. The rocks of the Karmutsen Formation generally have greenschist facies metamorphic mineral assemblages.

Within the property, the Karmutsen Formation is generally overlain by the Comox Formation. The basal Benson Conglomerate of the Nanaimo Group is present

IDEAL 12 -Pwar :-Ø. Ð lqd CREEK MA 1 RK The state D KN Tailings Tqd KN Hep) **KN** Tqd PAQUET KN KN Ted KN IDEAL 2 B.K. LEGEND , tod Tentary quarts dionte H DONALD Cretaceous Nanamo Go unconformity RK Triassic Karmutaan Em mineral showing 0 KN O diamond dritthole location Marietta Resources ħK. ы

Figure 4 Dove Property Geology and Mineralization - South Sheet

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mostly in the north part of the property. The Comox Formation sedimentary rocks occur primarily in the low-lying areas in the east part of the claims. These rocks are usually fresh-appearing, with local alteration related to structures and mineralized zones.

There are two types of Tertiary intrusions present on the Dove Property: a quartz diorite and a dacite porphyry. They generally occur in small stocks in the south half of the property. A large quartz diorite laccolith occurs along the east side of the property, and as far west as the Paquet Showing where it is in fault contact with the Karmutsen volcanic rocks. A fluidized contact breccia occurs on the margin of one of the smaller quartz diorite stocks, on the west side of the Ideal 7 Claim.

4.2 Structure

There is evidence in airphoto interpretations and landforms of several large scale lineaments occurring on the Dove Property. These large structures seem to be exclusive to the Karmutsen terrane and are dominantly northwest-southeast in orientation. There are also crosscutting structures, the more obvious examples generally oriented north-south. Local evidence of faults and shear zones is plentiful on the outcrop scale. The orientation of these features is quite varied. They are commonly shallow-dipping structures, with the exception of the north-south structures, which appear to be subvertical.

4.3 Alteration and Mineralization

Numerous sulphide showings occur throughout the Dove Property, but in particular seem to be concentrated around a large mag high feature in the central part of the claims. The showings of most interest tend to have anomalous concentrations of Au, Ag, As and Sb. In general, the showings are related to structural elements, such as faults and joints. There may be a zoning of elements away from the mag feature near the centre of the property, from more base metal-rich to more precious metal-rich showings. The mineralized zones are definitely later features, crosscutting the Karmutsen Formation and Nanaimo Group rocks. The mineralization seems to be approximately coeval with the Tertiary intrusive events.

The presence of structural complexities at the mineralized showings makes extrapolation and interpretation of the zones difficult. As well, the lack of good exposure of bedrock in most areas adds to the problems of evaluating the showings. It is for this reason that follow-up lithogeochemical and structural mapping work was done on those showings deemed to have the best potential.

