GEOLOGICAL REPORT

ON THE

J. & L. PROPERTY

FOR

STELLADORO ... STELLORADO MINES LTD.

REVELSTOKE MINING DIVISION

BRITISH COLUMBIA

Calgary, Alberta

October, 1979

W. G. Timmins Exploration & Development Ltd.

W. G. Timmins, P.Geol.

1 1 10 9 3 4 6 7 8

TABLE OF CONTENTS

	Page
SUMMARY .	
INTRODUCTION	1
PROPERTY	1
LOCATION AND ACCESS	1
CLAIM LOCATION MAP	2
LOCATION MAP	. 3
TOPOGRAPHY	4
TIMBER, WATER, POWER, CLIMATE	4
HISTORY	5
GENERAL GEOLOGY	6
GEOLOGY OF THE PROPERTY	6
MINERALIZATION	6
RECORD OF SHIPMENTS	9 .
CONCLUSIONS AND RECOMMENDATIONS	13
ESTIMATED COSTS OF PROGRAMME	16
CERTIFICATE	18
BIBLIOGRAPHY	19
CERTIFICATE OF ASSAY	20
MINE SURFACE MAP May	p Pocket
GEOLOGY #5 ADIT May	p Pocket
CREEK LEVEL ADIT May ADDENDUM	p Pocket 21

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

SUMMARY

Stellorado Mines Ltd. hold nine Crown Granted mineral claims near Revelstoke, British Columbia.

A mineralized shear zone varying in width has been sampled in the past over a length of some 5,000 feet on surface. Extensive sampling has also been carried out in two shafts and two adits.

Mineralization consisting of pyrite, arsenopyrite, galena and sphalerite with values in gold and silver occurs as stringers, lenses, bands, disseminations and massive replacements.

Indicated surface grades are 0.329 oz./ton gold, 4.58 oz./ton silver, 5.0% lead and 5.53% zinc across a width of 2.99 feet.

Indicated grades in the upper 3,200 foot level along a length of 300 feet, over a width of 3.0 feet are 0.13 oz./ton gold, 3.71 oz./ton silver, 5.03% lead and 7.46% zinc.

Indicated grades of three zones in the lower 2,700 foot level over an aggregate length of 385 feet, and width of 4.5 feet range from 0.054 to 0.26 oz./ton gold, 1.69 to 3.43 oz./ton silver, 2.60 to 4.11% lead and 3.61 to 6.81% zinc.

In view of the results to date and current higher metal prices, a three stage programme of exploration and development preceding a production decision is recommended at an estimated total cost Of \$575,000.00.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

INTRODUCTION

The writer was retained by Stellorado Mines LtD to review all relevant geological data and to make recommendations to further assess the economic potential of their property near Revelstoke, B.C.

A visit to the property for examination purposes was made on September 9, 1979. The writer was accompanied by Mr. T. Kirk of Carnes Creek Explorations Ltd.

PROPERTY

The property consists of nine Crown Granted mineral claims held under option as described below:

