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COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS

RECORDS:

1945/47

Report on Maintenance

Consolidated Gold Mines of Coolgardie Limited (Tindal's)

by

N.H. Fisher

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DEPARTMENT OF SUPPLY AND SHIPPING.

MINERAL RESOURCES SURVEY.

REPORT ON MAINTENANCE.

CONSOLIDATED GOLD MINES OF COOLGARDIE LIMITED (TINDAL'S).

REPORT NO. 1945/47.

Situation: 3 miles south of Coolgardie.

Representative: I. H. Salmond, Manager at the Mine.

Capital of Company: £300,000. No dividend has been paid. This company is the operating company. All shares are held by Tindal's Gold Mines Limited, incorporated in England, with an issued capital of £448,000 stg. The plant is mortgaged to the State Government for £34,200.

Maintenance commenced: January, 1945.

Average amount per calendar month: Approval was given by the Mines Department for an expenditure of £485 per month for two months with 10 employees, thereafter £348 per month with 6 men. Actual amounts charged against maintenance during April and May, 1945 averaged £403 per calendar month.

Men employed on maintenance:

1 Supervisor at £16 per week
1 Winder Driver at £8 per week
1 Electrician at £8 " "
2 General hands at £8 " "
1 General hand at 7 " "
1 General Mechanic at £7.15.0 per week.

Maintenance Expenses: Expenses charged for the 4-weekly period ending June 1st, 1945 were:-

Wages	£226/1/-	...	226/1/-	
Stores	36/4/7	...	36/4/7	
Fuel and Lubricant	...		69/15/7	
Accident Insurance	...		9/8/5	
Fire Insurance	...		13/2/6	X
Mine Workers' Relief				
Fund	...		1/1/-	
Pay Roll Tax	...		4/14/7	
Administration	...		1/11/9	X
Water Rates	...		7/5/-	X
Sanitary Rates	...		1/10/-	X

£370/13/11

Under the recently revised schedule of maintenance items marked X would not be allowed. Expenses for other periods include also insurance on motor vehicles.

Usual Number of Men employed: In December, 1944, 44 men were employed, but to resume operations at full scale at least 80 men will be required.

Ore Reserves: (Company's figures).

	<u>OXIDISED ORE</u>		<u>SULPHIDE ORE</u>		<u>TOTAL</u>	
	tons	Au. dwt per ton	tons	Au. dwt per ton	tons	Au. dwt per ton
Proved in Situ.	10,605	4	194,945	4.3	205,550	4.3
Broken in Stopes	1,873	4	17,287	4.0	19,160	4.0
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Total proved above No. 7 level (750 ft.)	12,478	4	212,232	4.3	224,710	4.3
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Probable ore to 900 ft. Vertical Depth.	4,819	3.7	57,726	3.9	62,545	3.9
Possible ore 750 to 900'	—	—	86,900	3.9	86,900	3.9
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TOTAL	17,297	4.0	356,858	4.1	374,155	4.1

Also 20,000 tons of tailings assaying 1.8 dwt. gold per ton, of which 1.3 dwt. per ton can be extracted by cyanitation.

Average monthly throughput: Before closing down only 1,700 tons were being milled owing to shortage of labour, and the cyanide section of the plant had been closed down. Throughput required for economical working of the mine is estimated by Mines Department Officers at 5,000 tons per month, and the plant, with the addition of one new classifier, would be capable of handling 10,000 tons per month.

Plant: Diesel driven power plant, 3 compressors, Electric Winder, ore bins, jaw and cone crushers, belt conveyors, screens, ball mill, classifier, 2 thickeners, 6 agitators, 4 clarifying tanks, pumps, Oliver filters, Merrill-Crowe precipitation unit, assay furnace; Change house; Blacksmith's and fitter's shop; toolsharpening shop; Mill Building; fitting shop; assay room; garage; mine office; 6 houses (including mess quarters). The plant and machinery is valued on the company's books at £89,713, and the buildings at £13,700.

A.G. Olive, District Inspector of Mines, estimated (7/12/44) that to put the plant into suitable condition to bring production up to 5,000 tons per month, repairs costing approximately £3,690 would be necessary.

Mine: Total production from the mine has been 282,571 tons for a return of 50,578 ozs. of gold. During 1943, 31,300 tons of sulphide and 1,720 tons of oxidised ore were treated for 5,127 ounces of gold, a return of 3.3 dwts. gold per ton.

The mine is developed down to the No. 7 (750') level and the main shaft is sunk 100 feet below this level. Known dimensions of the ore on the bottom level are 580 feet in length, with a probable further 200 feet not yet driven, an average width of about 20 feet, and an average value of 4 dwts. per ton. There is no apparent reason why ore should not persist at approximately these dimensions below the bottom level.

The mine makes very little water, not more than 7,000 gallons per day. The walls of the orebody are strong and are practically vertical. It is probable that no harm would result to the mine if the water were allowed to rise. The levels have not so far been found to require any maintenance work.

Present Maintenance Programs:

(a) Routine Maintenance: The mine is kept dewatered by an air pump, which lifts the water from the 750' level to the 500' level, and by an electric pump from the 500' level to the surface. These pumps are operated 3 days a week, and this involves keeping one engine and compressor running in the powerhouse. The shaft is inspected regularly.

Crushers, conveyors and vibrating screens are run for a short time every week, and all rollers and moving parts greased.

(b) Primary Maintenance: Work which is being carried out and which is necessary to put the plant in condition for a prolonged spell of inactivity includes:-

Cleaning Water Cooling system; overhauling powerhouse main engine; scaling scraping and cleaning mill-machinery - crushers, pumps, pipes, filters, classifiers, ballmills and all ironwork - also painting machinery and tarring vats, where necessary; oiling and tightening up wooden shaft headframe; one fitter is employed converting the ore skips into bailers.

Details of Present Maintenance Work: The Winder Driver and two men underground are employed 3 days a week pumping water out of the mine, and the electrician looks after the diesel engine. The General Mechanic is converting the ore skips into bailers and the other maintenance men, together with the underground crew when the latter are not employed on the pumps, are engaged in the scaling, scraping etc. of ironwork in the mill.

Future Maintenance Requirements: When the bailers are completed, all water should be allowed to run down the shaft, and one day's bailing per week will keep the mine free of water. The laying up of the machinery should be continued until completed.

Recommendations: That all possible steps be taken to expedite the completion of the bailers and that mine water be then bailed from the bottom of the shaft one day a week only. That apart from this work all the maintenance crew be employed in scaling, scraping, cleaning, painting and tarring machinery until this is completed to the satisfaction of the District Inspector of Mines; and that the maintenance crew be then reduced to four men, a supervisor, a Winder-Driver, and an electrician, and an underground man.

(N. H. Fisher)
COMMON FAITH GEOLOGIST.

2/8/45.

(T. C. Olive)
DISTRICT INSPECTOR OF MINES.