4.4 Ideal 2 and 12 Claims

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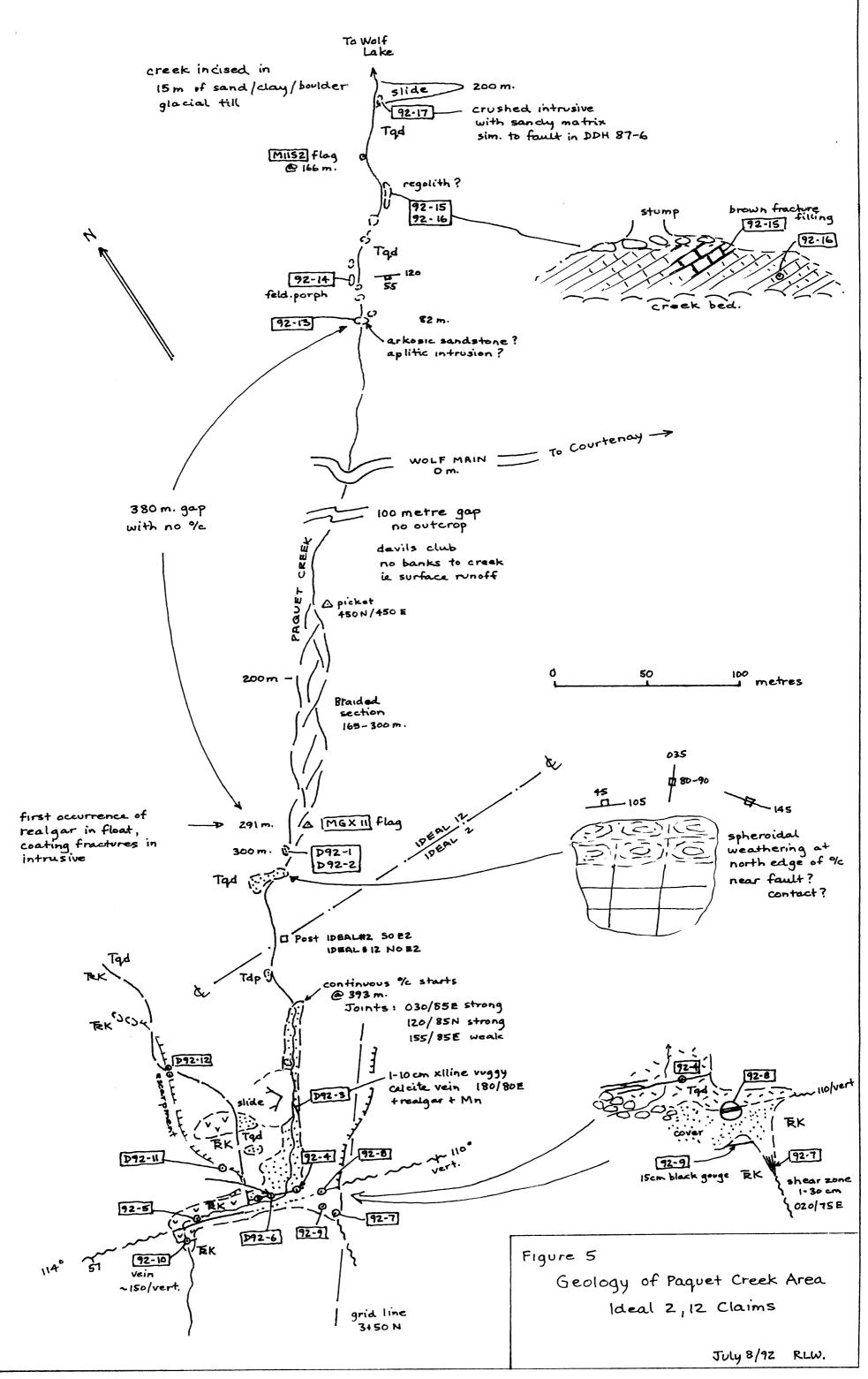
The Paquet Fault is a very strong feature where it is exposed in Paquet Creek, but due to extensive overburden surrounding the creek, the extent and continuity are uncertain. Similarly, a prominent north-south lineament that can easily be seen on airphotos immediately to the south, cannot be traced with any degree of certainty into the area of the showings. Several small shears and veinlets around the showing do suggest that the feature does continue into this area.

Figure 5 shows the geology in the area of the projection of Paguet Creek. The outcrops occur predominantly in the creek bed around the showings, and along the escarpment to the northwest, with the surrounding area being drift-covered. At the main showing, a Tertiary quartz diorite is in fault contact with the overlying Karmutsen volcanics. in the footwall of the fault, on the north side of the showing, the diorite is in intrusive contact with the volcanics, and this contact can be traced for several hundred metres to the north along the escarpment. The guartz diorite intrusion is exposed in the creek below the showing for a distance of approximately 200 metres, until the break in slope, where debris and glacial drift thickens. The guartz diorite is also exposed along roads to the southeast about 300 metres, apparently on both sides of the projected Paquet Fault. This indicates an apparent left-lateral displacement on the fault, although this is not conclusive, since the attitude of the intrusive contact is unknown, and the effect of the north-south lineament is uncertain. It should be noted here that a drillhole collared in 1987, along strike from the Paquet showing, but across the projection of the north-south lineament, failed to intersect the fault, suggesting that the north-south lineament may indeed alter the location or continuity of the Paquet Fault east of the showing.

