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*V. S. M. S., F. 1940*  
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Replacing Mine Shaft Timbers Is Costly both from actual cost of installation and from delay of haulage thru the Shaft.

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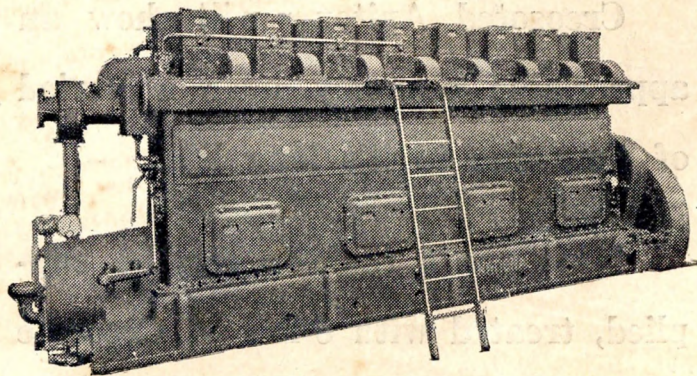
# NATIONAL

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## GOOD YEAR

### MULTI-V BELTS

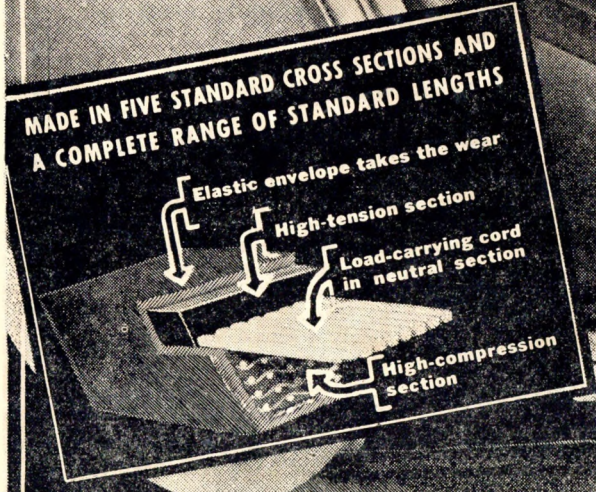
### E-C CORD

**G**OODYEAR Multiple V Belts always have been built with a precision that produces belts of uniform, accurate cross section and length. Now comes a still better belt under a new name—the Goodyear E-C Cord Multi-V Belt.

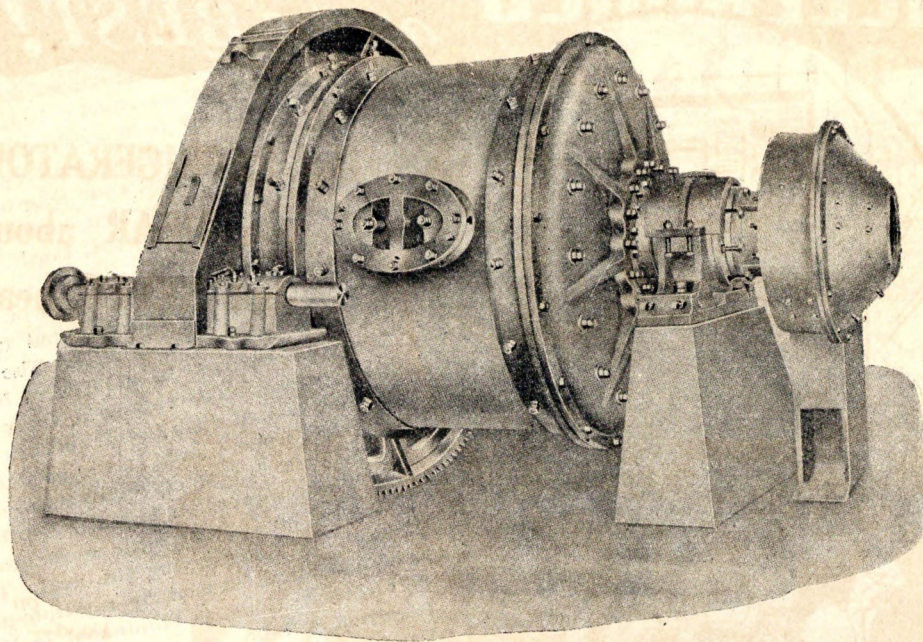
All of the previous advantages of Goodyear V Belts are incorporated in the new E-C Cord Multi-V Belt. The load is carried entirely by a layer of heavy high tensile, low-stretch cord, thoroughly impregnated with liquid rubber. The layer of cord is placed in the section of the belt which is under neither the tension nor compression imposed by flexure, and the full strength of the cord is available for carrying the load. Internal friction, caused by multiple-ply belt constructions, is eliminated in the Goodyear V Belt.

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Masbate Consolidated Mining Co.  
Batong Buhay Gold Mines

one—#66 Marcy Ball Mill  
one—#56 Marcy Ball Mill  
four—7x10 Marcy Overflow Mills  
three—#86 Marcy Ball Mills  
one—#56 Marcy Ball Mill  
two—#75 Marcy Ball Mills  
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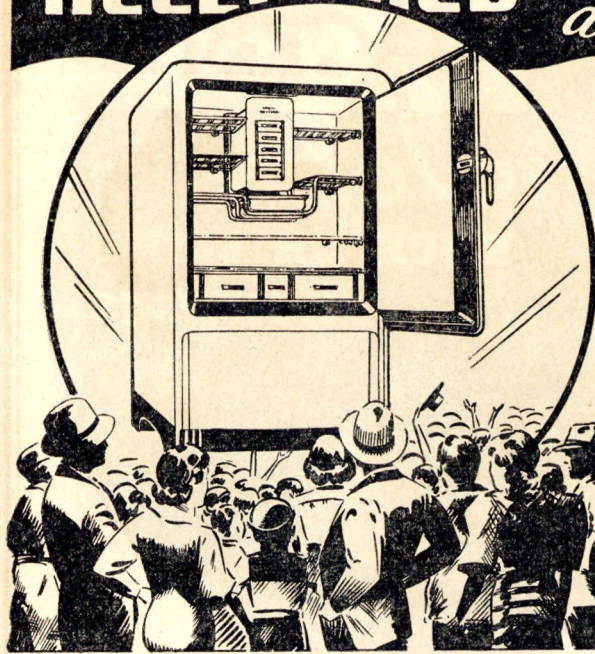
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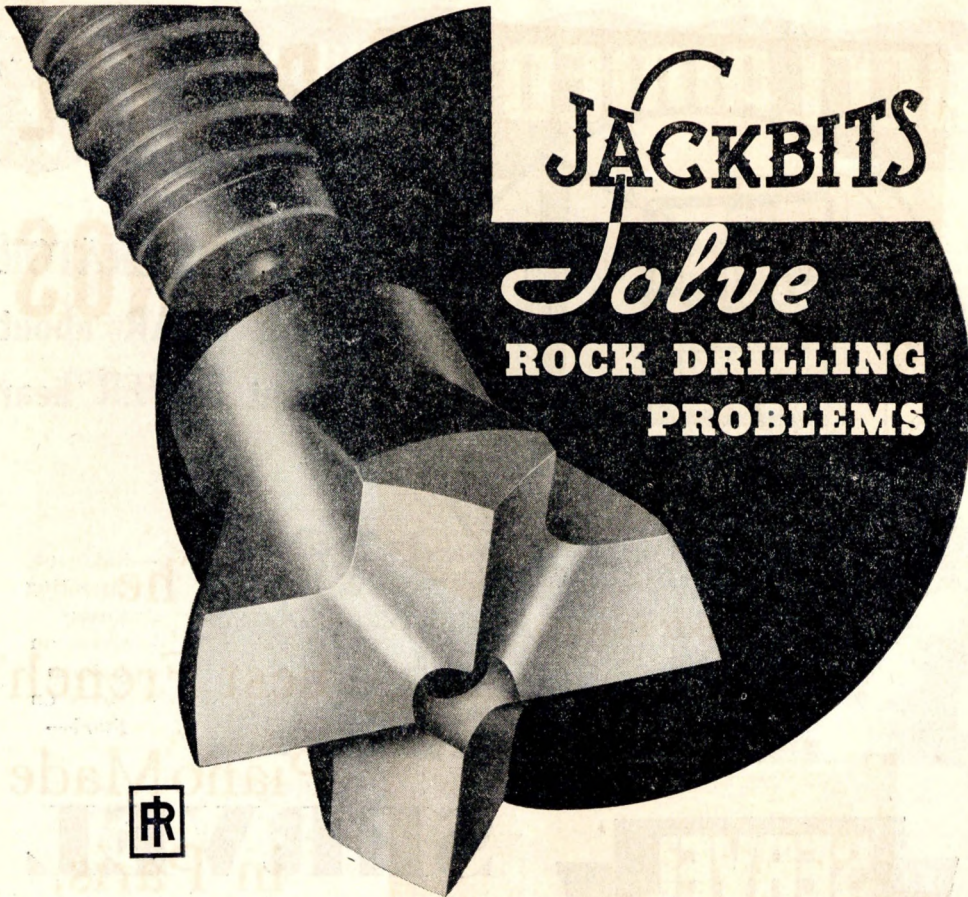
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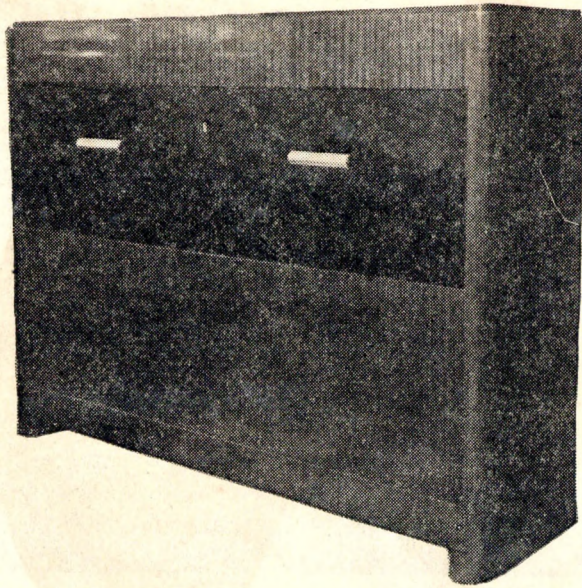
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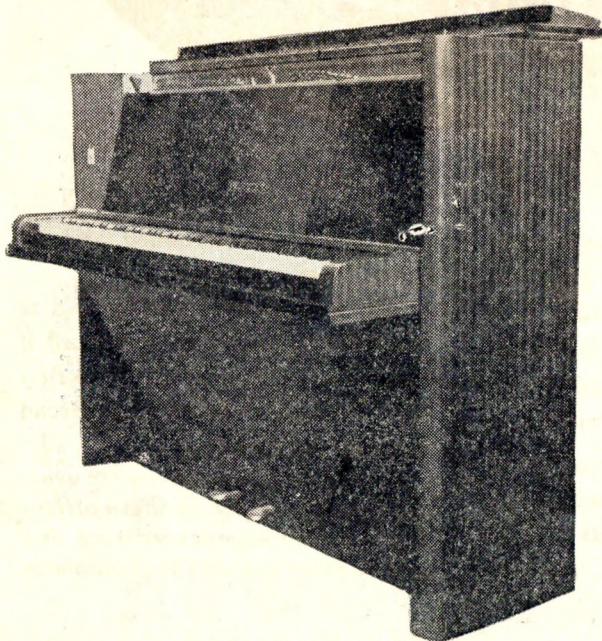
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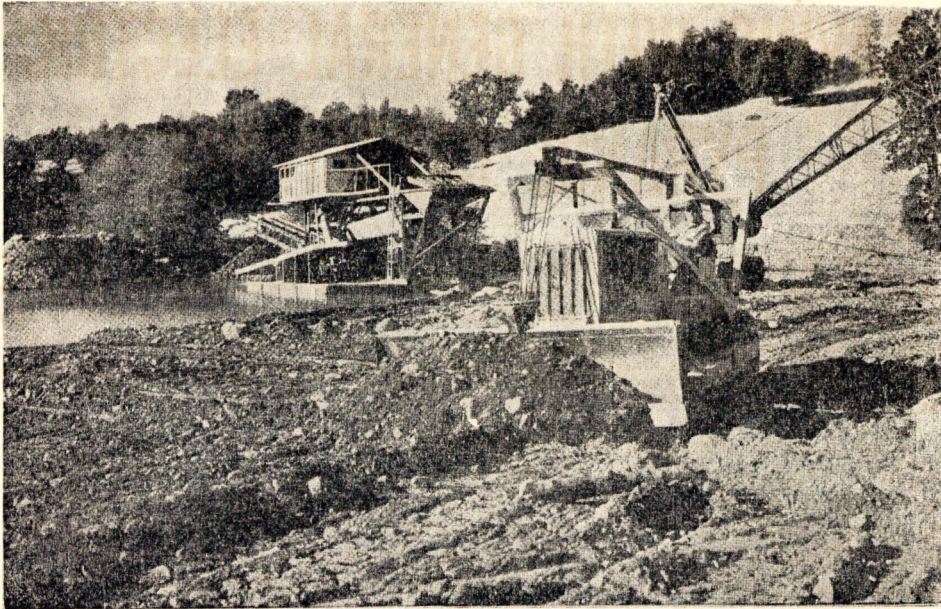
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make short work of stripping off top-soil in this mining operation. Because of their stamina and fuel economy “Caterpillar” Diesel Tractors probably perform more of this work than any other type of equipment in the mines of the world. Wherever power and performance must be most efficient, you’ll find “Caterpillar.”

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**Pacific Commercial Company**

Cebu—Cagayan—Manila—Bacolod—Iloilo

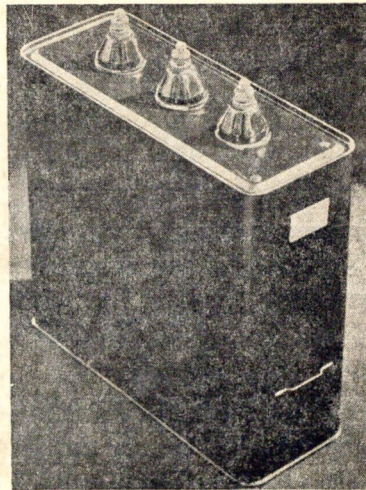
# SAVING WITH GENERAL ELECTRIC PYRANOL CAPACITORS

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Port Area

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6	10	200
8	30	400
10	60	1200
12	100	1800
14	200	2400
16	200	3600

Motors are available for operation on other voltages, including 2200 volts, other cycles, or for greater horse-power in a given well than listed above. Information furnished upon request.

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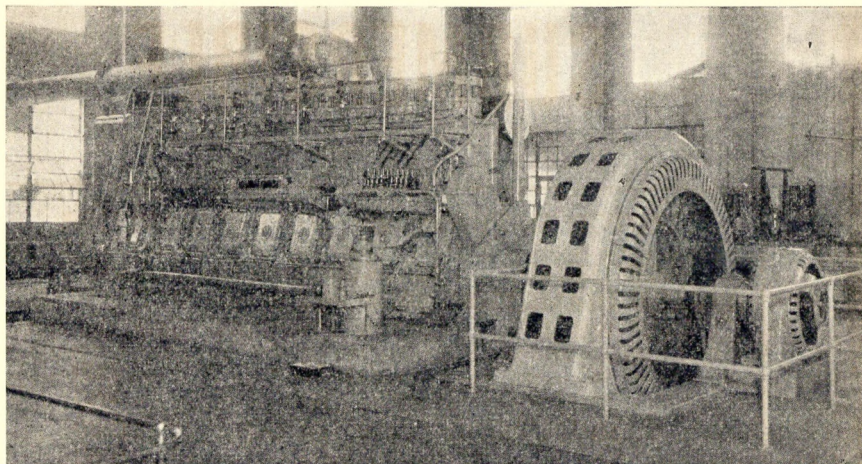
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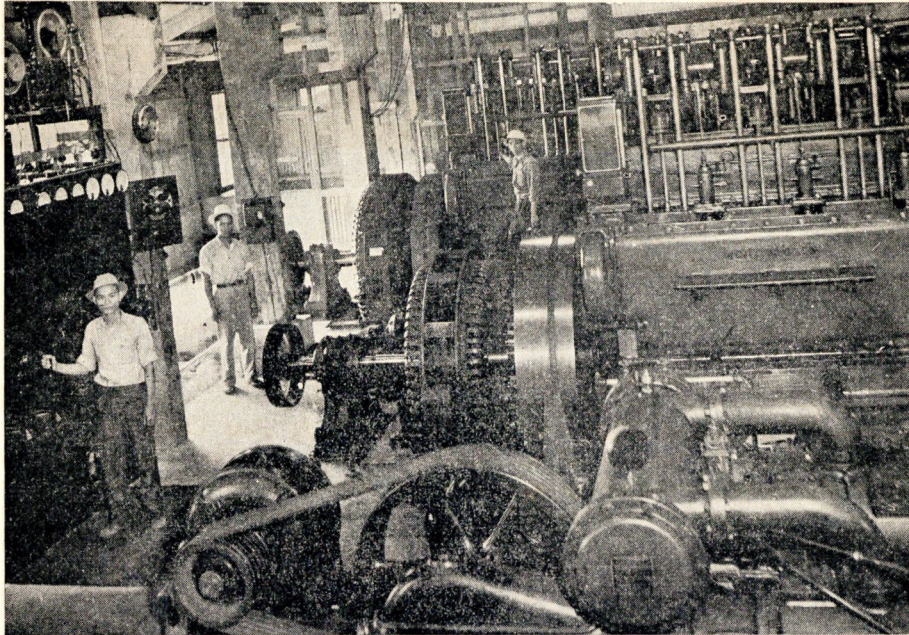
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Courtesy of  
Paracale-Gumaus Consolidated Mining Co.  
Philippine Islands.



View of Paracale-Gumaus' 675 h.p. Worthington Diesel Power Plant. These engines are exclusively lubricated with Gargoyle D.T.E. Oil Extra Heavy.

**D**ISCERNING executives and engineers have a dependable helper in Correct Lubrication... it helps them operate expensive machinery smoothly and efficiently at minimum expense.



