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SUMMARY REPORT

ARCTIC GOLD & SILVER MINES LTD.

CARCROSS, Y.T.

EXAMINATION 4-7 OCTOBER, 1968.

by

WALTER E. CLARKE, B.Sc., P. Eng.

ARGTIC GOLD & SILVER MINES LTD.

S U M M A R Y

EXAMINATION 4-7 OCTOBER 1968.

PRODUCTION TO DATE

Mine Mucks	27810T	0.32	8.94	All items 20-25% high
Mill Heads	20847T	0.25	7.03	
Recovery	Au 74%	Ag 67%		Ratio of Concentration 1:11

Hal Pawson anticipates 90% + for each in near future.

Estimated Revenue \$373,000.00

Costs	Per ton milled
Mining - ore to Coarse Ore Bin	8.13
Milling	11.38
Concentrates, Transportation & Treatment	<u>5.80</u>
	25.31
Indirect	
Administration (Probably erratically high but will average 3.00)	4.20
Financial	<u>1.15</u>
	30.66
Revenue	<u>18.00</u>
NET LOSS	12.66

COMMENTS:

Grade low because of excessive overbreak in stopes which average 6 feet wide. Check calculations of chip samples over 6 feet width gives

comparable grade to mucks. Opinion of mine personnel is that fines left in stopes will account for much of discrepancy. I disagree as a rough estimate assuming 2" fines over F.W. of stopes will only produce about 400T from all working places and will not average better than concentrate grade of 2.00 oz. Au and 50 oz. Ag., thereby increasing overall grade by only 0.05 Au and 1.00 oz. Ag.

Present grade is not a paying proposition and with exception of next 3 months when grade should be better, there is no reason to expect a change, unless a cleaner mining method can be devised.

FUTURE OPERATIONS

Estimated Reserves above adit level

24,700T 0.61 17.47 based on 6' mining width
out by 20% to conform to previous comparison with mill heads, giving
grade of 0.49 13.98

At the present rate of milling, 230 T.P.D. reserves will be exhausted by mid January.

Revenue	40.80 P.T. milled	
Costs as per July Aug.	<u>30.66</u>	
Net Profit	10.14 or for 24,700T	\$250,458.00
	assuming 85% recoveries Au. \$38 Ag 2.10	
Less 75% for debentures		<u>187,843.00</u>
Net Profit to Company		\$ 62,615.00

Liabilities to Aug. 31	2,676,292.00
Estimated loss Sept.	<u>63,692.00</u>
	2,739,984.00
Less Profit on 24,700T	<u>250,458.00</u>
NET LIABILITIES	\$2,489,526.00

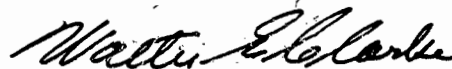
New adit starting today for a total length of 1,400 feet, collared 150 feet vertically below existing main level. It is estimated that a new and untested vein, the Portal vein will be reached 15 November. The #1 vein 1 December and #2 vein 15 January (when reserves on present level are exhausted). It is estimated that \$150,000.00 will be required for the adit, drifting and raising, plus some diamond drilling, as the preproduction cost. This work may put 75,000 tons in sight, but drill indications, which admittedly are sparse and directed at poor angles to the vein, are that the grade may be sub-ore - certainly unless a better mining method is used.

The balance of the property adjacent to the mine has been tested by geochem and several interesting anomalies are present - one proved to be a vein at the portal of the new adit, which is encouraging. The Montana vein was not seen, but other than one very short shoot, the assay plan indicates a grade of 0.08 Au, 10-15 oz. Ag.

It is believed that the cream is off the presently known ore shoots, but a commitment of \$150,000.00 is necessary to optimistically provide continuity to the operations which is already saddled with a \$2.5 million debt. There does not appear to be much chance that this expenditure will generate enough revenue to substantially decrease this debt. In fact the reverse may be true, particularly considering the enforced 75% debenture repayment.

The untested portion of the property is the only salvation and expenditures in this direction will not produce mill feed in a hurry.

Respectfully submitted,



WALTER E. CLARKE, B.Sc., P.Eng.,
Consulting Engineer.

October 8, 1968.

MINE-MILL PRODUCTION BALANCE

JUNE-SEPT, 1968.

