## WORK CARRIED OUT

## ON

THE SV \#1, \#2, \#3, \#4, \#5 and \#6 CLAIMS

## KAMLOOPS MINING DIVISION

MAP 92 I-6E

> LAT. $50^{\circ} 22^{\prime} \mathrm{N}$ LONG. $121^{\circ} 02^{\prime} \mathrm{W}$

NORSEMONT MINING CORPORATION (Formerly Lorado Mining Corp.)


Egil Livgard Livgard Consultants Ltd., Vancouver, B.C.
February, 1980
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TOPO MAP with drill and trench locations

The work described herein was carried out during the summer and fall of 1979 on the SV Claims in the Highland Valley for the owner Norsemont Mining Corporation, formerly Lorado Mining Corporation.

The work was carried out by various contractors under the supervision of Egil Livgard B.Sc. P. Eng. on behalf of the company.

The program was carried out, supervised and paid for by Norsemont Mining Corporation following an agreement with Lornex Mining Corporation whereby Lornex reimbursed Norsemont for the exploration expenses and thereby acquired an interest in the Claims under an option agreement.

## PROPERTY AND LOCATION



The claims are contigous and extend over 7,000 meters north-south from the junction of Skuhost and Skuhun Creek and north to the south boundary of the Lornex claims at a point about 2,200 meters south and east of Pemainus Lake.

The claims are in the Kamloops Mining Division on map sheet 92 I/6E and are in the name of Lorado Mining Corporation Ltd. The name of the Company has been changed to Norsemont Mining Corporation Ltd.

## ACCESS

The claims can best be reached from the Merritt-Spencers Bridge Highway. A good dirt road leaves this highway at a point 22.5 km south of Spencers Bridge. The dirt road extends eastward 16 km to the claim ground and northward on the east side of Skuhost Creek across the claims. About 7,250 metres of drill access road have been built to various parts of the property.

TOPOGRAPHY

The lowest part of the claims is on the southern end at the Skuhun-Skuhost junction where the elevation is about 1,000 metres. Skuhost Creek bisects the property and the slopes both east and west are moderate to steep ( $32^{\circ}$ ). Several flat gravel benches are found in the valley. The slope to the east reaches a plateau at 1,500 metre elevation. There is a corresponding plateau on the west side at an elevation of about 1,600 metres.

## HISTORY

The claimground has been staked several times in the past and various types of surveys were carried out on a variety of claims on parts of the present SV claims.

- On the east plateau on the present SV \#2 claims survey upon survey was carried out (a good example of how not to conduct an exploration program) Assessment Report 5501 P survey

| $"$ | $"$ | 1081 | Fracture Density |
| :--- | :--- | :--- | :--- |
| $"$ | $"$ | 1828 | Magnetic survey |
| $"$ | $"$ | 2327 | Techtonic aerial survey |
| " | " | 3193 | Mag. and E.M. Survey |
| " | " | 3728 | " |
| " " | " | 4328 | Mag. survey |

All these surveys essentially discovered nothing.

- On the south end of the claims Cominco carried out an IP survey and minor geochemical soil survey. The IP survey - Assessment report 2085 - showed low resistivity along the creeks. The IP survey is about 1,000 metres south of Diamond Drill Hole \#8 described in this report A magnetic survey - Assessment Report 3187 - shows a low magnetics response covering roughly the same area shown by the drilling described in this report to be altered (argillic) and extending south along the east side of Skuhost Creek.
- On the northern part of the claims, SV \#1 and \#2, an IP survey - Assessment Report 1898 - shows scattered areas of pluss 3.0 milliseconds chargability response. The best "anomaly" occurs in an area now known to have 200-300 feet of overburden and with electrode spacing of 400 feet no response should have been seen.
- On the central and north part of the claims Rio Tinto Canadian Exploration carried out soil surveying and IP survey during 1966. Of special interest is the work on the northwest part of the SV group. Only minor work was done here and only one IP line using $800^{\prime}$ spacing was run. This line shows chargabilities of 3.0 to 4.0 milliseconds over a distance of 1,600 feet. Three soil survey lines southeast of the IP lines show about 250 PPM in the soil over an area 1,000 ' by 400 feet. It is difficult to evaluate this limited work particularly knowing that the overburden may be 200-300 feet deep. These results lie where the B.C. Department of Mines has projected a Bethsaida - Bethlehem intrusive contact and therefor may be considered a target for mineralization in the highland valley.