**STANDARD-VACUUM  
OIL COMPANY**



VOL. VIII

FEBRUARY, 1940

No. 5

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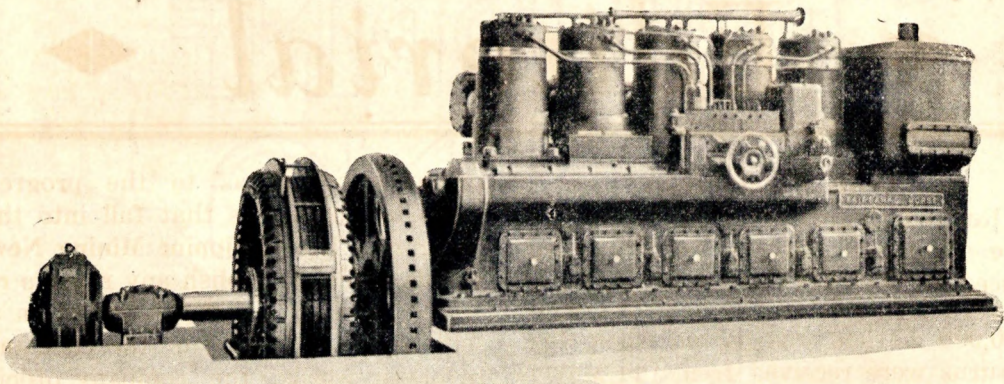
Entered as Second Class Mail Matter at the Manila, P. I., Post Office on April 18, 1933

Devoted to the Interest of the Mining Industry of the Philippines

Unless otherwise noted, all gold values are based on P70 per ounce price.

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## Fairbanks-Morse Diesel Engines

Extreme simplicity has been achieved in model Fairbanks-Morse engines through the elimination of all but the essential moving parts. High combustion efficiency, resulting from advanced cylinder head design, improved injection valve and the new design of the scavenging air ports to produce complete back-flow scavenging, makes the Fairbanks-Morse engine at once the simplest, most reliable and most efficient prime mover available.

### **BUILT FOR CONTINUOUS OPERATION**

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*Complete Information Upon Request*

## **Pacific Commercial Company**

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# ◀ Editorial ▶

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## ***Gold Production***

Revised figures for 1939 shows that the Philippine Mining Industry produced ₱74,000,914 worth of gold and silver during that period. The ₱74,000,000 mark was passed when final returns were received from the Mayon Mining Corporation, one of the last properties brought into production during 1939. Although final production figures have not been received from all gold producing districts in the United States, it is safe to assume that the Philippines will hold its position as the second largest gold producer among the states and territories of the United States.

## ***Accurate Reports Necessary***

Accurate reports on the past year's operations should be sent to stockholders by all mining companies now doing business in the Philippines, if the confidence of the investing public is to be maintained. While it is a fact that most of the producers and active development concerns send out complete annual statements, many of the companies organized during the past four years have failed to render any reports whatsoever to their stockholders. All stockholders are entitled to at least an annual statement as to the financial condition of their company; and are also highly interested in what is being done in the way of developing the property owned by the company. It is a fact that some of the registered mining concerns in the Islands may be out of funds and in no financial position to prepare and mail out reports. That is a good excuse, but there is another way of keeping the

public informed as to the progress made by companies that fall into this category. The **Philippine Mining News** stands ready to publish any reports received, so long as the information is sent in by an official of the company. In other words, the company official who really wants to inform stockholders of the position of his company, can do so by writing a statement and sending it to us for publication.

## ***Facts From The Bureau***

The Bureau of Mines is to be congratulated on the bulletins recently issued. These circular bulletins, giving information on mining areas and properties in various sections of the Philippines, were compiled and written so that the average layman was able to understand the contents without resorting to reference books of a technical nature. Little enough is known by the average investor concerning the Island mining industry and its possibilities. Too much information about the industry cannot be disseminated. When this information comes from the Bureau, it is considered official by the public and therefore tends to create confidence. We hope that the Bureau continues the publication of these bulletins!

## ***War And Gold***

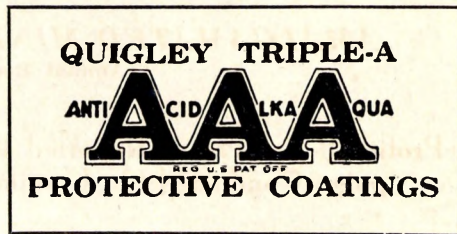
With the United States gold supply standing at about \$17,000,000,000, there is every indication that another billion will be added eventually by purchases of war materials by the Allied governments.

Britain and France have an estimat-

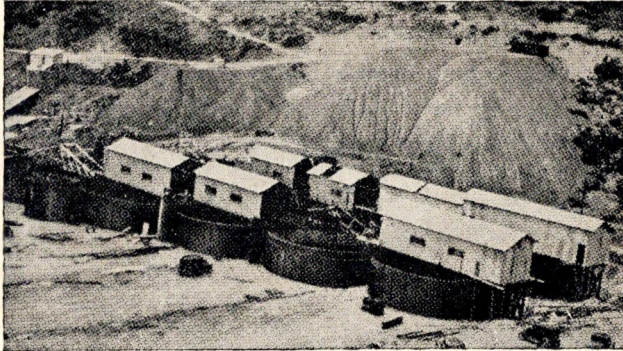
(Continued on page 30)

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Resist Acids, Alkalies,  
Fumes of Chlorine, Sul-  
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Steam, Moisture and Other Agent Destructive to Steel.



**STEEL CYANIDE TANKS**—Coated Inside and Outside With Two Coats of **TRIPLE-A No. 10**. In the Test Mill, the Cyanide Tanks, Coated in Same Manner, Have Been in Continuous Service Four Years Without Showing Any Depreciation.

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**AMALGAMATED MINERALS, INCORPORATED**  
(Annual Report For 1939)

**Net Profit Of P52,123.15 Reported For 1939 • Extensive Exploration Campaign Conducted On Company's Property, Official States**

Stockholders of Amalgamated Minerals were recently informed that their company had made a net profit of P52,123.15 during 1939. The company shipped 10,082 tons of manganese ore during the period under review, which had an approximate value of P231,000 f.o.b. ship.

N. Quisumbing, general manager and treasurer of the company stated that production was less than expected due to one of the mines failing to produce since

July, 1939. Extensive exploration work is now being undertaken on this property.

Officers and directors of the company follow:

Dr. Augusto J. D. Cortes, pres; E. B. Vidal, vice-pres; N. Quisumbing, treas. and gen. mgr; Salvador Zaragoza, Chas. V. Stilianopulos, Quirino Eleizegui, Ild. Coscolluela, directors; Q. C. Makalintal, sec.

**AMALGAMATED MINERALS, INC.**

BALANCE SHEET FOR THE YEAR ENDING DECEMBER 31, 1939

A S S E T S

CURRENT:

Cash on Hand & in Banks .....	P	58,611.98	
Accounts Receivable:			
Buyers of Ore .....	P	37,362.48	
Advances against Ore Purchase .....		18,399.42	
Advances against Royalties .....		5,159.12	
Miscellaneous .....		9,734.94	70,655.96
Ore Stock .....		29,937.50	P 159,205.44

FIXED ASSETS:

Engineering & Surveying Equipment .....	P	523.25	
Floating Equipment .....		12,000.00	
Furniture & Fixtures .....		465.30	
Lighters & Barges .....		19,978.18	
Machinery Parts & Supplies .....		11,330.54	
Mining Equipment .....		1,027.50	
Office Equipment .....		1,294.06	
Small Tools .....		500.00	
Transportation Equipment .....		3,348.90	50,467.73
Less:			
Reserve for Depreciation of Fixed Assets .....		5,322.61	P 45,145.12

SUNDRY ASSETS:

Coron Manganese Mines .....	P	5,273.53	
Bani Manganese Mines .....		3,885.41	
San Nicolas Manganese Mines .....		121.71	P 9,280.65

DEFERRED CHARGES:

Capital Development .....	P	30,711.24	
Field Exploration .....		2,721.13	
Office Improvements .....		254.46	
Miscellaneous Charges .....		9,246.23	P 42,933.06
			256,564.27

## LIABILITIES

<b>CURRENT:</b>			
Accounts Payable .....	P	2,959.48	
Taxes Payable .....		2,114.87	
Accrued Expenses .....		1,340.00	P 6,414.35
<b>OTHER LIABILITIES:</b>			
Deferred Credits .....			P 4,500.00
<b>RESERVES:</b>			
Reserve on Treasury Stock .....	P	59,125.00	
Reserve on Shrinkage of ore Shipped .....		5,000.00	P 64,125.00
<b>NET WORTH:</b>			
Capital Stock Authorized: 10,000,000 shares @ P.10 par value .....		P1,000,000.00	
<b>Deduct:</b>			
Unissued Capital Stock .....	P	120,400.00	
Treasury Stock .....		162,000.00	282,400.00
Subscribed & Fully Paid .....			717,600.00
Deficit Account Dec. 31st 1938 .....	P	588,198.23	
Profit for the year 1939 .....		52,123.15	P 536,075.08
			<u>P256,564.27</u>

**PROFIT & LOSS STATEMENT FOR PERIOD**

January 1, 1939 to December 31, 1939

GROSS PROCEEDS ON ORE OUTPUT .. P227,600.58

**Less:**Cost of Production

Labor .....	P45,740.68	
Mine General Expenses ..	4,601.60	
Materials & Supplies...	18,252.18	
Supervision .....	5,647.02	
Royalty .....	35,271.01	P109,512.49

GROSS PROFIT ON OPERATION ..... P118,088.09

**Less:**

Selling Expenses .....	P 4,104.40	
Shipping Expenses .....	24,004.69	
Taxes & Licenses .....	7,095.03	
Depreciation .....	5,322.61	P 40,526.73

TRADING PROFIT .....

**Plus:**

Miscellaneous Income & Recoveries .....	P11,809.38	
Interest Earned .....	491.89	
Miscellaneous Profits ..	3,067.81	P 15,369.08

PROFIT CARRIED DOWN .....

**Less:**

General Expenses .....	P37,072.82	
Bonus Account .....	2,421.19	
Miscellaneous Losses ...	1,313.28	P 40,807.29

NET PROFIT FOR THE PERIOD .... P 52,123.15

**Recreation Hall Inaugurated At  
Lepanto Consolidated Mining Co.**

The newly constructed recreation hall at Lepanto Consolidated Mining Company was inaugurated on February 3, and is for the use of employees of the company as well as their families.

The hall has been equipped with facilities for all types of indoor sports, and includes a well fitted library. The use of the recreation hall and the regulation of activities is in the hands of a board of governors headed by Dr. J. T. Sonora.

Among the many activities planned for the coming year is a series of theatrical presentations by the employees of the company. Plans have been made to start an adult educational program for the benefit of Lepanto residents. A kindergarten school under the supervision of Caridad Castro has already been started in the building.

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110 Escolta

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Phone 2-12-82

## BATONG BUHAY GOLD MINES, INC.

### Equipment Shipments May Start March First

The shipment of mill machinery and equipment purchased from the Tumbaga property of Consolidated Mines is expected to start on March 1, Batong Buhay officials report. Construction of the road from Latawan to the Pasil River adjacent to the proposed millsite is fast nearing completion and is expected to be in shape for heavy transportation during the latter part of February.

Satisfactory progress was maintained on the Latawan-Batong Buhay road throughout January, with the Batong Guinto cliff section being successfully blasted and with two other difficult portions being practically completed. The road bed should be established by the middle of February from Station 87 and 365 to the Pasil River bridge site.

Extensive construction on the Cadamayan section was carried on with about 80 meters of unfinished road and one bridge remaining to be accomplished.

Work on the Pasil River tram was started towards the latter part of the month with laborers and miners concentrating on the leveling for the loading platforms on each side of the river.

Underground repair and clean up activities were also started in preparation for extensive stope development during the next few months.

Sawmill and logging production remained unchanged with about 45,000 board feet of lumber being cut during the month.

Weather, as a whole, was excellent and labor and working conditions remained normal, the report concluded.

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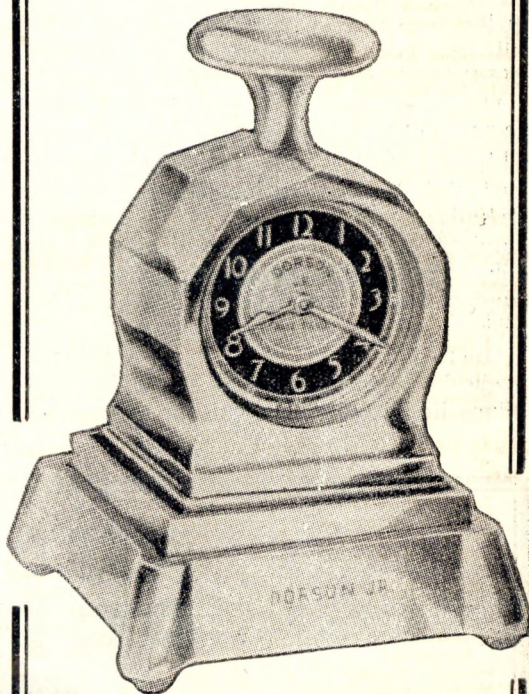
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Equipment, Inc.**

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## **COCO GROVE, INCORPORATED**

### **Production Increased During January When Both Dredges Handle 328,900 Cubic Yards Of Gravel For A Gross Output Of P159,020.14**

Coco Grove increased production in January when both dredges handled 328,900 cubic yards of gravel for P139,020.14, up P55,000 from that of the previous month. Average recovery amounted to P.423 per cubic yard, as against P.338 for December. Production for the same month last year was P142,587.58.

**Mary Angus**—This dredge handled 26,450 cubic yards of pay gravel from which P15,093.28 was recovered, the report stated. In addition, the dredge was stripping from January 1 to 22, and handled 135,055 cubic yards of overburden. Total area dredged was 92,375 square feet to an average depth of 48.9 feet.

Operations were continued in non-pay ground southwest of the Paracale light-house heading for the tailing area in the

Paracale River Bend. During the last 10 days of the month the Mary Angus was working in pay dirt again; the recovery was fair, as anticipated. As the drill holes ahead of the dredge showed good values, an improvement is expected in February, the report continued.

**Anne Petronella**—This dredge is now working old tailings and partly in virgin ground heading for the bay again. By the middle of March the dredge is expected to reach the beach area where a satisfactory production may be anticipated.

**General**—The mechanical performance of both dredges in general was satisfactory. The operations of the suction dredge Rotterdam have been suspended and will be resumed when weather conditions improve.

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**EAST MINDANAO MINING COMPANY, INC.**  
(Annual Report For 1939)

**Company Declares Initial Dividend In December, 1939 • Net Profit Of P152,986.56 Reported For Year Under Review**

The annual report and balance sheet of East Mindanao which was distributed to stockholders this month showed gross revenue from bullion at P709,765.85 for the year ended October 31, 1939. Profit for the year was reported as P152,986.36.

The annual stockholders' meeting was held in the offices of the company in Cebu on December 28, 1939.

The following officers and directors held office at that time:

H. Gasser, pres; C. J. Martin, vice-pres; K. Fick, sec; L. Schmitt, treas; F. W. Varney, director.

The company paid an initial cash dividend of 10 percent on January 30, 1939 to stockholders of record on January 20.

F. W. Varney, general superintendent, rendered the following report on operations at East Mindanao during the year under review:

**Summary**—The end of the year shows a great improvement in the mine with regards to ore reserves. Operations were somewhat disrupted during the rainy season which caused a serious pumping problem at the time.

"Your ore reserves, conservatively figured, amount to P2,947,102.48 for positive, probable and possible ore an increase of P2,069,124.06 over the ore reserves of October 31, 1938.

"Sufficient ore has been developed to warrant an increase in your mill capacity up to at least 200 tons per day in order to lower operating costs and overhead per ton mined.

"During the period from November 1, 1938 to October 31, 1939 your mill handled 40,235 tons of ore valued at P777,520.79. Mill extraction for the year averaged 91.2 percent producing P709,765.85 in bullion, an increase of P177,111.17 over the production for 1938.

"The outstanding piece of development work for the year was the Tinupan Mine giving a total of P2,087,932.91 reserve for positive, probable and possible ore.

"**Exploration**—The results of the past years exploration warranted development work being started on the Bull, Tinupan

and Nellie veins. Work at the Lucky and Big Rock did not prove satisfactory and was discontinued.

"Exploration on the Kaintuck claim failed to locate the Kaintuck silver ore at depth and the work was temporarily discontinued but will be undertaken again after the present rainy season is over.

"The Heinie shaft was put down 160 feet to explore the Briggs and Heinie vein as well as the Colorado No. 4.

"The Mindoro shaft was put down to the 500 level and sinking started for the 600 level.

"The Tinupan shaft was put down to the 300 level and the 300 crosscut north was run out to the Tinupan ore body.

"Exploration work on the Nellie claim, amounted to 1,560 feet of crosscutting and drifting resulting in the opening of a very good ore deposit.

*Summary of Exploration Footage*

	<i>Feet</i>
Mindoro Mine .....	2,543
Briggs Mine .....	788
Tinupan Mine .....	509
Kaintuck Mine .....	427
Nellie Mine .....	1,560
Arling Tunnel .....	10
Lucky Claim .....	372
Sneer Claim .....	65
Cash Claim .....	59
Suyoc Claim .....	74
Nugget Claim .....	40
<b>TOTAL</b> .....	<b>6,447</b>

"Exploration work produced 3,484 tons of ore valued at P41,422.06 net.

"**Development**—The total amount of development work amounted to, 1,763.5 feet. All stope raises have been charged directly to stoping instead of development as in the past. Development work on the Mindoro mine was largely confined to the 500 level.

"Ore produced by development amounted to 2,514 tons valued at P43,940.28 net as follows:

*Summary of Development Tonnage*

	<i>Tons</i>	<i>Value P</i>
Mindoro Mine .....	1,249	20,458.11
Briggs Mine .....	451	8,198.19
Tinupan Mine .....	746	15,179.02
Kaintuck Mine .....	58	104.96
<b>Total</b> .....	<b>2,514</b>	<b>43,940.28</b>

"Drifting on the Bull vein exposed a large body of ore that cannot be handled in the mill due to the copper content. Work has been stopped on this ore until alterations can be made in the mill or equipment included in the enlargement of the present mill which is at present under consideration.

