



# Giant Mine Environmental Assessment

## Technical Session Undertakings

EA No: 0809-001

November 14, 2011

### UNDERTAKING RESPONSE

EA No: 0809-001

Undertaking No: 12

#### Date Received

Transcript: Day 5, pg. 217

#### Undertaking:

The Giant Mine Project Team to provide documents identified in Alternatives North Information Request #4, question 4, to Kevin O'Reilly and to post to the registry.

#### Response:

##### Introduction

Technical sessions to discuss the Giant Mine Remediation Project Developers Assessment Report were held in Yellowknife in the week of October 17, 2011. This memorandum is to answer questions regarding Source information used to make the statements quoted in Question 4.4 of Alternatives North information request.

##### Response

Question 4, bullet 1: *page 4-10, a May 1949 study on the effects of arsenic pollution*

The source of this information is the May 1949 monthly operation report to Ventures Ltd. Board of Directors. The original May 1949 study report, mentioned on page 4-10 of the Developer's Assessment Report, was not found during the research for the history of the mine in 2002. A photocopy of the monthly report was not made, in 2002, as the original document could be located in the archives at the Prince of Wales Heritage Centre. As a result of this undertaking the Giant Mine Remediation Project Team has requested a copy however has not been able to acquire a copy of the May 1949 monthly operation report by November 14, 2011. A copy of the monthly report will be filed with the Mackenzie Valley Environmental Impact Review Board upon receipt.

Question 4, bullet 2: *page 4-11, according to the records, surface disposal of arsenic trioxide dust occurred in July 1949 and February 1950, but the disposal location is not recorded in the any of the documents reviewed*





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The source of this information is the July 1949 and February 1950 monthly operation report to Ventures Ltd. Board of Directors. Photocopies were not made as the original documents could be located in the archives at the Prince of Wales Heritage Centre. During the course of writing the site history in May 2002, subsequent searches for other documents and maps that may indicate where these surface disposals occurred but could not be located. The location of these disposals was not mentioned in the monthly reports.

As a result of this undertaking the Giant Mine Remediation Project Team has requested a copy however has not been able to acquire copies of the July 1949 and February 1950 monthly operation reports by November 14, 2011. Copies of the monthly reports will be filed with the Mackenzie Valley Environmental Impact Review Board upon receipt.

*Question 4, bullet 3: page 4-11, the sand plain option was abandoned due to a high water table, and the Department of National Health and Welfare (the responsible regulatory authority) would not consider the Veronica Lake option until more information was available.*

The source of this information is the February 24, 1951 letter to G.E.B. Sinclair of the Department of Resources and Development already submitted to the Mackenzie Valley Environmental Impact Review Board.

*Question 4, bullet 4: page 4-11, in a letter dated July 21, 1950, the Department of National Health and Welfare stated that is regarded the use of concrete vats on surface as the safest method of storage.*

The original letter from July 21, 1950, mentioned on page 4-11 of the Developer's Assessment Report, was not copied during the research for the history of the mine in 2002.

As a result of this undertaking the Giant Mine Remediation Project Team has requested a copy from the Prince of Wales Heritage Centre and reviewed the files stored at site in the Giant Mine administration building however as of November 14, 2011 a copy of the letter has not been found.

The Giant Mine Remediation Project Team is continuing to search for the July 21, 1950 letter and previously mentioned reports and will these with the Mackenzie Valley Environmental Impact Review Board upon receipt.

Alternatives North information request #4 requested "any other relevant document held at the Giant Mine site related to understanding how the arsenic pollution and its effects on people and the environment were initially identified and managed." The attached five documents may be of interest. In response to the question of why so few documents, the bulk of information used in constructing the





# Giant Mine Environmental Assessment

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Giant Mine history was obtained from the monthly operation reports to Ventures Ltd. Board of Directors.

***Attachments:***

Monthly Report - May 1949

Monthly Report - July 1949

Monthly Report - February 1950



Yellowknife, N. W. T.,  
June 14th, 1949.

The President and Directors  
Giant Yellowknife Gold Mines Limited

Monthly Report - May, 1949.

Dear Sirs:-

The following report covers operations at the property during the month of May, 1949. The end of the month marks the completion of the first year of production for purposes of assistance payments under the Emergency Gold Mining Assistance Act, and for tax exemption under the Income Tax Act.

Production for the month amounted to 10,855.8 ounces of Gold and 4,477.4 ounces of Silver, with a total gross value of \$383,158.00. The milling rate averaged 243.4 tons per day, with calculated mill heads of 0.81 oz./ton, for a total of 7,546 tons milled during the month. Gold recovery from current tonnage totaled 5,234.3 ounces, representing 48.2% of the production for the month, of which 1,171.9 ounces were obtained by Amalgamation and 4,062.4 ounces from Roasting and Cyanidation of flotation concentrates. Treatment of concentrates reclaimed from the stockpile produced 5,621.5 ounces of Gold, representing 51.8% of the gross production for the month. At the end of the period, the balance in stockpile was estimated to be 2,615 tons with net recoverable gold content of 11,300 ounces, with a gross value of \$395,500.00.

Tons treated in the Roaster during the month amounted to 1,473 tons, consisting of 615.5 tons of current flotation concentrates and 857.5 tons of reclaimed stock concentrates. Roaster feed rate averaged 47.5 tons per day at 7.54 ozs./ton, made up of 20 tons of current flotation concentrates and 27.5 tons of reclaimed stock concentrates. Calcine residues averaged 0.784 oz./ton during the month, as compared with 0.84 oz./ton and 1.24 ozs./ton in April and March, respectively. While dust surveys in the Roaster stack indicate that dust losses have been high, overall extraction improved substantially and absorption was at a minimum during the period.

Total income during the month amounted to \$526,879.00, made up of \$347,443.00 from Mint receipts, \$167,740.00 from Assistance Payments for part of 1948, and the first quarter of 1949, and \$11,696.00 in repayment by the Dominion Government on Transmission System interest. The Operating Bank Loan was reduced by \$310,183.00 during the month to a total of \$974,957.00 at the end of the fiscal year on May 31st. This represents a reduction of \$549,451.00 from the high of \$1,524,408.00 at February 26th of this year.

Treatment Plant

Production, May 1 - 31, 1949

Recoveries shown in the following table are based on the following data:-

	Fine Ounces	
	Gold	Silver
April 21-30 Bars 59 to 66, Adjustment to Mint Returns	-9.57	-13.28
May 1-20 Bars 67 to 79, Mint Returns	6,786.65	2,678.25
May 21-31 Bars 80 to 88, Mine Assay Office Returns	4,078.70	1,812.46
	10,855.78	4,477.43

- 2 -

<u>Dry Tons Milled:</u>	Month	7,546	
	Aver. per Day	243.4	
	Aver. Mill Heads, per ton	0.810 oz.	\$25.96

Recoveries:

<u>(1) From Current Tonnage</u>			
(a) by Amalgamation	1,171.93 ozs.		\$41,018.
Extraction	19.26		
 (b) in Flotation Concentrates			
Tons Concentrates Produced	615.48		
Aver. Grade per ton	7.368 ozs.	\$257.88	
Contained Ounces	4,535.16		
Extraction	74.26		
Ratio of Concentration	12.26 : 1		
Flotation Tailings, tons	6,930.5		
Aver. Grade, per ton	0.099	\$2.05	
 (c) by Roasting & Cyanidation			
Tons treated	615.48		
Contained Ounces	4,535.16		
Ounces Recovered	4,062.38		\$142,183.
 <u>(2) From Stockpiled Concentrates</u>			
Tons reclaimed and treated	857.5		
Aver. Grade per ton	7.319 ozs.	\$256.16	
Contained Ounces	6,276.35		
Ounces Recovered	5,621.47		\$196,751.
Cyanidation Residues, per ton	0.784	\$27.45	

Summary of Recoveries

		<u>Ounces</u>	<u>Gross Value</u>
<u>(1) From Current Production</u>			
(a) by Amalgamation	1,171.93		
(b) from Flotation Conc.	4,062.38	5,234.31	\$183,201.
 <u>(2) From Stockpiled Concentrates Reclaimed</u>			
		5,621.47	196,751.
Total Gold Recovered		10,855.78	\$379,952.
Total Silver Recovered		4,477.43	3,206.
Gross Value of Production			\$383,158.

OperationsCrushing Plant

Tons Crushed per operating hour	58.2
Crushing Time, aver. hours per operating day	5.0

- 3 -

Grinding, Amalgamation & Flotation

Mill operating time averaged 99.7% for the month. The primary Ball Mill grind improved and on May 19th the Classifier overflow was increased from 19% to 21% solids. Jig operation was satisfactory and Amalgamation results improved as compared with the previous month.

Flotation results varied considerably during the first half of the month when Flotation feed temperatures were low, ranging from 56.2°F. to 64.2°F. Results improved during the last half of the period with feed of increased density (30.7% solids) and higher average temperature (63.9°F.)

