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BOUZAN GOLD MINES LTD.

REPORT ON LEAD PROPERTY

by

C. O. STEE  
Mining Engineer, Toronto,

December 13, 1948

INTRODUCTION:

In Limerick Township of the North Hastings area of Ontario, a calcite vein, containing galena, has been exposed at intervals for nearly a mile. The central segment of this long vein crosses the property of Bouzan Gold Mines Limited for approximately 1660 feet. Systematic sampling has not yet been done, but lead in commercial quantities is indicated in the many places where the vein is uncovered.

PROPERTY:

The property of Bouzan Gold Mines Limited, in this area, consists of one lot, and is more specifically described as Lot 2, Concession 2, Township of Limerick, Hastings County, Ontario. The lot contains 100 acres, of which 92 acres consist of timberland and 8 acres in Wadsworth Lake, which enters the property from the south. This lot is very conveniently situated approximately four miles due east of St.Ola Station on the Canadian National Railway. It is also the same distance from the Gilmour Station on the same railway. These two stations can both be reached over good gravelled highways which pass along the border of the property. The lot is covered by a good growth of timber, which will be useful for all mining purposes. It is also situated in a farming

community, where labour conditions are very satisfactory.

#### HISTORY:

People first settled in this area over a hundred years ago. Just when the vein was first discovered is not a matter of record. There are pits along its outcrop which were made many years ago. A brief description of this early work is found in Volume 52, Part 3, 1943, of the Ontario Department of Mines, entitled "Mineral Occurrences in North Hastings Area" by James E. Thomson. On page 55 of this volume, Mr. Thomson tells of the vein having been opened up for a distance of 375', and having an average width of about 5'. Since Mr. Thomson's visit, more recent work has been, and is now being done, which has resulted in greatly extending the length of the vein.

#### GEOLOGY:

This property is located in country where the rock is predominately limestone and dolomite, with minor amounts of amphibolite. It is situated about midway between a granite body north of Gilmour Station, and the large granite area about four miles east. It is also approximately midway between an island of diorite or gabbro in limestone, a mile to the east, near Gunter; and another slightly smaller island approximately half a mile to the west. To the southeast, at a distance less than a mile, is the contact between the limestones and the basic volcanics, hornblende-chlorite schists, agglomerate and tuff. The vein has a strike of approximately north 45° west, and dips vertically. It cuts across the formation at an angle of 30° to 40°. The formation is chiefly a banded limestone, very much folded, and in places dipping vertically. The vein is a calcite vein, containing galena in blobs and bunches. These lead showings seem to be concentrated along a band, more

or less, in the center of the calcite vein. In places there are two of these bands. There is also galena scattered through the calcite to the very edges of the vein. Barite and fluorspar are present in minor quantities. The vein is very persistent. It not only cuts across the property in a northwest southwest direction for a distance of 1660', but can be traced into adjoining properties for at least an equal distance. The vein was exposed many years ago over its outcrop length for a distance of 375'. It has since been exposed in other places on the lot to the northwest. This work of trenching is now proceeding. Beginning at a point 160' from the north boundary, the first trenching has exposed the vein at a depth of one to three feet for a length of 150', and being extended. Then followed low swampy ground for a distance of 300'. At 660' to 690', from the north boundary, the vein was again exposed, and at 810' and at 1060' there were pits exposing the vein for about 6'. From all these exposures, the vein seems to maintain its width of approximately 5'. The original or oldest pit, extending from 1160' to about 1520' from the north boundary, was located where the vein out through high ground. From this trench some tonnage of ore had evidently been mined out. As previously stated, this vein has not been systematically sampled, but it is characteristic of veins of this nature in the district, that they contain very little silver. Sphalerite was not seen, and is probably very sparse.

No authorities have so far been able to agree on the origin of the lead. The most likely explanation is that it was

deposited from hydrothermal solutions of igneous derivation. The presence in the vicinity, as previously stated, of granites, diorites and volcanics, lend strength to this theory.

DEVELOPMENT AND MINING:

Aside from the exploration and development of this persistent vein by surface trenching, it could be further explored at depth by diamond drilling. Because of the soft and friable nature of the calcite vein, core recoveries might not be very satisfactory. However, by saving the cuttings, information could be got on the width of the vein and the lead content.

Eventually, the sinking of a shaft, from which crosscuts and drifts could be driven, would be advisable. The mining of this vein would be quite simple. A cheap method of shrinkage stoping, calling for a minimum amount of drilling and explosives, would give low costs. The character of the walls are such that very clean mining could be done. Apparently very little support would be necessary. The treatment of the ore would also be quite simple. A method of hydraulic concentrating, using tables, possibly followed by flotation to save the pulverized fines, should give high recovery and very clean product, at low cost.