"**Stoping**—Ore produced by stoping amounted to 34,237 tons valued at P623,867.71 net as follows:

	Tons	Value P
Mindoro Mine .....	25,748	430,624.01
Briggs Mine .....	5,842	103,807.41
Tinupan Mine .....	1,952	75,299.17
Kaintuck Mine .....	469	8,895.80
Nellie Mine .....	226	5,241.32
<b>TOTAL</b> .....	<b>34,237</b>	<b>623,867.71</b>

*Summary of Production*

	Tons	Value P
Exploration .....	3,484	41,422.06
Development .....	2,514	43,940.23
Stoping .....	34,237	623,867.71
<b>TOTAL</b> .....	<b>40,235</b>	<b>709,230.05</b>

(Note: Above value subject to U. S. Mint Returns)

"**Mill**—The mill handled 41,326.71 tons of ore distributed as follows:

	Tons	Value P
East Mindanao Mining Co. . .	40,235	709,098.96
Mapaso Goldfields .....	1,021.73	38,686.72

Nabago Gold & Silver Mines . . . . .	69.93	738.24
<b>TOTAL</b> .....	<b>43,326.71</b>	<b>748,523.92</b>

"The average mill extraction for the year amounted to 91.2 percent of the gold content of the ore.

*Summary of Mill Operations*

Skip .....	34.5%
Crusher .....	61.7%
Ball Mill .....	94.6%
Precipitation .....	98.6%
Filter .....	61.1%

"**Construction**—The storm of January 13, 1939 took out over a kilometer of our road that had to be rebuilt.

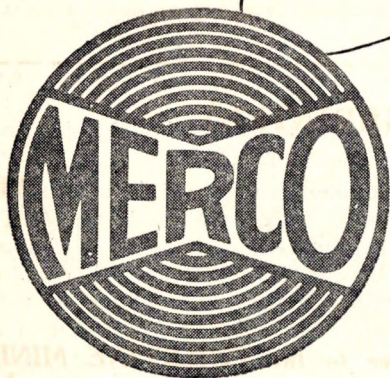
"During the past year the two company barrios have been rebuilt, one staff house built and the dispensary remodeled and enlarged into a hospital.

"The Heinie shaft head frame and ore bin that will handle all ore from the Briggs and Heinie shaft was completed.

"A four hundred ton fuel oil tank was erected at the power house for fuel oil storage in addition to the one hundred ton tank originally installed.

"**Recommendations**—**POWER**: The present power plant consisting of two 300 h.p. Worthington engines is greatly overloaded and another unit should be in-

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stalled as soon as possible to take care of the present requirements as well as the additional horse power that will be needed for the Tinupan, mill enlargement and mine requirements. Another compressor should be installed to take care of additional air requirements and do away with the operation of the portable compressors which are now being used.

**“Tinupan**—A new three compartment shaft should be sunk on the Tinupan in order to handle the ore tonnage that has been developed in the past year. This will call for the shaft head frame, hoist house, double drum hoist and necessary equipment to sink the shaft. A survey just completed shows that a road can be constructed from the Tinupan to the head of the mill that will be on a uniform grade and less than half the length of the present road.

**“Mill**—With the present tonnage of ore available it is advisable to increase the capacity of the mill to 200 tons per day and therefore advise having mill test made that will determine the flow

sheet advisable for our present ore with additional equipment to handle the Bull vein ore.

**“Mine**—With the addition of a new unit in the power plant the Mindoro, A-1, Tinupan and Heinie shafts each, should be sunk at least one hundred feet more.

“Development work should be advanced as fast as possible on the Nellie vein which would include the sinking of an inclined shaft.

**“Ore Reserves**—Ore reserves are calculated the same as in the past using the same system of blocks as per mine sections attached. In making calculations a minimum of four feet in width and P12.00 per ton was used.

	Tons	P/T	Total Val. P
POSITIVE ORE . . . . .	59,453	24.42	1,451,951.61
PROBABLE ORE . . . . .	27,713	22.04	610,897.87
POSSIBLE ORE . . . . .	40,206	21.99	884,252.97
<b>TOTAL . . . . .</b>	<b>127,372</b>	<b>23.14</b>	<b>2,947,102.45</b>

The increases in value per ton for ore reserves over 1938 amounts to P4.82.

ORE RESERVES AS OF NOV. 1, 1939

MINE	POSITIVE ORE			PROBABLE ORE			POSSIBLE ORE		
	Tons	P/T	Total Val. P	Tons	P/T	Total Val. P	Tons	P/T	Total Val. P
MINDORO . . . . .	19,791	21.50	425,504.67	4,008	17.91	71,773.00	5,460	17.38	94,875.60
BRIGGS . . . . .	2,075	18.35	38,076.04	2,830	18.40	52,076.00	1,100	14.00	15,400.00
BRIGGS EXT. . . . .	—	—	—	—	—	—	1,335	12.09	16,743.72
TINUPAN . . . . .	33,960	27.01	917,189.63	18,975	23.73	450,276.75	30,361	23.73	710,466.53
NELLIE . . . . .	3,627	19.62	71,181.27	1,900	19.35	36,767.12	1,900	19.35	36,767.12
<b>GRAND TOTAL.</b>	<b>59,453</b>	<b>24.42</b>	<b>1,451,951.61</b>	<b>27,713</b>	<b>22.04</b>	<b>610,897.87</b>	<b>40,206</b>	<b>21.99</b>	<b>884,252.97</b>

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**East Mindanao Mining Company, Inc.**  
BALANCE SHEET AS AT 31st OCTOBER, 1939

MINE AND MINE PROPERTIES		ASSETS			
At Cost					
Add—Development Cost from 3rd October, 1934 to 31st October, 1939.				P 300,000.00	
				515,078.87	P 815,078.87
Less—Allowance for Depletion					275,673.04
					P 539,405.83
<b>FIXED ASSETS</b>					
	<i>At Cost</i>	<i>Depreciation Allowance</i>	<i>Net Book Value</i>		
Real Estate	P 12,911.63	P —	P 12,911.63		
Buildings	94,854.68	27,947.74	66,906.94		
Plant Structures	38,270.36	10,272.76	27,997.60		
Machinery and Equipment	454,532.83	196,577.37	257,955.46		
Boats and Lighters	3,645.04	2,589.03	1,056.01		
Trucks and Autos	10,540.03	6,907.88	3,632.15		
Furniture and Fixtures	11,085.94	4,783.56	6,302.38		
Roads and Bridges	7,724.73	2,432.67	5,292.06		
Lime Stone Quarry	1,143.96	362.27	781.69		
	P634,709.20	P251,873.28	P	P	P 382,835.92
<b>CURRENT ASSETS</b>					
Materials and Supplies—Valued and Priced by Management				P102,649.29	
Accounts Receivable					
Miscellaneous	P 12,569.83				
Staff and Employees	3,598.34			16,168.17	
Deposits				328.00	
Bullion					
At Mine	P 58,238.17				
In Transit	185,041.02			243,279.19	
Cash on Hand				12,959.82	375,384.47
<b>DEFERRED CHARGES AND DEBIT BALANCES</b>					
Prepaid Insurance				P 1,420.83	
Suspense				2,500.00	
Travel Suspense				720.00	
Compensating Tax (Paid Under Protest)				608.36	5,249.19
					P1,302,875.41
<b>NET WORTH</b>		<b>LIABILITIES</b>			
<b>Capital Stock</b>					
Authorized Capital					
10,000,000 Shares of 10¢ each				P1,000,000.00	
Issued and Fully Paid					
9,200,000 Shares of 10¢ each	P920,000.00				
Stock Held in "Escrow"					
800,000 Shares of 10¢ each	80,000.00			P1,000,000.00	
Surplus					
Balance—1st November, 1938	P 15,182.05				
Less—Prior Period Adjustments	1,557.29				
	P 13,624.76				
Net Profit for year ended 31st October, 1939	152,986.36			P 166,611.12	P1,166,611.12
<b>CURRENT LIABILITIES</b>					
Bank Overdrafts					
Chartered Bank of India, Australia and China—Cebu	P 24,232.35				
Wells, Fargo Bank & Trust Co.—San Francisco	8,524.97			P 32,757.32	
Accounts Payable					
Suppliers and Miscellaneous	P 28,712.30				
Staff	3,533.17				
Workmen's Compensation	1,476.27			33,721.74	
Unclaimed Wages				301.94	
Accrued Expenses					
Wages	P 8,633.46				
Taxes and Income Tax	19,075.78			27,709.24	94,490.24
<b>DEPOSITS</b>					
Escrow Release Deposit				P 10,000.00	
Miscellaneous				756.00	10,756.00
<b>RESERVES</b>					
Workmen's Compensation				P 13,152.90	
Major Repairs of Wasting Assets				14,715.15	
Return Transportation of Staff				3,150.00	31,018.05
					P1,302,875.41

**SUMMARIZED OPERATION AND PROFIT AND LOSS STATEMENT  
FOR THE YEAR ENDED 31st OCTOBER, 1939**

<b>REVENUE</b>		
Proceeds of Bullion .....		P709,765.85
<i>Less:</i>		
Taxes on Production .....	P11,290.91	
Expenses on Bullion .....	11,792.81	23,083.72
Net Proceeds of Bullion .....		P686,682.13
<b>EXPENDITURE</b>		
Production Costs—		
Operating Development .....	P 15,858.84	
Stoping .....	118,771.79	
Ore Delivery .....	8,842.00	
Mine General Expenses .....	80,105.84	
Milling Expense .....	100,504.00	
Administration and Overheads .....	66,972.30	P391,054.77
Depreciation .....		75,057.35
Ore Depletion Allowance .....		40,299.00
Profit on Production .....		P180,271.01
<b>REVENUE FROM CUSTOM MILLING</b> .....		7,753.59
Profit on Mine Operation .....		P188,024.60
<b>MISCELLANEOUS REVENUE</b> .....		2,018.73
		P190,043.33
<b>GENERAL ADMINISTRATION AND OVERHEAD</b>		
Cebu Office .....	P 18,106.93	
Directors' fees .....	350.00	
Placer testing .....	1,012.74	
Mine Manager's Bonus .....	3,824.66	
Income Tax .....	13,762.64	37,056.97
Profit for year ended 31st October, 1939 .....		P152,986.36

## ITOGON MINING COMPANY

### *Development Work Uncovers Good Grade Ore In Various Sections Of Mine Mill Treated 28,120 Tons Of Ore For P405,789.10*

Itoyon officials reported a P27,000 increase in production during January when the mill treated 28,120 tons of ore for P405,789.10. Average recovery per ton amounted to P14.43 which compares with P13.32 during December. Extraction was 87.41 percent. Output for the same month last year was approximately P346,252.00.

**Development**—Total advance for the month amounted to 4,043 feet. Capital account was charged with 2,893 feet with 670 feet in ore. Operating development advanced 1,150 feet with 470 feet in ore.

**Mine**—Drifting on seven levels of the Sesame vein advanced 302 feet and resulting in 188 feet in ore of better than average grade over a width of 4.5 feet. In the Gilkison split, advance amounted to 121 feet, all on the 800 level. Average grade ore was uncovered over a length of 64 feet. Average width of the vein was 4.5 feet.

Satisfactory results were obtained from work on the 31 vein, the report continued. Drifting amounted to 187 feet on four levels. Ore found on the 200, 300

and 400 levels was of better than average grade over a width of five feet.

The pocket raise from the 1000 to the 875 level on the 23 winze was connected during the period under review and sinking was resumed in order to install loading pockets on the 1000 level.

Development work on all levels above the zero, Taka vein, has been temporarily discontinued as enough ground has been opened to provide for stoping operations for some time. The raises on four levels were driven a total of 233 feet with 131 feet in ore. Recent work in this section of the mine has been very encouraging.

Ore of good value was reported from work on the face of the Itoe vein, drift east, which was cut on the last day of January. The drift east on the 300 level was advanced 69 feet in better than average grade ore over a width of 4.5 feet.

**General**—No much construction work was undertaken during the period under review, but an active program has been planned along this line during the next few months, the report concluded.

## INTERNATIONAL ENGINEERING CORPORATION

### Six Properties Produce ₱1,202,210.52 From 130,569 Tons Of Ore Treated During January • New High Monthly Record Set By Masbate Consolidated

Total production from six Soriano properties under the management of International Engineering amounted to ₱1,202,210.52 from 130,569 tons of ore treated, officials reported. Output was up ₱100,240 from that of the previous month.

A new alltime high production record was established by Masbate Consolidated Mining Company when the mill treated 95,272 tons of ore for ₱513,906.26.

**Antamok Goldfields**—The mill treated 13,561 tons of ore during January for ₱196,343.83, up ₱33,000 from that of the previous month. Average recovery amounted to ₱14.48 per ton as compared to ₱14.36 during December. The mill also treated 602 tons of Gold Creek ore valued at ₱9,419.16. Average value of this ore was ₱15.65 per ton.

**Guy Willey Group**—This property produced 46 tons of ore valued at ₱642.00. Average recovery amounted to ₱13.96 per ton, officials reported.

**I.X.L.**—The mill treated 12,031 tons of ore during January for an output of ₱272,980.64, up ₱45,000 from that of the previous month. Average recovery per ton was ₱22.69 as compared with ₱28.83 during the previous month.

Development footage for the month amounted to 1,168.5 feet with 259 feet in ore.

The 64 winze prospecting the Balate southwest ore shoot was advanced close to the 700 level. It passed through six feet of ₱24 ore. Prospect dogholes were cut east and west, 50 feet below the 600 level and uncovered ore averaging better than ₱31 per ton.

Excellent progress was made in the Balete River diversion project, a total of 8,750 cubic yards of earth and rock being moved.

**Masbate**—A new monthly high production record was established at Masbate during January when the mill treated 95,272 tons of ore for ₱513,906.26. Output was up ₱46,000 from that of December. Average recovery amounted to ₱5.39 per ton as compared to ₱5.82 for the previous month.

**North Camarines** — The mill treated 8,377 tons of ore in January for a gross recovery of ₱192,270.34, down ₱1,000 from December's output. Average recovery per ton amounted to ₱22.95 as compared to ₱25.82 during the previous month.

**Paracale National**—Production amounted to ₱26,067.26 during the period under review, down ₱7,000 from that of the previous month. The mill treated 1,282 tons of ore for an average recovery of ₱20.33 per ton. This compares with an average of ₱23.93 during December.

### MONOGRAPH PUBLISHED ON MANGANESE ORES

A monograph on manganese ores was recently published by E. M. de Villa, consulting geologist. In this brief but interesting study, Mr. de Villa gives a few descriptions of certain areas, selected from deposits in various parts of the world; chosen not because of the particular value of the deposit but to enable the geologist or mining engineer to compare such deposits with the particular property which is under study by him.

The monograph describes the ores of manganese and where found, the various uses, typical deposits in Russia, India, Philippines and the U.S.; hints for the prospector marketing data, and other pertinent information.

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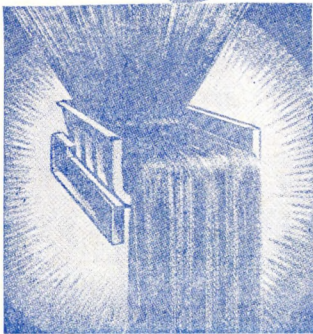
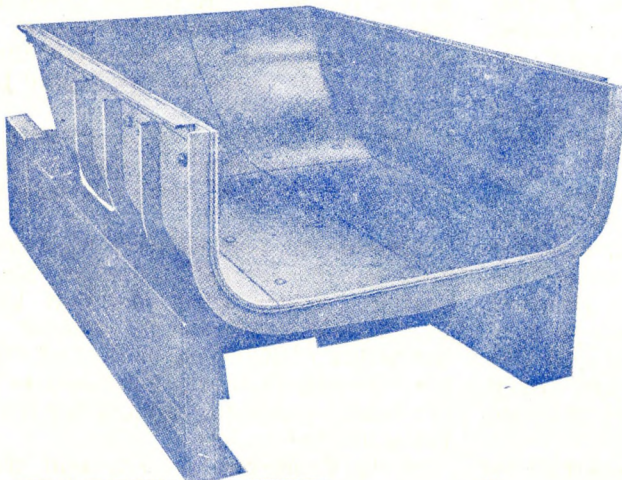
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## **MAYON MINING CORPORATION**

### **Development Work Uncovers Good Grade Ore At Depth • Daily Capacity Of Mill To Be Increased • January Production Is ₱26,600**

January's production at Mayon Mining amounted to approximately ₱26,600.00 from 1,647 tons of ore treated, officials reported. Output was down ₱14,000 from that of December. Average recovery amounted to ₱16.15 per ton.

The 50-ton mill at the Mayon property, which started operations during the middle part of August, was one of the last mills to be placed in production during 1939. Production for the year amounted to ₱127,720.77 from 7,321 tons of ore treated. It is newsworthy that output from this property brought the total gold production figures of all properties in the Philippines past the ₱74,000,000 mark.

Mayon Mining Corporation was incorporated in 1933. Present capitalization is ₱100,000 authorized and fully paid. The present property of the company was located in the same year. Continuous prospecting and development work progressed on a small scale until the latter part of 1938, by which time enough ore had been indicated to justify the purchase and installation of a 50-ton milling plant. The mill went into operation about the middle of August, 1939, and has been in full and continuous operation since that time, with satisfactory results.

#### **Ore Developed On 350**

During the past year, the main shaft was sunk to the 350 level and drifts run on the ore at this depth. Ore developed

on this level has been of entirely satisfactory grade and has added considerably to ore reserves. Plans are now being made to sink the main shaft to the 450 and 550 levels, the report continues.

In addition to the deposit now being worked, exploration and development work is also being carried out on the "Yakal" vein, approximately 600 feet northwest of our present workings. Good values have been found in this vein. The shaft in this area has now reached a depth of 120 feet with 30 feet to go. Prospecting is being carried on continuously on the rest of the property and a number of structures have been located, some of which show good values.

Mill tonnage is being increased from 50 to 65-70 per day. Installation of the necessary additional equipment will be completed during the current month.

It has been found that the flowsheet and metallurgy as originally planned, worked out entirely satisfactory due to the care and thought given these items by W. A. Solomon, who has been in general charge of the company's activities and is chief engineer and assistant manager, officials stated. N. J. Ericson is general superintendent and H. W. Schonbeck is mill superintendent.

B. D. Cadwallader is president and treasurer of Mayon Mining; R. N. Cadwallader, vice-president; E. Gumaru, secretary; and E. B. Ford, W. A. Solomon, W. F. Cadwallader are directors.

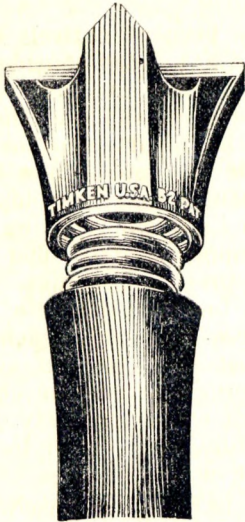
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## **MINERAL RESOURCES, INC.**

### **Production Drops Due To Shutdown From January 1 to 11**

Production during January amounted to ₱17,023.11 from 1,323 tons of ore treated, officials reported. Average recovery amounted to ₱12.87 for the month as compared to ₱14.19 for December. Output was down ₱13,000 from that of the previous month.