Roasting & Cyanidation

Dust surveys indicated that gold losses in dust from the stack have been comparatively high, due, in larger part to unsatisfactory control of the draft, with the dampers originally installed. New type dampers were installed, permitting reduction in the draft from 0.25 to 0.10. Immediate increase in the stack temperature from 360°F. to over 400°F. occurred, and a noticeable improvement was evident in general operation. Dust surveys are being continued and a program of heat conservation, recommended by Mr. W. G. Hubler, Consulting Metallurgist, has been instituted. Studies are being made in conjunction with the Con Mine, of the effect on the district generally of the arsenic fumes being discharged into the atmosphere from the two roasting plants in the area.

Replacement of sections and fittings of the Calcine return line from the Roasting plant to the Mill, due to corrosion of the ordinary iron pipe by the acid Calcine, continues to be a serious problem. The possibility of using hard rubber or rubber-lined pipe and fittings is being investigated.

The following data indicate that absorption was at a minimum in both the Roasting and Cyanidation plants during the month as the difference of 221.94 ozs. between the calculated gold content of the Roaster feed and that of the Calcine, calculated from Cyanide plant products, probably represents dust losses in the Roasting plant.

Roaster Feed

	Tons	Grade (ozs./ton)	Contained Ounces	% Dist.	
				Tons	Ounces
Current Concentrates	615.48	7.3685	4,535.16	41.78	41.95
Stock	857.53	7.3191	6,276.35	58.22	58.05
	1473.01	7.3397	10,811.51	100.00	100.00

Cyanidation Plant

Solution Precipitated	36,090	0.2688(1)	9,701.14)		
		0.0006(2)	21.65)	91.82	
Calcine, Residue	1,104.8	0.7845	866.78	8.18	
Calcine	1,104.8	9.5850	10,589.57	100.00	
Calcine Residue Solids		0.7773	858.82		
Solution		0.0072	7.96		
			866.78		

Notes: (1) Pregnant (2) Barren

- 4 -

The comparison is of interest, as noted above, between the gold content of 10,811.51 ozs. in the Roaster Feed and the ounces from Cyanide Plant products amounting to 10,589.57, a difference of 221.94 ozs. Dust surveys indicate that dust losses would account for most, if not all, of this difference.

#### Refining

The following bars were shipped to the Mint from production during the month:-

<u>Production Period</u>	<u>Bar Nos.</u>	<u>Type</u>	<u>Date Shipped</u>
May 1st to 10th	670 to 720	Cyanide	May 13th
1st to 15th	731	Amalgam	19th
11th to 20th	740 to 790	Cyanide	26th
21st to 31st	800 to 850	Cyanide	June 4th
16th to 31st	871, 881	Amalgam	4th

#### Underground Operations

Tonnage trammed to the Ore Passes during the month amounted to 7,285 tons averaging 0.84 oz./ton in ore pass sampling and 0.83 oz./ton from the weighted composite of trammed grades. This compares with tonnage milled of 7,546 tons and calculated mill heads of 0.81 oz./ton. Details of tonnages trammed from the various working places, with chip and car sampling averaging, are given in the appendix to this report.

Stope preparation and mining continued on the second and third levels, and the rate of development was increased early in the month with the addition of two development crews.

Broken ore reserves were recalculated at the end of the fiscal year, using the more conservative factor for cubic feet per ton of 12 instead of 11. This resulted in an apparent reduction in tonnage during the month and gives a greater margin of safety in the estimates. The revised broken ore reserves now amount to 43,419 tons averaging 0.77 oz./ton.

Details of development, stope preparation and mining are described below, and summaries of development advances, sampling averages and tonnages of ore and waste hoisted during the month, are appended to this report. A composite plan of No. 2 shaft workings showing development to May 31st, is attached to this report.

#### Development

On the second level, driving of 210E Dr. was resumed for the southward extension of draw points from 208 Stope. 219E Dr. was turned northerly off 219E Kent in order to provide access to the low-angle ore north of 221 Stope. 228E Kent was driven into the hanging wall of No. 1 Ore Shoot from 204N Dr. on 5700 North, to provide a position for diamond drilling in order to determine the stoping layout for the ore below 204E Dr.

On the third level, 312E Dr. was started by slashing the east wall of 308E Dr. on 51100 North, and was continued with an advance of 43.5 feet at the end of the month. Slashing and drifting to the end of the period averaged

- 5 -

1.66 ozs./ton in face sampling, and 592 tons of development ore trimmed from these operations averaged 1.52 ozs./ton. This heading will be driven in ore as far as possible to the north as an exploration opening. 3148 Dr. was turned off 3035 West in order to provide access to the ore below 3048 Dr.

On the fourth level, a total of 282 feet of drifting was accomplished in 4038 Dr. and 4048 Dr.

#### Stope Preparation and Mining

Mining was suspended in 206 Stope on reaching the first level sill pillar. Mining was resumed in 207 Stope on completion of the access raise from this stop to 1108 Dr. 218 Stope was drawn heavily in order to install a slusher for removing the broken ore in the latter portion of this ore shoot.

Mining proceeded normally in 212 Stope; an access raise was driven from 213 Stope to 1068 Dr.; and silling of 214 Stope was about completed at the end of the period.

In the East Zone, mining continued in 308 Stope with emphasis on the caving of the south end, and finger raising was commenced above the two new draw points in 306 Stope.

#### Underground Diamond Drilling

Routine diamond drilling was continued throughout the month, the results being tabulated in the appendix to this report.

Drilling was carried out for the purpose of planning a stope layout in a high-grade quartz orebody at the north end of 306 Stope.

In No. 1 Ore shoot above the third level, two steep angle holes on 1000 North and 1050 North returned 1.38 ozs./ton for a core length of 69 feet and 1.53 ozs./ton for 48.5 feet, respectively. These results compare with the average of 1.38 ozs./ton in car sampling in 310 Raise, and 1.43 ozs./ton in car sampling in 3088 Dr., indicating unusually consistent values for this ore shoot between the second and third levels.

#### Surface Diamond Drilling

Diamond drilling was resumed in the southern portion of the property during the latter part of the month and four holes were drilled to test the extension of the East Zone orebody above the 200 level. Three of the holes entered the zone in the probable footwall of the orebody, indicating a relatively steep dip and returning sub-marginal assays, except for an intersection of 9 feet averaging 0.25 oz./ton. A fourth hole intersected 35 feet of ore averaging 0.45 oz./ton. A tabulated summary of these results is appended to this report.

Further drilling will be done in the East Zone area later in the season, and in the meantime, drilling was commenced in the West Zone during the early part of June. Results to date of writing have been very encouraging and this drilling will be reported on in the report for the first half of June.



- 6 -

Construction and General

Hydro power consumption from the Northwest Territories Power Commission (Mare River project) was as follows:-

Primary Power	-	670,940 Kw. Hrs.	-	919 Kw.	-	1232 HP
Electric Boiler	-	379,200 " "	-	520 " "	-	697 HP
		<u>1,050,140 Kw. Hrs.</u>		<u>1439 Kw.</u>		<u>1929 HP</u>

Primary power consumption, therefore, was only 61.6% of the minimum contract quantity of 2,000 HP for which the Company pays \$16,666.66 monthly, at the rate of 1¢ per Kilowatt hour. Total consumption, including that supplied to the electric boiler, amounted to 1929 HP. On the basis of the minimum contract cost per month, cost per ton milled was \$2.22 for the period.

At the site of No. 3 shaft, sinking to a depth of about 15 feet for installation of the concrete collar, was commenced and rock excavation was well under way at the end of the month at the location of the hoist and compressor house for this shaft. The fir timber for the No. 3 shaft headframe is now at Hay River and will be freighted across by barge as soon as navigation opens.

As noted in the April monthly report, it has been extremely difficult to build up the construction crew to the point required for the essential buildings to be erected this season. Two contracting firms were consulted and it was decided to arrange a contract with the Dalton Engineering and Construction Company of Toronto, for the erection of at least three of these essential buildings. Immediate results are evident as, at date of writing, the Dalton Company has advised that a full construction crew will arrive at the property on June 16th. It is hoped, by contracting this work, to minimize the effect on the established wage scale in the district. Under present conditions, it is impossible to hire satisfactory carpenters at the existing rate in the district.

Concrete work and a substantial portion of the necessary framing was completed at the new Cafeteria, construction of which will be taken over by the contractor's personnel on their arrival here. Rock excavation and foundation work are in progress at the new Shop, located near No. 3 shaft, and foundation work is under way at the Staff House.

Work was well advanced on the two duplex Cemento houses being erected under contract for the Company on the Yellowknife townsite. At date of writing, one of the duplex units is ready for occupancy.

As noted in the report for the last half of May, the Babcock-Wilcox compressor, obtained from Gaysborough Mines Limited, is now in operation at No. 2 shaft. Substantial expenditures were incurred in repairs to both the motor and the compressor, the cost of repair parts for the latter only amounting to approximately \$1,000.00.