Approximately 500 metres north of the Paquet showing, at the base of the escarpment, drilling in 1989 intersected Nanaimo Group sediments, including basal Benson conglomerate and regolith, overlying Karmutsen volcanics. There are no exposures of outcrop in this area, or in the area between these drillholes and the quartz diorite exposures in Paquet Creek; hence, the nature of the contact between the sediments and the intrusion is unknown.

Detailed mapping in 1992 located a number of significant structures, which could be related to the poorly-exposed north-south lineament:

- at the toe of the landslide, about 100 m below the main showing, a 1 to 10 cm-wide calcite-realgar vein with an attitude of 180/80E is exposed in the cliff face (sample D92-03).
- at the east end of the Paquet Creek showing, a well-defined shear zone is exposed in the cliff face. This zone, which ranges in width from 1 to 30 cm, and a small tensional feature associated with it (samples D92-07 and 09, respectively) contain significant amounts of antimony, arsenic and copper, but no gold. Silver values are, however, anomalous.



• the Paquet Fault has an attitude of approx 114/57S at the west end of the zone, at the base of the waterfall. At the east end, the fault changes to 110/vert, indicating a curvature of the shear due possibly to interaction with a second intersecting shear ... the NS lineament.

A number of other interesting features were noted during the mapping. Along Paquet Creek on the north side of the Wolf Main, exposures of quartz diorite and dacite porphyry show extreme alternation, to the point where outcrops can be sampled with bare hands. This may be a preserved remnant of pre-glacial regolith, or may be an extensive zone of hydrothermal alternation associated with mineralization.

5.0 LITHOGEOCHEMISTRY

The seventeen(17) lithogeochemical samples which were collected on the Ideal 2 and 12 Claims are listed in Appendix A and analyses are in Appendix B. Samples D92-13 to 16 are of the alteration zone discussed in the previous section. Samples 13 and 16 were also submitted for whole rock analysis. The results were compared with a sample of fresh quartz diorite from drillhole 89-1 (Appendix 2). The results are remarkably consistent for SiO₂ and Al₂O₃ when corrected for loss on ignition, and show a loss of 2% Na₂O with a corresponding increase in CaO, MgO, K₂O, and Fe₂O₃.

6.0 CONCLUSIONS

The Paquet Creek area, Ideal 2 and 12 claims, was examined with a particular model in mind, namely that mineralisation is controlled by the intersection of the Paquet Fault with the projection of the north-south lineament which is well exposed to the south, but not demonstrated in the current area of interest. Evidence for this structure in this area includes mineralised veinlets in the quartz diorite with a 180/80E attitude, a geochemically anomalous shear zone at the east edge of the main showing, and an abrupt change in the attitude of the Paquet Fault at the projected point of intersection with the north-south lineament.

Although the additional work was unable to clearly demonstrate the nature of the hypothesized structures in this area, the known mineralisation and proximity to similar showings with demonstrated gold values, make this an important target for further work.

7.0 RECOMMENDATIONS

It is recommended that the above-described model be tested by a limited program of diamond drilling, designed to test both the Paquet Fault along strike and down dip, as well as the north-south lineament. The ultimate target would be the projected intersection of these two structures; however due to the uncertainty regarding their precise location, it would be unwise to attempt this immediately, without the benefit of an initial phase designed to locate these structures in three dimensions.

To facilitate the drilling, a preliminary VLF-EM survey, using a different line orientation from previous surveys, could be considered. Previous survey results were, however, inconclusive in detecting known faults in this area.

8.0 REFERENCES

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Benvenuto, G., 1986. Geology and Mineralization of the Dove Property and area near Mt. Washington, Vancouver Island, B.C. Assessment Report, 68 p.

Carson, D.J.T., 1973. The plutonic rocks of Vancouver Island, B.C.: their petrography, chemistry, age and emplacement. G.S.C. Paper 72-44, 70 p.

Muller, J.E. and Carson, D.J.T., 1969. Geology and mineral deposits of the Alberni area, B.C.. G.S.C., Paper 68-50.