TRENCHING: $\quad 358 \mathrm{~m}^{3}$
27 trenches were excavated mainly on SV \#5 claim. The first trenches traced a mineralized shear over a length of 300 metres. It is 1.5 metres wide and contains up to $1.0 \%$ copper. Trenching further northwest failed to pick up the shear but moderate argillic alteration showed up.
(The designations weak-moderate-intense argillic alteration are those used at Lornex where weak is that with partial destruction of the plagioclase - moderate that with full destruction of the plagioclase and intense that with destruction of all feldspar).

The trenching was continued north in generally 5-10 feet of overburden until on the south end of claims SV \#3 and \#4 the overburden deepened to in excess of 20 feet.

The trenching showed a large area 300 m by 500 m of altered, shattered, fractured and faulted Bethsaida rocks.

The alteration consisted of argillic grading from weak to moderate. The rocks showed increasing shattering to the north. In some trenches (5.5, 5-6) large amounts of zeolite was found in fractures.

The southern and southwest trenches showed less alteration and shattering (weak argillic) but more copper staining (malachite). Minor copper staining was noted in most trenches.

## ACCESS ROADS:

7,250 metres of drill access roads were put in. Some of these roads were improvements of previous cat trails. The roads were the width of the cat blade and only of sufficient quality for drill access.

## PERCUSSION DRILLING:

Percussion drilling on SV \#3 in the Skuhost creek valley was not successful in finding bedrock. The holes were short due to trouble with boulders. Five holes were drilled for a total of 245 feet.

Percussion drilling on the eastern plateau was carried out largely on SV \#4. The holes were spaced at about 400 metres. This drilling outlined an area on west $1 / 3$ of SV \#5 and the south end of SV \#2 which shows weak and perhaps moderate argillic alteration over more than 2,500 metres north-south and 600 metres east-west. No copper values of interest were found. The location of the holes are noted on the accompanying map and specific information on the holes is in the appendix.

DIAMOND DRILLING: The core is stored at the Lornex mine,
10 diamond drill holes were drilled during the year for a total of 3,195 feet.

On the west side of Skuhost Creek Hole \#1 was drilled to 250 feet through clay and boulders. At 250 feet sand and water under pressure was encountered and the hole was abandoned.

Hole \#2 was drilled 450 metres southwest of \#1. It had problems with heavy ground and broken equipment and was abandoned at 110 feet. Hole \#2A was drilled a short distance away and intersected bedrock at 142 feet. The rock was tentatively identified as Skeena variety granodierite. The rock has weak argillic alteration. The last 30 feet of the hole showed shattered rock and the hole had to be stopped at 192 feet.

Hole \#3 was drilled 200 metres southwest of \#3. It encountered bedrock at 121 feet. The rock type was tentatively identified as Skeena variety. The rocks show weak argillic alteration at the top and increasing to moderate to intense toward the bottom. The hole was drilled to 400 feet.

Hole \#4 ( $260^{\prime}$ depth) was drilled 575 metres south of Hole \#3. Bedrock was encountered at 86 feet. The rock was identified as Skeena variety. Most of the rock showed very weak argillic alteration. Some sections were not altered. Minor potassic alteration was noted. Minor copper staining was noted.

Hole \#10 (300' depth) was drilled 450 metres south of \#4. Bedrock was encountered at 52 feet. The rock was tentatively identified as Skeena variety but it is coarser grained and has a higher mafic content than the rocks to the north.

Hole \#9 was drilled 990 metres south of \#19. No bedrock was encountered to 300 feet.

Hole \#6 was drilled in the Skuhost Creek valley and reached 480 feet wi thout encountering bedrock.

Hole \#5 (298' depth) was drilled on the east side of the creek on the east centre of SV \#3. Bedrock was encountered at 177 feet. The rock was identified as Bethsaida phase of the Guichon Batholith. The rock shows weak to moderate argillic alteration. Minor copper and molyboenum staining was noted in the hole.

Hole \#7 (281' depth) was drilled 550 metres south of Hole \#5. It cut bedrock at 161 feet. The rock was Bethsaida Phase. The rock shows weak argillic alteration. Short sections of intense shattering were cut. Minor copper staining was noted.

Hole \#8 (318' depth) the hole cut bedrock at 169 feet. The rocks are Bethsaida Phase and show intense to moderate argillic alteration. Gauge zones with hematite staining were noted.