CONCLUSION:

The vein is very persistent and extends across the property for a distance of nearly 1700'. Commercial values were seen in a number of pits.

The property is located within four miles of two different stations on the Canadian National Railway. Good gravelled country roads pass the property on the north and on the east. The

mining and treatment methods would be quite simple and conducive to low cost operation. The price of lead, at the present time, is 20.75¢ a pound, Canada. Taking all these factors into account - the size of the vein; the evident commercial values present; the cheap methods of mining and milling, and the high market value of the product - it is logical to assume that a profitable operation should be possible on this property.

It is, therefore, my recommendation that its development be continued, and that it be brought into production at an early date.

Yours truly,

C. O. STEE  
Mining Engineer

Dec.13, 1948.

I, CLARENCE ORRIN STEE, of the City of Toronto, in the County of York, Mining Engineer, do hereby certify that:

(a) My address is 404 Glenoairn Ave., Toronto, Ontario, and my occupation is Mining Engineer.

(b) My qualifications are:

E.M., University of North Dakota

and thirty-six (36) years' experience in the practice of my profession.

(c) I have no interest either directly or indirectly nor do I expect to receive any interest either directly or indirectly in the property referred to in the accompanying report or the securities of the Company which is owner of the property covered by the report.

(d) The report is based on a personal examination of the vein and surrounding country, a study of the various Government reports and maps, including report by James E. Thomson.

Toronto, Ontario,  
December 13, 1948.

C.O. STEE  
MINING ENGINEER



REPORT ON  
BOUZAN GOLD MINES LIMITED  
LIMERICK TOWNSHIP

April 18, 1949

PROPERTY

Location

The Limerick property of Bouzan Gold Mines Limited is located in Lot 2, Concession 2, Limerick Township, North Hastings area of Ontario. It lies 4 miles east from Gilmour station of the Canadian National Railway.

Boundaries

The property is bordered on the :-

- NORTH- by the Gunter - St.Ola country road
- SOUTH- by Little Wadsworth Lake
- EAST - by A. Palmateer's farm
- WEST - by ground held by the International Nickel Cop

In area it encompasses 400 acres.

Accessibility

The property is accessible from the Gunter - St.Ola road on the north or from the Gilmour-Gunter road on the south.

GEOLOGICAL REPORTS AND MAPS

The property is mentioned in Vol. LII, Part III, 1943 of the fifty-second annual report of the Ontario Department of Mines by Jas. E. Thomson.

Maps

- (1) North Hastings Area, Province of Ontario Map No.52-B
- (a) Coe Hill, North Hastings Area, Province of Ontario, Department of National Defence Map No. Canada, Sheet 31 C/13

## GEOLOGY

### General

The property is diagonally traversed by a calcitegalena vein which strikes N 61 - 41 W and dips about vertically. The average outcrop width is about 5 feet for a presumed length of 1500 feet.

The vein material fills a fault-fissure which cuts diagonally across the strike of the country rock. The country rock is mostly banded limestone and calcareous greywacke cut by small gabbro and diorite dikes. Along the outcrop the vein material consists of spottily distributed clusters of galena, in a gangue of calcite containing a little barite and fluorspar. Galena is visible in streaks and lumps or in parallel bands 2 to 3 inches in width.

Note: The writer spent 4 weeks at the property during the winter when the outcrop was obscured by snow. The above information is on reliable authority and was corroborated by visual inspection of widely separated spots from which the snow was cleared.

### THEORIES OF MINERALIZATION

#### Theory No.1

The mineralization solutions come from some deep-seated igneous source and therefore the vein should be well mineralized at depth.

#### Theory No.2

The mineralization comes from circulating surface solutions and would not persist at depth.

Theory No.1 has been gaining considerable popularity in this area and it was reasonable to believe that diamond drilling



run down the strike of the outcrop with hubs at 100' centres.

#### 4. Pits

Four small pits were excavated and a total of 1032 cu.ft. of overburden removed.

32 holes were drilled with a gasoline plugger and left to be blasted at a later date.

#### 5. Construction

Three camp buildings including a cookery, bunkhouse and office were completed. A small ice house was also constructed and lake ice was cut and packed. Camp facilities for about twelve men were thus provided.

#### 6. Engineering

A surface plan, diamond drill sections and core logs were completed.

#### 7. Diamond Drilling

19 holes were drilled by the Continental Diamond Drilling Company of Rouyn, Quebec, a total of 3247 feet was completed.

#### 8. Supervision

Surface work commenced under W. A. McMurray of Gilmour on December 1, 1948. A survey under Frank James was done during the period December 14th to 23rd. Work was also under his direction until February 8th, when the writer took over. Work was suspended on March 9, 1949 while equipment was removed and the property shut down.

#### RECOMMENDATIONS

That a limited amount of surface work be done in summer and some good bulk sampling be completed. It seems obvious that further diamond drilling is not warranted.