MINE MUCKS

<u>TONS</u>	<u>GRADE</u>		
	Au.	Ag.	
27,810	0.32	8.94	(Average 20% higher than mill)

MILL HEADS

	<u>METAL CONTENT</u>			
	Au.	Ag.	Au.	Ag.
20,847	0.25	7.03	5,148.7	146,580.96

RECOVERY

Concentrate

DRY TONS	GRADE		METAL CONTENT		RECOVERY	
	Au.	Ag.	Au.	Ag.	Au.	Ag.
1864.84	2.05	52.71	3,814.48	98,296.00	74.09	67.06

TAILS

<u>18,982.00</u>	0.07	2.54	<u>1,296.72</u>	<u>48,274.00</u>
20,846.84			5,111.20	146,570.00

UNACCOUNTED FOR

37.50 10.96

RATIO OF CONCENTRATION 1:11

FINANCIAL (to August 31, 1968)

BUILDINGS & EQUIPMENT	\$2,143,708.00
DEFERRED EXPLORATION, DEVELOPMENT, ADMINISTRATION, FINANCE	<u>2,204,825.00</u>
	<u>\$4,348,533.00</u>

LIABILITIES:

Current	\$ 819,664.00
Option Payments	159,760.00
Mortgage	11,868.00
Long Term Debt	<u>1,585,000.00</u>

\$2,676,292.00

COSTS

MINING

PER TON MILLED

Direct	2.75
Indirect	2.66
Overhead	0.82
Tramming	1.13
Haul to mill	<u>0.77</u>

8.13

MILLING

Direct	8.59
Indirect	2.79

11.38

CONCENTRATE

5.80

TOTAL OPERATING COSTS

25.31

REVENUE

18.00

NET OPERATING LOSS

7.31

INDIRECT COSTS

Administration (Future possibly 3.00)	4.20
Financial	<u>1.15</u>

TOTAL INDIRECT COSTS

5.35

NET LOSS

\$12.66

FUTURE OPERATIONS

RESERVES ABOVE 835 LEVEL

24,700T	0.61	17.47
Present Milling Rate	230 T/D	30 Days/Mo.
Maximum Duration of Milling		3.5 Mo.

MILL HEADS (Calculated Mine Mucks less 20%)

<u>TONS</u>	<u>GRADE</u>		<u>METAL CONTENT</u>	
	Au.	Ag.	Au.	Ag.
24,700	0.49	13.98	12,103.	345,306.

RECOVERY - Assume 85% for each metal Ratio Concentration 1:11

<u>DRY TONS</u>	<u>GRADE</u>		<u>METAL CONTENT</u>	
	Au.	Ag.	Au.	Ag.
2245	4.58	130.74	10,288	293,510.

VALUE OF CONCENTRATE Au. - \$38/oz. Ag. - \$2.10/oz.

<u>PER TON</u>			<u>TOTAL</u>
Au.	Ag.	Total	
174.04	274.55	448.59	\$1,007,084.00

PROFIT & LOSS ESTIMATE

		<u>PER TON MILLED</u>
Revenue		\$40.80
Operating Costs (as July & Aug.)	\$25.31	
Indirect Costs	<u>5.35</u>	
Total Costs		<u>30.66</u>
NET PROFIT		<u>\$10.14</u>

FINANCIAL

Net Profit	\$250,458.00
Less 75% for Debentures	<u>187,843.00</u>
BALANCE TO COMPANY	<u>\$ 62,615.00</u>

Liabilities to Aug. 31	\$2,676,292.00
Estimated loss Sept.	<u>63,692.00</u>
	2,739,984.00
Less Profit on 24,700T	<u>250,458.00</u>

NET LIABILITIES TO BE WRITTEN OFF AGAINST NEW ORE \$2,489,526.00

DEVELOPMENT

New Adit	1400' @ \$25.00	\$ 35,000.00	
Portal Vein	300' Drifting @ \$25.00	7,500.00	Reached 15 Nov.
	400' Raising @ \$30.00	12,000.00	
#1 Vein	300' Drifting @ \$25.00	7,500.00	Reached 1 Dec.
	400' Raising @ \$30.00	12,000.00	
#2 Vein	700' Drifting @ \$25.00	17,500.00	Reached 15 Jan.
			(Reserves Exhausted)
	1000' Raising @ \$30.00	<u>30,000.00</u>	
		121,500.00	
Contingencies 15%		<u>18,500.00</u>	
		\$140,000.00	
Diamond Drilling		<u>10,000.00</u>	
		\$150,000.00	

This work may put 75,000 T in sight.