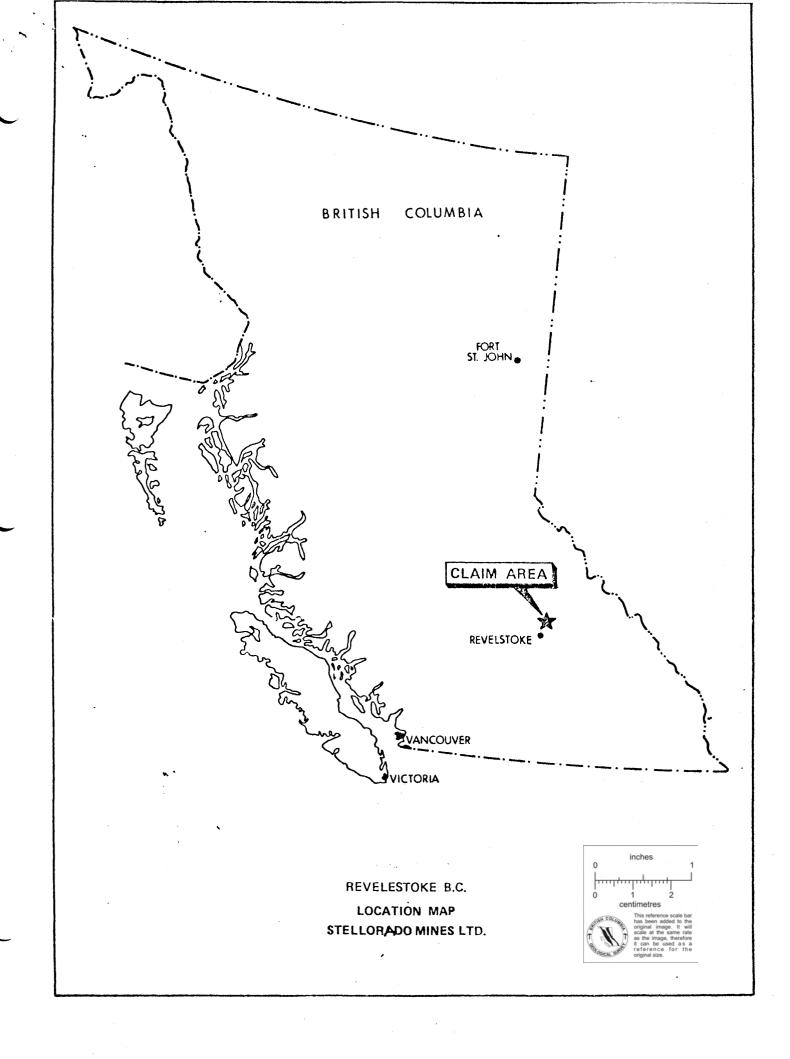
Claim Name	Lot No.		
Goat Fr.	14821		
Goat No. 2 Fr.	14822		
Goat No. 3 Fr.	14823		
Goat No. 4 Fr.	14824		
Goat No. 5 Fr.	14825		
Goat No. 6 Fr.	14826		
View Fr.	14827		
View No. 2 Fr.	14828		
Creek Fr.	14829		