Every effort has been made to reduce the oil consumption at the heating plant and substantial economies have been effected by cutting off the steam in the line from No. 1 camp to the Mill, and by shutting down the boiler at No. 2 shaft. Further economies will be made as a result of a study of the heating layout made by Mr. E. E. Couper, Consulting Engineer, in charge of the Edmonton City power plant.

- 7 -


The weather during the month was windy and comparatively cold, temperatures ranging from below freezing during most of the evening to a maximum of about 50 F. The bay between the mine and the settlement of Yellowknife did not clear until June 4th and, at date of writing, the ice has not as yet cleared from Great Slave Lake. Difficulties are being encountered by the transportation companies between Waterways and the Smith portage, due to very low water conditions in the Athabasca River. The completion of the road to Hay River from railhead at Peace River assures transportation to the former point should conditions become more serious on the Mackenzie river system. Arrangements are being made for regular boat service from Hay River to Yellowknife during the navigation season at rates which compare favorably with those on the Waterways route.

Messrs. E. V. Neelands, Consulting Engineer, and F. C. Hubler, Consulting Metallurgist, visited the property during the month. As noted earlier in this report, Mr. Hubler's recommendations for heat conservation in the Roasting plant are now being carried out. During Mr. Neelands' visit, the underground development and production situation was closely studied.

The following is a comparison of the working force as at April 30th and May 31st:-

	<u>April</u>		<u>May</u>	
Total on Payroll, end of Month		258		265
Total Hired: Outside	30		42	
Locally	<u>7</u>	37	<u>10</u>	52
Total Left: Outside	25		37	
Locally	<u>4</u>	29(1)	<u>8</u>	45
Maximum on Payroll for 1 day		263(28th)		266 (30th)
Minimum on Payroll for 1 day		250( 1st)		255 (21st)
Average no. of Employees		254		259
Employees on Vacation Leave		6(1)		10
(1) included in "Total Left"				

Yours very truly,

  
F. C. Hubler,  
General Manager

Month Ending May 31st, 1949

No. 2 ShaftSummary of Development Advances:

Heading	DRIFTING, CROSSCUTTING AND RAISING			To Date		CUMULATIVE	
	Period Feetage Hds. Adv./Hd.	Period Feetage Hds. Adv./Hd.	Period Feetage Hds. Adv./Hd.	Period Cu. ft.	To Date Cu. ft.	Period Cu. ft.	To Date Cu. ft.
B-109E X-C	21.0 3 7.0	127.5 59 7.1		60	2503		
B-210S Dr.	55.0 9 6.1	154.0 23 6.9		1013	2328		
B-215M Dr.	-- -- --	-- -- --		571	571		
B-228W X-C	31.5 5 6.3	31.5 5 6.3		--	--		
B-312N Dr.	43.5 7 6.2	43.5 7 6.2		4125	4125		
B-314S Dr.	29.0 4 5.9	29.0 4 5.9		825	825		
B-403N Dr.	114.5 16 7.2	124.5 61 7.0		1520	1520		
B-404M Dr.	166.5 24 6.9	166.5 24 6.9		--	--		
725 Lamp	11.0 2 5.5	184.0 32 5.8		4906	5627		

Month Ending May 31st, 1949

GIANT YELLOWKNIFE GOLD MINES LIMITED

Summary of Development in Ore:

Heading	ADVANCE	
	Period To	ft.

B-312m Dr. 43.5 43.5

FACE OR RISE SAMPLING	
Period To	ft.
Av. Width	Av. Grade
ft.	oz./ton
8.0	1.66
8.0	1.66

CAR SAMPLING	
Period To	ft.
Tons	Av. Grade
592	1.52
592	1.52

Summary of Slope Sampling

Working Place	CHIP SAMPLING	
	Period To	ft.
Tons	Av. Grade	oz./ton
Broken	oz./ton	

B-204 --  
B-206 217 .45  
B-207 480 1.12  
B-208 1951 .36  
B-212 2596 1.28  
B-213 759 .49  
B-214 1006 .44  
B-216 81 .14  
B-221 --  
B-206 1452 .27

CAR SAMPLING	
Period To	ft.
Tons	Av. Grade
Trimmed	oz./ton

170 1.94 1.212 1.44  
360 3.677 .46  
940 12.486 .93  
1872 9.219 .53  
671 25.089 1.08  
851 3.471 .48  
545 5.229 .52  
16 2.776 .82  
1181 5.560 .81  
1181 7.037 .45

HUCKER HILL	
Period To	ft.
Tons	Av. Grade
oz./ton	

--  
1444 .59  
4952 .86  
7842 .64  
16,873 .96  
2,868 .50  
2,090 .48  
245 .85  
1,435 .70  
2,634 .43

Summary of Ore and Waste Trammed and Hoisted:

FROM ONE HUMP	
Period To	ft.
Tons	

-- 8957

ONE HUMP RELATIVE

Period To	ft.
Tons	

7637

FROM MINES	
Period To	ft.
Tons	Av. Grade

7546 .84 79,312 .81

WASTES	
Period To	ft.
Tons	

2911 47,384



No. 2 Shaft  
(Continued)

## Summary of Underground Mine Drilling:

Hole No.	COLLAR	Reading	Section	Bear.	Dip	FOOTAGE		SIGNIFICANT INTERSECTION					
						From	To	Drilled	From	To	Core Length	Calc. Inset	Grade Out
U-B 523		B-208 St.	365M	877E	71S	0	51	51	105.0	107.0	2.0	.40	-
U-B 524		B-403M	650M	560E	74S	0	196	196	0	5.0	5.0	.50	-
									153.0	179.5	26.5	.12	.09
U-B 525		B-208 St.	360M	820W	710	0	49	49	160.0	165.0	5.0	.33	-
U-B 526		B-208 St.	298M	870W	Hor.	0	23	23	0	8.0	8.0	.20	-
U-B 527		B-101E	125M	560E	Hor.	0	201	201	0	10.0	10.0	.64	.55
									0	29.0	29.0	.24	.18
									64.0	80.0	16.0	.29	.27
U-B 528		B-403M	650M	560E	71S	0	212	212	112.0	118.0	6.0	.34	-
									121.0	123.0	2.0	3.37	-
									90.0	91.0	1.0	1.15	-
U-B 529		B-208 St.	315M	885W	Hor.	0	32	32	184.0	192.0	8.0	.12	-
U-B 530		B-208 St.	--	--	-40	0	25	25	0	5.0	5.0	.06	-
U-B 531		B-208 St.	--	--	Hor.	0	41	41	5.0	10.0	5.0	1.03	-
U-B 532		B-303M	950M	860W	-50	0	60	60	0	11.0	11.0	.64	-
									(drilling)				

Footage drilled, May 1949

Footage drilled to April 30, 1949

Total No. 2 Shaft Footage to date

## Summary of Surface Mine Drilling:

Hole No.	COLLAR		FOOTAGE		SIGNIFICANT INTERSECTION			
	Reading	Section Elev.	From	To	Core Length	Calc. Inset	Grade Out	
S-356	Int. Elev. 5700	6000 5594	0	109	35.0	.14	-	
S-357	5600	5950 5799	0	185	4.0	.25	.24	
S-358	5500	5925 5798	0	106	9.0	.12	-	
S-359	5850	6000 5981	0	206	1.0	.45	.33	
S-360	6900	5300 6018	0	101	35.0			
	Footage drilled, May 1949			706				
	Former surface footage			95.226				
	Total surface footage to date			96.232				

Footage drilled, May 1949

Former surface footage

Total surface footage to date

Yellowknife, N. W. T.,  
July 19th, 1949.

Mr. T. Lindaley, President  
Giant Yellowknife Gold Mines Limited  
25 King Street West  
Toronto, Ontario

Report for July 1st - 15th, 1949.

Dear Mr. Lindaley:-

The following report summarizes the operating and development results of interest during the first half of July.

Treatment Plant

Amalgamation and Flotation Results, July 1 - 15, 1949

	<u>Dry Tons</u>	<u>Grade (oz./ton)</u>	<u>Contained Ounces</u>	<u>% Dist.</u>
Tons Milled; Period	3,091	0.917	2,834.60	100.0
Average per Day	206			
Recoveries:				
by Amalgamation			619.41	21.9
in Flotation Concentrates	236.4	8.583	2,028.85	71.5
R. C. - 13.1 : 1				93.4
Flotation Tailings	2,854.6	0.065	186.34	6.6

Tonnage milled was lower during the period due to renewal of the bowl and mantle of the Short Head Cone Crusher and installation of new head liners in the feed and discharge ends of the Ball Mill. While the work was being done on the Cone Crusher, mill feed was obtained directly from the Standard Cone and the grinding capacity of the Ball Mill was lower than normal due to the coarser feed. Re-lining the Ball Mill required a shut down of 32 hours, 20 minutes. During this time, roaster feed was maintained at the established rate by drawing more heavily on the stockpile.

Cyanide Bars Nos. 108-C to 113-C, with estimated gross value of \$103,625.00 from production of July 1st to 10th, were shipped to the Mint on July 14th. Amalgam Bar No. 114-A, with estimated gross value of \$21,760.00 from amalgamation recovery for July 1st to 15th, was shipped on July 19th.