Owing to the strike of December 31, 1939, with attendant sabotage, the report stated, the mill was shutdown from January 1 to 11. January's production therefore, represents a mill run of 17 days and 21 hours.

The shaft and mine being flooded, most of the ore treated was mined from surface areas. This resulted in a heavily oxidized ore which upset the standard mill treatment and caused a low rate of extraction, the report continued.

The dewatering of the mine and shaft is proceeding according to schedule and it is expected that mining operations on the first and second levels will be resumed by the end of February, the report concluded.

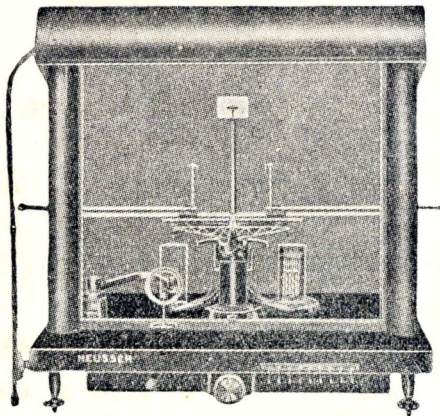
## **EDITORIAL**

(Continued from page 15)

ed \$5,000,000,000 in assets in the United States, of which about one-fifth is said to be in a form which can be converted into gold. France alone is supposed to have approximately \$500,000,000 in gold held in Canada and New York.

George T. Hughes, noted financial commentator, has the following to say regarding the so-called gold problem:

To the discussion of possible solutions, Dean John T. Madden of the Institute of International Finance of New York University, has just made an interesting contribution in a bulletin entitled "The European War and the Gold Problem." He dismisses suggestions that the Treasury should stop buying imported gold or that the price should be reduced, adding, as to the latter course, that it would not necessarily stop the inflow. In Dean Mad-



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den's opinion, also, putting gold coin into circulation would take out of the Treasury only a relatively small amount.

On this last-named point there is room for difference of opinion, but there is only one really serious objection. That is the appreciation of the dollar against foreign currencies which would probably result. Certainly the reasons for nationalization of gold that were advanced in 1933 no longer apply. Gold could be restored to its pre-depression convertibility without any possible danger to the Treasury, and, even if it did not drain off any large amount, the advantages of that policy seem to outweigh the difficulties.

Dean Madden is not optimistic about restoring the gold standard, in which opinion even the most ardent of its advocates must concur. He lists the conditions essential to success, among them "free international interchange of commodities, services and labor, and, where tariffs are deemed necessary, they must not be prohibitive." That at least seems hopeless in any foreseeable future.

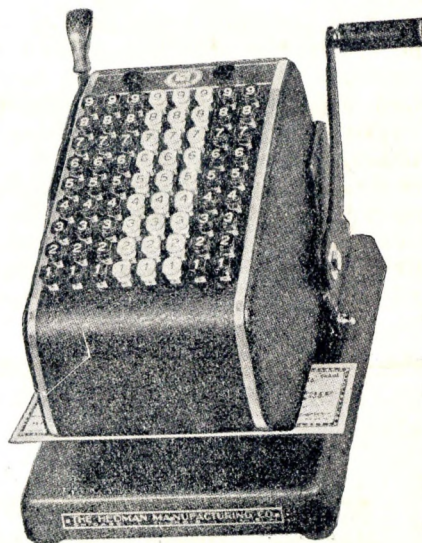
He looks with a kindly eye on the proposal to extend gold loans to Latin America now and possibly to Europe after the war.

The foregoing discussion is of great interest to gold miners because it bears directly upon that industry. With war conditions so unsettled and the possibility ever-present that the United States may be drawn into war, the presence of a huge gold reserve in this country should bring additional feeling of security. A nation with plenty of gold in its vaults is in a far better position to engage in a successful conflict than otherwise. With the possibilities of war threatening this country, the United States Treasury needs all of the domestic mined gold that can be made available to it.—*Mining and Industrial News.*

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A new monthly high record was established by Paracale Gumaus Consolidated Mining Company when ₱120,310.33 worth of bullion and concentrate was produced during the month under review.

The reports on the various properties follow:

**Lepanto Consolidated** — The mill treated 13,050 tons of ore during the month for ₱204,301.98 worth of copper and gold concentrates. Output was down ₱8,000 from that of the previous month.

Average recovery amounted to ₱15.66

which compares with ₱15.80 during December.

**Paracale Gumaus**—Setting a new high production record, the mill treated 4,607 tons of ore for ₱120,310.35, up ₱1,000 from the previous month. Average recovery was ₱26.11 per ton as compared with ₱24.83 for December.

**Hixbar Gold Mines**—Copper ore valued at ₱51,661.45 was mined during January. The property delivered 1,811 tons of ore with an average value of ₱28.53 per ton. This compares with ₱34.61 during the previous month. Output was up ₱13,000 from that of December.

**Hongkong Mines**—This plant treated 4,685 tons of ore during January for ₱40,440.11 worth of lead and silver concentrates. Output was up ₱11,000 from that of the previous month. Average recovery amounted to ₱8.63 per ton as compared to ₱7.41 for the previous month.

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**SAN MAURICIO MINING COMPANY**

**Development Advances 2,025 Feet During January With 618 Feet Reported In Ore • Mill Treats 15,147 Tons For P557,420.91**

Production at San Mauricio during January was down P41,000 from that of the previous month when P557,420.91 was produced from 15,147 tons of ore treated. Average recovery per ton amounted to P36.80 which compares to P39.89 for the preceding month. Extraction was 94.96 percent. Output for the same month in 1939 amounted to approximately P504,168.00.

**Development**—Total advance during the month was reported at 2,025 feet of which 1,612 feet were in capital and 404 feet in operating advance. Of the capital development, 444 feet were in ore as were 174 feet of operating advance.

**San Mauricio Mine**—The south drift on the Spokane vein, 300 level, advanced 109 feet in ore over a width of 14 inches. The south drift on the Tacoma No. 1 vein, 300 level, was advanced 55 feet in ore giving better than average assays over a width of 10 inches.

The north drift on the 2230 vein, 400 level was advanced 43 feet in ore of better than average grade ore over a width of 11 inches.

Sinking operations on the Spokane shaft amounted to 91 feet and this

shaft was at the 200 level when this report was rendered. The Tacoma No. 3 shaft was sunk 14 feet to the 625 level. The shaft station on the 625 level, Tacoma, was 90 percent completed at the end of January.

**Santa Ana Mine**—An advance of 24 feet was made on zero crosscut, 300 level. This crosscut will eventually connect with the Santa Monica and San Mauricio workings. The drift on hangingwall split, 800 north of the 425 level was driven 67 feet in ore giving high assays over a width of 12 inches.

**Construction**—The dynamite magazines for both United Paracale and San Mauricio were completed during the period under review. Excavation for the foundation of diesel electric generating unit No. 7 at the main power plant was 80 percent completed. Excavation work has been started on the recreation building. Construction of the building to house the diesel-driven compressor at Santa Ana was started in January, and the P.O.C. compressor at Santa Ana was moved to its new location, the report concluded.

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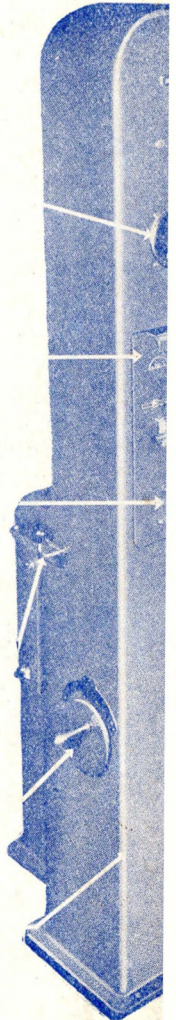
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## **SURIGAO CONSOLIDATED MINING COMPANY**

### **Development Work Uncovers Further Tonnage Of Good Grade Ore**

Production at Surigao Consolidated during January amounted to P151,791.08, down P4,000 from that of December, officials reported. The mill treated 10,289 tons of ore for an average recovery of P14.75 per ton. This compares with P15.96 during the previous month. Production for January, 1939 amounted to P75,200.

**Development**—Work in the northwest section of the mine has developed further tonnage of good grade ore both on the 100 and 200 levels.

**Mine**—During the month 10,289 tons of ore were mined, almost all of which came from underground sources. Stopping operations continue to prove extent and grade of ore to be slightly in excess of estimates. In future months production will at least equal the past two months, the report continued.

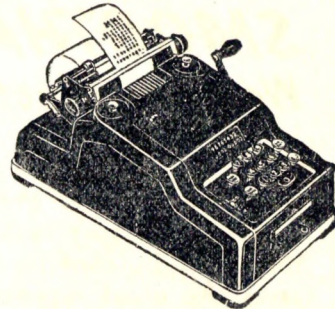
The Weber shaft was sunk to 30 feet below the 300 level during the month under review, and the station is being cut in erratic marginal grade ore.

**Mill**—While more improvements can be expected in the metallurgy of this operation has been improved each month for the past four months.

The mill produced P92,417.71 in bullion and P59,373.37 were produced in the form of concentrates which were shipped to the smelter in the United States.

**General**—Despite adverse weather conditions operations were generally satisfactory. Surface drainage and slides increased costs to a certain extent. Timber deliveries were hampered but having anticipated this condition, a good supply of lumber was on hand, and no serious shortage was experienced. Addition and betterment of the plant generally contributed to a slightly higher cost than that of December, but operating costs were just as low and total profit was about the same, the report concluded.

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## **SUYOC CONSOLIDATED MINING COMPANY**

### **Mill Treats 6,624 Tons Of Ore For P162,542.59 • Development Advance Uncovers Good Grade Ore • Suyoc Club Starts Contest**

Gold production at Suyoc during January amounted P162,342.69, down P2,000 from that of the previous month. The mill treated 6,624 tons of ore for an average recovery of P24.51. This compares with P35.78 for December, officials reported. Extraction was 87.83 percent. Production for the same month last year was about P141,330.00.

**Development**—Total advance for the period under review amounted to 1,546 feet. Capital account was charged with 803 feet of which 171 feet were in ore. Operating development advanced 743 feet with 167 feet in ore.

**Mine**—No. 1 shaft was sunk 20 feet during January. The 2244 winze was sunk 17 feet on the vein which gave average grade assays. The 2238 crosscut east cut a quartz vein of low grade ore having an average width of four feet. Work in this section will be continued in order to obtain definite information on this vein.

The 2062-A raise was started off the 20262 No. 2 drift north. This raise is on

the No. 2 vein and ore uncovered is of better than average grade. The 1864-E raise reached the 1700 level and a drift is being started to the south to connect the 17262 drift north.

Air and water pipes have been installed in the 1647 crosscut east and the heading will be pushed to cut under the No. 1 vein. This crosscut has some 1,000 feet to go and indications are that results will be favorable.

**Mill**—Improved extraction has been obtained in the flotation plant due to the retreatment of the sand portion of the flotation tails. Operations were normal during the period under review.

**Construction**—Work has been started on the extension of the hospital.

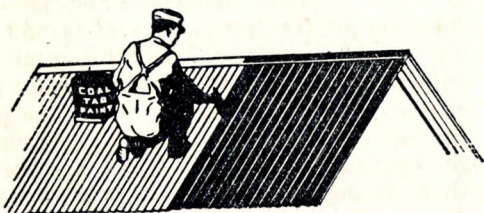
**General**—The Suyoc Club is sponsoring a "Submittal of Ideas" contest in order to improve production and decrease costs. Some worthwhile suggestions have been submitted to date, the report concluded.

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## UNITED PARACALE MINING COMPANY

### *New High Production Record Established In January When The Mill Treats 9,421 Tons Of Ore For Gross Output Of P257,837.15*

All previous monthly production records were passed by United Paracale during January when the mill treated 9,421 tons of ore for a gross output of P257,837.15, officials reported. Production was up P8,000 from that of the previous month. Average recovery was P27.37 per ton as against P25.72 during December. Extraction was 91.75 percent. Production for the same month in 1939 was approximately P238,355.00.

**Development**—An advance of 1,083 feet was made during the month under review. Of this amount, capital account was charged with 780 feet while operating development advanced 303 feet. Capital advance accounted for 138 feet in ore while development progressed 130 feet in ore.

**Mine**—The Baluarte counter-shaft No. 3, 525 level, was sunk 44 feet during the month, and is now 144 feet below the 525 level. Cutting on the 650 station was started.

In the Longos 150 level, the 152 drift north was started from the 120 north crosscut west and advanced 27 feet along

the vein. Average assays were obtained over a width of 1.3 feet.

The 301 drift north, Longos 300 level, was advanced 52 feet along the vein which gave excellent assays over an average width of 6.8 feet. The 301 drift south in this section advanced 85 feet along the vein. Better than average grade ore was uncovered over an average width of 7.6 feet.

Shaft No. 3, Longos 300 level, was sunk 37 feet in peridotite and was 47 feet below the 300 level when this report was rendered.

**North Camarines Contract**—Development advance during the month was 182 feet, all in the 535 north crosscut. A vein was cut which gave average assay values over a width of 11 inches. No stoping was done and no ore was delivered to the mill during the month under review.

**General**—The excavation for the Longos power house extension was started and was 90 percent completed at the end of the month, the report concluded.

## Payne Addresses Aimme Members On Surigao Geology

Fifty-two members and guests of the Philippine Section of the American Institute of Mining and Metallurgical Engineers attended the first dinner meeting of 1940 at the Bay View Hotel in Manila on February 2nd. Chairman Wm. F. Boericke presided.

Preliminary plans for a symposium on Philippine geology were announced. Quirico A. Abadilla, director of the Philippine Bureau of Mines, told the members that letters had been sent to all of the mining companies in the Islands, earnestly requesting their aid in compiling the symposium. The proposed symposium will be published under the auspices of the Philippine Bureau of Mines or the Philippine Section of the Institute or jointly which ever is most feasible. Messrs. H. Foster Bain and C. A. Mitke

expressed their views on the proposed symposium and offered constructive criticism.

The speaker of the evening was John Payne, Jr., consulting geologist for Surigao Consolidated Mining Co. and Mindanao Mother Lode Mines, Inc., who delivered an excellent unwritten talk on the "Gold Deposits of the Surigao Peninsula." Mr. Payne discussed the tectonic relations of the Surigao deposits and the other gold deposits of the Philippine Archipelago, the genesis of the ore, and presented several interesting ideas justified by his study of the district. Although the principal deposits are epithermal there is no decrease in grade with depth nor is there any evidence of bottoming of the oreshoots at the lowest levels. The gold values occur in the sulphides with no particular degree of uniformity. At the close of the talk several geologists took part in the discussion. It was gratifying that a number of geologists made the trip down from Baguio to hear Mr. Payne's paper.

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# AN AMERICAN VIEW OF THE COPPER INDUSTRY

By E. O. Sowerwine, Assistant to the President, Anaconda Copper Mining Company

(Reprinted From The December 15, 1939 Edition of THE MINING JOURNAL.)

**C**OPPER is a world commodity both as to sources of production and of consumptive demand. From primeval use as roughly fashioned into tools, weapons, and utensils, usage developed in statuary, bells, coins, buttons, ornaments of all sorts, building materials, clocks and watches, wires and screenings, pins and those myriads of miscellaneous purposes for which copper, brass, bronze, and other alloys are particularly adaptable. Copper has served mankind for thousands of years, but its really vital history is younger than many of those present here today.

Remember that the first public exhibition of the telephone was at the Centennial Exposition in 1876. One year later only 778 instruments were in use. Electric lighting and electric railways began to assume some importance 10 years later. Intensive machinization of industry dates from that period. Thus based upon nature of use, copper became a new commodity in world economy only half a century ago.

A fortunate coincidence of this rebirth of the metal was the discovery and development of copper mines in Montana and Arizona, supplementing the production from Michigan mines, which were opened in 1845. Thus the modern epoch of copper production and of copper utilization came hand in hand. Each progressed rapidly. Alternately each was fearful of the other. Whence would come the copper to supply the electrical requirements, the added millions of miles of telephone, lighting, and railway wires, generative equipment for the power plants, motors, and accessories for the factories,—all pyramided on top of the steady growth of the brass industry and those centuries old uses for copper? Then came more mines, improved metallurgy—making pay ore today out of what was worthless rock or waste yesterday—and the miners were fearful that this deluge of too much copper would overwhelm the market, wipe

out payrolls, and destroy the value of their constantly increased investments. But, in spite of intervals of overproduction with surplus stocks bearing down upon price, followed by periods of consumptive demand that taxed to the utmost the productive capacity of the mines, both increased progressively in orderly fashion, a steady upward trend correlated with increased price for the metal up to and through 1913.

Consumption of primary copper in 1913 was 1,111,061 tons; more than 2½ times that of 1900, more than four times that of 1887, 17 per cent more than total of the first 50 years of the nineteenth century. Every development which was adding to the progress of civilization called for more and more copper. Electricity had eliminated untold drudgery in the factory and in the home. The path ahead indicated clear sailing, a steady healthful growth.

Then came the Summer of 1914 and the holocaust of war. Any fair understanding of the copper industry of today must date from that time.

**C**OPPER had seen many wars since the days of the Pharaohs, but had never played a stellar role. Even in modern times, in the first 20 years of the nineteenth century embracing the Napoleonic wars and our war of 1812, total copper consumption was less than 20 per cent of that of the single year of 1913. Total consumption in the decade 1841-1850, including the Mexican, Italian, and Crimean wars, was only about 30 per cent of that of 1913. Use for all purposes in 1861-1870, covering the period of our Civil war, the Danish and the Austro-Prussian Wars, was less than that of 1913. There had been no marked demand for copper in the more recent Spanish-American, Boer, Russo-Japanese, or Balkan wars. There was nothing in past experience to designate war as a source of new demand or as a factor of price increase. Therefore, the immediate effect of the

war was disorganization of markets, falling off of demand, curtailment of production, loss of confidence and general demoralization.