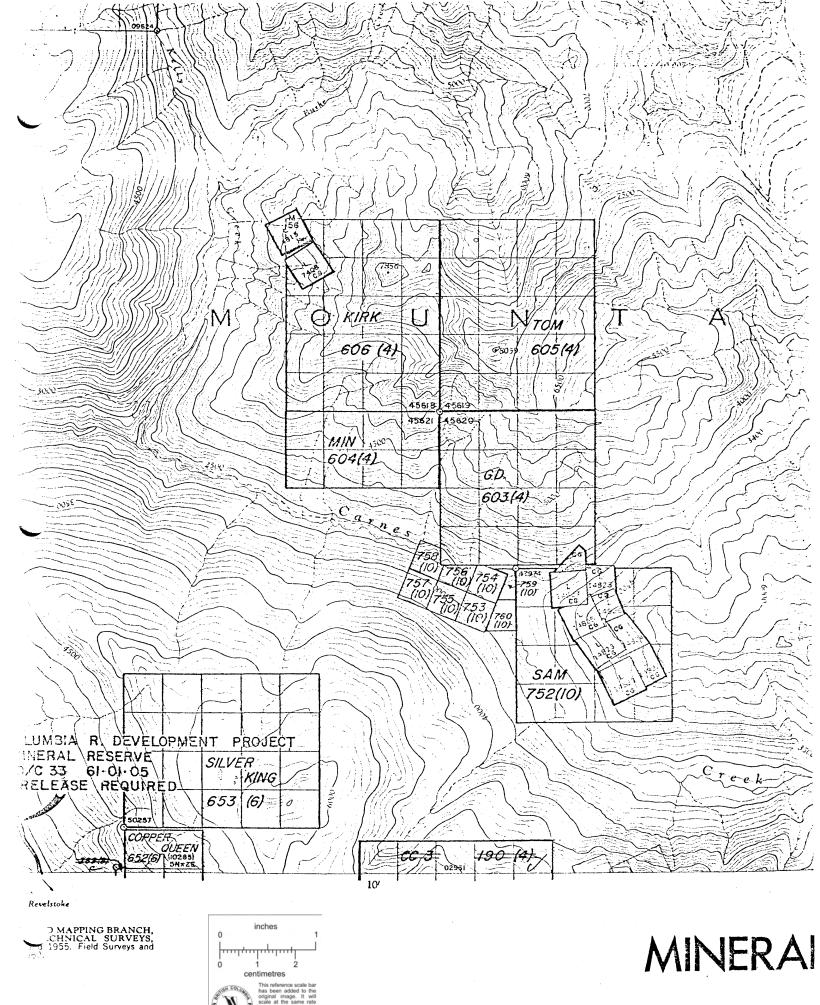
LOCATION AND ACCESS

Approximate co-ordinates: 51° 16' N, 118° 10' W.

The property is located in the Revelstoke Mining Division of

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.





3000 4000 Metres 3 4 Kilometres British Columbia, about 20 miles north of the town of Revelstoke in the Big Bend District of the Columbia River. The camp and adit sites are situated on the south bank of the east fork of Carnes Creek on the northwest flank of Goat Mountain.

Access is provided by 4-wheel drive road for a distance of about eight miles from a point on the Big Bend Highway, some 20 miles north of Revelstoke.

TOPOGRAPHY

Elevations in the area reach 7,000 feet A.S.L. with local relief of some 4,000 feet. The camp and lowest mine workings are at an altitude of approximately 2,700 feet.

Slopes are in the order of 30° to 40°.

TIMBER, WATER, POWER, CLIMATE

Cedar, spruce and hemlock vegetate the claims area in sufficient amounts for mining requirements.

The east fork of Carnes Creek provides ample water for exploration and mining purposes.

Power would be supplied by diesel generator.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

Winters in the area are long, with heavy snowfall in the range of three to six feet, however winter temperatures are normally not severe.

HISTORY

The claims were originally staked in 1896, on behalf of Roseberry Consolidated Mines. By 1922 the claims had been acquired by Mr. E. E. McBean.

In 1924, Purcupine Goldfields Development Company drove two 70 foot adits, and by 1928 the property was under option to interests in Regina, Saskatchewan.

The present owner, Mr. T. E. Arnold, acquired the property in the early nineteen thirties. The claims were converted to Crown Grants in 1934. From 1941 - 1946, during which time Raindor Gold Mines Ltd. acquired the ground, two shallow shafts and several surface trenches were excavated, and the upper adit at the 3,200 foot level extended to its present length of 500 feet.

Westairs Mines Ltd. optioned the property in 1965 and drove some 975 feet of drifts and crosscuts on the 2,700 foot level. No further work has been carried out since completion of that programme.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

GENERAL GEOLOGY

The area is underlain by Paleozoic and Pre-Cambrian meta-sediments, and nome volcanies, complicated by tight folding. Chanitle stocks of Mesozoic age intrude the sediments.

A northwest trending belt of shearing and faulting disturbs the assemblage for some 40 miles.

GEOLOGY OF THE PROPERTY

The property is underlain by Lower Cambrian meta-sediments occurring on the western limb of a geo-syncline. The rocks locally strike N 30° to 50° W and dip northeasterly 30° to 65° , and may be tightly folded assymetrically.

The upper rocks of the series consist of crystalline limestones and graphitic meta-argillites, overlying interbedded quartzites and sericite schists with occasional bands of crystalline limestone. The series is underlain by chloritic schist.

MINERALIZATION

A mineralized shear zone two to six feet in width containing pyrite, arsenopyrite, galena and sphalerite with minor amounts of chalcopyrite has been traced on surface for some 4,000 feet southeast of the 3,200 level adit, by means of numerous surface cuts and pits and two shafts. The sulphide mineralization occurs as stringers, lenses, disseminations or massive bands.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

Gangue material is quartz and calcite.

The shear zone occurs along the quartzite-sericite schist - limestone unit. The zone generally occurs along the lineation of the sediments but occasionally cuts across at a moderate angle causing local brecciation.

The surface showings, shafts and the 3,200 foot level adit have been sampled by several parties in the past. At the present time these workings are sloughed or inaccessible. However, the early work suggested the occurrence of six possible ore shoots.

