Views and Reports of Activities of

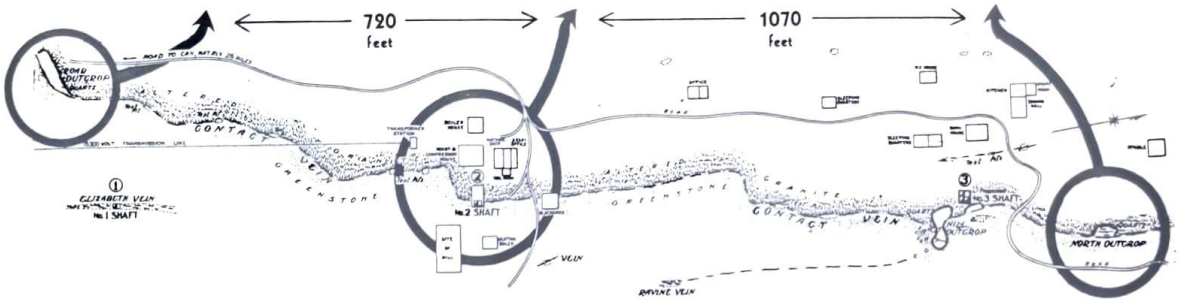
ELIZABETH GOLD MINING

COMPANY LIMITED

(NO PERSONAL LIABILITY)

HEAD OFFICE
156 YONGE ST.
TORONTO, CANADA

MINE OFFICE
ATIKOKAN
ONTARIO



View of Main Contact Vein from South Outcrop to No. 2 Shaft and to North Outcrop, 1790 Feet in All

C. H. MILES, M.E. Consulting Engineer, reports November 30th, 1935:

"The Elizabeth Contact Vein is one of the largest of the above type in North Western Ontario."

C. N. THOMPSON, M.E., reports October 31st, 1935:

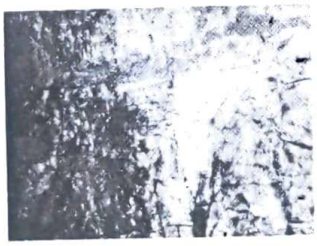
"The property includes nearly two miles of the contact along its sinuous course."

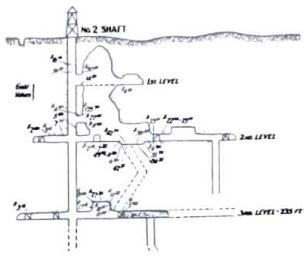
W. N. McCLINTOCK, B. Sc., M.E., reports January 27th, 1937:

"The prominent structural feature is a granite greenstone contact that almost diagonally traverses the property. Mineralization: Pyrite chalcopyrite, galena, gold."

UNDERGROUND DEVELOPMENT

NO. 2 SHAFT





View of Quartz in Shaft and Sublevel No. 2 Shaft, described by Mr. W. N. McClintock, B.Sc., M.E., in his report of May 22, 1936. "The quartz exposed was truly spectacular as regards mineralization, crystallization and width."

THE MAIN WORKINGS OF THE MINE ARE DEVELOPED BY No. 2 SHAFT SHOWN ABOVE ON THE MAIN CONTACT VEIN. THESE WORKINGS ARE REPORTED ON, AS FOLLOWS:

C. H. MILES, M.E., reports November 30th, 1935:

"No. 2 or Contact Vein has No. 2 Shaft, 242 feet deep, with three working levels.

"The first level is 63 feet from surface and 95 feet long to the north. The drift is 5 feet in width. Some exceedingly high grade ore remains in place....Sampling of the former has given average values of $33.60.

"A sub-level opening from the shaft is found 24 feet above the second level. Here the lamprophyre shows a width in the shaft and cross-cut of 13 feet. There still remains 12 to 14 feet of quartz in place on the East wall. Eleven samples were taken, mostly off the East wall, from the shaft opening to the North end of the stope, where entrance is made into the second level. The average of these samples gave $21.63 per ton. The sub-level stope is 60 feet in length.

"Some exceedingly high assays have been obtained from the south end of the stope - channel sampling up to $175. and an undetermined tonnage of this rich ore still remains in place.

"THE SECOND LEVEL is 135 feet from the surface, and has been driven to the North 243 feet. 50 feet from the shaft is a low stope, 20 feet high, and a three foot underhand stope.