From an average price of about 14.25 cents for the first six months of 1914, there were no quotations during August, September, and October. First quoted price was 11.1 cents on November 2, and the outlook was discouraging indeed. But not for long. This was a war such as our ancestors had never dreamed of. This was a war not only of men but of machines. Of machines that were to devour copper not by the pound but by shiploads. Such demand had not been foreseen; hence, no preparations had been made to meet it. Demand was insatiable. Prices skyrocketed. The average price of copper, f.o.b. refinery, as quoted by the "E. & M. J.," for the 15 years ending with 1913 was 14.963 cents per pound. The average price during 1913 was 15.269 cents.

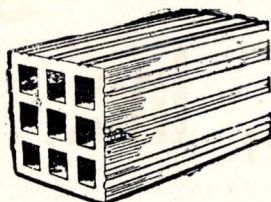
Following the slump in demand, price quickly passed this point to 20 cents by June, 1915, to 22.37½ cents by December, to 27 cents by February, 1916, and 33.25 cents by December of that year, with some sales at even higher prices. The allied

governments were demanding more and more copper. Price was no object. Their purchases exceeded all the copper above ground. Contracts exceeded productive capacity. Therefore, capacity must be increased, no matter what the cost of investment, the cost of production, or disruption of orderly development. Peacetime uses for copper were crowded off the highway as the juggernaut of war stepped on the gas.

Average price for 1915 was 17.27½ cents or 13.1 per cent above 1913, and consumption established a new peak of 1,175,373 tons. In 1916 the average price was 27.202 cents or 78.2 per cent above 1913. Consumption had jumped to 1,420,429 tons of primary copper or 27.8 per cent above 1913, the peak of all peace years. During 1917 some sales were made at prices as high as 37 cents per pound, but average price for the year, 27.18 cents, was slightly lower than the previous year, due to the fixing of price at 23.5 cents, effective September 21, following our entry into the war. However, deliveries jumped to 1,588,364 tons, or almost 43 per cent more than in 1913.

Whereas peacetime uses of copper had previously been interfered with, they were

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now wiped out. All supplies were rationed by the War Industries Board, and not even the most favored customer could secure a single carload without the specific approval of the board. To partially compensate for increased costs of labor, supplies, etc., and for freight advances made by the government after taking over the railroads of the country, the fixed price was advanced to 26 cents per pound on July 2, 1918, and remained at that level to the end of the war, and nominally to December 4, 1918, after which there were no quotations until February 1, 1919, when nominal price of 18.37½ cents was quoted.

**D**URING the war at the urgent behest of the government, every effort was made in mine, smelter, and refinery to increase output to the maximum. Plant facilities were expanded and operations were conducted at a feverish pace. So great was the increase of production, and so far in excess of any possible war requirements or ability of the United States and its allies to fabricate, that the responsible leaders of the industry warned the government of disaster threatening the mining enterprises. Suggestions were

made for a letdown in rate of production and release of man-power for other war essentials, but the government was adamant in its refusal to countenance any curtailment, and ordered production to continue at full capacity even after the Armistice.

War profits were over. The future had been mortgaged and the proceeds spent. Now the long lean years of losses and readjustment lay ahead. Copper lost far more than it gained from the war. It suffered more than any other commodity as a result of maladjustments directly traceable to the war.

The tremendous quantities of copper produced and delivered during the years 1915 to 1918, inclusive, did not represent true consumption, although for purposes of statistics they were considered as "consumed" upon delivery from the refineries. At the termination of the war, inventories showed enormous quantities of copper on hand at the various refineries and fabricating plants, not only in the hands of the producers and of our government, but in those of all the allied powers. Hundreds of millions of pounds of copper also were reclaimed from the

# Southwestern Engineering Company of P. I., Inc.

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battlefields and from munition scrap.

The total amount of copper actually on hand at the end of 1918 represented far more than the world had ever utilized in any year.

Meanwhile, the rate of production, increased to its maximum, was continuing at a rate in excess of any peace year, and the industry was faced with constantly growing stock and a disintegrated market. The producers spent huge sums in an effort to restore copper to its ordinary uses, but stocks continued to increase and the price melt away until, in 1921, the entire industry was threatened with ruin and practically all companies were forced to suspend operations. The following year operations were resumed, not because economic conditions justified it, (which was not the case, as stocks were still large and the price extremely low), but because, as copper is in large measure mined and smeltered in districts where it represents the major, and in some cases the only support for the population, humanitarian reasons dictated the resumption of operations in order to maintain employes and restore to some degree their means of living and purchasing power.

Prior to the war it was customary for users of copper to cover their requirements upon basis of three months delivery; after the war, knowing of the large stocks of copper readily available in refined forms, the practice became general of buying copper for immediate requirements only. This continued until the latter part of 1928. Meanwhile stocks had dwindled away until there were no excess reserves. An actual shortage of copper occurred in the latter part of 1928 and early 1929, the realization of which caused fabricators to cover their position for future deliveries. The reversion to pre-war purchasing methods resulted in purchase of copper not only for the current month but for three months in the future.

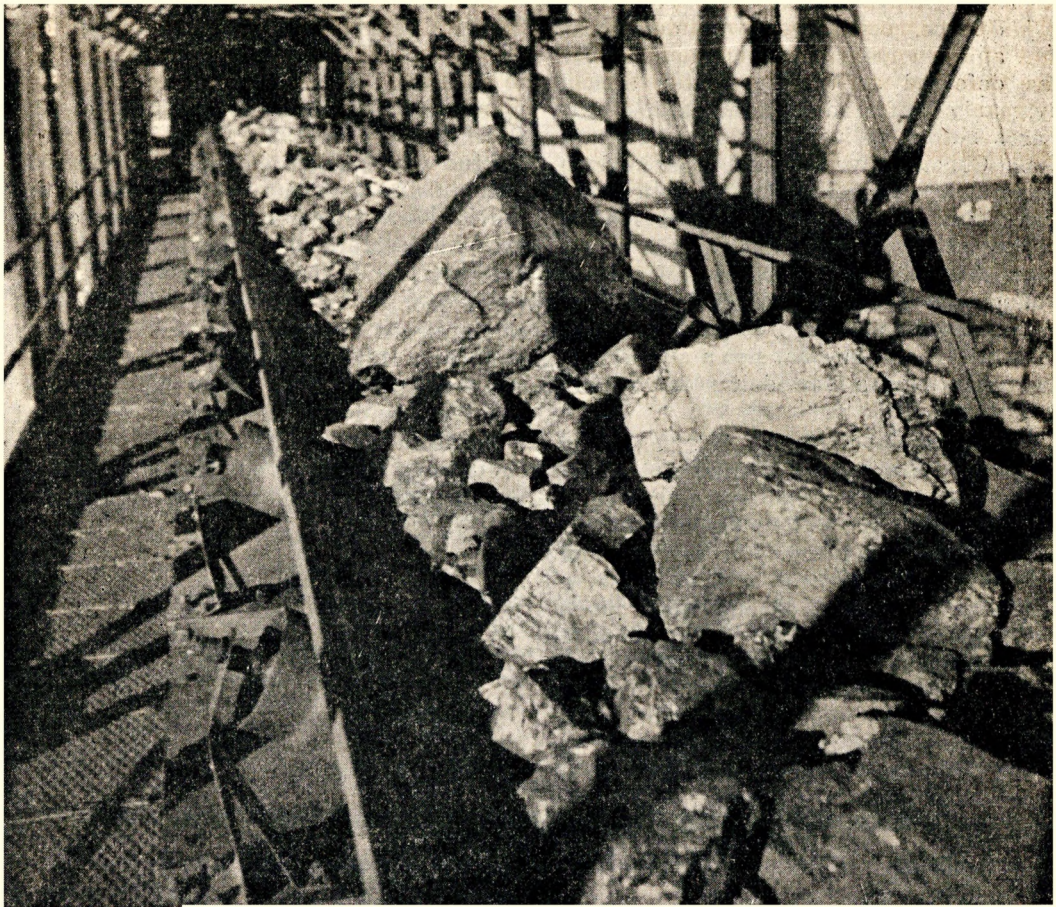
Impelled by the fear of shortage for their plants, fabricators actually purchased more than their requirements, and the total of orders so placed at the end of March 1929, amounted to more than 1,000,000,000 pounds, in contrast with which total world stocks of copper, refined and in process, as of March 31, 1929, amounted to only 627,790,000

pounds. This extraordinary buying movement had the effect of forcing the price to 23.775 cents per pound, a condition unsatisfactory to producer and consumer alike.

This period of advancing prices was the first enjoyed by the industry since the war. It was not a question merely of production being less than demand, as this condition had prevailed in every year since the shutdown, with the exception of 1923 and 1926. Demand had been constantly increasing, world deliveries setting new high records, but without benefit to the producers, due to stocks of copper carried over from the war creating a surplus in each of the following years to 1928.

As a result of the large demand in the Spring of 1929 and price higher than had prevailed for many years, world production increased, almost immediately surpassing consumption, again creating an accumulation of stocks, which should have been sufficient warning to the industry. This warning was ignored because of the large sales already made for future delivery and the belief that any recession of business was only temporary. However, some companies realized the dangers of excess production and reduced their output in May 1929, with cumulative rate of curtailment thereafter. But it was only after the Wall Street crash and the accumulation of surplus stocks that any effort was made by others to adjust production to consumption demand and more than a year later before any effective curtailment was accomplished.

Such curtailment did not fully equalize the recession in business. Stocks continued to increase and the weight of this surplus broke the price to 4.775 cents per pound on December 8, 1932, continuing to March 8, 1933, 46.6 per cent below the record low of any previous depression; less than the direct operating cost of production of the cheapest producer in the United States; 49.8 per cent of the direct cash production cost and 35.6 per cent of the cost, including depletion and interest, 13.41 cents per pound of all domestic production for the three years 1928-9-1930 as reported November 30, 1931, by the United States Tariff Commission after an exhaustive investigation by its experts.



## 3 Million Tons of Crash! Bang! Crunch!

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On a belt-killing quarry conveyor, where the best belt ever made was pounded to shreds in carrying 400,000 tons of rock, one of these new Goodrich endless belts

has already carried 3,000,000 tons—and is still efficiently at work. In mines and quarries all over the world, Goodrich conveyor belts are serving with the

same economy and efficiency. For complete details on how Goodrich belts can save you money on your operations, write us today.

### Goodrich International Rubber Co.

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Manila, P. I.

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ONCE the price of the metal started to decline, confidence was destroyed, and wherever possible manufacture was deferred as the fabricator almost invariably suffered a loss on his purchases before delivery could be made to him. Consumptive demand was held in restraint by the well-grounded belief that by waiting a day, a week, or a month, copper could be purchased at a lower price. The desire or necessity of certain producers for cash vindicated the view of the buyer and it became a buyer's market to the point that not a single producer got back a new dollar for an old one.

The Industrial Recovery Act, passed by Congress, June 13, 1933, removed many of the restrictions which were throttling the industry. Basically designed to improve social conditions, to restore and distribute buying power, and to conserve natural resources, it accomplished much good during its short life. A copper code was enforced upon the industry from April 1934 to June 15, 1935. Surplus stocks were gradually reduced, and thanks to improvement in conditions in foreign countries where the depression

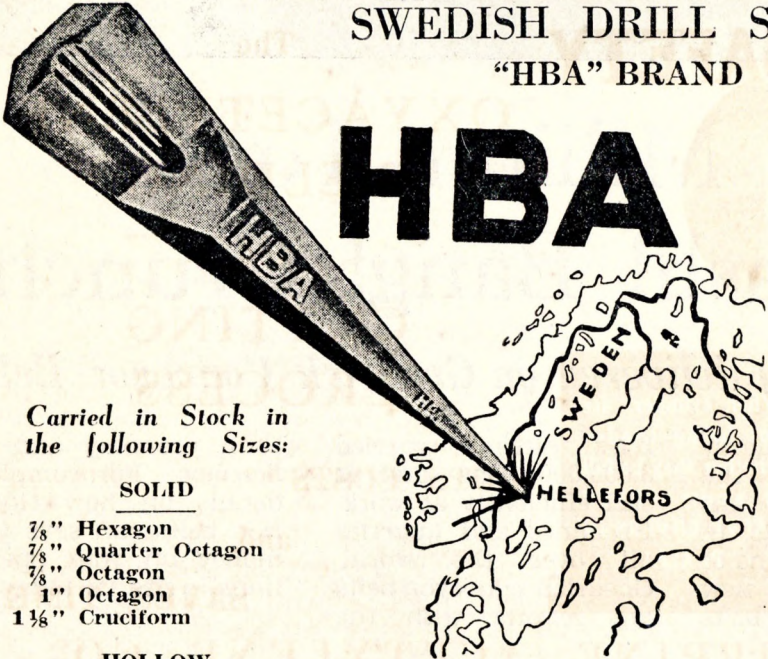
was much less severe than in the United States, demand increased and prices slowly advanced from 4.775 cents in 1933 to 7 cents, 8 cents, 9 cents and to maximum of 9.525 cents to the end of the third quarter of 1936. Foreign demand led the way with more copper used in 1934 than in any previous year, including the World War period, and each succeeding year has established a new high record.

In the last quarter of 1936 and the first three months of 1937 conditions tended to duplicate the situation of late 1928 and early 1929. A buying wave moved the price up to 11.775 cents on December 31, 1936, and continued in volume and momentum until a peak price of 16.775 cents was reached on March 31, 1937, which lasted less than a week. Consumption of copper for the first time in eight years was back to the level of the first six months of 1929, while foreign deliveries were more than 40 per cent above the 1929 level. Prices generally were back to 88 per cent of 1926 as reported by the United States Bureau of Labor. Unemployment was rapidly disappearing, buying power increased, and the end of the recession seemed in sight.

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- $\frac{7}{8}$ " Hexagon
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**FRED WILSON & CO., INC.**

53-55 Barraca Manila

But hopes were blasted by a complete reversal of sentiment. Buying ceased. Cancellations poured in. Deliveries were postponed. Confidence was destroyed. Prices dropped. Production was curtailed. Employment was reduced and wages of those remaining on the payroll were lowered, as in the copper industry there is a direct correlation of price and wages — a direct and automatic profit sharing system. Buying power of millions of workers was curtailed or destroyed. By December, deliveries were down to less than 20 per cent of those of March and April, and the price was down to 9.9 cents. There was only slight improvement in 1938 with average domestic deliveries only 42 per cent of those of March and April 1937, and price recovery to only 11.025 cents by the end of the year, which was unchanged to March 21, 1939. This was followed by a drop to 9.775 cents. Then, as a result of the fear of war in Europe and the actual outbreak of hostilities, there developed a huge buying wave in July which has continued to date, advancing price to 12.275 cents on October 5, 1939.

This price is still below the true aver-

age cost of production as reported by the Tariff Commission in 1931. Since that date there have been some improvements in mining and metallurgy but nothing of great importance. Credits for silver and gold have increased. But every other factor entering into cost of production has moved upward, particularly wages, cost of supplies, and taxes of every kind and character. However, there are favorable indications of increased demand and a price commensurate with cost of production and a fair return on the huge investment of the industry. Present price is only about 80 per cent of the 1913 base while the average of all commodities included in the United States Bureau of Labor index is about 115 per cent.

**C**OPPER is entitled to a square deal. Fair treatment is necessary if the irreplaceable natural resources of this country are to be conserved and utilized to advantage. Reserves are limited, sufficient for less than a generation, and the average grade has steadily decreased as the richer ores are rapidly being exhausted. This is graphically shown by the United States Bureau of Mines report

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*Pioneers of the oxyacetylene industry in the Philippines*

of grade of ores mined in the United States. This declined from 5.35 per cent in 1889 to 2.73 per cent in 1902, to less than 2 per cent in 1909, and to a low of 1.41 per cent in 1928, 1929 and 1930. During the worst depression years, selective mining was necessary for many mines to survive and only the higher grade ores were hoisted, thus increasing average grade of ore mined in the United States in 1932 to 2.11 per cent. Production was only 27 per cent of that of 1929. When demand increased in 1937 to 83 per cent of 1929, average grade treated dropped to 1.29 per cent. In the five previous years much ore was irretrievably lost. Only a fair price can prevent further losses and the United States cannot afford profligate waste. This country has not had a major new discovery in recent years.

Although still the largest individual producer, the United States has lost its supremacy in the copper world. With exception of the shutdown years, 1921 and 1922, the United States produced more copper each year from 1894 to 1927 inclusive, than all of the rest of the world combined. But in 1937, a relatively good year, its share of the total was less than one-third, dropping to about one-fourth in 1938. World supremacy never can be regained. However, there is no reason why the domestic copper industry cannot rehabilitate itself, and, by adjusting production to consumption demands, avoid the pitfalls of the past, overproduction, surplus stocks, depressing price below cost of production and those violations of the inexorable law of supply and demand that inevitably bring their own retribution.

The outlook is favorable. Business generally is on the up-grade. While perhaps partially due to the European war,

this improvement primarily can be attributed to a better domestic situation. The condition of every industry served by copper seems to be improving. New uses for copper are developing and old ones are expanding. Production of electricity is establishing new high records. Outlook for the automobile industry is good. Utilities and railways are showing signs of recovery, particularly in the purchase of new equipment and expansion of facilities. Prospects indicate a huge increase of copper going into copper-bearing steel. The shipyards are busy. Copper radiators are rapidly gaining preference both in the home and office buildings. Sales of copper and brass pipes in September were more than the total for the entire year 1922 when the Copper and Brass Research Association started its advertising campaign, and sales for the first ten months of this year exceeded all of 1936, the previous peak year. The brass mills are busier than they have been for years.