Mr. A. R. Allen, P.Eng., in his report dated July 24, 1957 summarized previous samplings. The summary is reproduced below.

No. & Location of Samples	Sampler & For Whom	Date	Av. Width Ft.	Gold oz/T	Average Silver oz/T	Values Lead %	Zinc
Arithmatic Av. 12. Av. Surface & underground	B.T. O'Grady	1922	3.3	0.37	3.2	3.3	4.5
Arithmatic Av 31. Av. Surface & underground	C.C. Starr Porcupine Gold Fields	1926	3.5	0.35	3.8	4.6	3.4
Arithmatic Av. 64. Av. Surface & underground	P. E. Hopkins Private Parties	1929	2.7	0.35	4.0	4.0	5.4
10 in 5 sections underground Arithmatic Av.	W. L. Brown Mining Corp.	1942	3.3	0.297	5.0	5.3	7.5
Arithmatic Av. 27. Av. Massive Sulphides, Surface	J. E. Riddell Raindor	1946	1.95	0.438	2.32	2.97	Not Assayed #1

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

No. & Location of Samples	Sampler & For Whom	Date	Av. Width Ft.	Gold oz/T	Average Silver oz/T		
41 in 31 sections Arith. Av. Upper Adit (J&L) 30 to 330 ft. from portal	J. E. Riddell	1946	2.05	0.189	5.43	7.36	10.92
7 in 7 sections	J. E. Riddell Raindor		•		8.1		6.3
No. 1 (Annie M) shaf	t Arith Av. 60	to 120	feet depth	, part	ly oxidiz	ed	
18 in 6 sections .	J.E. Riddell Raindor	1946	5.51	0.27	4.75	Not	Assayed #2
No. 2 ("98") shaft,	Arith Av. 70 to	120 fe	eet depth,	very ox	cidized.		
ARITHMATIC AVERAGE O	F ABOVE		2.99	0.329	4.58	5.0	5.53

Notes -

#1 - Assume 0% zinc as shown by Starr, in compiling averages

Since the surface samples, and most of those from the shafts are from leached material, they are indicative only, and do not give a true evaluation of the metal content of the vein. The leached zone is about 125 feet deep. The truly representative mineralization exposed to date has been the inner 300 feet of the adit drift. This section was thoroughly sampled and the average assay results are:-

Location	Sampler	Width Ft.	Gold oz/T	Silver oz/T	Lead %	Zinc %
Upper Adit (J&L) Drift 30 - 330 ft. from portal. Arith. Av. 41 samples in 31 sections	J. E. Riddell	2.05	0.189	5.43	7.36	10.92
Same as above converted to 3 foot mining width	do	3.00	0.130	3.71	5.03	7.46

Reproduction of the assay plan of the 3,200 foot level adit from Westairs Mines Ltd. is attached to this report.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

^{#2 -} Assume 2.97% lead and 4.2% zinc as shown by Brown, in compiling averages.

Mr. Allen also reports records of shipments and bulk samples as follows:

RECORD OF SHIPMENTS (Made for Testing)

The following shipments were made from near-the-surface ores, and were, therefore, partially ozidized, although the parties who took the samples endeavored to get the freshest ore possible. The idea was to get, as nearly as possible, the average grade of ore.

	MADE by Geological Survey of Canada	MADE by B.C. Government	MADE by Mountain Copper Co., San Francisco	MADE by Mining Corp., Canada Ltd. Toronto
Quantity	2,000 lbs.	10,000 lbs.	1,000 lbs.	10,000 lbs.
Gold Silver	0.525 oz/T 10.26 oz/T	0.64 oz/T 6.00 oz/T	0.51 oz/T 3.80 oz/T	0.70 oz/T 5.36 oz/T
Sulphur Iron	7.9 % 9.2 % 23.35 % 24.30 % 0.55 % Not reported Not reported	7.5 % 9.8 % 14.8 % 22.8 % 21.2 % 0.14% 16.5 % 2.1 % Not reported	4.6 % 8.5 % 16.6 % 22.6 % 23.4 % 0.33% 19.6 % Not reported 0.5 %	8.4 % 11.41 % 14.88 % Not reported Not reported 0.17 % Not reported Not reported Not reported

The following two shipments were made from a bulk sample taken from the upper (J&L) adit from footages 80 to 150 and 250 to 310 from the portal. This material represented the massive sulphides component of the vein and averaged 26 inches in width. This material was fresh and unoxidized.