- 2 -

Underground Operations

Ore trammed during the period, amounting to 3,467 tons, averaged 0.87 oz./ton in Ore Pass sampling and 0.85 oz./ton from the weighted trammed grades.

Development was continued on all levels. On the first level, 110-N drift is being driven to the surface raise. On the second level, 215-N drift was driven to Section 250-N, where further diamond drilling will be done to define the low-angle ore. No. 34 Boxhole Xcut was completed from 218-N drift. On the third level, a limited amount of work was accomplished in 212 and 214 drifts. No. 44 Boxhole Xcut was started for a southerly draw point at that end of 306 Stope. Driving of 403-N drift was resumed on a two-shift per day basis at the end of the period.

In No. 1 Ore Shoot, boxhole raising from the end of No. 34 Boxhole Xcut was advanced into ore below L.B.H. U-El77. In No. 2 Ore Shoot, mining continued normally in all stopes. 212 Stope provided approximately half the ounces trammed to the Ore Passes during the period.

In the N-AGE Zone, work continued on the preparation of additional draw points in the southern extension of 208 Stope. With respect to underground diamond drilling, one hole was drilled westerly from 403-N drift on Section 1300-N towards the projection on this level of No. 1 Ore Shoot. As this zone was not identified in this hole, which might lie to the south of the projected location, the drift will be carried to Section 1500-N before further diamond drilling is carried out.

Surface Diamond Drilling

One hole was completed on Section 6200-N near the West Bay fault and the drill was then moved to the East Zone between Section 6000-N and 6300-N. A significant intersection was obtained in hole S-376, in which a core length of 18 feet averaged 0.81 oz./ton (uncut).

Construction and General

At No. 2 Shaft, pump installation was completed at the main sump on the 725 level and this sump is now in service. Framing for the timber for raising the headframe was under way during the period and, as noted in the report for the last period, the surface piping has been changed to a new location.

At No. 3 Shaft, the additional excavation required for surface lines at the shaft collar, was completed and the bearing set is now being placed. Forms for the hoist are about 50% completed.

At the Cafeteria, exterior sheeting and the roof were completed and lower floor partitions are now in place. Installation of electrical and plumbing equipment is being carried on simultaneously with the construction of the building. Work on the Staff House is proceeding at a satisfactory rate.

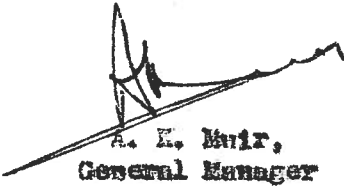


- 3 -

The Machine Shop framing was erected and the building is now being sheathed and backfill is being placed. The No. 3 Dry location is ready for driving of piles in the permafrost.

Freighting operations from Waterways, Norman Wells and the Resolute sawmill, are proceeding very satisfactorily.

Yours very truly,



A. L. Muir,  
General Manager

cc: AJA, EVN, ASD, ACC-3, MO-2 ✓

Yellowknife, N. W. T.,  
August 22nd, 1949.

The President and Directors  
Giant Yellowknife Gold Mines Limited

Dear Sirs:-

Monthly Report - July, 1949

The following report covers operations at the property during the month of July, 1949.

Production for the month amounted to 9,671.31 ounces of Gold and 4,002.37 ounces of Silver, with a total gross value of \$341,357.51. The current milling rate averaged 224.7 tons per day, with calculated mill heads of 0.792 oz./ton, for a total of 6,966 tons milled during the month. Gold recovery from current tonnage milled was 4,003.34 ounces, representing 49.7% of the production for the month, of which 1,201.65 ounces were obtained by amalgamation and 3,601.69 ounces by roasting and cyanidation of current flotation concentrates. Treatment of concentrates reclaimed from the stockpile produced 4,567.97 ounces of Gold, representing 50.3% of the production during the period.

Roaster feed rate averaged 15.9 tons per day, made up of 17.1 tons of current concentrates and 26.8 tons of reclaimed stock concentrates. The Ratio of Concentration in flotation continued high at 13.06 to 1. Calcine residues were again lower at 0.693 oz./ton, as compared with 0.764 oz./ton in June and 0.784 oz./ton in May. Indicated extraction by roasting and cyanidation averaged 91.6% for the month, on the basis of the estimated contained ounces in the Roaster feed, as compared with cyanidation plant products. Indicated overall extraction on current tonnage milled, including amalgamation, flotation and cyanidation, averaged 87%.

Broken ore reserves in No. 2 Shaft workings were increased by 6,730 tons to a total at July 31st of 57,466 tons averaging 0.77 oz./ton.

Total income during the month amounted to \$334,600.00, of which \$334,448.00 represents Mint Returns on Bars #94 to #113, inclusive. Due to heavy payments during the month on invoices for 1948-50 supplies, the Bank Loan was increased by a net amount of \$2,221.00. The net total of the loan at the end of the month of \$253,366.00, is after deducting cash on hand of \$7,773.00 at July 31st.

- 2 -

Treatment Plant - Recoveries and Operating Data

Dry Tons Milled; Month	6,966	
Average per Day	224.7	
Average Mill Heads, per ton	0.792 oz.	\$ 27.72

Recoveries(1) From Current Tonnage

(a) by Amalgamation	1,201.65 ozs.	\$ 42,057.78
Extraction	21.70%	

(b) in Flotation Concentrates

Tons Concentrates produced	533.55	
Average Grade, per ton	7.367 ozs.	\$257.85
Contained Ounces	3,930.54	
Extraction	71.24%	
Ratio of Concentration	13.06 : 1	
Flotation Tailings, Tons	6,432.45	
Aver. Grade, per ton	0.060 oz.	\$ 2.10

Combined Extraction by Amalgamation & in Flotation Concentrates	93.02%
--	--------

(c) by Roasting & Cyanidation

Tons treated	533.55	
Contained Ounces	3,930.54	
Ounces Recovered	3,601.69	\$ 125,274.72

(2) From Stockpiled Concentrates

Tons Reclaimed & Treated	888.58	
Average Grade, per ton	5.950 ozs.	\$208.25
Contained Ounces	5,287.20	
Ounces Recovered	4,867.97	\$ 171,163.32

Cyanidation Residue, per ton of Calcine	0.693	\$ 24.25
---	-------	----------

Summary of Recoveries

(Min. Returns on Bars Nos. 108 to 113, Mine Assays on Bars Nos. 114 to 126)

(1) From Current Tonnage

(a) by Amalgamation	1,201.65	
(b) from Flotation Concentrates	3,601.69	4,803.34 ozs. \$ 167,332.50

(2) From Reclaimed Stock Cons.

	4,867.97	171,163.32
--	----------	------------

Total Gold Recovered	9,671.31 ozs.	\$ 338,495.82
Total Silver Recovered	4,002.37	2,861.69

Gross Value of Production	\$ 341,357.51
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Details of development, slope preparation and mining, are described below and summaries of development advances, sampling averages and tonnages of ore and waste hoisted during the month, are appended to this report.

- 4 -

Development

On the first level, 110-W Dr. was completed to 105-W Vent for access to the ventilation and escape raise. 112-W Vent is being driven from 110-W Dr. to provide access to 212, 213 and 214 Stope as they break through to the first level.

On the second level, 215-W Dr. was extended to Section 250N in preparation for the development of the low-angle orebody.

On the third level, drifting was continued in S12ward 314S drifts. During the month, 312S drift averaged 1.40 ozs./ton in face sampling and 0.60 oz./ton in core sampling. In order to provide the additional storage capacity required for the increased mill tonnage planned in the near future, 303 Ore Pass raise is being driven to connect with the upper and lower ore pass systems.

On the fourth level, 403-W Dr. was advanced beyond Section 1400N and 404-W Dr. was driven a short distance to the north.

Slope Preparation and Mining

Work is under way on #46 Box Hole Vent, from which 205 Stope will be developed in No. 1 Orebody above the second level. This Vent was started from 207-W Vent and raising was under way at date of writing.

In the N-400 Zone, sub-drifting and finger raising are in progress from 210-W Dr. to prepare two additional draw points for the southward extension of 208 Stope. No. 44 Box Hole Vent was driven on the fourth level to provide an additional draw point at the south end of 306 Stope.

Underground Diamond Drilling

Routine diamond drilling was continued on the third and fourth levels and this program was increased on completion of the surface drilling early in August. Very encouraging results have been obtained in the drilling below the fourth level horizon.

Surface Diamond Drilling

Diamond drilling from surface was continued with one machine on the West Zone and East Zone definition holes, and this program was completed early in August. Important results were obtained in drilling the West Zone and the indicated tonnage was substantially increased during this program. The results are now being studied and a full report will be prepared at the earliest possible date.

- 5 -

Construction and General

At the No. 3 shaft area, the lower section of the concrete shaft collar was poured and the upper section was completed early in August. The foundation for the hoist was also completed and installation of the equipment is now in progress. Piling was driven for the change house and work continued on the Shop.

At No. 2 shaft new pipe boxes were built and raising of the headframe was in progress during the month.

