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Monthly mill reports with Roy W S Palmer

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DATA ON COSTS FOR THE MACKAY SCHOOL OF MINES.

X-17

1. The standard wage scale of Virginia City for 1926 for mine employees. Synopsis of bonus methods.

Miners	$5.25	Av. with bonus $5.37
Timbermen	5.25	
Muckers	4.75	
Hoist Engineers	6.00	
Shift Bosses	6.50	
Pipe men	6.00	
Surface Labor	4.50	
Carpenters	6.00	
Blacksmiths	6.00	
Electricians	6.00	
Pipemen	5.75	
Motormen	5.75	

2. Power- Main points in power schedule:

Item 1. For power and all other purposes except that "connected lighting load" is not to exceed 10% of "other connected load".

Item 2. RATES FOR LOW VOLTAGE POWER.

Power to be metered on low tension side of company's distributing transformers.

(a) Service charge of $2.40 per month per kilowatt of active demand. Active demand is to be measured by a maximum demand meter and to be taken as highest fifteen minute demand during the month for which bill is rendered.

b Plus a KWH charge of:

First	3000	KWH @	1.6	cents per	KWH
Next	"	" "	1.4	" "	"
Next	"	" "	1.2	" "	"
Next	"	" "	1.0	" "	"
All over	12,000	" "	0.8	" "	"

(c) MINIMUM MONTHLY CHARGE.

Same as service charge.

(d) Discount.

Prompt payment discount of 20 cents per KW of demand on all bills paid on or before the 10th day of month following that for which bill is rendered.

(c) PENALTIES.

When power factor averages less than 80% during any month, demand charge to be increased for that month by 1% for each 1% of average power factor less than 80%.

Item 3. RATES FOR HIGH VOLTAGE POWER.

Power to be furnished at either 2200, 4100, 23000 or 60000 volts.

(a) Charges to be figured on the same basis as for LOW VOLTAGE POWER with one of the following discounts

Discout of 10% when customer owns high voltage transformers (Primary volts 60,000, 23,000 or 12600).

Discount of 10% when customer owns distributing transformers (2200)volts primary) if Company measures power at 2200 volts or 4100 volts.

Discount of 5% when Power Company owns distributing transformers (2200 volt primary) if company measures power at 2200 volts or 4100 volts)

Discount of 5% when customer owns distributing transformers (2200 volt primary) if company measures power on low tension side of transformers.

3. Supplies- f.o.b. Virginia City-

Material	Kind and Size	Unit	Cost
Timber, Stulls	9" diam.	Foot	$ .13
Lagging	Mine timber	1000 Bd ft.	28.50
Dimension	Mine timber	" "	29.00
Powder	Hercules	Ton	291.20
Caps	California #8	Case(5000)	91.00
Fuse	Comet #2 Special	Reel(3000'@	19.29
Track	16 pounds	Ton	70.00
Ventilating pipe	15" size	Foot	1.00
Iron Pipe	2"	100 feet	20.30
	1"	" "	9.35
	½"	" "	5.20
Blacksmith coal		Ton	21.75
Crucible drill steel	7/8"	Cwt.	14.41
Air Hose	¾" Goodyear	Foot	.33
Wire water hose	½" wire wrapped	Foot	.21
Carbide		Ton	105.00

4. MILL

Wage scale at the mill:

Roustabouts	$4.50
Operators	5.25
Shifters	6.00
Repairmen	6.00

Supplies- f.o.b. Virginia City-

Material	Kind	Unit	Cost
Gyratory Mantles	American Manganese	Pound	$ .16
Concaves	" "	"	.19
Roll Shells	Columbia	"	.11
Ball Mills, Shell	American Manganese	"	.087
End Liners	" "	"	.087
Balls	Hoffman	"	.039
	St. Louis	"	.041
Filter canvas	#6 Cotton duck, 78" wide	Yard	1.11
Cyanide	Aero Brand	Ton	320.00
Lime	Pacific Lime & Plaster	Ton	17.25
Zinc Dust	Merrillite	Pound	.125
	John Finn	"	.113
Litharge	Formula #51	"	.122
Acid- HCl		Carboy	4.39
Fuel Oil		100 gal.	5.83

Virginia City, Nevada, Nov. 12, 1925.

Mr. H. W. Seamon,
Mine Superintendent,
Comstock Merger Mines, Inc.,
Virginia City, Nevada.

Dear Sir:

Herewith is a copy of the Bonus rates and allowances which have been arrived and used in figuring the recent bonus settlements. With the copy of rates is a copy of the instructions for using them.

The original rate for Top-slicing was 4.5 tons per man-shift, irrespective of the difference in timbering, mucking and other conditions, which would tend to make this rate too high in some cases and too low in others. In order to give each stope an average rate each period that would include allowances for favorable or unfavorable conditions, a system of rates and allowances has been arrived at from both observations made here and data had at hand.