Wright, R.L., 1988. 1987 Year End Report on the Dove Property. Internal Company Report, 70 p., 8 vol.

Wright, R.L., 1989. 1988 Year End Report on the Dove Property. Internal Company Report, 49 p., 4 vol.

Wright, R.L., 1990. 1989 Year End Report on the Dove Property. Internal Company Report, 42 p., 3 vol.

9.0 STATEMENT OF QUALIFICATIONS

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I, Robert L Wright, geologist, residing at 105 Sunset Drive, in the village of Lions Bay, province of British Columbia, hereby certify that:

- 1. I received a B.Sc degree in Honours Geology from McMaster University, Hamilton, Ontario in 1971 and a M.Sc degree in Geology from the University of British Columbia, Vancouver, B.C. in 1974.
- 2. I have been practising my profession as an exploration geologist since 1975.
- 3. I am a member of the B.C. Association of Professional Engineers and Geoscientists.
- 4. I am the proprietor of the exploration consulting firm, R.L. Wright & Associates.
- 5. The work described in this report was undertaken by myself, on a consulting basis, on behalf of Westmin Resources Ltd., 1055 Dunsmuir Street, Vancouver, B.C.

17th day of February, 1993

Vancouver, British Columbia

R.L. Wright, M.Sc., P.Geo

R.L. Wright & Associates

10.0 STATEMENT OF EXPENDITURES

Personnel

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Field: R.L. Wright, consultant, 3 days @ \$300/day E. Radcliffe, assistant, 4 days @ \$120/day M. Jones, project geologist, 1 day @ \$225/day	\$ 900 480 225
Office:	
R.L. Wright - preparation, 1 day @ \$300/day (0.75)	\$ 225
- report, 2 days @ 300/day (0.75)	450
M. Jones, 2 days @ \$225/day (0.75)	338
Geochemistry:	
11 rock samples @ \$20.85 each	\$ 229
2 rock samples @ \$20.00 each	40
Project Costs:	
Travel, consultant, 2 days @ \$300/day (0.75)	\$ 450
Accommodation, meals, \$874 (0.75)	656
Gas for Vehicle, \$158 (0.75)	119
Vehicle Rental, \$313 (0.75)	235
Maps and Reports	75
Consultant Administration Charges	57

Total Expenditures \$ 4469

NB : Some costs have been apportioned with work done at the same time on the Ideal 9 Claim.

APPENDIX A

Paquet Creek Area:

- D92-01 Orange-weathering c.g. <u>feldspar porphyry intrusion</u>, with clay-altered feldspars and mafics.
 - from Stn 1, 305 m. up Paquet Ck from Wolf Main.
 - alternation poss. due to proximity to fault.
- D92-02 Fresh <u>quartz diorite</u>: unaltered equivalent of D92-01.
 - Pale greenish grey, c.g., equigranular with white plag phenos and smaller stubby pyroxenes (?).
 - from Stn 2, 312 m. up Paquet Ck from Wolf Main.
- <u>D92-03</u> Coarse vuggy, crystalline calcite vein, 1 10 cm thick, att. 00/80E, with crystalline realgar and black manganese patches.
 - from Stn 4, 460 m. up Paquet Ck from Wolf Main, on south wall of creek opposite landslide.
- <u>D92-04</u>
 <u>Calcite, pyrite, grey sulphides vein</u>, 2 10 cm thick, att 110/80N on south side of creek at corner, 502 m. up Paquet Ck from Wolf Main. Sample taken over 2 m. length of vein.
 - analysis shows 0.017 oz Au/T and 1.8 ppm Ag.
- <u>D92-05</u> Paguet showing: sample of main fault zone, composed of realgar/calcite (50/50) vein in fault, with minor grey sulphides and black manganese streaks, att 114/57S.
 - from 40 m. west of sample D92-04.
 - analysis shows 0.005 oz Au/T and 1.4 ppm Ag.
- D92-06 Second sample of <u>vein in footwall</u>, from north side of creek, approx. 5 m. along strike from D92-04, att 110/80N.
- <u>D92-07</u> Sample of <u>shear zone</u> with calcite, clay gouge and grey sulphides, att 020/70E, 1 30 cm wide.
 - at southeast end of Paquet showing area, in hangingwall above main Paquet Fault, which in this area is vertical.
 - sample shows anomalous Sb, As and Cu.
- <u>D92-08</u> Main <u>Paquet Fault</u> adjacent to D92-07 which is 30 cm wide and vertical where exposed. See sketch in Fig 5.
 - sample shows high Sb unlike the other Paquet Fault showing D92-05, indicating an influence from the shear zone at 020/70E which intersects the Paquet Fault in this area.
- <u>D92-09</u> Altered, bleached zone in Karmutsen volcanics, approx 15 cm wide adjacent to above-mentioned shear zone (D92-07). Black gouge and