MILL STATISTICS & PERFORMANCE

MILL HEADS

MONTH	TONS	GRADE		METAL CONTENT	
		ounces/ton		ounces	
		Au.	Ag.	Au.	Ag.
June	4930	0.16	4.23	788.8	20,853.90
July	5856	0.25	5.25	1464.0	30,802.56
Aug.	5030	0.33	9.55	1659.9	48,036.50
Sept.	<u>5031</u>	<u>0.25</u>	<u>9.32</u>	<u>1236.0</u>	<u>46,888.00</u>
	20,847	0.25	7.03	5148.7	146,580.96

PRODUCTION

1. CONCENTRATE

MONTH	DRY TONS	GRADE		METAL CONTENT		RECOVERY %	
		ounces/ton		ounces		Au.	Ag.
		Au.	Ag.	Au.	Ag.	Au.	Ag.
June	330.74	1.510	39.71	499.33	13,134.00	65.32	62.98
July	522.69	2.011	42.11	1050.91	22,013.00	71.97	71.53
Aug.	563.18	2.280	56.42	1284.24	31,777.00	77.76	66.13
Sept.	<u>448.23</u>	<u>2.186</u>	<u>69.99</u>	<u>980.00</u>	<u>31,372.00</u>	<u>79.29</u>	<u>66.91</u>
	1,864.84	2.05	52.71	3814.48	98,296.00	74.09	67.06

2. TAILS

June	4,599	0.058	1.68	265.10	7,720.00
July	5,333	0.077	1.64	409.30	8,761.00
Aug.	4,467	0.082	3.64	366.29	16,277.00
Sept.	<u>4,583</u>	<u>0.056</u>	<u>3.39</u>	<u>256.03</u>	<u>15,516.00</u>
	18,982	0.07	2.54	1296.72	48,274.00

3. TOTAL CONCENTRATE PLUS TAILS

4 months	20,847	5111.20	146,570.00
Circuit Loss		37.5	10.96

RATIO OF CONCENTRATION 1:11

CONCENTRATE SHIPMENTS (Approximately June, July, August Production)

SHIPMENT No.	WET		MOISTURE Content %	METAL CONTENT ounces		VALUE \$		FREIGHT COST* \$		TREATMENT COST \$	
	Tons	Tons		An.	Ag.	Total	Per Ton	Total	Per Ton	Total	Per Ton
1.	862.25	753.5	12.5	1217.05	28,823.37	126,826.	168.	14,437.	19.	14,047.	18.60
2.	<u>675.88</u>	<u>590.4</u>	<u>12.5</u>	<u>1103.77</u>	<u>35,973.00</u>	<u>139,602.</u>	<u>236.</u>	<u>11,315.</u>	<u>19.</u>	<u>12,675.</u>	<u>21.50</u>
	1538.13	1343.9	12.5	2320.82	64,796.37	266,428.	198.	25,752.	19.	26,722.	20.00

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* Additional freight charges, loading and wharfage accrue at Carcross amounting to \$15/ton concentrate.

MINE STATISTICS

PRODUCTION

<u>MONTH</u>	<u>TONS</u>	<u>MUCK ASSAY</u>		CAR FACTOR 1.6 Tons
		Au.	Ag.	
April	4069	0.34	5.72	
May	5579	0.20	5.96	Note: Both metal assays approximately 20% above mill heads.
June	4606	0.20	5.67	
July	5719	0.34	8.03	Tonnage approximately 25% above mill calculated.
Aug.	4499	0.49	16.86	
Sept.	<u>3338</u>	<u>0.37</u>	<u>13.22</u>	
	27,810	0.32	8.94	

Walter Clarke good picture (1)

Summary

- (1) Production to date
mine muck £7,810 .52 An
8.94 Ag.
well head 20,847 .25 An
7.03 Ag
20% diff not unusual but high
An 74% Ag 67%

ratio of conc 1/11

Soon will get 90% recovery An/Ag
couple of days 89 An
Ag still about 70%
possible to get to 90%
but work shows possible.

- (2) Estimated revenue for trial prodn.
£ 373,000 (van Thompson)

Milling	\$8.13/ton	milled
Sorting	11.38	"
Conc haul	5.80	"
Grat.		
	<hr/>	
	28.51	

Admin costs	4.20	(high - Ave
Admin		ea. 300)
Finance	1.15	
	<hr/>	
to you	30.66	

Revenue 18.00

Net loss 12.00 / ton milled

① Grade Low due to excessive overbreak

6' width ^{chips} expanded = grade similar to unbrk.

② Fines left in slopes won't account for it
2-3" on top

400-500 tons max
ave ^{not} 202 An 5002 Ag 4

.05 An 102 Ag increase

Real problem is overbreak
vital to change method of mining

Not paying proposition on present grade.