	Analyzed by H. C. Wolf	Analyzed by Noranda Mines Limited
Quantity	10,000 lbs.	10,000 lbs.
Gold	0.32 oz/T	0.33 oz/T
Silver	5.88 oz/T	6.43 oz/T
Lead	8.01%	7.7%
Zinc	13.82%	13.7%
Arsenic	6.34%	7.45%

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

A composite check sample of the same material assayed -

Copper 0.2 % 0.07% S G 4.9 + 6.5 cu. ft. per ton of 2,000 lbs. Insol 16.85%

The 2,700 foot level adit was driven for 100 feet on the most westerly of two shear zones, however assays were poor and a crosscut was driven to intersect the mineralized vein 100 feet to the east. Westairs then explored the mineralized shear zone for a length of some 700 feet, in a southeasterly direction and drove the westerly end back to surface.

The portal of the 2,700 foot level is situated about 800 feet north of 3,200 foot level adit. Although the structure between the two adits has not been traced, it is considered quite probable that the two veins explored are part of the same structure. The hanging wall is schistose and the footwall is silicified limestone.

The 2,700 foot level portal is situated just above creek level and about 500 feet from the old camp. Sections of the road have washed away and would have to be repaired which would then provide easy access to the portal.

Joseph Sullivan, P. Eng. in his 1966 report provided a compilation of assay results for surface and shafts by Raindor Mines, for the 3,200 foot level by Westairs, and for part of the 2,700 foot level by Westairs.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

A summary of the assay results was reported in Mr. Sullivan's 1967 report and is reproduced below:

Raindor, for the surface, 35 samples

Width (ft.)	Au O/T		Ag O/T
2.4	0.31	•	2.3

Raindor, for Shaft No. 1, 12 samples

Raindor, for Shaft No. 2, 12 samples

Westairs, for the 2,700 level, 408 Dr. 10 samples

Westairs, for the 3,200 level, 1964, 16 samples

B.T. Grady (1922), 12 samples

Mr. Sullivan reports a record of an additional 207 samples taken by Westairs Mines in the 2,700 foot level adit. A copy of the assay plan is reproduced and attached to this report.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

Sullivan reported assay results calculated for three zones in the 2,700 foot level, comprising a total of 385 feet within the 590 foot mineralized shear. The averages are as follows:

Area	Length	Width	oz./ton Gold	oz./ton Silver	% Lead	% Zinc
1	151'	4.5'	0.26	3.43 .	5.11	6.81
2	130'	4.6'	0.17	1.85	3.18	3.61
3	114'	4.3'	0.054	1.69	2.60	4.00

This writer is in agreement with the above calculations.

Sullivan further calculated that the 385 feet would develop 191.4 tons per vertical foot.

The writer took several samples from the 2,700 foot level adit as checks. Assay results and sample locations are listed below:

Sample No.	Location	Type	Width		oz./ton Silver	% Lead	% Zinc	% Arsenic
6084	sta.A-14	Select Grab		.020	4.02	6.0	7.19	1.18
6085	sta.A-11	Select Grab		.220	2.52	10.0	6.51	6.75
6086	L. X-cut near face	Chip	4.0	.060	1.06	1.36	1.45	0.45
6087	20' S. of X-cut near sta.A-8	Chip	2.2'	.160	2.98	3.36	3.55	6.01
6088	20' S. of #6087 L. wall	Select Grab		.100	1.38	2.34	8.40	3.50
6089	20' N. of sta.A-10	Select Grab		.200	2.30	3.16	0.58	8.10

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

The assays indicate confirmation of the past results as reported by Sullivan and Allen.

The Silver mineralization appears to be associated with galena and indications are that the gold is associated with arsenopyrite. It is apparent from the assays that arsenic is present in considerable amounts.