Satisfactory progress is being made on the construction of the Cafeteria and Staff House.

Deliveries of lumber from the Rosdeltla sawmill and of general freight from Waterways and oil from Norman Wells, continued at a satisfactory rate. The tonnage of freight northbound from Waterways for the Mackenzie River region is substantially less than normal.

Temperatures during the month varied from 39.9°F. to a maximum of 79.9°F. Mean maximum temperature for the month was 67.1°F. and mean minimum temperature was 48.2°F.

The Governor-General, Viscount Alexander, accompanied by Viscount Alanbrooke, formerly Chief of the Imperial General Staff, paid a short visit to the property during the month. Dr. A. S. Jackson, Consulting Geologist for the Company, arrived at the property on July 19th.

Hydro power supplied by the N. W. T. Power Commission (Lanare River project) during the month was as follows:-

Primary Power	-	632,945 Kw. Hrs.	-	850 Kw.	-	1,140 H.P.
Electric Boiler	-	312,800 " "	-	420 " "	-	563 " "
		945,745 Kw. Hrs.	-	1,270 Kw.	-	1,703 H.P.

Primary power consumption amounted to 37% of the minimum contract quantity of 2,000 H.P. on the basis of the minimum contract cost \$16,666.66 per month, cost per ton milled for power was \$2.45 for the period.

The following is a comparison of the working force as at June 30th and July 31st:-

	June		July	
Total on Payroll, end of month		290		305
Total Hired: Outside	38		32	
Locally	11	49	11	43
Total Left: Outside	18		19	
Locally	6	24	9	38
Average No. of Employees		275		299
Employees on Vacation Leave		3(E)		4(E)

E included in "Total Left"

Yours very truly,

  
General Manager

cc: TL, AJA, HP, JAB, AER, EMA, EVJ,  
ACC, EVN, AGR, NO-2.

Month Ending July 31st, 1949

No. 2 ShaftSummary of Development Advances:

Heading	Drifting, Orienting and Mailing			To Date			SLASHES Period To late On.ft. On. ft.
	Per 100	Footage	Adv./ft.	Per 100	Footage	Adv./ft.	
B-110W Dr.	175.0	27	6.5	350.0	6	6.3	--
B-112E X-O	22.5	3	7.5	22.5	3	7.5	975 975
B-212W Dr.	30.0	7	5.4	108.5	19	5.7	--
B-312W Dr.	42.5	7	6.1	131.0	21	6.2	
B-314E Dr.	36.0	6	6.0	116.0	18	6.5	
B-403W Dr.	159.5	22	7.3	849.0	121	7.0	1120
B-404W Dr.	13.5	2	6.8	180.0	26	6.9	--
B-303 O.H. Pass.	112.0	22	5.1	112.0	22	5.1	

Month ending July 31st, 1949.

No. 2 Shaft

Summary of Development in Ore:

Heading	ADVANCE	
	Period	To Date
	ft.	ft.

B-312N 42.5 131.0

TRACE ON EMB SAMPLING	
Period	To Date
Av. Width	Av. Grade
ft.	oz./ton
0.0	1.39
0.0	1.49
0.0	1.49

CARBAMPLING	
Period	To Date
Tons	Av. Grade
oz./ton	oz./ton
202.0	.60
1114	1.23

Summary of Slope Sampling:

Working Place	CHIP SAMPLING	
	Period	To Date
	Tons	Av. Grade
	Broken	oz./ton

B-204	--	1.70
B-207	1,503	.97
B-208	2,614	.70
B-212	3,944	1.14
B-213	1,147	.56
B-218	385	.92
B-221	--	--
B-206	2,344	.47
B-214	1,503	.48

CARBAMPLING	
Period	To Date
Tons	Av. Grade
oz./ton	oz./ton
27.0	1.20
1306.8	1.19
966.6	.63
957.6	1.44
41.4	.29
298.8	1.27
--	--
2073.6	.42
1369.8	.50

BROKEN RESERVE	
To Date	Tons
Av. Grade	oz./ton
6266	.77
9812	.60
23695	1.08
3446	.49
175	.80
1298	.70
3842	.55
4694	.47

Summary of Ore and Waste Trammed and Related:

FROM ONE INTF	
Period	To Date
Tons	Tons

-- 8957

ONE INTF RESERVE	
To Date	Tons
7637	

FROM MINE	
Period	To Date
Tons	Av. Grade
oz./ton	oz./ton
6966	.75
93406	.81

WASTE	
Period	To Date
Tons	Tons
3460	
52874	



Month Ending July 31st, 1949.

No. 2 Shaft

SUMMARY OF UNDERGROUND MINERAL DRILLING

Hole No.	COLLAR			VELOCITY			SIGNIFICANT INTERSECTION			
	Heading	Section	Per. Dip	From	To	Drilled	From	To	Core Length	Grade Calc. Percent Cut
N-B504	N-308W	1300M	N60W	Hor.	80.0	989.0	909.0	909.0	--	--
N-B549	N-401W	550M	N60S	+45°	0.0	222.0	222.0	222.0	--	--
N-B550	N-403W	1300M	N60W	Hor.	0.0	395.0	395.0	395.0	--	--
N-B551	N-403W	1300M	N60S	Hor.	0.0	202.0	202.0	202.0	--	--
N-B552	N-302W	650M	N60W	-60°	0.0	79.0	79.0	79.0	--	--
N-B553	N-302W	650M	N60W	-60°	0.0	72.0	72.0	72.0	--	--
N-B554	N-302W	650M	N60W	+65°	0.0	74.0	74.0	74.0	--	--
N-B555	N-302W	475M	--	-90°	0.0	95.0	95.0	95.0	--	--
N-B556	N-215W	250M	--	+90°	0.0	108.0	108.0	108.0	--	--
N-B557	N-302W	525M	--	-90°	0.0	84.0	84.0	84.0	--	--

Footage Drilled, July 1949

2,240.0

Footage Drilled to June 30, 1949

50,385.0

Total #2 Shaft Footage to Date

52,625.0

Monthly Ending July 31st, 1949

No. 2 ShaftSummary of Surface Diamond Drilling

Hole No.	COLLAR			FOOTAGE			ESTIMATED INTERSECTION		
	Lat.	Long.	Heav. Dip	From	To	Drilled	From	To	Grade
8-372	6900	5600	6004	--	--	--	--	--	--
8-373	6200	5500	6039	--	--	--	--	--	--
8-374	6400	6300	6005	--	--	--	--	--	--
8-375	6300	6100	5996	--	--	--	--	--	--
8-376	6300	6275	6019	--	--	--	--	--	--
8-377	6100	6218	6008	--	--	--	--	--	--
8-378	5950	6050	5994	--	--	--	--	--	--
8-379	5900	6050	5993	--	--	--	--	--	--
8-380	7500	5950	6012	--	--	--	--	--	--
8-381	7500	5400	6011	--	--	--	--	--	--
8-382	6900	5976	6009	--	--	--	--	--	--
8-383	6900	5800	5994	--	--	--	--	--	--
8-384	6800	5600	6004	--	--	--	--	--	--
				293	395	102.0	296.5	331.0	.21
				0	598	598	248.5	252.0	.11
				0	184	184	297.5	304.0	.12
				0	193	193	160.0	162.0	.22
				0	140	140	108.5	126.5	.81
				0	191	191	135.0	138.0	.69
				0	128	128	--	--	--
				0	140	140	134.5	136.5	.43
				0	165	165	76.5	80.0	.45
				0	183	183	--	--	--
				0	469	469	414.0	416.0	.33
				0	507	507	--	--	--
				0	131	131	--	--	--

Footage Drilled, July 1949

3.131

Surface Footage to June 30, 1949

99.267

Total Surface Footage to Date

102.398

GIANT YELLOWKNIFE GOLD MINES LIMITED

Yellowknife, N. W. T.,  
March 18, 1950

The President and Directors,  
Giant Yellowknife Gold Mines Limited

Monthly Report - February, 1950

Dear Sirs:-

The following report covers operations at the property during the month of February, 1950.

Production for the 28 day period amounted to 7,019.77 ounces of Gold and 2,767.91 ounces of Silver, with a total gross value of \$272,491.42. The milling rate averaged 391.1 tons per calendar day for a total tonnage treated of 10,951 for the month. Calculated mill heads averaged 0.713 oz/ton (.27.44/ton) and indicated overall extraction in the Treatment Plant was 89.95% for the month.

Broken ore reserves at No. 2 Shaft were increased by 1,850 tons to a total of 28,750 tons averaging 0.72 oz/ton at the end of the month. This tonnage represents over seven months mill supply at the current rate of 400 tons per day. A total of 328 feet of lateral development was carried out on the fourth level at this shaft, of which 180 feet was in ore of excellent grade.