Respectfully submitted.

George B. Darling, B.Sc., P.Eng.  
Mining Engineer

GBD:vn

CERTIFICATE

I, George B. Darling, of Noranda, in the Province of Quebec hereby certify:-

1. That I am a Mining Engineer and reside at Noranda.
2. That I am a graduate of the Michigan College of Mining and Technology, Houghton, Michigan, 1940 and have been practising my profession as an Engineer for 9 years.
3. That I have no direct or indirect interest whatsoever in the development licences and mining claims covered thereby referred to in the accompanying report.
4. That the accompanying report is based on personal examination of the property and neighbouring properties and also on documents and maps.
5. That I resided on the property for the period mentioned in the report.

Dated this 12th day of April 1949

George B. Darling

would disclose heavy mineralization at depth. Accordingly a drilling program was initiated. The essential results are tabulated in the following summary:-

DIAMOND DRILLING SUMMARY

<u>Hole No.</u>	<u>Vertical Depth of Intersection</u>	<u>Total Core Length of Vein Intersection</u>	<u>True Width</u>	<u>% Lead in Vein Intersection</u>	<u>Value per ton Lead @ .21¢</u>
1	125.0'	7.59	4.35	0.068	\$0.29
2	130.0'	5.50	4.50	0.023	\$0.10
3	157.0'	9.66	5.52	0.116	\$0.49
4	78.0'	3.33	2.73	0.267	\$1.12
5	152.0'	4.67	2.68	0.010	\$0.04
6	80.0'	3.41	2.78	0.036	\$0.15
7	Vertical Hole	-	-	-	-
8	"	-	-	-	-
9	70.0'	4.80	4.02	0.01	\$0.04
10	No Vein	-	-	-	-
11	120.0'	8.8	1.52	0.021	\$0.09
12	45.0'	17.0	7.2	0.019	\$0.08
13	70.0'	3.3	1.39	0.00	\$0.00
14	200.0'	2.2	0.57	0.00	\$0.00
15	120.0'	16.6	8.3	0.013	\$0.05
16	No Vein	-	-	-	-
17	120.0'	1.0	0.56	Not assayed	No visible galena
18	150.0'	10.0	5.36	"	"
19	150.0'	5.0	4.24	"	"

The negative results obtained at depth seem to substantiate the second theory. Accordingly the drilling was discontinued and the property closed down.

SUMMARY OF WORK DONE

1. Brushing

- 1/2 mile road
- an area 1500' x 40' along the vein outcrop

2. Trenching & Stripping

350' had been previously stripped by W. R. McMurray of Gilmour. 500' more was stripped exposing 850' along the outcrop.

3. Surveying

Property boundaries were determined and a base line was



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CHRYSLER LEAD PROPERTY

BOUZAN GOLD MINES, LTD.

LOCATION

In 1949 Bouzan Gold Mines, Ltd., owned a lead property located on lot 2, concession II, Limerick township in Hastings county. This showing is sometimes referred to as the Chrysler lead deposit. It lies 4 miles northeast of Gilmour station on the Canadian National railway; the workings are immediately south of the Gunter-St.Ola road.

HISTORY AND DEVELOPMENT

Earlier developments on the property have been described by Alcock and Thomson<sup>1</sup>. This work consisted of surface trenching

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1. F.J. Alcock, Zinc and Lead Deposits of Canada, Ec. Geol.Ser. No.8, Geol. Sur. Can. 1930, p. 158.  
Jas. B. Thomson, Mineral Occurrences in the North Hastings Area. Ont, Dept. Mines, Vol. 52, Pt.3, 1943, p. 55.
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and sampling along the strike of the vein for a distance of 375 feet. In 1948 the vein was further exposed by surface trenching. In 1949 Bouzan Gold Mines drilled 19 holes, totalling 3247 feet, at intervals along the vein. Results of this work were negative.

GEOLOGY

The general geology in the vicinity of the property is shown on map No.52b of the Ontario Department of Mines. The

showing consists of a fissure vein that cuts across the strike of the country rock which is mostly bedded impure limestone with lesser amounts of paragneiss and quartzite. The vein has been exposed at intervals along a strike length of 1460 feet as shown by Fig. . It disappears under swamp to the southeast and is covered by overburden northwest of the property boundary. The vein dips vertically, has clean-cut walls, and varies from 2 to 8 feet in width. It occupies a strong fault fissure on which there has been some displacement. Fault breccias are commonly found in the vein.

The vein material is very largely banded calcite showing crustification. This central part of the vein contains many small vugs and cavities, indicating incomplete filling. Galena is the only metallic mineral in the vein and is very sparsely and spottily distributed. It occurs in lumps and solid streaks, the latter being concentrated near the middle of the vein over widths of 2 to 3 inches.