"This point is evidently on the rake of the ore shoot, which dips to the north, and channel sampling of the roof, walls and floor of this chamber gave some very high results. Along the protogine side, 3 samples averaged $29.87, and along the East or greenstone side, 4 samples averaged $32.02.

Ore car at Shaft Head, Elizabeth Gold Mines

"217 feet from the shaft is a winze, supposed to be 70 feet deep. The first 50 feet from the shaft are in quartz and lamprophyre. The drift is 10 feet in width.

"Most of the ore is still in the drift. The vein has an average width of 6 feet.

"THE THIRD LEVEL: the shaft is in the contact and the north drift follows the contact. The vein material is 40 inches wide at the shaft. This width increases and 50 feet from the shaft, the vein was sampled over a width of 17 feet. The average body gave an average of $11.77.

"North to the open stope, the lamprophyre has a width of 20 feet and over. Approximately 15,000 tons of ore are available to the North of the shaft."

CONRAD N. THOMPSON, M.E., reports October 31st, 1935:

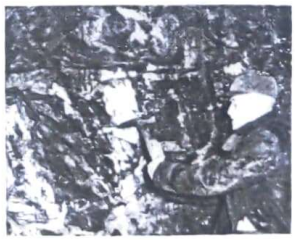
No.2 SHAFT, 1st LEVEL. "The stope extends northerly to within 30 feet of the face of the workings. A Pillar remains between the shaft and the stope to a depth of 48 feet. Channel sampling of the Pillar has given assays of $28.70, $50.40 and $18.90 over vein widths of four to five feet."

SUB-LEVEL, "At 111 feet in depth, a sub-level has been driven west and north to connect with the stope between the first and second levels. It extends to the north for a distance of 60 feet, the open stope measuring twelve feet between walls. Assays are as high as $175.70 from samples taken on the south margins of the stope."

2nd LEVEL, "At 135 feet depth, is located the 2nd Level. The workings extend to the north a distance of 270 feet. The workings widen out to 22 feet from wall to wall. Channel sampling gave values of $23.10, $22.05 and $23.10. 45 feet due south of this spot, sampling gave values of $42.70. $11.20 and $35.70. Along the south-east margin of the underhand-stope, sampling gave values of $38.50, $4.20, $1.05 and $84.35."

3rd LEVEL, "At a vertical depth of 100 feet below the 2nd level, is located the 3rd level. The development to the south has reached a straight distance of 78 feet, while to the north, the workings extend to 130 feet. North of the shaft and to the entrance to the north-west cross-cut measures 50 feet. Channel sampling along this section gives an average of $11.77."

"A shipment was prepared from vein matter taken from 1st, Sub, 2nd and 3rd levels of No. 2 Shaft. It was crushed and sampled and the assay result gave the extraordinary value of $109.20 gold per ton."

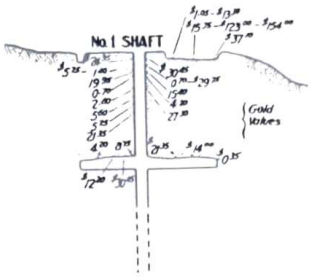


North Face, First Level, No. 2 Shaft

W. N. McCLINTOCK, M.E., reports January 27th, 1937:

High grade ore should be expected from this deposit. From old records, the average of 4 diamond drill holes across the zone was $26.80 over 53 inches and the average of 13 samples in the old stope outline plan is $28.80 over 47 inches."

NO. 1 SHAFT



Views of Ore in No. 1 Shaft at Elizabeth Showing Mr. W. N. McClintock, B.Sc., M.E., Examining the Vein, Centre, Assay Map

C. H. MILES, M.E. reports November 30th, 1935:

"Shaft No. 1 is 480 feet south of Shaft No. 2, and the vein strikes E. 45° N. The dip is vertical. North of No. 1 shaft is a trench to a length of 50 feet, showing a vein, 4 feet wide and highly mineralized with iron pyrite, some chalcopyrite and gold. The shaft, as old reports show, is 110 feet deep. At a depth of 80 feet from surface, is an 80 foot drift. The average sample was taken over 3 feet,6 inches, or two samples over a width of 7 feet.

