SIGNIFICANT FACTS

IN 1952

The mining and smelting industry payroll in Arizona totaled over \$65,000,000, or 1.25 million dollars each and every week of the year. Statistics show that the average weekly earnings of those employed in the Arizona mines are higher than those of any other industry in the state and higher than the national average for non-ferrous metals mines. Fringe benefits have added over \$10,000,000 to the annual labor costs of the mining and smelting industry.

* *

Arizona mines spent over \$20,000,000 in Arizona for Arizona grown or manufactured supplies and equipment, thus contributing substantially to the industrial life of the state and the economy of the larger cities where supply and machinery headquarters are located. Most large national manufacturers maintain Arizona offices because of the mining business.

* *

The mining industry is Arizona's largest taxpayer. Over \$13,000,000 was paid for taxes within the state in 1952. No other industry contributes as much in taxes. Mining carries about 24 per cent of the total tax load; an amount which is materially in excess of its dollar value proportion of the total production of all industries in the state.

* *

The Mining Industry has a vital and far reaching effect on the economy of the whole state of Arizona and on every industry and community within its borders.

* *

MINING IS THE ONLY INDUSTRY WHICH CREATES NEW AND INDESTRUCTIBLE WEALTH

DEPARTMENT OF MINERAL RESOURCES STATE OF ARIZONA PHOENIX, ARIZONA

R. I. C. MANNING, DIRECTOR



MINING'S PART in ARIZONA'S ECONOMY

Cable: GEOEX Cable: GEOEX Cable: GEOEX Cable: GEOEX SEP 2 4 1976 BOX 5954 TUCSON, ARIZONA 85713 Phone: (AREA 602) 623-0578 By FRANK J. TUCK Revised November, 1953

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mines in Arizona nowadays are the product of venture capital in large amounts, the use of engineering skill in the invention and construction of labor-saving machinery and processes, and, finally, the business acumen of seeing into the future. A great industry has been developed, and, with proper understanding and equitable treatment, still has tremendous potentialities of remaining vital to the state's economy indefinitely into the future.

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+4

In view of the impossibility of determining just how many persons in Arizona depend upon the mining and smelting industry, perhaps the best criterion is the assessed valuation and the taxes paid. This leads to the conclusion that between twenty-five and thirty percent of the population depend upon the mining economy. At any rate, the mining industry produces close to one quarter of the wealth of the State, had an assessed valuation in 1950 of 25.74% of the total assessed property valuation, and paid 28.1% of the grand total of state, county, city and school taxes.

Using 25% as mining's part in Arizona's economy,we find that 187,397 persons (25% of 749,587) would be involved. Dividing 187,397 by 13,900 (the Employment Security Commission's reported employed in the mining and smelting industry) we get an average of 13.5 persons (including the miner himself) dependent upon each mine employee.

This figure of 13.5 persons per mining employee compares with 14.1 persons in Utah reported twenty years ago by Rolland A. Vandegrift and Associates, specialists in economic and governmental research. These economists made an exhaustive study of the "economic dependence of the population of Utah."

More recently, Miles P. Romney of the Utah Mining Association was quoted as follows in "Western Mineral Survey" of April 25, 1952:

"For every man employed in basic industry there are five people supported in services and professions."

If we use his figures in Arizona's 1950 case, we might get the following:

13,900 mining industry employees times 3 per family 41,700 69,500 service industry employee's times 2* per

family 139,000

Total dependent upon the mining industry 180,700

This comes very close to the 187,397 arrived at by our own method of calculation.

*This proportion was used because of the large number of families where both husband and wife work.

Thus it is demonstrated that the mining industry plays a vital and important part in Arizona's economy. Its ramifications extend in every direction. Contrary to the "popular" belief that the mining industry is exhausting the state's natural resources, history has shown that the industry actually has created resources where none previously existed.

Mines are made, not found. It has been almost forty years since a "bonanza" has been "discovered". All the producing

MINING'S PART IN ARIZONA'S ECONOMY

The purpose of this study is to determine the part the Mining and Smelting Industry plays in Arizona's economy. United States Census figures, reports of the Employment Security Commission of Arizona and Arizona Tax Commission Reports will be used in painting this picture.

Many towns in Arizona exist today because of the discovery of copper. Such towns as Bisbee and Douglas, Clifton and Morenci, Ray and Hayden, Jerome and Clarkdale, Globe and Miami, Ajo, and Superior are the principal examples. They depend upon the mining industry for their economic existence. So long as these communities are producing exportable surpluses of metals to balance their trade, they thrive. As soon as their exportable excess productions cease they cannot support themselves; their populations will drift away, leaving ghost towns as monuments to the necessity of excess production in their community maintenance and development.