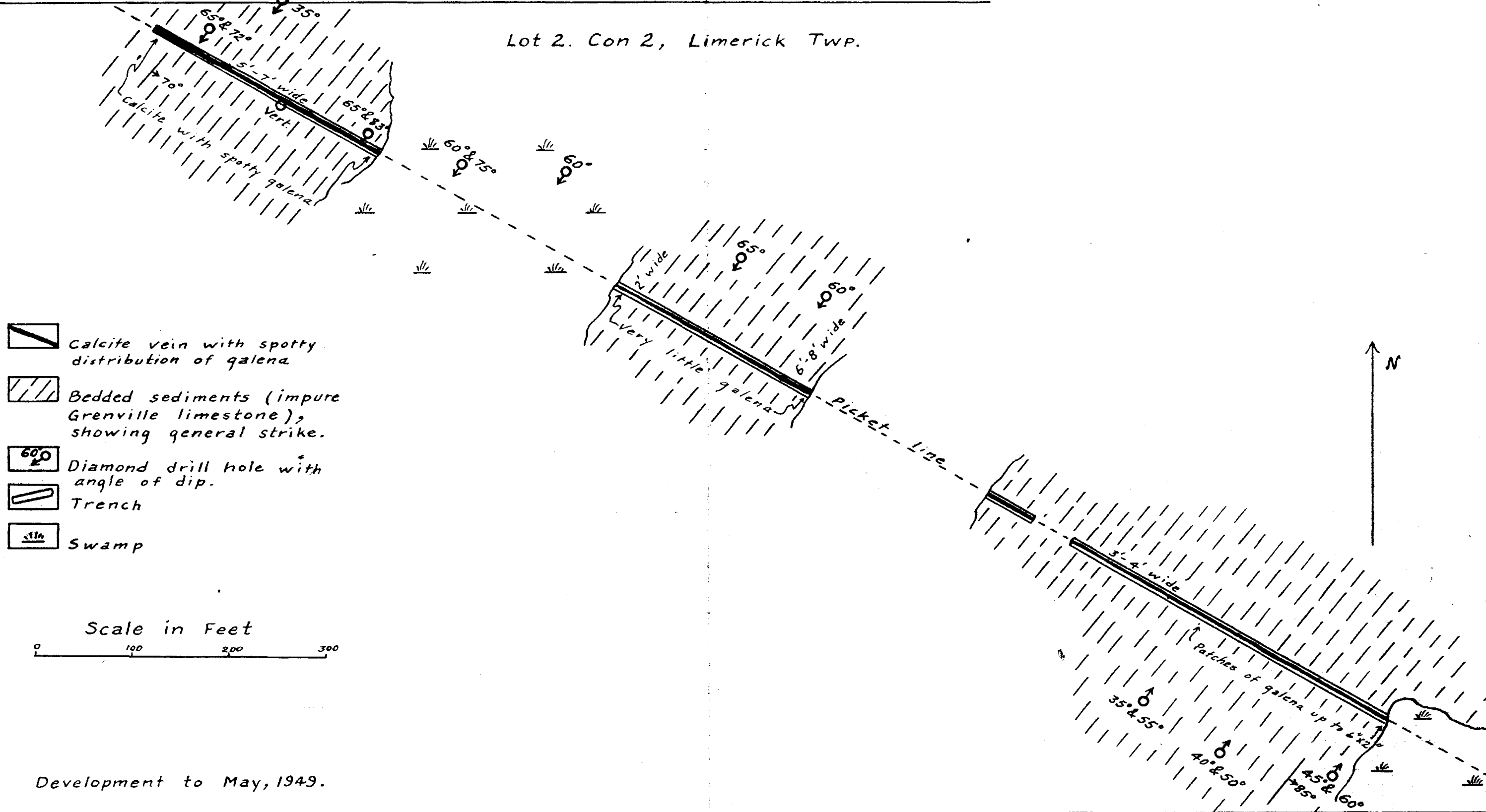
Only bulk sampling could give an accurate estimate of grade but there is little doubt that the average lead content of the entire surface showing would be very low. A short section of the vein at the southeast end contains some good chunks and patches of galena.

#### DRILLING RESULTS

Vein material was intersected in 15 of the diamond drill holes and showed a true width of 0.56 to 7.2 feet. The percentage of lead in the vein intersections was very low, the best value being 0.267 per cent lead in a core length of 3.3 feet. The vein was cut at vertical depths ranging from 45 to 200 feet.

Gunter - St. Oia Road

Lot 2. Con 2, Limerick TWP.



Development to May, 1949.

Geological sketch map of the Chrysler lead property, owned by Bouzan Gold Mines, Ltd, Lot 2, Con. 2, Limerick Township, Hastings County.