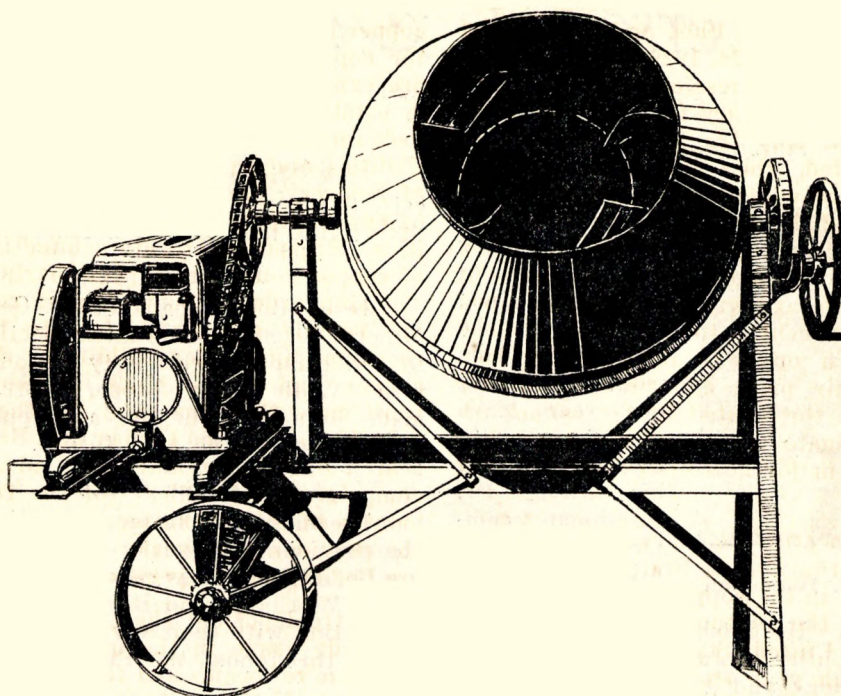
Electro-deposited sheet copper is gaining wide usage in the building industry for spandrel beams and foundation waterproofing, damp-proofing walls, as a vapor seal for insulating materials for concealed window and door flashings, as a protection to flooring below grade level, for lining shower stalls, etc. It is one of the most interesting developments in the copper industry as it can be produced in continuous sheets up to more than 60 inches wide and weighing as little as one-eighth of an ounce per square foot, although commercial weights range from one ounce to seven ounces per foot.

Anticipating a restoration of price to a level fair to both producer and consumer, with continued growth in demand, the copper industry faces a healthy and prosperous future.

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*Via RCA*

**TELEGRAMS TO ALL THE WORLD AND SHIPS AT SEA**



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This highly portable machine—designed for quick work and easy hauling on the job—has saved money and increased efficiency for many contractors.

It will mix slush concrete for all kinds of monolithic construction, semi-wet concrete for walls, foundations, side walks, culverts, etc. It will mix a complete batch per minute, discharging directly into the wheelbarrow or forms.

Available in two sizes: Model 2S with a capacity of 2 cu. ft. of mixed concrete, and Model 3-1/2T with a capacity of 3-1/2 cu. ft. mixed concrete.

## INTERNATIONAL HARVESTER COMPANY

OF PHILIPPINES

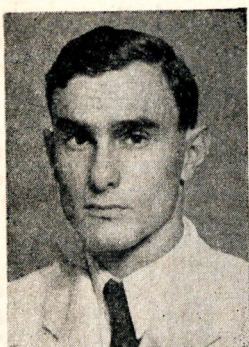
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# « Personal Mention »

## Dr. Harshman Returns



Dr. E. N. Harshman

Dr. E. N. Harshman, staff geologist for Nielson and Company, Inc., returned to the Philippines this month from a one year leave of absence in the U.S. During his leave, Dr. Harshman completed work for his Ph. D. at the University of Arizona. He finished this work under Dr. B. S. Butler in July, 1939 with a major in geology and a minor in metallurgy. His thesis was entitled "Areal geology and ore deposits of the Belmont-Queen Creek area, Superior, Arizona." This work will be published with the work of Dr. F. W. Galbraith III and Dr. M. N. Short by the Arizona bureau of mines in a bulletin on the Superior District.

Dr. Harshman is a graduate of the California Institute of Technology at Pasadena, Cal., where he received a B.S., in 1932 and an M.S. in geology in 1933. Spent one year as general superintendent and geologist for the Cadiz Placer Mining Company and as field assistant to B.M. Moore of the U.S. Geological Survey. He went to the University of Arizona from September, 1934 to June, 1936 on a holiday teaching fellowship, and in the meantime started work on his Ph. D. He resigned his fellowship in August, 1936 to accept a staff position with Nielson and Company. During his first three years in the Philippines, Dr. Harshman was staff geologist for Nielson and Company and at intervals was general superintendent at Tinago Consolidated Mines and Hixbar Gold Mining Company.

Shortly after his return to the Philippines, he left on a trip to inspect the Sulu-Wabig property which is being operated by Nielson and Company.

## Leaves For U.S.

L. R. Nielson, head of Nielson interests, left the Philippines for the United States this month on a business trip.

## Inspection Trip

Jesus Rocas, manager of Compañia Minera, recently made an inspection trip to the company's property Coron, Palawan. While on the property, Mr. Rocas made arrangements for a shipment of manganese for the near future.

## Resigns Office

Freemont F. Clarke has resigned as vice-president of Southwestern Engineering Co. of P.I. and is now associated with Roger W. Clarke and Horace S. Moore in connection with their various mining activities throughout the Philippines.

## Visits Property

W. W. Harris, president of Atok Gold Mining Company, made an inspection trip to the Big Wedge mine in the Baguio district this month.

## Returns From U.S.

Mark Hubbard, consulting engineer for Mine Operations, Inc., and the general superintendent of the Capsay property, will arrive in Manila on the President Coolidge from a combined business and pleasure trip to the U.S.

## Returns From Hongkong

George T. Scholey, manager of Nielson and Company, Inc., returned from a trip to Hongkong where he inspected the lead furnace installation of Hongkong Mines, Ltd.

## Sayre Visits Property

American High Commissioner Sayre made a trip to the Masinloc mine of Consolidated Mines this month in order to inspect the property.

## Elected President

Felix Culanculan, staff member at Lepanto Consolidated, was elected president of the Lepanto Scientific Club to serve for the first half of 1940. Other officers elected were Bart Dulay, vice-president;

Diomedes Subido, secretary-treasurer; and Gregorio Mapanao, asst. secretary-treasurer.

F. L. Neuman, mill shift boss, gave a lecture before the club on January 27, when he spoke on "Copper Mining in the Lake Superior District of the United States."

**Leaves Tapi-an Surigao**

William de Carbonel is no longer connected with Tapi-an Surigao Gold Mines, Inc., where he has been general superintendent for the past five months.

**Resigns From Santa Rosa**

Wendell Fertig recently resigned as general superintendent of the Santa Rosa Mining Company. He has joined the mining staff of Elizalde and Company and will be stationed at the Samar Iron property of that company.

**Transferred**

Frank Shriver, formerly mill shifter at Paracale Gumaus Consolidated Mining Company, has been transferred to the Manila office of Nielson and Company where he will act as assistant purchasing agent.

**Business Trip**

J. M. Flannigan of Manila Machinery

and Supply Company made a business trip to the Paracale gold district this month.

**On Leave**

H. T. Hutchinson, electrical superintendent of San Mauricio Mining Company, left for the United States this month on home leave. He was accompanied by his family.

**Payne Leaves For U .S.**

John Payne, Jr., consulting geologist for Surigao Consolidated and Mindanao Mother Lode Mines, left for the United States this month.

**New Staff Members**

Harold Blanchard and Earl Stillman arrived in the Philippines this month and have joined the engineering staff of Nielson and Company.

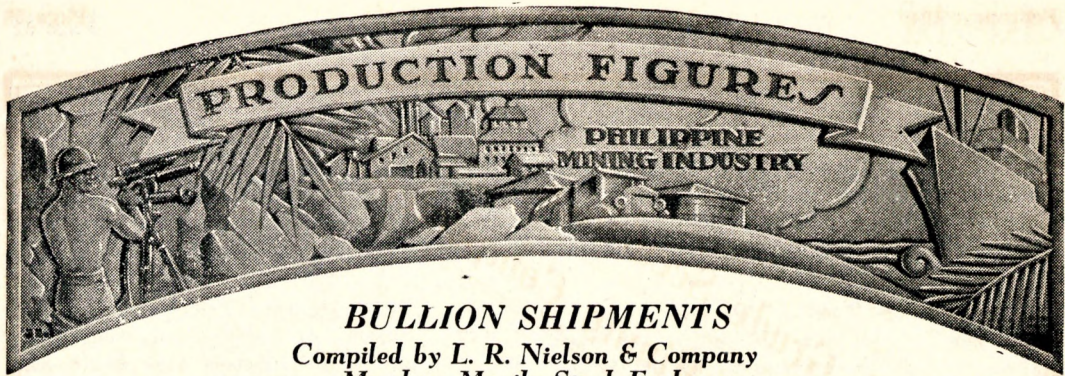
**Belden On Clipper**

Henry J. Belden, Atlantic, Gulf and Pacific Company official, left for the United States this month via clipper. Mr. Belden will be gone about four months on a combined business and pleasure trip.

**Appointed Mine Accountant**

J. M. Wareham has been appointed mine accountant of Philippine Iron Mines. Mr. Wareham relieves L. R. Riechers who recently resigned.

The advertisement is enclosed in a double-line rectangular border. At the top center is a logo of a camel standing on a curved banner that reads "CARAVAN". Below the logo, the text "Beautiful Oriental Rugs" is written in a cursive font, followed by "Very Reasonably Priced" in a similar font. At the bottom center, the word "CARAVAN" is printed in large, bold, serif capital letters. In the bottom left corner, it says "Tel. 5-43-23" and in the bottom right corner, it says "96 Isaac Peral".



## BULLION SHIPMENTS

Compiled by L. R. Nielson & Company  
Members Manila Stock Exchange

Started Milling	Name	December Production	January Production	January Tonnage	Recovery Per Ton	Total 1940	Total Output 1 month 1939
1932	Antamok	P163,180.73	P196,343.83	13,561	P 14.48	P 196,343.83	P 290,276.03
1930	Baguio Gold	159,640.00	162,732.20	11,945	13.62	162,732.20	160,100.00
1927	Balatoc	1,018,861.34	1,041,949.46	62,368	16.70	1,041,949.46	1,011,536.44
1913	Benguet Con.	941,864.56	918,465.28	39,191	23.44	918,465.28	934,976.20
1939	Benguet Goldfields (X)	30,786.00	37,984.70 (H)	1,382	27.48	37,984.70	—
1936	Big Wedge	182,404.94	163,234.92	6,695	24.38	163,234.92	174,951.00
1935	Cal Horr**	122,975.48	79,638.32	5,884	13.53	79,638.32	116,797.06
1939	Capsay (F)	135,967.32	141,152.02	3,021	46.72	141,152.02	—
1936	Coco Grove (a)	84,842.67	139,020.14	328,900 (e)	.423	139,020.14	142,587.58
1939	Crown Mines (X)	15,501.29	17,887.36	770	23.23	17,887.36	—
1934	Demonstration	76,338.35	59,777.94	4,703	12.71	59,777.94	115,775.18
1936	East Mindanao	62,402.60	59,279.15	3,333	17.79	59,279.15	33,952.86
	Gold Creek*	11,018.86	9,419.16	602	15.65	9,419.16	2,916.88
1939	Guy Willey Group (XX)		642.00	46	13.96	642.00	—
1934	Ipo Gold	103,770.74	98,172.82	6,180	15.88	98,172.82	107,037.10
1925	Itoyon	378,343.58	405,789.10	28,120	14.43	405,789.10	346,242.52
1931	I. X. L.	227,438.39	272,980.64	12,031	22.69	272,980.64	247,883.57
1939	Km. 73 Mining (b)	72,435.00	56,625.00	2,230	25.39	56,625.00	—
1938	Macawiwili Gold	48,672.84	43,513.25	2,902	14.91	43,513.25	49,859.93
1939	Mambulao Con. (F) (G)	7,700.75					—
1938	Mapaso Gold						2,280.85
1935	Masbate Consolidated	477,100.22	513,906.26 (H)	95,272	5.39	513,906.26	328,234.17
1938	Masbate Goldfields (b)						21,745.24
1939	Mayon Mining Co. (J)	40,259.68	26,600.00	1,647	16.15	26,600.00	72,819.91
1937	Mindanao Min. Co. (a)						4,392.32
1937	Mind. Mother Lode	131,266.00	140,538.00	4,724	29.75	140,538.00	18,401.79
1938	Mineral Res. (Labo mill)	35,257.55	17,023.11	1,323	12.87	17,023.11	—
1939	North Camarines (F)	193,003.41	192,270.34	8,377	22.95	192,270.34	6,817.96
1937	North Mindanao (a)	10,520.20	16,184.04	17,700 (e)	.91	16,184.04	—
1939	Northern Mines, Tuba (c)	52,266.13	50,198.00	1,911	26.27	50,198.00	60,763.58
1938	Paracale Gumaus	132,682.13	120,310.33	4,607	26.11	120,310.33	18,401.79
1939	Paracale Mining	19,933.81	10,140.20	1,571	6.45	10,140.20	—
1939	Paracale National (G) ††	33,546.28	26,067.25	1,282	20.33	26,067.25	—
1936	San Mauricio	598,490.92	557,420.91	15,147	36.80	557,420.91	504,168.56
1938	Santa Rosa	70,777.06	62,471.85	4,920	12.70	62,471.85	91,073.50
1939	Sta. Cecilia (a)		2,906.00	4,718 (e)	.616	2,906.00	2,977.04
1938	Surigao Con.	155,004.00	151,791.08	10,289	14.75	151,791.08	75,200.00
1934	Suyoc	164,637.57	162,342.59	6,624	24.51	162,342.59	141,337.32
1929	Tambis Gold (a)	7,084.80					7,581.22
1939	Treasure Island	54,612.58	75,479.02 (H)	3,315	22.77	75,479.02	59,942.21
1937	Twin Rivers***	25,086.53	21,256.00	17,682	1.20	21,256.00	28,751.25
1935	United Paracale	249,586.68	257,837.15 (H)	9,421	27.37	257,837.15	238,355.11
		P6,304,428.36	P6,309,349.42			P6,309,349.42	P5,437,700.31

\*Ore milled by Antamok

\*\*Includes Ukab

\*\*\*Treats tailings

(+) Started milling in May

(††) Started milling in June, 1939

(H) Alltime monthly high record

(X) Ore milled by Demonstration

(XX) Ore milled by North Camarines

(a) Placer property

(b) Started milling in July, 1939

(c) Started milling in Feb., 1939

(e) Cubic yards

(F) Started milling in March, 1939

(G) Ore milled by North Camarines

(J) Started milling in Aug., 1939

## BASE METAL SHIPMENTS

	December Production	January Production	January Tonnage	Production For 1940*
Acoje Mining (Manganese)	P193,510.00			
Agusan Gold Mines (Iron Ore)				
Amalgamated Minerals (General Agents)	14,244.30			
Cia. Minera de Filipinas (Manganese)				
Consolidated Mines (Chrome Ore)	139,200.00	271,000.00	22,600	271,000.00
Dinagat Mines (Chrome Ore)		36,000.00	2,000	36,000.00
Gold Star Mining Co. (Iron Ore)		34,598.75	7,775	34,598.75
Hixbar Gold Mining Co. (copper)	38,693.98	51,661.45	1,811	51,661.45
Hongkong Mines (Lead & Silver)		40,440.11	4,685	40,440.11
Lepanto Consolidated (Copper & Gold)	212,333.94	204,301.98	13,050	204,301.98
Mine Factors (General Agents)		49,914.00	2,006	49,914.00
Philippine Iron (Iron Ore)	253,454.20	239,467.50	52,150	239,467.50
Philippine Nippon (Manganese)				
Samar Iron (Iron Ore)	100,400.00	194,500.00	42,750	194,500.00
Zambales Chromite Mining (Chrome ore)		45,000.00	2,500	45,000.00

\*Only actual shipments included

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**L. R. Nielson and Company, Limited**  
*Hongkong*

**Our Reputation for Reliability Is Your  
Guarantee of Efficient Service**

# REVISED GOLD PRODUCTION

Company	January	February	March	April	May	June
Antamok.....	P290,276.03	P326,398.42	P377,086.81	P358,159.29	P317,283.92	P245,698.03
Baguio Gold.....	160,100.00*	152,897.90*	156,365.60*	161,561.58*	159,713.36*	151,722.60*
Balatoc.....	1,011,536.44	993,272.98	1,102,301.40	887,158.76	1,205,110.96	1,094,525.04
Benguet Cons.....	934,976.20	912,281.44	959,365.68	1,022,321.06	949,798.24	913,029.54
Benguet Explor.....	9,917.16*	—	—	—	—	—
Benguet Goldfields..	—	—	—	2,349.35	9,974.08	16,738.18
Big Wedge.....	174,951.00*	152,006.80*	162,386.86*	152,527.08*	149,729.38*	143,022.96*
Cal Horr (Ukab)....	116,797.06	108,420.90	124,383.60	121,610.16	130,628.14	131,615.92
Capsay.....	—	—	59,648.17	94,293.55	103,630.01	141,244.39
Coco Grove.....	142,587.58*	114,484.74*	72,233.73	28,871.27*	143,017.52*	171,125.52*
Crown Mines.....	—	—	—	777.79	1,779.56	3,341.95
Demonstration.....	115,775.18	109,076.62	97,498.14	113,404.02	75,452.64	84,170.57
East Mindanao.....	33,952.86	36,302.43	41,389.17	37,907.42	37,967.03	73,596.52
Gold Creek.....	2,916.88	1,932.16	3,931.14	5,310.39	7,515.47	18,809.51
Guy Willey Group..	—	—	—	—	—	—
Ipo Gold.....	107,037.10	101,887.22	102,007.72	104,347.06	98,480.82	99,387.14
Itogon.....	346,242.52*	312,437.69*	343,290.85*	342,662.23*	379,126.29*	450,866.91*
I. X. L.....	247,883.57	249,684.81	259,547.71	247,963.78	279,218.15	250,445.18
Km. 73 Mining.....	—	—	—	—	—	—
Layog Gold Mines..	—	—	—	—	—	—
Macawiwili Gold...	49,859.93	44,347.57	45,844.12	42,586.09	34,106.25	26,811.43
Mambulao Cons.....	—	—	49,139.79	42,401.95	43,077.89	36,015.28
Mapaso Goldfields...	2,280.85	2,559.72	4,709.49	3,389.22	5,028.38	3,246.00
Masbate Cons.....	328,234.17	319,093.45	372,760.70	368,779.63	369,916.46	408,306.82
Masbate Goldfields..	—	—	—	—	—	—
Mayon Mining.....	—	—	—	—	—	—
Mindanao Mining...	21,745.24	21,906.96	27,021.94	26,336.24	9,653.52	13,212.94
Mind. Mo. Lode....	72,819.91	115,242.78	140,693.72	106,285.77	125,725.44	81,200.36
Mineral Resources..	4,392.32	7,973.84	10,698.20	12,842.22	8,020.34	8,643.84
North Camarines...	—	—	137,824.87	149,682.16	218,584.22	212,962.03
North Mindanao....	6,817.96	8,361.42	14,333.86	12,854.54	7,531.04	10,893.18
North Mines, Tuba..	—	9,000.00*	33,416.99*	48,582.60*	36,997.99*	41,451.76*
Paracale Gumaus...	60,763.58	75,226.16	89,001.91	87,518.08	75,942.12	80,165.71
Paracale Mining....	18,401.79	9,306.01	12,681.52	13,402.06	12,343.87	—
Paracale National...	—	—	—	—	—	11,696.86
Royal Paracale.....	22,028.77*	24,880.60*	29,598.66*	30,543.34*	31,922.03*	16,069.30*
San Mauricio.....	504,168.56*	501,826.48*	550,601.31*	551,091.93*	550,618.76*	565,862.63*
Sta. Ana-S. Joaquin	—	—	—	—	9,671.86	6,968.33
Sta. Cecilia.....	2,977.04	4,151.36	3,622.50	—	1,977.04	1,404.06
Santa Rosa.....	91,073.50*	76,222.90*	102,243.22*	96,102.64*	91,130.65*	70,325.74*
Surigao Cons.....	75,200.00*	76,735.66*	90,000.43*	131,117.15*	124,018.00*	106,933.00*
Suyoc.....	141,337.32*	144,163.41*	138,044.89*	136,425.82*	145,861.07*	144,039.77*
Tambis Gold.....	7,581.22	8,902.98	12,180.90	11,055.02	11,663.34	8,372.52
Tapi-an Surigao....	—	—	—	—	31,911.32*	21,000.00*
Tinago.....	6,020.00	2,520.68	7,560.00	5,488.24	6,039.43	5,260.26
Treasure Island.....	59,942.21	57,072.96	56,727.14	54,519.82	43,534.18	40,817.68
Twin Rivers.....	28,751.25*	11,063.28*	—	20,597.93*	37,817.77*	38,580.44*
United Paracale....	238,355.11*	234,790.71*	241,754.37*	236,598.89*	239,918.80*	239,727.26*
<b>Totals</b> .....	<b>P5,437,700.31</b>	<b>P5,326,433.04</b>	<b>P6,031,897.11</b>	<b>P5,869,426.13</b>	<b>P6,321,437.34</b>	<b>P6,189,307.21</b>

NOTE: \*Mine Reports; \*\*Includes P79,882.18 recovered from cleanup of the refinery.

