

to a Dorr Classifier. In closed circuit with the classifier is a 3x6 feet Colorado Iron Works ball mill. After the material leaves the classifier additional reagents are added. The material is then fed into a Denver Sub-A conditioner. The material from the conditioner passes to five No. 12 Denver Sub-A roughener cells. The cleaner cell concentrates are fed back to the unit cell concentrates and pass directly into the 15-ton Portland rotary filter. The remainder of the material from the roughener cells goes direct to the Plato-Deister, and overstrom tables. The table concentrates are fed back to the 3x6 ball mill, while the final tails are discharged into the tailings pond. The discharge from the rotary filter passes to the concentrate drying trays. After the excess moisture has been driven off, the concentrates discharge into a 40-ton concentrate bin. The concentrates are shipped to smelter for treatment.

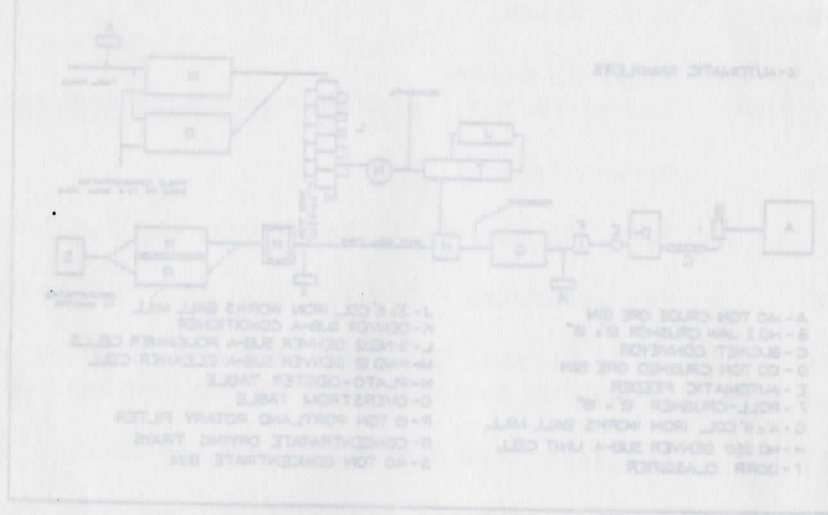


Figure 1. Diagram of flotation mill operations.

The flotation mill erected by the Rudisill Gold Mine, Inc., of Charlotte, is briefly described below:

Figure 1 gives the flow sheet in diagram.

The ore from the mine is delivered by truck to the flotation mill. The ore is dumped direct into 140-ton crude ore bin. From the crude ore bin the ore dumps direct into No. 3 jaw crusher, 12x18 inches. The crushed material is discharged into bucket elevator, which in turn discharges into 100-ton crushed ore bin. By automatic feeder the crushed ore is fed into a roll crusher, 12x18 inches. The ore from the roll crusher is fed into a 3x6 feet Colorado Iron Works ball mill. Between the roll crusher and the ball mill is an automatic sampler, from which samples are taken at certain intervals to keep a careful check on the character of the ore. The ore from the ball mill passes into a No. 120 Denver Sub-A unit cell. Between the ball mill and the unit cell the necessary reagents are added. The unit cell concentrates pass direct to a 30-ton Portland rotary filter, while the fines pass

RUDISILL GOLD MINE

ANALYSIS OF DIRECT COSTS

Month of December, 1936

Mining Expense:

| | | |
|---|----------------------------|-------------------|
| | Wages - Foremen | 300.56 |
| L | Labor - Surface | 176.53 |
| | Labor - Underground | 670.27 |
| | Timbering Repairs & Maint. | 105.61 |
| | Power | 210.60 |
| | Powder, etc. | 147.00 |
| | Mine Supplies | 37.75 |
| | <u>Total Mining Cost</u> | <u>\$1,648.32</u> |

Milling Expense:

| | | |
|--|------------------|-------------------|
| | Labor - Foremen | 192.43 |
| | Labor - Mill | 306.77 |
| | Supplies | 184.59 |
| | Power | 332.50 |
| | Repairs & Maint. | 0.00 |
| | Telephone | 8.08 |
| | <u>Total</u> | <u>\$1,024.37</u> |

Truck Expense:

| | | |
|--|---------------------------|-------------------|
| | Wages | 54.46 |
| | Gas & Oil | 37.42 |
| | Repairs | 4.75 |
| | Licenses | 71.00 |
| | Insurance | 12.04 |
| | <u>Total Milling Cost</u> | <u>\$1,204.04</u> |

Administrative Expense:

| | | |
|--|-----------------------------|-----------------|
| | Office Salaries | 100.00 |
| | Rent | 30.00 |
| | Telephone & Telegraph | 8.75 |
| | Office Supplies | 34.59 |
| | Legal & Professional | 125.00 |
| | Interest & Expense | 71.83 |
| | <u>Total Administrative</u> | <u>\$370.17</u> |

Direct Costs:

| | | |
|--|----------------|-------------------|
| | Mining | 1,648.32 |
| | Milling | 1,204.04 |
| | Administrative | 370.17 |
| | <u>Total</u> | <u>\$3,222.53</u> |

Smelter Shipments:

| | | | | |
|--|------------------------------|------------|----------|-----------------|
| | Car #53 - Shipped 12/11/36 p | - - - - | 1,663.66 | |
| | " #54 | " 12/19/36 | - - - - | 622.47 |
| | " #55 | " 12/31/36 | - - - - | <u>1,110.53</u> |
| | | | | \$3,396.66 |

Mint Shipments:

| | | | | |
|--|-----------------------|-----------|-----------|---------------|
| | #37 - Shipped 12/4/36 | - - - - - | 224.03 | |
| | #38 - " | 12/24/36- | - - - - - | <u>338.18</u> |
| | | | | 562.21 |

Total Returns (net)

\$3,958.57