rusty ochre material from this zone runs 1% + Sb, plus high Fe, As and Ni.

- <u>D92-10</u> <u>Calcite vein</u> with pyrite and black manganese patches, att 150/vert, in bleached basalts.
 - from top of waterfall above main Paquet showing.
 - shows anomalous Bi.
- D92-11 <u>Karmutsen basalt</u>, med grey green, f.g., from top of cliff north of Paquet showing, in footwall of Paquet fault.
- D92-12 <u>Altered intrusion</u>, light grey, m.g. porphyritic, from contact zone with Karmutsen volc, about 50 m. north of Paquet showing.
 - main alteration appears to be bleaching of mafics needs work.
- **<u>D92-13</u>** <u>Altered intrusion</u>, with brown hematized feldspars, and overall chalky appearance.
 - zoned alteration similar to D92-01: possibly related to unconformity beneath Nanaimo sediments which underlie the intervening ground (?)
 - analysis shows remarkable consistency with unaltered quartz diorites from the tailings pond area DDH 89-01 see Appendix B.
- D92-14 Altered intrusion with brown uralitized mafic prisms in mottled orange and white chalky feldspathic matrix.
 - possibly a dacite porphyry
 - from 113 m. down Paquet Creek from Wolf Main.
- <u>D92-15</u> Brown earthy material lining fractures in deeply weathered, soft crumbly chalky outcrop under creekbank, 150 m. downstream from Wolf Main.
 - shows anomalous Mn, Fe, Ba, Mo and As.
 - possible hydrothermal alteration of quartz diorite?
 - regolith of pre-glacial age preserved in depression.
- **D92-16** weathered (altered?) intrusion from same outcrop as 92-15.
 - predominant veining att. is 020/45E.
- <u>D92-17</u> <u>Crushed intrusion</u> composed of gravel-sized angular fragments of green, relatively unaltered quartz diorite in a sandy matrix.
 - very similar to fault zone encountered in DDH 87-6.

<u>D92-03</u> underlined samples analyzed by 32 element ICP method

D92-13 bold samples: whole rock analysis.



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A9215645

Comments: ATTN: MURRAY JONES CC: R.L. WRIGHT AND ASSOCIATES

CERTIFICATE			A9215645
VESTMIN	I MINES L'	TD.	
Project: P.O. # :	DOVE		
amples This rep	submitte port was	ed to our la printed on	b in Vancouver, BC. 16-JUN-92.
	SAM	PLE PREP	ARATION
CHEMEX CODE	NUMBER SAMPLES		DESCRIPTION
299 200	22	Pulp; prep Whole rock	ed on other workorder fusion
	1		

Code 1000 is used for repeat gold analyses It shows typical sample variability due to coarse gold effects. Each value is correct for its particular subsample.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION	Upper Limit
594	2	Al203 %: Whole rock	ICP-AES	0.01	99.99
588	2	CaO %: Whole rock	ICP-AES	0.01	99.99
590	2	Cr203 %: Whole Rock	ICP-ARS	0.01	100.00
586	2	Fe203(total) %: Whole rock	ICP-ARS	0.01	99.99
821	2	K20 %; Whole rock	ICP-ABS	0.01	99.99
593	2	MgO %: Whole rock	ICP-ABS	0.01	99.99
596	2	MnO %; Whole rock	ICP-AES	0.01	99.99
599	2	Na20 %; Whole rock	ICP- AES	0.01	99.99
597	2	P205 %: Whole rock	ICP-AES	0.01	99.99
592	2	SiO2 %: Whole rock	ICP-AES	0.01	99.99
595	2	TiO2 %: Whole rock	ICP-AËS	0.01	99.99
475	2	L.O.I. %: Loss on ignition	FURNACE	0.01	99.99
540	2	Total %	CALCULATION	0.01	105.00