No. 3 Shaft was sunk 118 feet to a depth of 464 feet below the collar and 9735 cu. ft. of station cutting was completed at the third (425) level. Including equivalent footage of 41.5 feet for the latter, total advance for the month, including 5½ shifts lost while handling "loose" at the third level Station, amounted to 159.5 feet for the 28 day period. During the 3½ month period from the start of sinking on November 14th, total advance amounted to 539.5 feet, consisting of 427 feet of sinking and 112.5 feet of equivalent advance in stations cutting. This represents an average advance of 154 feet per calendar month, including all time lost for plant shutdowns and holidays.

Total income received during the month amounted to \$381,230., of which \$306,644. was obtained from Mint Returns on Bars Nos. 205 to 221, representing net returns on the entire production in January. In addition, a payment of \$68,567. was made by the Dominion Government on Emergency Assistance Claim No. 4,1949, and \$6,000. was received from the sale of Treasury Stock under By-law No. 19. Total disbursements amounted to \$136,640. resulting in a surplus of \$244,590. which reduced the Bank Loan to a net total of \$451,892. at the end of the month.

Operating costs at the mine during the month were \$14.08 per ton and total costs, including 21¢ for Bank interest and 41¢ for Administrative charges were \$14.70 per ton. Unit costs were slightly higher than in January, due to the 28 day month, as such charges as salaries, overhead, insurance and electric power are on a monthly basis. Operating profit before write-offs, amounted to \$128,334., or \$11.72 per ton milled, included estimated Emergency Assistance for the month of \$19,025.

TREATMENT PLANT - Recoveries and Operating Data

Note: Based on Mint Returns for production of February 1st to 15th;  
Mine estimates for production of February 16th to 28th, and  
adjustment to Mint Returns for January 16th - 31st.

<u>Tons Milled:</u> Month	10,951	
Average per Calendar day	391.1	
Average per Operating day	408.2	
Calculated Mill Heads, per ton	0.713 oz.	\$27.44

Recoveries

(a) <u>by Amalgamation</u>		
Ounces Gold Recovered	1,214.10	
Extraction	15.56 %	
(b) <u>in Flotation Concentrates</u>		
Tons Concentrates produced	1,005.4	
Average Grade, per ton	6.003	\$231.13
Contained ounces	6,035.95	
Extraction	77.34 %	
Ratio of Concentration	10.9 to 1	
Flotation Tailings, Tons	9,945.6	
Average Grade, per Ton	0.056 oz.	\$2.14

Combined Extraction by Amalgamation and in Flotation Concentrates	92.89 %
--	---------

(c) <u>by Roasting and Cyanidation</u>		
Tons treated	1,005.4	
Average per day	36	
Contained ounces	6,035.95	
Ounces Gold Recovered	5,805.67	
Extraction	96.18 %	
Cyanidation Residues, Tons	755.7	
Average Grade, per ton	0.575	\$22.12

Indicated Overall Extraction in Treatment Plant	89.95 %
---	---------

Summary of Recoveries

<u>Gold:</u> by Amalgamation	1,214.097	
by Cyanidation	5,805.674	
	7,019.771 ozs.	\$270,261.19
<u>Silver:</u> Total Recovered	2,767.91 ozs.	2,230.23
Gross Value of Production		\$272,491.42

### Refining

The following bars were shipped to the Mint from production during the month:-

<u>Production Period</u>	<u>Bar Nos.</u>	<u>Type</u>	<u>Date Shipped</u>
February 1st - 15th	2220-2270	Cyanide	February 20th
" 1st - 15th	228A	Amalgam	" 20th
" 16th - 28th	227A	Amalgam	March 6th
" 14th - 28th	2300-2350	Cyanide	" 6th

### Operations

Mill operating time averaged 95.8% for the month, lost time being caused by repairs to the Ball Mill feeder and the change-over when the 54" Classifier and the new Screw Conveyor were brought into the circuit. The Primary Ball Mill tonnage was then increased to approximately 425 tons per day and, with normal conditions, it is expected that an average rate of 400 t.p.d. can be maintained. The Bowl and Hantle of the Standard Symons Crusher were renewed on February 18th/19th; the former after crushing 93,421 tons and the latter after handling 73,984 tons of ore. Larger sheaves and motors were installed on the Unclassified and Barren Solution runs so that the solution tonnage could be increased with the higher milling rate.

Primary grind averaged 79.4% -200 mesh and flotation feed density averaged 31.5% solids. Flotation feed temperature was maintained at an average of 67.6°F.

The base section of the Roaster Stack was cleaned out on February 17th/21st and the accumulated arsenic disposed of under overburden. The dust chambers of both hearths were cleaned on February 24th.

### UNDERGROUND OPERATIONS

#### No. 2 Shaft

Ore trammed during the month, amounting to 11,055 tons, averaged 0.77 oz/ton in car sampling.

Broken ore reserves increased by 1,850 tons to a total of 88,750 tons averaging 0.72 oz/ton.

Summaries of underground diamond drilling and development results, broken ore reserves and tonnages of ore and waste trammed and hoisted during the month, are appended to this report.

#### Development and Diamond Drilling

On the fourth (575) level, a total of 328 feet of drifting was accomplished in 403 North and 409 North Drift. The latter heading exposed 180 feet of ore averaging 0.75 oz/ton in face sampling and 0.60 oz/ton in car sampling, across drift width, with cross sectional diamond drilling to be carried out later to determine full widths.

403 North Drift was extended to Section 1700 North and diamond drilling, both horizontal to the west and east and down holes below the level will be carried out in March.

Routine diamond drilling was done from 308 and 312 Drifts for the development of 312 and 408 Stopes. Down holes were drilled from the fourth level to trace the lower orebody south from Section 1200 North. On Section 1150 North, a core length of 56.5 feet was intersected, but narrow marginal intersections only were obtained on Section 1100 North.

### No. 3 Shaft

Progress during the month amounted to 118 feet of sinking and 9735 cu. ft. of Station Cutting at the third (425) level; the latter being equivalent to 41.5 feet of sinking advance. Total equivalent advance for the month amounted to 159.5 feet. Time lost for legitimate reasons, --shaft inspection, installing bearer set, and handling excessive loose at the third level station --amounted to 5 1/2 shifts. Bonus earnings, after subtracting legitimate time lost and adjusting to a 31 day month, averaged \$10.80 per miner shift.

Operating data are summarized below:-

#### Sinking

Advance for Month	125.0'	Total to February 28th	464.0'
No. of working days	21.3	Advance per day	5.5'
No. of Benches	54	Advance per Bench	2.2'
Tons Mucked	2,589	Tons per ft.-advance	21.9
Explosives lbs.	7,765	Lbs. per ft. advance	63.8
Detachable Bits	8,600	Bits per ft. advance	53.9

#### Station Cutting (425 level)

Cu. Ft. of Excavation	9,735	Equivalent Advance-	41.5'
No. of working days	6.0	Advance per day	6.9'
Tons Mucked	811	Tons per ft. advance	19.5
Explosives Lbs.	1,560	Lbs. per ft. advance	37.6

### GENERAL

Hydro power supplied by the N.W.T. Power Commission during February was as follows:-

Primary power	874,360 K.W.H.-	1,301 K.W.-	1,745 HP
Electric Boilers	952,300 " -	1,418 " -	1,900 "
	1,826,660 K.W.H.-	2,719 K.W.-	3,645 HP

Primary power consumption amounted to 70% of the minimum contract quantity of 2,500 HP. The balance, together with an additional 1,900 HP, was used in the electric boilers at the Mill.

At the Treatment Plant, the 54" Duplex Classifier was brought into the primary grinding circuit with completion of the Screw Conveyor. A larger exhaust fan was installed above the agitators in the cyanidation section of the Mill. The mill testing Laboratory, adjoining the mill office, is ready for operation.

Interior work and electrical and heating installations were in progress in the new Assay Office which is located in the No. 3 Shaft-Treatment Plant area.

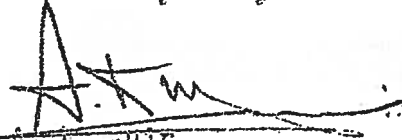
Collective bargaining negotiations were in progress at the end of the month. A summary of the situation on March 16th, when the Union requested the Services of a Conciliation Officer, was submitted to Head Office by letter of March 17th.

Average temperatures, while consistently well below zero, were milder than in February, 1949. Maximum and minimum temperatures during the month were -2.5°F on February 13th and -49°F on the 18th.