The treatment and recovery of metals requires study and metallurgical testing in order to determine a practical and satisfactory method, as it may require roasting and cyaniding or perhaps chemical leaching.

CONCLUSIONS AND RECOMMENDATIONS

Stellorado Mines Ltd. holds under option nine Crown Granted Mineral claims on which a mineralized shear zone has been sampled in the past over a length of some 5,000 feet on surface. The width varies from two to six feet. Extensive sampling has also been carried out in two shafts and two adits.

Mineralization occurs as stringers, lenses, disseminations and massive replacements of pyrite, arsenopyrite, galena and sphalerite containing values in silver and gold.

Indicated surface grades are 0.329 oz./ton gold, 4.58 oz./ton silver, 5.0% lead and 5.53% zinc across 2.99 feet in width.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

Indicated grades in the upper 3,200 foot level along a length of 300 feet and width of 3.0 feet are 0.13 oz./ton gold, 3.71 oz./ton silver, 5.03% lead and 7.46% zinc.

Grades of three zones in the lower 2,700 foot level over an aggregate length of 385 feet and average width of 4.5 feet range from 0.054 to 0.26 oz./ton gold, 1.69 to 3.43 oz./ton silver, 2.60 to 5.11% lead and 3.61 to 6.81% zinc.

In view of the results to date and current higher metal prices, a three stage programme of exploration and development is recommended and is outlined as follows:

Stage I

- 1. Several places along the mine road require rehabilitation and re-building, and the road to the 3,200 foot level should be re-built.
- 2. Re-habilitate present buildings, and erect new office building and cookhouse.
- 3. Re-habilitate portals, drifts, drain water, etc.
- 4. Survey surface showings and underground workings, and geologically map workings.
- 5. Re-sample sections of underground workings to re-confirm grades.
- 6. Conduct metallurgical tests on ore material from underground workings which would require several bulk samples from different locations.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

STAGE II

- 1. Drive an additional 500 feet of drifting southerly on the 2,700 foot level, raise to the 2,850 foot level and drive northerly to surface.
- Conduct exploration diamond drilling as drifting proceeds.
- 3. Surveying, geological mapping, sampling and assaying should be carried out as the programme proceeds with re-evaluation of grade.

STAGE III

- 1. Drive 600 feet southerly on the 2,850 foot level and raise to the 3,000 foot elevation, then drive to surface.
- 2. Conduct exploration diamond drilling.
- 3. Survey, geologically map, sample and assay.
- 4. Compile and re-evaluate all information to date prior to a production decision.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

ESTIMATED COSTS OF PROGRAMME

STAGE I

 Road rehabilitation and re-building Rehabilitation and erection of buildings Rehabilitation of portals, drift cleanup, etc. Surveying, mapping, etc. 	\$ 15,000.00 12,000.00 10,000.00 12,000.00
buildings3. Rehabilitation of portals, drift cleanup, etc.	10,000.00
cleanup, etc.	12,000.00
4. Surveying, mapping, etc.	•
5. Re-sampling and assaying	6,000.00
6. Metallurgical testing and research	30,000.00
7. Camp costs, supplies, equipment, etc.	20,000.00
8. Transportation, communication, fuel, etc.	15,000.00
 Supervision, engineering, maps, reports, etc. 	20,000.00
TOTAL STAGE I	\$140,000.00
STAGE II	
 Drifting 500' all inclusive at \$200/foot 	\$100,000.00
2. Raising 150' at \$150/foot	22,500.00
3. Diamond drilling, 2000' @ \$15/foot	30,000.00
4. Surveying, mapping, sampling, assaying	10,000.00
5. Camp expense	15,000.00
6. Transportation, communications, etc.	15,000.00
7. Engineering, supervision, maps, etc.	10,000.00
TOTAL STAGE II	\$202,500.00

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

STAGE III

1.	Drifting 600' all inclusive at \$200/foot.	\$120,000.00
2.	Raising 150' at \$150/foot	22,500.00
3.	Diamond drilling, 2,000' @ \$15/foot	30,000.00
4.	Surveying, mapping, sampling and assaying	10,000.00
5.	Camp expense	15,000.00
6.	Engineering, supervision, maps, etc.	10,000.00
7.	Transportation, communications, etc.	15,000.00
8.	Compilation of all data to date and final report re production	10,000.00
	TOTAL STAGE III	\$232,500.00

Total estimated costs of three stages - \$575,000.00. A production decision can be made following completion of the above programme of work.