Since the adoption of the present system, the average rates in Top-slices, computed by dividing tonnage produced by total Allowed shifts, are between 3.7 tons per man-shift and 5.5 tons per shift, the average rate of all stopes for the past two months being about 4.4 tons per shift. The low rate of 3.7 was used where all sets were spiled and the muck was moved by wheelbarrow for a distance over fifty feet; the other rate of 5.5 was given to a slice where all sets were regular and the muck was moved by scraper.

At present, the base rate for slicing includes mining and scraping or hand-mucking into chute; allowances being made for timber, wheelbarrow or car tram, mucking to scraper-way and, lastly, temperature. The temperature is taken just once in each period in each working face, as it has been found that the temperature remains unchanged except in the case of breaking through into other workings.

The rates for Development and Preparation headings remain unchanged, except for the addition of rates for tramming distances greater than 100 feet. These rates have worked out very satisfactorily and moreover are already posted, which would make it inadvisable to change them.

Previous to the adoption of this system of rates and allowances, several ideas were tried out, such as the rating on the basis of standard sets of ground removed, individual tonnage rates for each stope, etc., but due to the disadvantage of collecting data not regularly reported and the inconsistencies of mining in slices, these were discarded.
The following rates and allowances, though not exactly accurate, are believed to be within the limits of error that can be allowed to standards for very changeable conditions such as exist here.

Yours very truly,

Original signed - F. A. Feigel

BONUS RATES & ALLOWANCES

PRODUCTION

TOP-SLICING

Base Rate- (Mining and Scraping or Shovelling less than 20')

Less than 50' from chute	7.0 tons per man
50' to 100' " "	6.5 " " "
100' to 150' " "	6.0 " " "

Allowances

(A)-Timber:

1-Sets of Timber	1.0 shifts/set
2-Spiling	1.0 shifts/set-lot
3-Posts and Stulls	0.4 shifts/each

(B)-Wheelbarrow: (Efficiences)

1- 0' to 50'	70%
2- 50' to 100'	60%
3-100' to 150'	53%

(C)-Car Tram in Slices: (Efficiences)

1-Less than 100'	92%
2-More than 100'	87%

(D)-Mucking to scraper-way:

1-Not more than 2 offsets	35 tons/shift

(E)-Temperature: (at 80%-90% rel. humidity)

	Circulation	Air on	Dead
1-Less than 80 deg.	No Allow	3%	7%
2-80 deg. to 85 deg.	3%	7%	10%
3-85 " " 90 "	7%	11%	14%
4-90 " " 95 "	12%	16%	19%
5-95 " " 100 "	18%	22%	25%

BROW CAVING

Base Rate- (Mining or Pulling timbers and Mucking)

Less than 50'	9.0 tons/man
50' to 100'	8.5 "
100' to 150'	8.0 "

Allowances:

Use allowances given above under Top-Slicing for Temperature and Barrow conditions.

SQUARE SET STOPING

Base Rate- (Mining and Mucking into stope chutes)

Regular conditions	5.0 tons/man

Allowances:

Make allowances for old timber and large boulders.

BONUS RATES AND ALLOWANCES

PRODUCTION

PULLING CHUTES (in Drift Caving operations; tram under 200')

(A)-Where muck is compact and contains an appreciable amount of old timber	10.0	tons/man
(B)-Small amount of blasting is required	15.0	"
(C)-Muck is mostly small size quartz, dry and with a fine, granular filling	20.0	"

Allowances:

For greater tramming distances than 200', make an allowance of 2 minutes per car for each additional 100' and convert to shifts of 450 minutes.

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DEVELOPMENT & PREPARATION

DRIFTS & XCUTS

	Open	Timbered	Spiled	Boomed
5' x 7'	0.85	1.2	1.4	1.6
Large	1.0	1.3	1.5	1.7

RAISES

	Open	Square Set	Small Cribbing	Large Cribbing
4' x 7'	0.9	1.2	1.4	1.6
5' x 9'	1.0	1.4	1.7	2.0

WINZES

	Open	Square Set
4' x 7'	1.4	2.2
5' x 9'	2.0	3.0

Where no regular trammers are used for tramming from chutes or headings, the following allowances are used for tramming distances over 100':

Tram. Dist.	100 to 300	300 to 500	500 to 700	700 to 900	900 to 1100	1100 to 1300	1300 to 1500	1500 to 1700	1700 to 1900
Size	Shifts per foot advance								
5' x 7'	0.26	0.28	0.31	0.34	0.37	0.39	0.41	0.44	0.46
6' x 8'	0.36	0.38	0.42	0.46	0.50	0.54	0.58	0.62	0.65
8' x 9'	0.53	0.58	0.63	0.69	0.75	0.82	0.88	0.95	1.12

Note- The above rates for Drifts, Xcuts, Raises and Winzes are given in SHIFTS PER FOOT ADVANCE.