# TION FIGURES FOR 1939

<i>July</i>	<i>August</i>	<i>September</i>	<i>October</i>	<i>November</i>	<i>December</i>	<i>Total</i>
P249,392.20	P224,300.45	P172,028.07	P198,626.39	P174,388.94	P163,180.73	P3,096,819.28
153,807.06*	149,431.04*	141,519.58*	141,878.52*	150,795.62*	159,640.00*	1,839,432.86
1,194,300.10	1,076,268.44	1,030,425.52	990,690.48*	953,480.62*	1,018,861.34*	12,557,932.08
941,102.38	917,179.74	941,196.98	972,584.44*	961,667.78*	941,864.56*	11,367,368.04
—	—	—	—	—	—	9,917.16
8,818.43	9,413.58	6,198.74	6,365.85	25,945.30	30,786.00	116,589.51
157,646.90*	145,306.34*	159,661.22*	166,192.10*	170,359.66*	182,404.94*	1,916,195.24
109,484.74	122,344.00	112,558.78	119,764.20*	112,670.88*	122,975.48*	1,433,253.86
150,531.67	147,033.75	130,145.02	141,185.32	138,551.64	135,967.32	1,242,230.84
203,004.82*	252,346.32*	301,884.34*	247,861.61*	263,936.63*	84,842.67*	2,051,604.85
5,052.56	8,267.74	7,611.95	17,177.08	16,871.98	15,501.29	76,381.90
85,503.95	95,471.32	98,342.35	101,157.87	78,239.55	76,338.35	1,130,430.56
51,387.84	67,526.62	71,201.38*	119,894.54*	55,093.97*	62,402.60*	688,622.38
15,320.75	6,025.11	12,212.73	19,048.23	15,768.46	11,018.86	119,809.69
—	—	—	—	4,750.12	—	4,750.12
98,728.96	99,763.74	113,729.70	120,080.60*	114,449.93*	103,770.74*	1,263,670.73
410,983.08*	352,725.25*	395,464.12*	438,698.18*	421,323.55	378,343.58*	4,572,164.25
271,235.93	269,418.61	272,824.90	253,717.20	233,246.08	227,438.39	3,062,624.31
23,000.00*	121,098.00*	113,030.82*	45,406.00*	102,775.00*	72,435.00*	477,744.82
12,926.00	23,419.30	19,858.06	15,463.86	16,080.00	—	87,747.22
34,529.02	48,534.73	52,339.73	90,459.68	57,005.52	48,672.84	575,096.91
40,989.90	34,481.77	31,283.87	29,089.16	28,584.12	7,700.75	342,764.48
4,000.00	—	1,560.00	—	—	—	26,773.66
430,314.00	432,073.36	455,650.30	468,441.34	500,246.26	477,100.22	5,010,798.89**
40,839.00	59,817.00	59,336.00	55,164.66	—	—	215,156.66
—	9,682.67	23,184.92	27,054.22	27,539.28	40,259.68	127,720.77
2,237.70	—	—	—	—	—	122,114.54
103,064.68	106,225.80	130,272.00*	139,860.00*	155,010.10*	131,266.00*	1,407,666.56
8,168.74	16,621.55	10,462.71	11,611.80	11,964.75	35,257.55	146,657.86
211,745.36	213,095.61	186,120.96	176,218.73	175,395.42	193,003.41	1,874,632.77
—	9,668.68	5,585.42	11,442.34	11,939.98*	10,520.20*	109,948.62
51,351.00*	50,220.31*	51,360.00*	63,817.17*	52,331.00*	52,266.13*	490,794.95
107,344.09	123,525.65	108,447.40	128,392.67	127,593.81	132,682.13*	1,196,603.31
—	9,811.87	—	—	14,688.95	19,933.81	110,569.88
11,902.64	22,804.84	18,887.12	39,521.19	26,537.48	33,546.28	164,897.13
19,346.71*	20,313.13*	19,947.72*	25,147.86*	23,256.52*	9,167.37*	272,222.02
545,580.72*	535,458.09*	540,311.67*	533,557.80*	553,943.32*	598,490.92*	6,531,512.19
4,655.64	—	—	—	—	—	21,295.88
1,906.10	3,857.68	3,401.52	943.74	—	—	24,261.04
71,375.31*	78,282.03*	70,777.60*	76,573.62*	61,286.06*	70,777.06*	956,170.21
122,100.00*	118,116.52*	94,956.00*	106,860.00*	113,368.00*	155,004.00*	1,314,408.76
150,941.95*	147,375.61*	159,067.54*	164,276.13*	151,967.64*	164,637.57*	1,788,138.72
6,680.82	6,938.60	11,121.20*	8,420.40*	10,702.20*	7,084.80*	110,704.00
—	—	—	—	—	—	52,911.32
1,990.01	3,621.82	10,613.40	13,333.08	2,953.18	—	65,400.10
56,595.02	56,867.24	66,504.58	50,581.88*	62,934.32*	54,612.58*	660,709.61
26,142.69*	13,049.09*	12,245.83*	17,304.00*	24,374.00*	25,086.53*	255,012.81
236,501.03*	241,404.40*	250,034.17*	251,909.63*	250,432.73*	249,586.68*	2,911,013.78
P6,432,529.50	P6,449,187.40	P6,473,365.92	P6,605,773.57	P6,454,450.35	P6,304,428.36	P74,000,914.13

## REVISED BASE METAL PRODUCTION FOR 1939

<i>Company</i>	<i>January</i>	<i>February</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>August</i>	<i>September</i>	<i>October</i>	<i>November</i>	<i>December</i>	<i>Total</i>
Acoje Mining.....	P————	P231,550.00	P————	P————	P————	P————	P————	P————	P————	P————	P27,300.00	P193,510.00	P452,360.00
Agusan Gold Mines.	————	————	————	————	————	64,000.00	35,775.00	35,000.00	122,535.00	87,948.00	31,185.00	————	376,443.00
Amalgamated Miners.....	27,175.70	26,415.70	33,145.49	26,481.72	25,962.54	18,126.00	17,793.97	10,892.70	12,638.32	8,565.20	11,265.10	14,244.30	232,706.74
Cia. Minera de Filipinas.....	————	————	17,842.83	————	————	————	————	————	————	————	————	————	17,842.83
Consolidated Mines.	————	————	————	————	————	————	————	————	76,000.00	————	120,000.00	139,200.00	335,200.00
Filipinas Mining....	————	————	————	————	————	————	————	65,446.00	————	————	————	75,200.00	140,646.00
Florannie Mining...	————	————	————	————	————	————	————	————	143,000.00	————	————	————	143,000.00
Gold Star Mining...	27,625.00	32,000.00	32,776.00	31,663.00	31,662.50	31,875.00	31,875.00	20,000.00	55,625.00	20,000.00	69,275.00	————	384,376.50
Hixbar Gold Mining	74,829.04	————	34,600.00	50,797.59	92,540.72	110,618.64	122,844.40	137,994.40	139,675.15	71,000.00	21,780.00	38,693.98	895,373.92
Hongkong Mines...	48,952.96	36,923.56	36,570.18	34,237.20	30,877.00	34,592.35	40,019.82	36,745.89	37,076.54	38,400.00	28,564.00	29,562.00	432,521.50
Lepanto Cons.....	127,433.12	118,019.90	136,250.62	136,840.47	161,504.04	158,174.80	138,432.00	140,360.40	169,169.36	188,326.20	174,307.68	212,333.94	1,861,152.53
Philippine Iron.....	301,812.45	222,802.83	236,340.44	266,125.69	246,670.89	257,072.04	236,215.88	184,641.38	251,941.43	170,836.03	257,098.75*	253,454.20*	2,885,012.01
Philippine Nippon..	21,250.00	14,800.00	11,250.00	30,000.00	————	————	————	32,500.00	————	30,000.00	————	————	139,800.00
Samar Iron.....	67,400.00	90,000.00	96,000.00	76,000.00	95,000.00	60,000.00	93,000.00	117,200.00	155,000.00	108,000.00	145,000.00	100,400.00	1,203,000.00
Tagobomar Dev. ...	————	————	————	————	————	————	————	————	————	————	————	34,104.69	34,104.69
Zambales Chromite.	————	————	————	22,285.60	65,430.52	————	————	6,280.15	53,231.20	65,838.06	34,646.00	————	247,711.53
Totals .....	P696,478.27	P772,511.99	P634,775.56	P674,431.27	P749,648.21	P734,458.83	P715,956.07	P787,060.92	P1,215,892.00	P788,913.49	P920,421.53	P1,090,703.11	P9,781,251.25

NOTE: \*Estimated Gross Receipts. No confirmation from Consignees

# You Can Depend On



There is no guesswork when you use "HERCULES" (Red-Strand) Wire Rope. It is designed and built to do specific jobs better... safer... more economically. Furnished in a wide variety of construction so as to be suitable for all purposes—each backed by 81 years of manufacturing experience and close cooperation with users.

## —PREFORMED—

For maximum efficiency in Preformed Wire Rope, use Preformed "HERCULES". It is available in both Round Strand and Flattened Strand constructions.

*Made Only By*

**A. LESCHEN & SONS ROPE CO.**

Established 1857



*Philippine Agents:*

**MARSMAN TRADING CORPORATION**

BAGUIO

MANILA

PARACALE

# GROSS GOLD PRODUCTION AND TONNAGE TABLE

The following table of statistics shows the gross tonnage treated by gold mines in the Philippines, total production and average recovery per ton for 1939. For monthly production records—please turn to page 54.

Company	Tons Treated During 1939	Value Recovered In Pesos	Average Recovery Per Ton In Pesos
Antamok Goldfields	208,467	P3,096,819.28	P14.86
Baguio Gold	118,223	1,839,432.86	15.56
Balatoc	676,462	12,557,932.08	18.56
Benguet Con.	430,641	11,367,368.04	26.40
Benguet Goldfields	6,849	116,589.51	17.02
Big Wedge	75,124	1,916,195.24	25.51
Cal Horr (A)	91,048	1,433,253.86	15.74
Capsay	29,163	1,242,230.84	42.60
Coco Grove	3,822,391*	2,051,604.85	.536
Crown Mines	4,214	76,381.90	18.13
Demonstration	88,987	1,130,430.56	12.70
East Mindanao	39,032	688,622.38	17.64
Gold Creek	8,784	119,809.69	13.64
Guy Willy Group	385	4,750.12	12.34
Ipo Gold	73,714	1,263,670.73	17.14
Itogon	338,183	4,572,164.25	13.52
I. X. L.	132,370	3,062,624.31	23.14
Km. 73 Mining	10,850	477,744.82	44.03
Layog Gold Mines	XX	87,747.22	—
Macawiwili Gold	XX	575,096.91	—
Mambulao Con.	23,430	342,764.48	14.63
Mapaso Gold	553	26,773.66	48.42
Masbate Con.	1,002,541	5,010,798.89	5.00
Masbate Goldfields	12,981	215,156.66	16.58
Mayon Mining	7,321	127,720.77	17.45
Mindanao Mining	278,479*	122,114.54	.439
Mindanao Mother Lode	48,945	1,407,666.56	28.76
Mineral Resources	10,545	146,657.86	13.91
North Camarines	68,206	1,874,632.77	27.48
North Mindanao	183,715*	109,948.62	.598
Northern Mines (Tuba)	17,723	490,794.95	27.69
Paracale Gumaus	41,730	1,196,603.31	28.67
Paracale Mining	12,429	110,569.88	8.90
Paracale National	8,472	164,897.13	19.46
Royal Paracale	33,614	272,222.02	8.10
San Mauricio	148,732	6,547,111.32	44.02
Sta. Ana-San Joaquin	914	21,295.88	23.30
Santa Cecilia	55,850*	24,261.04	.434
Santa Rosa	61,707	956,170.21	15.50
Surigao Con.	104,192	1,314,408.76	12.60
Suyoc Con.	77,096	1,788,138.72	23.22
Tambis Gold	343,030*	110,704.00	.322
Tinago	7,880	65,400.10	8.30
Treasure Island	33,741	660,709.61	19.58
Twin Rivers	XX	255,012.81	—
United Paracale	112,729	2,911,013.78	25.91

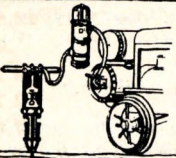
\* Cubic Yards

XX Tonnage not available  
(A) Includes Ukab contract

# THOR-COCHISE Rock Drills

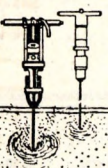
Give Long-life In Heavy Work

**LOWER AIR CONSUMPTION**



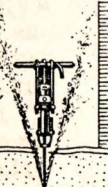
TRUE ECONOMY . . .  
Put a Flow-Meter in the  
air line and watch air  
consumption drop when  
a Thor drill goes on the  
job!

**MORE POWERFUL ROTATION**



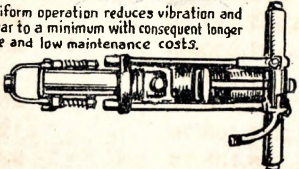
NO "STUCK" STEELS . . .  
"Measured Air" brings EXTRA  
power for positive rotation.  
Thor drills keep going in the  
most difficult formations.

**GREATER BLOWING POWER**



DIRECT PRESSURE . . .  
Thor design directs blowing  
power by the simplest method  
. . . wastes no air . . . blows the  
hole clean and the cuttings  
clear.

**LOWER MAINTENANCE COST**



Uniform operation reduces vibration and  
wear to a minimum with consequent longer  
life and low maintenance costs.

No matter how tough the going THOR-COCHISE ROCK Drills will outperform from the start... and keep going long after ordinary drills have found their way to the discard. They're built that way—for long life in heavy work where speed and economy is essential to profitable operation. Stronger rotation and blowing power enable THOR-COCHISE Rock Drills to drill faster and blow the holes perfectly clean, with the result that they increase production even where the drilling is the hardest. The positive, short-traveled THOR-COCHISE valve and efficient design assure low air consumption and make every foot of air pay dividends in work performed.

"Measured Air", an exclusive new principle of THOR-COCHISE Rock Drills brings supremacy in all four-features pictured at the left. Test these four-features on your own work and see why THOR-COCHISE Rock Drills bring super-duty performance with amazing air economy. Full information on request without obligation.

## Pacific Commercial Company

Iloilo—Bacolod—Cebu—MANILA—Baguio—Cagayan—Davao

## DIRECTORY OF MINING COMPANIES

The following list contains information, when available, on all mining companies organized in the Philippine Islands. **THREE ASTERISKS (\*\*\*)** designates information taken from sources considered reliable.

(Continued From December Issue)

### **SURIGAO CONSOLIDATED MINING CO.\*\*\***

*Officers & Directors:*—Otto F. Weber, pres. & treas; Wm. F. Gemperle, vice-pres; Thos. N. Powell, sec; Fulgencio Apellanez, Pedro G. Virata, directors.

*Capitalization:*—P1,200,000 authorized, P1,022,971 fully paid.

*Location:*—Lode claims in Surigao gold district, Mindanao.

*Production:*—P1,324,335 during 1939, P607,138 for 10 months of 1938. Production started March, 1938.

*Dividends:*—Paid initial dividend of 10 percent to stockholders of record on August 15, 1939.

### **SURIGAO DE ORO, INC.\*\*\***

*Incorporators:*—Salvador Zaragoza, Jose Ozamis, J. Antonio Araneta, Nicanor Reyes, Manuel Alcuaz.

*Capitalization:*—P1,000,000 authorized, P300,000 subscribed, P75,000 fully paid.

*History:*—Registered Oct. 15, 1936.

### **SURIGAO DIWATA GOLD MINING CO.**

*No information available.*

### **SURIGAO IRON MINES, INC.**

*No information available.*

### **SURIGAO ORIENTAL MINES, INC.\*\*\***

*Officers & Directors:*—C. de G. Alvear, pres; Rufino Martinez, vice-pres; J. L. Klar, F. J. Campos and Dr. R. Abriol, directors.

*Capitalization:*—P1,500,000 authorized, P661,535 fully paid, P300,000 escrow shares.

*Location:*—Coal claims covering the western slope of the Mananga River valley.

*History:*—Operations began on Oct. 7, 1936. On June 30, 1939, the company reported coal production at 1,000 tons since operations were commenced and that P3,000 worth had been sold.

### **SURIGAO-OROC MINES, INC.**

*No information available.*

### **SURIGAO-SUYOC MINING CO. INC.\*\*\***

*Incorporators:*—Wm. F. Gemperle, Otto F. Weber, Fulgencio Apellanez, A. Illenberger, Evaristo Echarri, F. Razquin, E. J. C. Montilla.