"I also wish to stress the mention made of your No. 1 vein. Many mining operations of today have only a single-vein mine and at that, not by any means as good as your No. 1 vein."

C. N. THOMPSON, M.E. reports October 31st, 1935:

"No. 1 shaft is located 480 feet to the south of No. 2 shaft. Here has been sunk a shaft reported to be 110 feet in depth. The vein maintains an average width of six feet, with smooth walls and a slight dip to the east. To the north of the shaft, a trench has uncovered the vein over a length of 50 feet, where it dips to the east into low ground and heavy overburden. Sampling of the vein in the shaft has given high average values. The better values appear to be running diagonally from the north-west to the south-east across the shaft and over 4-ft. widths, towards the top of the shaft. The average assay gives $22.66, with better than $12.00 over an average width of 8 feet. At greater depth, average values $20.88 and $9.80 have been obtained. In the trench, north of the shaft channel samples across the vein have given results of $13.30, $15.75, $123.80, $154.00 and $37.10, the presence of free gold, though not visible, presumably accounting for the high results.

Rebuilding Shaft Collar at No. 1 Shaft

"From a 2,000 lb. shipment prepared for shipment to Toronto, we selected fragments from each 250-lb. weight, the lowest result of which was $15.75 and the highest, $33.60, with an average of $19.60 for eight samplings.

"A further 150-lb. shipment, divided between Ottawa and Milwaukee, consisted of vein matter taken both from the trench and at various points in the shaft. This was all crushed in the Assay Office crusher and systematically sampled and the result obtained gave $42.90 gold per ton."

HERBERT PARLIMENT, B.Sc.,M.E., for MINING RESEARCH CORPORATION, reports August 27th, 1936:

"At number 1 shaft a narrow shear, with very small amount of quartz, widens out until at 30 feet in depth the vein, a series of lenses, widens out to over shaft width. Ten samples in the shaft to this depth averaged 36.5 inches in width, at $13.20 per ton. Seventy feet of drifting on the 80 ft. level averaged 34 inches in width at $14.20. Surface sampling, from 100 feet - 140 feet, north of number 1 shaft averaged 37.4 inches wide at $16.27 per ton."

W. N. McCLINTOCK, B.Sc.,M.E., reports January 27th, 1937:

"No. 1 Shaft was sunk on one of the shear zone type of structures, and on the 80 foot level, approximately 70 feet of drifting was completed by the old operators. From the data of Mr. Miles and Mr. Thompson, we gather that the walls of the shaft, to a depth of 30 feet, averaged $13.20 over 36½ inches and that their underground average of 6 samples was $14.30 over 34 inches.

"This zone was stripped by the writer for a length of 200 feet and sampled. Three samples taken in the shaft, averaged $11.90 over 47 inches and the surface sampling revealed two ore zones average:

$15.60 over 38 inches for 70 feet.
$22.60 over 56 inches for 20 feet.

SURFACE EXPLORATION

C. H. MILES reports November 30th, 1935:

"BESIDE THE VEINS ALREADY DESCRIBED, THERE ARE A NUMBER OF OTHER VEINS SHOWING ON THE SURFACE, AND SEVERAL CARBONATE SHEAR ZONES, WELL MINERALIZED WITH IRON PYRITE.

"A break striking west from the contact vein, about 1300 feet north of Shaft No. 2.

"These breaks or dikes are of lamprophyre in protogine. In places, the protogine is broken up and cemented into lamprophyre.

"This zone of dikes is about 100 feet in width, along which, to the north and south, are quartz veins and a network of quartz stringers in lamprophyre. The vein system extends beyond the Western boundary to the contact of greenstone schist.

C. N. Thompson, M.E., Examining Office Vein Exposure

"The western break has had no work of any kind done on it. The quartz is of the same structure as in the contact vein and gold values will be found here too, given intelligent investigation.

C. H. Miles, M.E., Examining Hill Vein Outcrop

"On the crest of the hill, south of the north vein, a particularly interesting showing was uncovered. It appears that the contact vein connects, at this point, with a vein which is to be seen on the west wall of the ravine, east of the mill, but further clearing off of over-burden will have to be done, before we can positively state what is actually there. This vein occurrence was thoroughly sampled along its sinuous course, and values ranged up to $19.00."