The following is a comparison of the working force in January and February, 1950:-

	<u>January</u>	<u>February</u>
Total on Payroll, End of Month	315	304
Change during month	7 23	-11
Total Hired: Outside	17	4
Locally	<u>18</u> 35	<u>8</u> 12
Total Left: Outside	6	12
Locally	<u>6</u> 12	<u>13</u> 25
Average No. of Employees	308	311
Employees on Vacation Leave	1	1

Yours very truly

  
A. H. Miller  
General Manager

cc: TL, AJA, RP, JBS, AKH, MPJ, LVJ,  
ACC-5, NVA, ASD, MO-2

Sheet No. 2

Period: February, 1950

Summary of Development Advances

Heading	DRAFTING, CROSSCUTTING AND RAISING				GLASSING		
	Period	Footage	Adv./M	To Date	Period	To Date	Adv./M
B-403N Dr.	88.5	12	7.4	1104.5	156	7.1	
B-408S Dr.	30.0	4	7.5	291.5	38	7.7	
B-409N Dr.	209.5	29	7.2	252.5	34	7.4	2720



Shaft No. 2

Period: February, 1950

# Summary of Development on Ore

Locating	ADVANCE		FACE OR LIDS		CAR SAMPLING	
	Period ft.	To Date ft.	Period Av. Width	To Date Av. Grade Cut	Period Tons Av. Grade Oz/ton	To Date Tons Av. Grade Oz/ton
B-109K	180.0	180.0	8.0	.75	1.279	.60 1.279 .60

# Summary of Stope Sampling

Stope	CHIP SAMPLING			CAR SAMPLING			BROKEN ORE	
	Period Tons Broken	Av. Grade oz/ton	To Date Tons Broken	Period Tons Trammed	Av. Grade oz/ton	To Date Tons Trammed	To Date Tons	Grade
B-204	1,022	1.67	2,469	117	1.20	1,564	905	1.20
B-206	--	--	9,941	--	--	8,598	1,343	.57
B-207	105	1.63	23,450	1,287	1.07	20,414	3,036	.83
B-208	4,441	.50	41,070	1,926	.52	22,492	18,578	.48
B-212	867	2.38	67,407	655	.58	34,303	33,104	.99
B-213	1,743	1.10	17,564	563	.76	9,122	8,442	.58
B-214	--	--	25,860	1,220	.80	16,666	9,194	.55
B-218	741	1.53	11,394	1,757	.75	9,643	1,751	.65
B-221	--	--	--	--	--	--	1,191	.70
B-306	1,796	1.26	33,675	1,480	.95	23,004	10,671	.52
B-310	646	1.68	2,311	419	1.50	1,771	540	1.20
B-304	269	.28	269	303	.19	303	--	--

# Summary of Ore and Waste Trammed and Hoisted

ORE FROM MINE			WASTE	
Period	To Date	Tons	Period	To Date
Tons	Av. Grade	Tons	Tons	Tons
10,951	.768	176,277	3,432	75,585

## SUMMARY OF UNDERGROUND DIAMOND DRILLING

Shaft No. 2

Hole No.	COLLAR			Dip	FOOTAGE			SIGNIFICANT INTERSECTION			
	Heading	Section	Bear.		From	To	Drilled	From	To	Core Length	Calc. Grade Uncut Cut
U-B702	B-210S	150N	--	490	90	150	60	121.0	150.0	29.0	.33
U-B703	B-407N	1550N	--	490	16	102	86	--	--	--	--
U-B704	B-407N	1500N	S60W	445	0	140	140	54.5	91.5	37.0	.41
U-B705	B-210S	150N	N60W	480	0	76	76	55.0	59.0	4.0	.34
U-B706	B-408S	1150N	--	490	0	78	78	44.5	59.0	14.5	2.60
U-B707	B-313E	1175N	--	490	0	133	133	73.0	77.0	4.0	.69
U-B708	B-408S	1150N	N60W	445	0	111	111	44.0	59.0	15.0	.50
U-B709	B-313E	1175N	--	490	0	89	89	80.5	111.0	30.5	.20
U-B710	B-404N	1050N	--	490	0	72	72	12.5	14.0	1.5	.51
U-B711	B-404N	1050N	--	-90	0	41	41	39.0	48.5	9.5	.60
U-B712	B-313E	1175N	--	490	0	142	142	1.0	22.5	21.5	.16
U-B713	B-312N	1400N	N	Hor.	0	480	480	2.0	16.0	14.0	.24
U-B714	B-313E	1175N	--	490	0	123	123	36.0	78.0	42.0	.48
U-B715	B-313E	1175N	--	490	0	109	109	145.5	150.0	4.5	.50
U-B716	B-313E	1175N	--	490	0	79	79	16.5	58.5	42.0	1.00
U-B717	B-308N	1050N	--	-90	0	44	44	1.0	35.5	34.5	.98
U-B718	B-308N	1100N	N60W	-70	0	110	110	50.0	57.0	7.0	.32
U-B719	B-404N	1150N	N60W	-35	0	222	222	1.0	8.5	8.5	.43
U-B720	B-308N	1100N	N60W	460	0	51	51	19.5	38.0	18.5	.39
U-B721	B-308N	1150N	N60W	-60	0	167	167	50.0	57.0	7.0	.33
U-B722	B-404N	1150N	N60W	-51	0	235	235	8.0	28.5	20.5	1.34
U-B723	B-308N	1150N	--	490	0	94	94	7.0	31.0	24.0	3.73
U-B724	B-404N	1150N	N60W	Hor.	0	34	34	53.0	74.5	21.5	.57
U-B725	B-404N	1100N	N60W	-20	0	191	191	1.0	27.0	26.0	.27
U-B726	B-312N	1150N	--	490	0	44	44	133.5	190.0	56.5	.60
U-B727	B-313E	1175N	N60W	460	0	38	38	1.0	22.0	21.0	8.40
					0	167	167	16.0	21.0	5.0	.51
					0	235	235	25.0	40.5	15.5	.61
					0	94	94	158.5	186.5	28.0	.41
					0	34	34	1.0	78.5	77.5	.97
					0	191	191	0	12.0	12.0	.18
					0	44	44	141.0	145.5	4.5	.25
					0	38	38	1.0	5.0	4.0	1.37
					0	167	167	12.0	21.0	9.0	.37
					0	235	235	7.0	21.0	14.0	.43
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					0	94	94				
					0	34	34				
					0	191	191				
					0	44	44				

# SUMMARY OF UNDERGROUND DIAMOND DRILLING

Shaft No. 2

Period: February, 1950

Hole No.	C O L L A R			F O O T A G E			SIGNIFICANT INTERSECTION		
	Heading	Section	Bear.	Dip	From	To	Drilled	From	To
U-B728	B-308N	1200N	N60W	-65	0	172	172	2.0	14.0
U-B729	B-404N	1100N	N60W	-45	0	56	56	34.0	89.0
U-B730	B-404N	1100N	--	-90	0	62	62	120.0	152.0
U-B731	B-308N	1250N	N60W	-65	0	167	167	17.0	41.5
U-B732	B-404N	1100N	N60W	-45	0	235	235	1.0	34.0
U-B733	B-403N	1150N	N60W	-30	0	116	116	9.5	14.5
U-B734	B-308N	1250N	--	-90	0	51	51	77.0	99.0
U-B735	B-308N	1300N	N60W	-65	0	127	127	116.0	153.0
								162.0	167.0
								18.0	25.0
								163.0	181.0
								204.0	210.0
								221.5	224.0
								64.0	79.0
								1.0	34.0
								8.0	127.0
								12.0	51
								55.0	56
								32.0	1.82
								24.5	.43
								33.0	.37
								5.0	.55
								22.0	.24
								37.0	.57
								5.0	.27
								7.0	.26
								18.0	.23
								6.0	.25
								2.5	.84
								15.0	.23
								33.0	.29
								119.0	.41

Footare drilled, February 1950

Footare drilled to January 31, 1950

Total No. 2 Shaft footare to date

4,035

73,985

78,020

Yellowknife, N. W. T.  
February 22, 1950

Mr. T. Lindsley, President  
Giant Yellowknife Gold Mines Limited,  
25 King Street West,  
Toronto, Ontario

Report for February 1st to 15th, 1950

Dear Mr. Lindsley:-

The following report summarizes the operating and development results of interest during the first half of February.

Treatment Plant

Amalgamation and Flotation Results, February 1 - 15, 1950

	<u>Dry Tons</u>	<u>Average Grade (Oz/ton)</u>	<u>Contained Ounces</u>	<u>% Dist.</u>
<u>Tons Milled:</u> Period	5,927	0.727	<u>4,310.3</u>	<u>100.0</u>
Average per day	395.1			
<u>Recoveries</u>				
by Amalgamation			669.0	15.5
in Flotation Conc.	603.5	5.581	3,367.8	<u>78.1</u>
R.C. - 9.8: 1				93.6
Flotation Tailings	5,323.5	0.051	273.5	6.4

Refining and Shipment of Bullion

Cyanide Bars Nos. 222C/227C with estimated gross value of \$115,479. from production of February 1st. to 13th and Amalgam Bar No. 228A with estimated gross value of \$25,883. for the period Feb. 1st. to 15th. were shipped to the Mint on February 18th. Estimated gross value of this shipment, from Mine assays, was \$141,362.

Operations

Lost time in the grinding and flotation circuits amounted to 7 hrs. 05 mins. through a short hydro power outage on February 1st and repairs to the Ball Mill feeder on the 2nd.

- 2 -

Underground OperationsNo. 2 Shaft

Ore trammed during the period, amounting to 6,162 tons, averaged 0.74 oz/ton in car sampling.

404 Stope Raise was broken through to the third level.

409 North Drift was driven at the rate of two rounds per day in the ore recently disclosed by underground diamond drilling between 407 North and 403 North drifts. The length of feet opened during the period averaged 0.92 oz/ton in face sampling and 0.82 oz/ton in car sampling.