No reason to expect change, run

.25 \$ = 703 // but will go after

Future operations

reserves above set level

24,700 tons .61 An

6' width 17.47 Ag

cut by 20% to get mill heads

. 49 An 13.89 Ag
milling 230 tons / ha so
exhaust by mid Jan

have worked out profit picture
on 24,

\$40.80 / ha milled
30.66 costs

10.14 net profit to give
\$250,000

have assumed 85% recovery
both metals @ 3800

25% to retire liabilities
\$187,800

\$62,800 to play with

As of Aug 31 Total Liabilities

\$2,676,000

loss in Sept 65,000 so

\$2,740,000

For any new work to be developed
by acid & other veins, have
\$2.5 m debt over property

partial for new adit finished ⁽⁴⁾
150' below. Estimated done
3 veins: 1400' total
Start driving today 3 shafts
20' / day.

shared with Partial vein Nov. 15

Get to No. 1 by Dec 1
No 2 vein by Jan 15
About time present returned
exhausted.

Adit + shaft + raise
cost \$150,000.

most optimistic estimate to
put 75,000 tons on sight by
this adit.

one, insure unless cleaner than

- Balance of property interesting
anomalous so tell other veins
- Montana assay plans - shaft are
short + overall indicated - 08 Au
\$10-15 oz Ag \pm 3' width
- ① with dip of main all below (peerless)
present adit onto Hirschhorn ground
- ② Bloom it off the main are short

Chances of duplicating h.o. (5)
are small from of the Vaclut Cook
good.

Vaclut look as if expenditure of
\$50,000 will generate much
revenue or decrease the
debt

= Pan prospect with \$2.5m debt
if debt could be negotiated
Stall off (4), may generate enough profit
to explore surface indications

Solution is geochim surface
indications, not downward
extension of new zones.

? may be early Ag in upper levels.
- can see decrease in Ag downward.

best shot \$700 tons H.O. over 6' with

D.H.s show decrease grade
below this.

strike continuity - geochim
penets

dec enough to geochim
to pay debt + debt
\$800,000 current liab

160,000 option pay \$
long term \$1.5M in.

PRODUCTION BREAKDOWN

WORKING PLACE	APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER		
	Tons	Au.	Ag.	Tons	Au.	Ag.	Tons	Au.	Ag.	Tons	Au.	Ag.	Tons	Au.	Ag.	Tons	Au.	Ag.
I #1 Vein																		
#7 St.													331	0.14	1.38			
#5 Rse	Note - One high assay 2.91 Au. for 42T, otherwise 0.20 average																	
Sub.Dr.	392	0.59	3.78															
#6 Rse	178	0.61	4.68															
#9 Rse	144	0.19	1.31															
#4 Rse	122	0.91	6.16															
AVERAGE GRADE #1 VEIN				0.39	Au.	2.57	Ag.											
II #2 Vein																		
1. Above 950 sub level																		
819D.P.				2315	0.17	5.94	1160	0.15	3.52				16	0.10	2.61	16	0.15	6.01
AVERAGE GRADE				0.16	Au.	5.12	Ag.											
2. Between 900 and 950 sub levels																		
829D.P.	925	0.22	6.90	1219	0.15	5.16	1562	0.23	7.32	1976	0.23	8.02	1994	0.32	18.55	1589	0.21	8.57
AVERAGE GRADE				0.23	Au.	9.75	Ag.											
3. Between 850 and 900 sub levels																		
838D.P.	144	0.34	6.06	786	0.31	7.63	1141	0.17	5.38	1653	0.35	7.31	1424	0.60	12.08	1258	0.47	16.36
850 Sub.	826	0.40	7.17	573	0.29	7.18	366	0.29	6.62									
AVERAGE GRADE				0.38	Au.	9.22	Ag.											
4. Highgrade Shoot East of Fault																		
850E.St.										146	2.52	54.18	338	1.69	58.99	230	0.68	43.16
AVERAGE GRADE				1.53	Au.	52.91	Ag.											
III #3 Vein (Faulted #2 Vein Probably)																		
284-150				618	0.20	4.77	5	0.10	1.91	249	0.28	5.32	397	0.29	6.18			
284-175	675	0.23	4.64	69	0.13	2.71				736	0.30	5.46						
284-100										27	0.03	0.93						
284-125	112	0.07	2.16				24	0.03	1.55	573	0.08	3.08						
284-200	346	0.40	5.19				347	0.27	5.84	363	0.53	8.28						
AVERAGE GRADE #3 Vein				0.26	Au.	5.06	Ag.											
TOTAL	3934	0.34	5.72	5580	0.20	5.96	4605	0.20	5.67	5723	0.34	8.03	4500	0.49	16.86	3338	0.37	13.22