CONCLUSIONS: The trenching and percussion drilling outlined a very large area of altered Bethsaida Phase. Minor copper only was found. The alteration is encouraging. The main copper showings lie in less shattered rock toward the south of the alteration. More than one mile of ground to the south to Skuhun Creek has no outcrops and no drill holes have tested the ground. This is considered a good target for further exploration.

Diamond Drilling (Allan Drilling, Merritt) ..... $\$ 63,802.00$
B.Q. Core
Cat Costs
Road and Trenching (Pooly Bros. Merritt) ..... 17,897.63
Percussion Drilling (Miller \& Horning, Kamloops) ..... 11,827.50
Accomodation and Meals (Kinikinic Homestead) ..... 2,897.14
Supervision and sampling
E. Livgard P.Eng.)
K. Petersen ..... )
A. Krogstad ) ..... 12,799.42

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## TRENCHES

| A1 | B) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| A2 | ) 1 | 1978 |  |  |
| A3 | ) |  |  |  |
| A4 | ) |  |  |  |
|  | Length | Depth (max) | $M^{3}$ |  |
| 5-1 | 36 m | $1.5 \mathrm{~m}\left(\mathrm{x} \frac{1}{2}\right.$ ) | 27 |  |
| 2 | 33 | 1.5 " | 25 |  |
| 3 | 67 | 1.0 " | 33 |  |
| 4 | 40 | 3 | 60 |  |
| 5 | 44 | 2.5 | 55 |  |
| 6 | 55 | 2.5 (tot) | 137 |  |
| 7 | 28 | 2 | 28 |  |
| 8 | 34 | 4 | 68 |  |
| 9 | 30 | 5 | 75 |  |
| 10 | 36 | 3.5 | 63 |  |
| 11 | 50 | 6 | 150 |  |
| 12 | 20 | 2 | 20 |  |
| 13 | 34 | 4.5 | 76 |  |
| 14 | 40 | 2 | 40 |  |
| 15 | 40 | 3.5 (tot) | 140 |  |
| 16 | 30 | 2.5 | 75 |  |
| 17 | 36 | 4.5 | 62 |  |
| 18 | 28 | 3 | 42 |  |
| 5-19 | 47 | 3.5 | 82 | 1,358 m ${ }^{3}$ |
| 4-1 | 50 | 5 | 125 |  |
| 2 | 45 | 5 | 112 |  |
| 3 | 40 | 5.5 | 110 |  |
| 4 | 23 | 4 | 46 |  |
| 5 | 52 | 6 | 156 | $549 \mathrm{~m}^{3}$ |
| 3-1 | 40 | 7.5 | 15- |  |
| 2 | 40 | 4 | 80 | $230 \mathrm{~m}^{3}$ |

## PERCUSSION DRILLING

| Hole | Overburden | Depth | tal) |
| :---: | :---: | :---: | :---: |
| 24 | $35^{1}$ | - |  |
| 2 A | $50^{\prime}$ | - |  |
| 25 | $50^{\prime}$ | - |  |
| 25A | $50{ }^{\prime}$ | - |  |
| 18 | $60^{\prime}$ | - |  |
| 79-1 | 20 | $120^{\prime}$ | Moderate Alteration |
| 2 | 80 | 100 | " ${ }^{\prime}$ |
| 3 | 60 | 140 | Weak |
| 4 | 70 | 200 | " " |
| 5 | 80 | 240 | " " |
| 6 | 20 | 170 | Fresh |
| 7 | 20 | 200 | " |
| 8 | 80 | 250 | Light Alteration |
| 9 | 80 | 190 | Moderate |
| 10 | 80 | - |  |
| 11 | 70 | - |  |
| 12 | 70 | - |  |
| 14 | 50 | - |  |
| 32 | 80 | 200 | Moderate Alteration |
| 33 | 50 | - |  |
| 34 | 80 | 160 | " ${ }^{\prime}$ |