C. N. THOMPSON, M. E. reports October 31st, 1935:

"A sample, across four feet on the top of the hill gave $2.10 and a sample taken from the vein in the tunnel, across only a few inches, gave a return of $29.05. There is a net-work of veins on the hill and conditions for a diamond drilling test are ideal."

T. A. YELLOWLEES, Assayer, reports May 29th, 1935:

"Sample No. 42-Taken from a vein in the side of the cliff to the east of the east of the mill - not showing or even mentioned in Government or other reports. It is heavily mineralized, galena, in particular, being recognizable.

"Average of two samples taken shows 4.4 oz. gold per ton, or $154.00.

"Gold valued at $35.00 per ounce."

Galena Vein Referred to in Report of T. A. Yellowlees

PIT EXPOSURE

Another view intersects the main contact, close to No. 2 Shaft. Values are disclosed in a pit, referred to as follows:

HERBERT PARLIMENT, B.Sc., M.E., MINING RESEARCH CORPORATION, August 27th, 1936:

"Pit number 1 at a distance of 110 feet east of number 2 shaft averaged, along a length of 30 feet, 30 inches wide, at $20.60 per ton."

W. N. McCLINTOCK, B.Sc., M.E., January 27th, 1937:

"Another exposure of this type, possibly a section of the other vein faulted off the strike --lying 130 feet east of No. 2 shaft gave an average of $20.60 over 30 inches for 35 feet.

ALL THESE ORE DISCLOSURES, lying so close to No. 1 and No. 2 Shafts, no doubt prompted C. H. MILES, M.E., to report on May 4th, 1937:

"You have on your property, showing now on the surface within a thousand feet of your No. 2 Shaft, enough ore to last you for approximately twenty years."

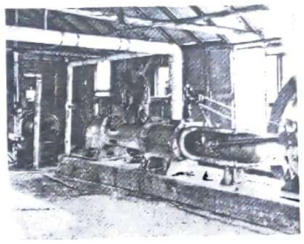
"In addition to the patented claims consisting of 373 acres, upon which the main operations have occurred, the Company has acquired 12 claims, consisting of 480 acres, by staking between Elizabeth proper and Harold Lake Gold Mine, making total acreage 853 acres. A limited amount of work has been done on these claims, but a survey made by MR. C. H. MILES has disclosed 26 veins, upon which he reports as follows:

"On all of the claims of the Southwest block, I located about twenty-six quartz veins and shearings, of which four of them gave values of such value that work should be commenced on those as soon as possible. I consider the South-west block from the contact southward for half a mile, to be a very valuable asset to the Elizabeth Gold Mining Company, Limited.

"Having before made a picture of the Southwest block with the necessary assessment work to hold these claims, I believe that you will find such values in gold that it will be advisable to form a separate mining company on these claims."

PLANT AND EQUIPMENT

The property is at present equipped with a steam plant, consisting of two boilers and a steam-driven Ingersoll Rand Compressor. As soon as the electric power is installed, this equipment will be replaced by electrically-driven Ingersoll Rand 1050 cu. ft. Air Compressor, which has been purchased and delivered together with a 200 H.P. motor. Underground, the present steam-driven Cameron Pumps will be replaced with an electrically-driven Cameron Motor Pump. This equipment, when installed, will give ample air to adequately provide for underground development, hoisting, pumping, etc.



Steam Compressor Now Being Replaced by Electrically driven Compressor

A modern 4x7 Allis-Chalmers ball mill and crusher have been purchased and are at present on the property. This mill was ordered after careful mill tests of the Elizabeth ore had been made by Allis-Chalmers Laboratories at Milwaukee, Wisc. and the Dominion Government ore dressing Laboratories at Ottawa.

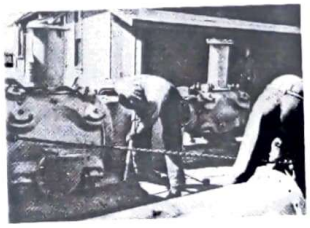
Boiler House at Elizabeth Gold Mines, Now Being Replaced by Electricity

Interior of Office at Elizabeth Gold Mines

The installation, design and erection of mill, is under the supervision of the world-renowned firm of Milling Engineers, Messrs. Shoemaker & Burnham.