Respectfully submitted,

W.G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

W. G. Timmins, P

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CERIFICATE

I, WILLIAM G. TIMMINS, maintaining offices at #201 909-. 5th Avenue S.W. Calgary, Alberta do hereby certifty that:

- 1. I am a geologist having been practising my profession for sixteen years.
- I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario, and have attended Michigan Technological University, Houghton, Michigan.
- 3. I am a member in good standing of the Association of Professional Engineers of British Columbia, and of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
- 4. I have no interest direct or indirect in the property or securities of Stellorado Mines Ltd., nor do I expect to receive any such interest.
- 5. This report is based on a study of government, private reports and maps and examination of the property during a visit on September 9, 1979.

Dated at Calgary, this 15th day of October, 1979.

W.G Timmine, P. Goog Consulting Geolog

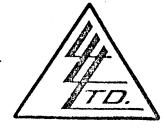
BIBLIOGRAPHY

- Hope, K. G., 1966, Progress Report on the A & E and J & L Projects of Westairs Mines Limited.
- Riddell, John E., 1946, Preliminary Report on Raindor Gold Mines Limited
- Brown, W. L., 1942, Report on J and L Group -- Revelstoke, B.C.
- McGinn, Gerald James, P. Eng., 1979, Report on Carnes Creek Exploration Ltd., J & L Project, Revelstoke, B.C.
- Sullivan, Joseph, P. Eng., 1967, Report on Westairs Mines Ltd., J & L Project, Revelstoke, B.C., Revelstoke, M.D.
- Allen, Alfred R., M.A.Sc., P. Eng., 1957, Report on Raindor Gold Mines Ltd., N.P.L., Revelstoke, M.D., B.C.
- Sullivan, Joseph, P. Eng., 1966, Report on Westairs Mines Ltd. J & L Project, Revelstoke, B.C., Revelstoke, M.D.
- Hopkins, P. E., Geologist, Report on J & L Property of Piedmont Mines Limited, Carnes Creek, Revelstoke Mining Division, B.C.
- Starr, C.C., Report of Preliminary Examination of the J & L Mine, Revelstoke, B.C.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

o: W.G. TIMMINS EXPLORATION
806, 703-6th Avenue S.W.
Calgary, Alberta

ATIN: W. G. Timmins



File No. 17802

Date September 24, 1979

Samples Rock

Servificate on

Carnes Circlety

LORING LABORATORIES LID.

BAMPLE Nu.	OOLD GOLD	OM./TON SILVER	₽6 ₩	% Zn	, K BA	
ROCK SAMPLES"						:
6084.	•020	4.02	6.45	7.19	1.18	
6085	.220	•252	10.79	6.51	6.75	
6086	•060	1.06	1.36	1.45	0.45	
6087	.160	2.98	3.56	3.55	6.01	
6088	.100	1.38	2.34	8.40	3.50	
6089	•200	2.30	3.16	0.58	8.10	•
•. '	1					
	71 There	by Certify 1	HAT THE ABOVE	RESULTS ARE TI	HOSE	

ejects Retained one month. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

ADDENDUM TO STELLORADO MINES LTD.

Geological Report by W.G. Timmins. Dated October 15th,1979

It is reported to this writer by Stellorado MInes Ltd that in addition to the nine claims held under option as listed in the report , the following clains have been staked on behalf of the company.

Claim Name	Record No.	No of Units	Expiry Date
			•
Sam	7 52	16	Oct. 1980
G.D	603	16	April 1981
Min	604	8	April 1981
Tom	605	20	April 1981
Kirk	606	20	April 1981
Mary	753	l (old claim)	Oct 1980
Mary 1-7	7 54-60	7 (old claim)	Oct 1980

This writer has not checked ownership or expiry dates of located claims, nor legality of option agreements on the nine Crown Granted claims as described in the report.

W.G. Timmins p. Geol.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.