Underground diamond drilling was concentrated in 308 North and 312 North Drifts and in 313 East XCut to provide information for the development of 310, 312 and 408 Stopes.

No. 3 Shaft

An advance of 79 feet, to a depth of 425 ft. below the collar, was obtained during the period.

GENERAL

At the Mill, a larger exhaust fan was installed near the agitators. Pipefitting was completed on the Screw Conveyor and this unit is scheduled to go into service during the current week. The housing for the Testing Laboratory, adjoining the Mill office, was completed and equipment is now being installed. Thawing of the wood stave flotation tailings line, which froze on January 1st, was resumed when the weather moderated during the first part of the month. These tailings are now being discharged through a 4" Victaulic line which was installed immediately after the freeze-up of the wood stave line in early January. Work continued on the insulation and interior sheeting of the new Assay Office.

Proposals for revisions in the existing Collective Bargaining Agreement, and additions thereto, were received from Local 802, I.U.M.M. & S.W. on February 15th and are now being studied.

The major demands are as follows:-

1. An across-the-board wage increase of 35 cents per hour.
2. Doubling the existing shift differential of 3¢, 4¢, and 5¢ per hour.
3. Double time for Sundays.
4. Double time for all Statutory Holidays if not worked; triple time if worked.

- 3 -

5. Seniority to be the only consideration in promotions, demotions, and lay-offs.
6. Elimination of the no-strike clause.
7. Two weeks vacation with pay after 10 months employment, three weeks with pay after 20 months, four weeks with pay after 30 months and five weeks with pay after 40 months. Vacation pay to be at the base rate for a 56 hour week, plus overtime and bonus earnings.
8. Fifteen days sick leave with pay for each year of employment, accumulative up to 90 days. Free board while on sick leave.
9. Two extra days off per month, in addition to regular time off.
10. All existing contracts of employment, between the individual employee and the Company, to become null and void.
11. Check-off of union dues, initiations and assessments.
12. "Union Shop" -- all employees to become and remain members of the Union as a condition of employment with the Company.

If the above demands are serious, and our information indicates that they are, it appears most unlikely that any reasonable agreement can be reached by collective bargaining, which will commence about March 1st, and that the conciliation procedure provided by Dominion law, will be employed in the early stages of bargaining.

Yours very truly



A. K. Muir  
General Manager

cc: AJA, EVN, ASD, ACC-3, MO-2

Yellowknife, N. W. T.,  
March 9, 1950

Mr. T. Lindsley, President  
Giant Yellowknife Gold Mines Limited,  
25 King Street West,  
Toronto, Ontario

Report for February 16th to 28th., 1950

Dear Mr. Lindsley:-

The following report summarizes the operating and development results of interest during the last half of February. Preliminary figures for production and recoveries during the month of February are given on the second page of this report.

Treatment Plant

Amalgamation and Flotation Results, February 16 - 28, 1950

	<u>Dry Tons</u>	<u>Average Grade</u> (Oz/ton)	<u>Contained Ounces</u>	<u>% Dist.</u>
Tons Milled: Period	5,024	0.696	<u>3,496.9</u>	<u>100.0</u>
Average per day	386.5			
<u>Recoveries</u>				
by Amalgamation			547.7	15.7
in Flotation Conc.	402	6.638	2,668.1	<u>76.3</u>
R.C. - 12.5 to 1				<u>92.0</u>
Flotation Tailings	4,622	0.061	281.1	8.0

Refining and Shipment of Bullion

Amalgam Bar No. 229A and Cyanide Bars Nos. 230C/235C, with estimated gross value of \$131,820. from production of February 16th to 28th, were shipped to the Mint on March 4th and 6th.

Operations

The milling rate for the period was slightly less than the average for the first half of the month, as the Primary grinding circuit was shut down for several hours on February 20th, 22nd, and 24th in preparation for cutting in of the 54" Duplex Classifier. This unit went into operation on February 24th, and the daily tonnage to the Primary Ball Mill was gradually increased from 404 tons that day to 426 tons on February 28th. In general, operation with the new circuit, and of the remainder of the Treatment Plant was satisfactory.

- 2 -

Preliminary Production Data, Month of February, 1950

<u>Tons Killed: Month</u>	10,951	
Average per day	391.5	
Calculated Mill Heads, per ton	0.713 oz.	\$27.45
<u>Recoveries</u>		
(a) <u>by Amalgamation</u>		
Ounces Gold Recovered	1,214.10 ozs.	
Extraction	15.6 %	
(b) <u>in Flotation Concentrates</u>		
Tons Concentrates produced	1,005.4	
Average Grade, per ton	6.003	\$231.11
Contained Ounces	6,035.95	
Extraction	77.3 %	
Ratio of Concentration	10.9 to 1	
Flotation Tailings, Tons	9,945.6	
Average Grade, per ton	0.056 oz.	\$2.14
Combined Extraction by Amalgamation and in Flotation Concentrates	92.9 %	
(c) <u>by Roasting and Cyanidation</u>		
Tons treated	1,005.4	
Average per day	36	
Contained Ounces	6,035.95	
Ounces Gold Recovered	5,805.67	
Extraction	96.2 %	
Cyanidation Residues, Tons	755.7	
Average Grade, per ton	0.575 oz.	\$22.14
Indicated Overall Extraction	89.9 %	

Summary of Recoveries

(Mint Returns on production of February 1st. - 15th., Mine office Assay for February 16th.-28th., and adjustment to Mint Returns for January 16th.-31st.)

<u>Gold</u>			
by Amalgamation	1,214.10		
by Cyanidation	<u>5,805.67</u>	7,019.77 ozs.	\$270,261.
<u>Silver</u>			
Total Recovered		2,767.91 ozs.	<u>2,230.</u>
Gross Value of Production			\$272,491.



- 3 -

Underground OperationsNo. 2 Shaft

Ore trammed during the period, amounting to 4,893 tons, averaged 0.805 oz./ton in car sampling. Stopes in No. 1 Ore Shoot supplied more than half the ounces of gold in the tonnage trammed, and 600 tons or approximately 12% of the latter was obtained from development in 409 North Drift in the new ore to the north on the fourth level.

Lateral development was continued on the fourth (575) level: 403 North Drift being extended to Section 1700 North and 408 North Drift was completed at Section 1100 North. In addition, 409 North Drift was advanced to 1700 North in ore averaging 0.55 oz./ton in face sampling and 0.35 oz./ton in car sampling.

Emphasis was continued on stope preparation; a start being made in taking down backs in 204 Stope, Sub-drifting was continued, following grizzly installations, in 205, 215, and 314 Stopes and silling of 310 Stope was in progress.

In No. 2 Ore Shoot the final ore sections adjacent to the surface pillar are being removed in 212 and 213 Stopes.

In the North ASD Zone, the westerly draw points in the northern section of 306 Stope were coned up into high grade ore and coning is in progress in 404 Stope above the 575 level.

Underground Diamond Drilling was carried out in No. 1 Ore Shoot for the development of 312 and 408 Stopes, and with down holes from the fourth level, traced the lower Ore Body south from Section 1200 North. In the latter drilling, an intersection of 56.5 feet averaging .60 oz./ton was obtained on Section 1150 North, but only narrow marginal intersections were obtained on Section 1100 North.

No. 3 Shaft

During the period, the shaft was sunk 39 feet to a depth of 464 feet below the collar, and 9,735 cu. ft. of station cutting, equivalent to 41.5 feet of shaft advance, was completed on the third (425) level horizon. Total equivalent advance for the period was 80.5 feet, making a total of 159.5 feet for the month of February. This would be equivalent to 176 feet for a 31 day-month.

Construction and General

At the Treatment Plant, pipe fitting and electrical work was completed in the Mill Laboratory, and equipment is now being installed. Installation of the Screw Conveyor was completed and, as noted in an earlier paragraph of this report, the 54" Duplex Classifier was placed in service during the period.

Installation and fire protective covering of the roof of the Mill Switch Room was commenced with the installation of Asbestoside.

- 4 -

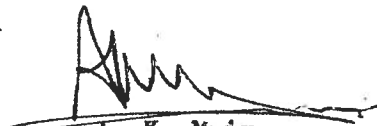
In the new Assay Office, which is located to the north of the Refinery and east of the F Conveyor Gallery, installation of the exterior walls was completed, partitions were installed, and a start was made on installation of equipment.

There was a marked increase in absenteeism during the period and nine employees were discharged for this reason.

During the period, the weather was considerably milder than in January, the maximum temperature being  $-0.6^{\circ}$  F on February 27th and the minimum  $-49^{\circ}$  F on the 18th.

Collective Bargaining Negotiations were in progress at the end of the period.

Yours very truly

A handwritten signature in dark ink, appearing to be 'A. K. Muir', written over a horizontal line.

A. K. Muir  
General Manager

cc: AJA, EVN, ASD, ACC-3, MO-2

RECEIVED  
JAN 27 1968  
T.W.H.