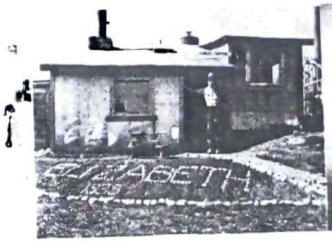
Dining Camp, Bunk Houses, equipped for 25 men, and Mine Office are also on the property.

The property is supplied with a completely-equipped assay office, with a capacity of 50 samples a day. A new furnace and pulverizer has recently been installed, and the equipment is modern in every respect.

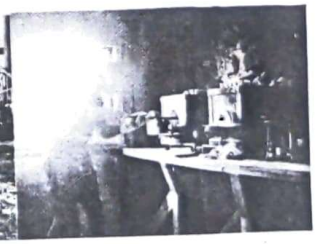


Unloading 1050 cu. ft. Electrically Driven Compressor

Mr. T. A. Yellowlees, Assayist



Assay Office, Elizabeth Mines



Interior Assay Office

form

POWER

One of the most advantageous power contracts held by any mine in Canada has been entered into with the Seine River Improvement Company, a subsidiary of the Minnesota and Ontario Paper Company and the Elizabeth Gold Mining Company Limited. The Seine River Improvement Company has a lease on the entire power rights of the Seine River, 150 miles long. They have developed power at four power dams on the River, and Elizabeth is getting its power from the High Falls plant. The price of power is the remarkably low rate of $21.00 per H.P. per Annum.

Power House of Seine River Improvement Co. from whence Elizabeth gets its power

Transformers and equipment have been supplied by the Canadian General Electric Company and the main transformers, stepping the power down from the transmission line of the power company from 110,000 volts to the Elizabeth power line carrying power to the mine at 13,500 volts, which are now in place where the Canadian National Railway and the Seine River Improvement Company's Main transmission lines cross. The Elizabeth power line has been cleared for 3½ miles to the power plant at the mine. Poles have been erected, and Hardware in place and a crew is at present completing the work on the line.

Placing Main Transformers at Power Line

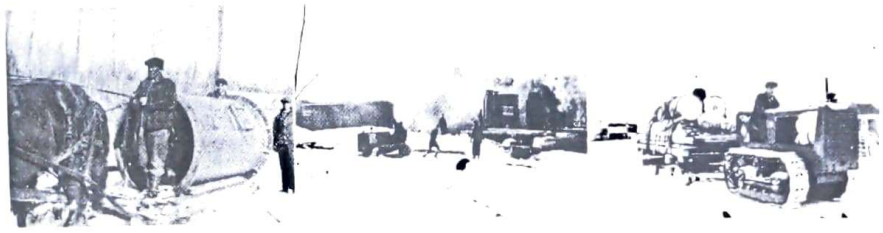
View of Elizabeth Power Line from Secondary Transformer Site on Property

The secondary transformers have now been installed at the property, stepping the power down from the Elizabeth power line at 13,500 volts to 550 volts for distribution at the mine. A 200 H.P. motor has been purchased to power the compressor and electric pumps, etc. This will be followed with additional electrical equipment to supply power for the Allis-Chalmer's mill now on the property and not yet erected.

TRANSPORTATION

One of the great advantages of the Elizabeth Gold Mining Company Limited is its transportation facilities. The Elizabeth extension property is less than a mile from the Canadian National Railway. The Ontario Government recently erected a bridge over the Seine River at Tracy Rapids. The road now connects the railway with the plant at No.2 Shaft, closely following the power line about 3½ miles in length; thus the essential factors of power and transportation are not excelled in any mining operation in Canada.

WATER, another essential, is also available, as the Elizabeth Mine covers most of the shore line of both Rice Lake and Harold Lake.



Hauling Ball Mill to Property — Unloading Main Transformers at Railway 3½ miles from Elizabeth Mines — Tractor Train Leaving Atikokan for Elizabeth

Fish and Game abound in the District reinforcing the camp's larder at times.

At right is Mr. Thompson, Mine Manager, with a substantial buck, and at left Mr. Harmeling, Mine Clerk, with a 50 lb. Lake Trout, caught with rod and line... Note other Trout, comprising a catch of 30 fish in 6 hours, the smallest touching 10 lbs.