*Capitalization:*—P400,000 authorized and fully paid.

*Location:*—Lode claims about 30 kilometers from Surigao. No valuation given by Bureau of Mines.

*History:*—Permit to sell P200,000 worth of shares granted May 20, 1937 by SEC.

### **SURIGAO TAGANAAN MINING CORP.**

*Company reported dissolved.*

### **SURIGAO WAKAT GOLD MINING CO.**

*No information available.*

### **SURVEYORS SYNDICATE, INC. \*\*\***

*Incorporators:*—Marcelino Agana, Fernando F. Yap-cinco, Arsenio Dizon, Jose D. Manzano, Felipe David, Bernardo Agana, Tranquilino P. Salvador, Fernando Yap-

cinco, Jr., Gregorio Pineda.

*Capitalization:*—12,000 shares no par value, P35,000 subscribed, P9,000 fully paid.

*History:*—Registered August 27, 1937.

### **SUYO-MARAPUDO MINING EXPLORATION CO.\*\*\***

*Officers & Directors:*—Francisco Santamaria, pres; Otilio R. Gorospe, mgr. & chief executive; John C. Todd, sec; L. M. Romero, treas; Olegario B. Clarin, vice-pres; Fernando Gorospe and Gregorio David, directors.

*Capitalization:*—P300,000 authorized, P60,000 subscribed, P18,640 fully paid.

*Location:*—33 lode claims in Bantocaling, Pangasinan. No valuation recommended by Bureau of Mines.

*History:*—SEC granted permit to sell shares on July 13, 1937. Last report released by officials Jan. 6, 1939 stated that company would suspend operations.

### **SUYOC BAUKO MINING CO. INC.**

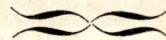
*No information available.*

### **SUYOC CENTRAL MINES, INC.**

*No information available.*

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**SUYOC CONSOLIDATED MINING CO.\*\*\***

*Officers & Directors:*—Amos G. Bellis, pres; J. H. Marsman, vice-pres; A. Beckerleg, vice-pres; Benj. S. Ohnick, M. H. Ruppel, directors; M. H. O'Malley, sec; A. F. Kelly, treas.

*Capitalization:*—P1,250,000 authorized and fully paid.

*Location:*—Claims in the Suyoc gold district about 100 kilometers north of Baguio.

*Production:*—P1,640,733.11 in 1939; P1,674,610.55 in 1938.

*Dividends:*—Paid 20 percent cash dividend in 1938, and 10 percent in 1939.

*History:*—Preliminary prospecting and development work started in 1932 and 1933. Construction of 100-ton plant started in 1934. The flotation unit went into production in July and the cyanide unit in December of 1934. Has been a steady producer since.

**SUYOC-KAYAN GOLD MINING CO., INC. \*\*\***

*Officers & Directors:*—J. W. Curameng, pres; F. C. Hizon, sec; Calixto M. Ferrerria, treas; Artemio Abaya, Ricardo Nostratis, Donato M. Guevara, Albino M. Ocampo, Felipe F. Asuncion, Rita A. de Paredo, directors.

*Capitalization:*—P1,000,000 authorized, P200,000 subscribed P50,250 fully paid.

*Location:*—124 full lode claims in Cervantes, Ilocos Sur and Kayan, Mt. Province. Bureau of Mines valued all claims at P20 each, a total of P2,480.00.

*History:*—Permit to sell P300,000 worth of shares granted by SEC on April 2, 1937.

**SUYOC-KULA MINES, INC. \*\*\***

*Officers & Directors:*—Dr. H. Sevilla, pres; Jesus Dineros, vice-pres; William B. Murphy, sec-treas; Rivalino Gamban, asst. sec-treas; Florendo Aquino, mgr; John F. Gotauco, Pelajio Villegas, directors.

*Capitalization:*—20,000 shares no par value authorized, 4,000 shares subscribed, P6,000 fully paid.

*Location:*—16 full lode claims in Barrio Guinawang, Mankayan, Mt. Province. Bureau of Mines valued 13 valid claims at P975.00 or P75.00 per claim.

*History:*—SEC granted permit to sell 6,000 shares on April 27, 1937.

**SUYOC SLIDE, INC. \*\*\***

*Incorporators:*—L. E. Nantz, S. Herrero, V. E. Lednickiy, I. B. Opisso, W. Manion, F. J. Gibbs, A. M. Opisso.

*Capitalization:*—P400,000 authorized, P80,000 subscribed, P20,000 fully paid.

*Location:*—Lode claims in the gold district adjoining Suyoc Consolidated.

*History:*—Registered August 22, 1939.

**TAGOBOMAR DEVELOPMENT CO. \*\*\***

*Officers & Directors:*—Jose Martinez, pres. & mgr; Soledad M. Taylor, vice-pres; Virgilio R. Gonzalez, treas; Gonzalo Borromeo, sec; Ardalion Gonzalez, dir.

*Staff members:*—Indalecio Ruiz, gen. supt; Boris Y. Gladkoff, mine supt.

*Capitalization:*—P2,000,000 authorized; P101,595.45 fully paid.

*Location:*—45 chromite claims Loreto, Surigao; 160 chromite claims Tagabaca and Tagbaboy, Surigao; 159 manganese claims at Anda, Bohol; 73 manganese claims, Siquijor Island; 400 hectares coal property at Mabais, Cebu; 1600 hectares iron property, Bucas Grande Island, Surigao.

*Development:*—Blocking out 30,000 tons various grades chromite; 20,000 manganese; 5,000 tons coal.

*Production:*—8,500 tons chromite; 1,400 tons coal; 2,500 tons manganese. No record of actual shipments.

*History:*—Organized April, 1937 as operating company of base metals and coal. Company owns gold claims in Bacwag, Surigao.

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**TAGUMPAY MINING COMPANY***No information available.***TAKIP PLACER MINING CO.***No information available.***TALUNTUNAN MINING CO. INC.\*\*\***

*Incorporators:*—Daniel M. Gomez, E. E. Yalong, Leon T. Garcia, Josefa C. Mendoza, Higino Tan, Ramon Fernandez Luzonghap, Go Qui Cheng.

*Capitalization:*—P1,000,000 authorized, P20,000 subscribed, P5,000 fully paid.

*History:*—Registered Jan. 1938.

**TAMBIS GOLD DREDGING CO., INC.\*\*\***

*Officers & Directors:*—H. Gasser, pres; C. J. Martin, vice-pres; Ramon Aboitiz, sec; Leo Schmitt, treas; Tio Tiam, dir.

*Staff members:*—W. F. Pearson, gen. super; Charles W. Heyda, manager lode property.

*Capitalization:*—P400,000 authorized; P390,850.40 fully paid.

*Location:*—18 placer and 43 claims at Tambis and Bañanilid, Surigao, Mindanao.

*Development:*—Testing of large placer area; lode property shut down at present.

*Production:*—P110,704.00 in 1939. P249,794.00 during 1938.

*History:*—Successor to Lianga Mines, Ltd., and taken over with all equipment in 1939. Tamb's initial capitalization was P60,000. Lode claims staked in 1932. Small scale exploration carried out until 1936 when aggressive program was inaugurated. Capitalization was gradually increased to present figure. The dredge has operated since Oct. 1929. Lode property handicapped by lack of funds.

**TANGAWAN GOLD CAVE SYNDICATE***No information available.***TAPI-AN SURIGAO GOLD MINE, INC.**

*Officers & Directors:*—Dr. José Soriano, pres; Mrs. Rosario J. de Soriano, vice-pres; Benj. Jalandoni, treas; Mrs. Jesus J. Soriano, executive sec.

*Capitalization:*—P1,500,000 authorized, P500,000 fully paid, P1,000,000 in escrow shares.

*Location:*—113 claims in Mainit, Surigao

*Production:*—P52,911.32 during 1939.

*History:*—Registered January 18, 1939, after property was developed during 1938. Cyanide mill of 120-ton capacity erected and operations started March, 1939. Operations suspended during the latter part of 1939.

**TAYABAS GOLD MINING CO.***No information available.***TAYABAS MINING CO. INC.***No information available***TIERRA DE ORO CO. INC.***Company reported dissolved.***TIGBI EXPLORATION CO. INC.***No information available.***TINAGO CONSOLIDATED MINES, INC.**

*Officers & Directors:*—L. R. Nielson, pres; L. J. Coote, vice-pres; Geo. T. Scholey, Juan Nabong, Franz Weissblatt, directors; Otto Becker, treas.

*Capitalization:*—P1,000,000 authorized, P650,000 subscribed, P350,000 escrow shares.

*Location:*—Claims in the Masbate gold district.

*Production:*—P50,861.20 in 1938. P65,549.41 in 1939. The 50-ton mill started operations in April, 1938 and suspended operations in November, 1939.

*History:*—Incorporated May 19, 1936, the management was taken over by Nielson and Company and an active development campaign started. Due to the refractory nature of the ore and erratic nature of assays, it was recommended that a 50-ton pilot mill be installed.

*(CONTINUED NEXT ISSUE)*

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## ◆◆ EQUIPMENT NOTES ◆◆

### ***New Gas-Engine Compressor (LVG)***

Ingersoll-Rand Company, 11 Broadway, New York, announces a new heavy-duty, gas-powered compressor known as the "LVG". Designed to fill the growing need for large compact, four-cycle units, the LVG is built in 485 and 650 hp. sizes using 6 or 8 V-type power cylinders. By using only two compressor frames on either size, the inlet, discharge and inter-stage piping and manifolding are simplified, and only two stuffing boxes are required.

The LVG incorporates overhead valves and removable wet-type liners in the power cylinders. All auxiliaries, including the camshaft, the built-in re-circulating water pump and auxiliary power take-off are driven from the flywheel end of the shaft, a feature promoting good governing and smooth operation.

### ***The new Ingersoll-Rand Gas-powered Compressor Type "LVG".***

Lubrication is full force-feed, with continuous oil cooling and oil filtration. Power pistons have oil-cooled crowns. Governing provides for manual or automatic speed control down to half-speed.

The manufacturer supplies LVG compressors with suitable cylinders for pressures up to 5000 pounds and for vacuum service.

Ingersoll-Rand further announces that the V-type cylinder power end of these units is available as a straight gas engine, known as the PLVG.

### ***Twin Unit Flotation Machine***

The new No. 15 Denver Twin Flotation Unit, built by Denver Equipment Company, Denver, Colorado, is especially designed for muleback transportation.

The tank knocks down into five pieces, each piece being easily handled and readily reassembled to form a watertight tank due to the patented leak-proof nuts and special gasket.

All parts are contained in the tank, the top only is boarded over, thus forming practically a metal packing case.

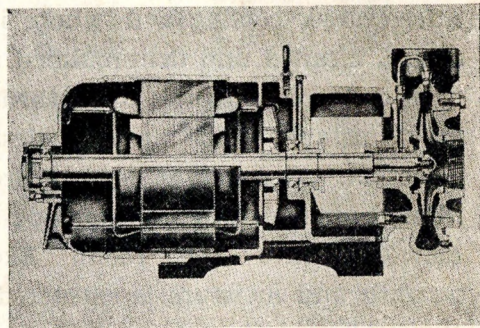
This type construction saves in both freight and packing, thereby reducing transportation costs and this saving is passed along to the customer.

The shaft assemblies and parts are identical to the domestic machines and consequently remote operators may now enjoy the high efficiency, reliability, and dependability that has always been available to the domestic user who could easily transport any size machine to his property.

A Denver Twin Flotation Unit is low in cost and is ideal for airplane as well as muleback transport.

### ***Balanced Monobloc Pump***

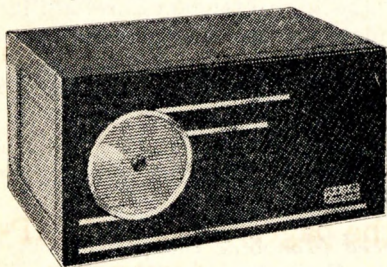
The Worthington Monobloc Pump, built by Worthington Pump & Machinery Corporation, Harrison, N. J., the construction of which is shown by the accompanying section, has many important construction features. Compactness of construction gives minimum floor space. No base plates are required even on larger



pumps. The impellor is hydraulically balanced to eliminate end thrust. The motor is standard, drip proof, with winding protected by special moisture resisting varnish. Motor is ventilated by air being drawn into back end cover and passing through the entire length of the motor. The face of the motor cover nearest the pump is solid to prevent moisture from entering the motor. The pump is built in sizes from 1 to 4 inches with capacities to 1000 g.p.m. up to 280 foot heads.

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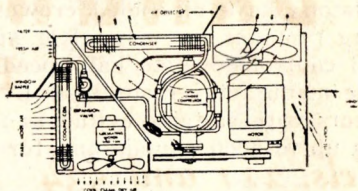
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Ipc Gold Mines, Inc. ....	1,000,000	819,793.70		0.10	1,000 tons	.025	.12*	.335	.095	.275	.85
	2,500,000	2,500,000.00		0.10	1,000 tons	.04	.28	1.85	.34	.44	.155
I. X. L. ....	1,500,000	1,500,000.00		0.10	400 tons	---	---	---	---	.77	.34
Lepanto Consolidated ....	1,750,000	1,050,000.00	700,000.00	0.10	500 tons	.005	.09*	.26	.11	.16	.03
Mambulao Cons. ....	1,200,000	939,382.79	250,000.00	0.10	(†††)	---	.016	---	---	.30	.011
Mapaso Gold ....	1,500,000	604,875.00	600,000.00	0.10	50 tons	---	.0575	.22	.085	.095	.02
Marsman & Co., common...	2,000,000	1,880,600.00		1.00	---	.08	1.30*	---	---	2.30	1.30
Marsman & Co., preferred..	2,000,000	1,880,600.00		1.00	---	.08	1.30*	---	---	1.80	1.30
Masbate Cons. Mining Co...	5,000,000	5,000,000.00		0.10	3,000 tons	---	.105	.58	.10	.255	.0625
Masbate Goldfields ....	1,500,000	1,200,000.00		0.10	125 tons	---	---	---	---	---	---
Mindanao Mother Lode ....	2,000,000	1,130,000.00	870,000.00	0.10	200 tons	---	.0975	---	---	.15	.055
Mine Factors, Inc. ....	1,000,000	510,669.00		0.01	---	---	.003*	.02	.006	.033	.002
Mine Operations † ....	1,250,000	1,250,000.00		0.10	---	---	.105*	.13	.095	.195	.0775
Mineral Resources ....	2,000,000	1,351,920.40		0.10	75 tons	---	.03*	.42	.10	.12	.02
Nabago Gold & Silver Mines	600,000	178,000.00	250,000.00	0.10	---	---	---	---	---	---	---
Nielson and Company †....	1,500,000	960,500.00		0.10	---	.005	.0675*	.27	.105	.12	.05
North Camarines ....	1,000,000	851,138.40	144,500.00	0.10	300	---	.10	.39	.23	.72	.0975
North Mindanao Min. Co.**.	800,000	360,000.00	440,000.00	0.10	800 Cu. Yds.	---	.026	---	---	.0875	.02
Northern Mining & Dev. ...	1,000,000	841,372.52	20,000.00	0.10	80 tons	---	.04*	---	---	.045	.038
Palidan Suyoc ....	750,000	750,000.00		0.10	---	---	.03*	.18	.05	.9725	.019
Paracale-Daguait ....	1,000,000	576,550.00		0.01	---	---	.0005*	.015	.003	.005	.00.
Paracale Mining ....	2,000,000	1,070,310.00	925,000.00	0.01	75 tons	---	.003*	.029	.005	.009	.002
Paracale-Gumaus ....	500,000	500,000.00		0.10	150 tons	.005	.225*	.91	.16	.29	.11
Paracale Gold Mining Co...	1,200,000	650,000.00	550,000.00	0.06	---	---	.034*	.38	.055	.0925	.03
Phil. Dorado ....	2,000,000	585,000.00		0.10	---	---	.022	.295	.10	.11	.02
Phil. Iron Mines, common..	2,000,000	2,000,000.00		50.00	---	10.00	33.00*	140.00	120.00	55.00	33.00
Phil. Iron Mines, preferred..	400,000	400,000.00		10.00	---	20	---	---	---	---	---
Royal Paracale Mines, Inc...	2,000,000	1,450,900.00		0.10	100 tons	---	.01*	---	---	.0825	.01
San Mauricio Mining Co....	2,000,000 (f)	2,000,000.00		0.10	500 tons	.135 (g)	.83	2.45	.41	2.30	---
Sta. Rosa Mining Co.....	1,500,000	1,000,000.00	500,000.00	0.01	175 tons	---	.005*	---	---	.04	---
Surigao Consolidated ....	1,200,000	1,022,975.00 (c)		0.10	300 tons	.01	.175	---	---	---	---
Suyoc Consolidated ....	1,250,000	1,250,000.00		0.10	210 tons	.01	.13*	.57	.135	---	---
Syndicate Invest, preferred..	900,000	900,000.00		0.10	---	---	.025*	.155	.055	---	---
Syndicate Invest., common..	100,000	100,000.00		100.00	---	---	---	---	---	---	---
Tambis Gold Dredging**...	400,000	390,642.80		0.10	1,200 Cu. Yds.	.005	.12*	---	---	---	---
Tinago Cons. Mines, Inc....	1,000,000	650,000.00	350,000.00	0.10	75 tons	---	.015*	.15	.06	---	---
Twin Rivers Gold Co., Inc...	1,000,000	1,000,000.00		0.10	1,000 tons	---	.011*	.47	.20	---	---
United Paracale ....	1,300,000	1,300,000.00		0.10	300 tons	.04	.295	1.60	.39	---	---

(a) One share each Mambulao Con. and Paracale National for each 100 shares Eastern Dev. extra.

(c) Includes Escrow Shares

(d) Stock dividend, 2 shares Mambulao Con. for every 5 Eastern Dev. held.

(e) Rights to subscribe to 500,000 shares at P.40 issued stockholders of record Sept. 20, 1938.

(f) Capital increased by 100 percent stock dividend May, 1939.

(g) 100 percent stock dividend extra.

(m) On new shares after 100 percent stock dividend.

† Operation and Management Companies

† After 50 percent Stock Dividend

‡ Capital Increased from P1,000,

†† After 2 for 1 split.

††† Ore milled by North Cam

\* Last recorded sales, 1939-40

\*\* Placer properties

(xx) Ore milled by Antamok

(x) Ore milled by Demonstra

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