Appendix B

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Project : DOVE Comments: ATTN: MURRAY JONES CC: R.L. WRIGHT AND ASSOCIATES

		_						CERTI	FICATE	OF AN	ALYSIS	<u> </u>	4921564	45	
SAMPLE	PREP CODE	A1203	CaO %	Cr203	Fe203	K20	Ng0 %	MnO %	Na 20 %	P205	8102 %	T102	LOI %	TOTAL *	
D92-13) altered D92-16) Tqd.	299 200 299 200	15.87 16.03	5.65 7.10	0.01 0.01	3.50 4.19	0.77 0.41	1.67 0.25	0.06 0.05	2.29 2.05	0.12 0.13	58.24 58.64	0.32 0.32	10.73 10.45	99.23 99.61	
compare : Unaltered Tqd NR 89-1-17		17.86	5.36	0.013	2.87	56	1.18	003	4 3B	0.15	έ6 .ου	0 - 32	1.0	99.79	
ecalculate for LOI = 0 % Total = 100%															
D92-13		17.93	6.38	0.01	3.95	0.87	1.89	0.07	2.59	0.14	65.81	0.36	0	100.00	
d 92-16			7.96	0.01	4.70	0.46	0.28	0.06	2.30	0.15	65.77	0.36	0	100.00	
														∋Mo	



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A9215634

Comments: ATTN: MURRAY JONES CC: R.L. WRIGHT AND ASSOCIATES

CERTIFICATE

A9215634

WESTMIN MINES LTD.

Project: DOVE P.O. # :

Samples submitted to our lab in Vancouver, BC. This report was printed on 25-JUN+92.

	SAMPLE PREPARATION				
	NUMBER SAMPLES	DESCRIPTION			
208 274 229	14 14 14	Assay ring to approx 150 mesh 0-15 lb crush and split ICP - AQ Digestion charge			
* NOTE	1.				

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, T1, W.

ANALYTICAL PROCEDURES

	NUMBER SAMPLES	DESCRIPTION	METHOD		Upper Limit
998	14	Au oz/T: 1 assay ton	FA-AAS	0.001	20.00
2118	14	Ag ppm: 32 element, soil & rock	ICP-ABS	0.2	200
2119	14	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	14	As ppm: 32 element, soil & rock	ICP-AES	2	10000
2121	14	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	14	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	14	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	14	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
7	14	Cd ppm: HNO3-aqua regia digest	AAS-BKGD CORR	0.1	200
2126	14	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	14	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	14	Cu ppm; 32 element, soil & rock	ICP-ARS	1	10000
2150	14	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	14	Ga ppm: 32 element, soil & rock	ICP-ABS	10	10000
2131	14	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	14	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	14	La ppm: 32 element, soil e rock	ICP-ABS	10	10000
2134	14	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	14	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	14	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	14	Na %: 32 element, soil & rock	ICP-AES	0.01	5.00
2138	14	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	14	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	14	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
2141	14	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	14	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	14	Sr ppm; 32 element, soil & rock	ICP-ARS	1	10000
2144	14	Ti %; 32 element, soil & rock	ICP-AES	0.01	5.00
2145	14	T1 ppm; 32 element, soil & rock	ICP-AES	10	10000
2146	14	U ppm; 32 element, soil & rock	ICP-AES	10	10000
2147	14	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	14	W ppm: 32 element, soil & rock	ICP-AES	10	10000
	14	In ppm: 32 element, soil & rock	ICP-AES	2	10000