| SV \#1 | D.D.H. \#1 | Apportioned Cost |
| :---: | :---: | :---: |
|  | \#2, \#2A) 952' | \$ 19,040.00 |
|  | \#3 ) |  |
|  | Percussion \#18 60' | 694.00 |
|  | Road 500 m . | 1,035.00 |
| Between <br> SV \#1 and \#2 | Percussion 79-8) |  |
|  | 79-34) ${ }^{410}$ | 2,620.00 |
|  | Road 300 m . | 621.00 |
| SV \#2 | Percussion 79-7 200') |  |
|  | 79-9 190') $510^{\prime}$ | 3,259.00 |
|  | 79-11 70') | 3,259.00 |
|  | 79-33 50') |  |
|  | Road 650 m . | 1,755.00 |
| SV \#3 | Road 2,500 m. | 5,175.00 |
|  | D.D.H.\#4 260') |  |
|  | " \#5 298') |  |
|  | \#6 480') 1,619' | 32,800.00 |
|  | \#7 2871) |  |
|  | \#10 300') |  |
|  | Percussion \#24 35' ) |  |
|  | \#24A $50{ }^{\prime \prime}$ ) |  |
|  | \#25 50' ) |  |
|  | \#25A 50' ) 606' | 4,264.00 |
|  | 79-12 $70{ }^{\prime}$ ) |  |
|  | 79-14 50') |  |
|  | 32 200') |  |
|  | Road 350 m . | 725.00 |
| SV \#4. | Road 2,350 m. | 4,865.00 |
|  | Percussion 79 \#1 120') |  |
|  | $2100{ }^{\prime}$ ) |  |
|  | $3140{ }^{\prime}$ ) |  |
|  | $\left.4200^{\prime}\right) 1,050{ }^{\prime}$ | 6,710.00 |
|  | 5 240') |  |
|  | $6170{ }^{\prime}$ |  |
|  | 10 80') |  |

WORK ON EACH CLAIM (cont'd)

| SV \#5 | Trenching 8 days | $\$ 4,500.00$ |
| :--- | :--- | ---: |
|  | S.S.H. \#8 318' (300) | $6,000.00$ |
| SV \#6 | Road $600 \mathrm{m}$. | $1,242.00$ |
|  | D.D.H. \#9 300' | $6,000.00$ |

LIVGARD CONSULTANTS LTD.
VANCOUVER, BC.

## CERTIFICATE

I, EGIL LIVGARD, of 1990 King Albert Avenue, Coquitlam, British Columbia:

1. I am a consulting geological engineer.
2. I am a graduate of the University of British Columbia, B.Sc., 1960. Geological Science.
3. I am a Member of the Association of Professional Engineers of the Province of British Columbia.
4. From 1960 to 1970 I was engaged in mining and exploration geology in Canada and Norway for various companies, and since that time I have been a consultant to the Mining Industry in B.C.
5. My report is based on the personal examination of the property and on information compiled from materials as referred to in the report.
6. I am a Director of Norsemont Mining Corporation and I own 84,000 common shares beneficially.

DATED at Vancouver, British Columbia, this 18th day of February, 1980


$\qquad$
Lat: $\qquad$
Dep: $\qquad$
Azimuth: $\qquad$ Core Size: — Claim No.: $\qquad$ $\leq V+1 /$
Dip:- $80^{\infty}$ DIAMOND DRIL RECORD
pane /-x/


Collared: $\qquad$ Dip Tests: $\qquad$ Elevation: $\qquad$ Logged By: $\qquad$
Completed: $\qquad$ Length: $\qquad$
42 erercukas ~ Remarks: $\qquad$
Len g


$\qquad$ 2
Mineralization and Siructures


$\qquad$

$$
\begin{aligned}
& = \\
& 7836
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Section $\qquad$ LORNEX MINING CORPORATION LIMITED
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Sheet No. R Of $\geq$


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Lat: $\qquad$
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Dip: $\qquad$ Vip Tests: $\qquad$ Elevation: $\qquad$ Logged By: $\qquad$ Collared: Dip Tests:Date Logged: $F \in S \& \in$ _Remarks: $\qquad$
Completed:
Length: $\qquad$


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Hole No. DDHEB
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$\qquad$ LORNEX MINING CORPORATION LIMITED
Hole No. DDWAS
Sheet No. 3
of



Hole No. 10

Sheel No $\geq$ of 4 Sheel No._-Of Assay Results \% totat cu $\quad$ \% |  |  |  | $\begin{array}{c}\text { mis) } \\ \text { Sample Number }\end{array}$ |
| :---: | :---: | :---: | :---: |


$\qquad$ LORNEX MINING CORPORATION LIMITED
Hole No. $\qquad$
Sheet No. 3
of $\qquad$