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SAMPLE D92-03 D92-04 D92-05 D92-07 D92-08		<u>. </u>	Au oz/T	Ag ppm			>10000 3190 >10000 1620	Ba ppn 20 20 30 30 50	Be ppa 5.5 2.5 5.5 5.0 5.5			CE	RTIF	CATE	A9215	15634						
	PREP CODE					Al %					Ca %	Cd P P	Co Ppm	Cr ppm	Cu PPa	Fe t	Ga ppm	Hg PP a	K ŧ	La pp n	Mg \$	Mn ppm
	208 2 208 2 208 2 208 2 208 2 208 2	74 74 74 <	0.017 0.005 0.001	<	0.6 1.8 1.4 3.8 < 0.2	0.35 0.32 0.91 1.22 1.37					>15.00 >15.00 3.10 6.25 0.34	< 0.5 1.5 < 0.5 < 0.5 < 0.5	4 19 55 67 60	20 117 87 127 47	3 306 154 920 11	7.44 3.55 9.29 6.74 8.19	< 10 < 10 20 20 10	< 1 4 < 1 26 3	< 0.01 0.05 0.15 0.11 0.18	< 10 < 10 < 10 < 10 < 10 < 10	0.14 0.17 0.91 0.08 0.08	2290 2060 900
D92-09 D92-10 D92-13 D92-15 D92-15	208 27 208 27 208 27 208 27 208 27 208 27	74 < 74 < 74 <	0.001 0.001 0.001	<	1.8 0.2 0.2 0.2 0.2 0.2	1,48 0,87 1,36 4,70 2,02	>10000 196 60 668 20	20 20 60 370 90	9.0 4.0 2.0 9.0 < 0.5	20 12 4 6 2	0.25 >15.00 4.06 0.54 4.98	<pre>< 0.5 < 0.5 < 0.5 < 0.5 < 1.0 < 0.5</pre>	610 28 9 35 10	112 86 45 34 30	28 146 8 128 11	>15.00 6.12 2.45 11.15 3.12	10 < 10 20 90 20	20 < 1 < 1 < 1 2	0.12 0.13 0.19 0.12 0.13	< 10 < 10 < 10 140 < 10	0.14 0.73 0.98 0.23 0.11	3150 440 >10000
092-17	208 21	74	0.005		0.4	2.34	84	90	< 0.5	< 2	0.20	< 0.5	9	75	10	2.71	10	2	0.20	< 10	0.09	555

CERTIFICATION: This Vonh



SAMPLE

b92-03

b92-04

b92-05

b92-07

b92-08

D92-09

b92-10

b92-13

b92-15

b92-16

b92-17

PREP

CODE

208 274

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A9215634 CERTIFICATE OF ANALYSIS Ni P Pb SЪ Ti **T**1 U V W Zn Mo Na Sc Sr * ppa ppa ł ppa **pp** ppm ppa ppm ppa ppa **PP** PPE ppe 6 < 10 13 < 10 26 5 0.02 < 1 < 10 68 39B 54 < 0.01< 10 384 208 274 2 29 < 0.01 < 10 < 10 6 < 10 1 0.02 18 50 546 216 144 208 274 10 0.02 58 100 46 252 30 25 < 0.01< 10 30 149 < 10 < 10 208 274 0.01 121 300 62 2210 16 15 < 0.0110 120 < 10 168 4 208 274 0.04 88 360 6 5420 7 9 < 0.01 < 10 10 30 < 10 154 4 6 < 0.01< 10 111 < 10 366 208 274 11 0.01 1205 210 98 >10000 16 20 96 208 274 75 < 0.01< 10 < 10 < 10 1 0.02 39 160 < 2 80 13 61 40 208 274 87 < 0.01< 10 < 10 17 < 10 < 1 0.14 1 500 < 2 22 3 110 208 274 59 0.11 25 3000 60 20 50 43 0.02 < 10 < 10 69 < 10 208 274 7 0.19 2 460 < 2 2 4 58 < 0.01 < 10 < 10 19 < 10 90 208 274 < 10 70 1 2 2 30 < 0.01< 10 < 10 29 0.18 6 430 4

CERTIFICATION: Which Vinh

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