Economists divide industry into two general classes, primary industry and service industry. A primary industry is one which produces exportable products, and a service industry is one which produces for the use and benefit of those employed by the primary industry and their dependents. Expressing it in another way, if the products of an industry are consumed outside the State, the industry is primary in character. If the products are consumed within the State, the industry is service in character, and as a service industry, is in turn dependent upon some primary industry for its existence.

Copper mining is one hundred percent primary in character as it exports all of its product, and its income supports a large section of Arizona's population. Although Agriculture is a primary industry, it is also a service industry. Exportable products consist of cotton, meat and meat products, cantaloupe, lettuce, and citrus products. A portion of these products, except cotton, is, of course, consumed within the State. Taken separately, cotton farming would be a hundred percent primary industry. In Manufacturing, Arizona has both primary and service industries. For example, the aircraft and aluminum industries are primary, while air-conditioning and foundries are service industries. Most foundry products, such as grinding balls and pump castings, are consumed within the State by the mining industry. It follows, therefore, that practically all of those employed in the production of these foundry products are economically dependent upon the metal mining industry quite as much as though they were employed directly by the metal mines or smelters of the State.

While the railroad industry is both primary and service in nature, it is largely dependent upon the mining industry for its existence. In fact, practically every branch line in the State was originally built for the purpose of serving some mining area and would be totally useless if mining activities were stopped. The story of every large mine in the State is linked with the building of a railroad, frequently by the mining company itself.

The business of the bus and air transportation companies, the telephone and telegraph companies is both primary and service in nature. Arizona's climatic conditions are such that it has become an important health center as well as a resort for winter tourists. This business may well be classed as primary. It might be said that we export climate.

Wholesale and retail establishments are all dependent upon the primary industries for their economic existence. Services, such as provided by doctors, lawyers, garages, service stations, laundries, bakeries, drug-stores, grocery stores, schools, banks, public utility companies, etc., etc., all share in the wealth created by the primary industries.



Aerial view of open pit copper mine

benefits as the copper mining employees were shown to have received, a total of \$10,392,303 (14,529 x 715.28) would have been added to the mining and smelting companies' payroll, which would have mounted to \$76,131,573 as the average for the years 1951 and 1952. Fringe benefits amount to 15.67% of the regular payroll and do not show on the employee's paycheck. In addition to the \$1.83 per hour which he averaged in 1951 and 1952, he received in fringe benefits another 28 cents per hour, or a total of \$2.11 per hour.

Conclusion

Statistics are not available to show exactly how many persons outside the mining districts are dependent upon the mining industry for their livelihood. We know that there are many industries and professions in the large cities of Phoenix and Tucson who derive their income from trade with and services for the miner, millman and smelterman, and their families. We know that the foundries of Phoenix are almost one hundred percent dependent on the mining districts for their business. We know that the miner is the highest paid wage-earner in the State, and that he spends practically all of his earnings within the State. We know that the railroads get large revenue from the mines and smelters in the form of freight on ores, concentrate and blister copper. We also know that power and telephone utilities derive much revenue from the mines. Many state and federal employees in Arizona are paid out of the taxes which the mining companies pay. The wholesale and retail stores in Phoenix and Tucson get considerable business from both the mining companies and their employees in the mining districts. The farmer and stockmen raise food for the miners.



Asbestos mill in Arizona

Type of Payment	Per cent of Payroll	Cents per Payroll Hour	Dollars per year per Employee
c. Separation or termination pay allow ances			3.90
d. Discounts on goods purchased from Co. by employees e. Misc. payments	'n		0.76 2.82
3. Paid rest periods, lunch periods wash-up time, travel time, clothes	5, ;-		
change time, etc.	3.36	6.15	153.27
 A. Payments for time not worked a. Paid vacations and bonuses in lieu o 	3.68 f	6.74	168.09
vacations b. Payments for holidays not worked c. Paid sick leave			119.56 41.78 5.10
d. Payments for National Guard duty jury, witness and voting pay allow ances, payments for time lost du	/, /- e		
al reasons	-		1.65
5.b. Christmas or other special bonuses service awards, suggestion awards etc.	s, s, 0.11	0.20	4.98
6. Other employee fringe benefits not listed above Hospital deficit Rental Dept. loss Social Contributions	2.36	4.32	107.67 83.32 12.55 11.80
Total fringe payments as percent of pay roll	/- 15.67		
Total fringe payments as cents per pay roll hour	/-	28.68	
Total fringe payments as dollars per yea per employee Average Hourly Wage Rate of Cop (exclusive of any fringe benefits Average Number of Employees Survey, 1951-52 Average Annual Wages (excl. of t	ar oper.Mi s) 1951 coverec fringe be	ners -52 \$1. 1 in 9 ene- ¢4	715.28 830 201
The average annual wages paid for t	he vear	s 1951 a	ind 1952

The average annual wages paid for the years 1951 and 1952 to all mining, quarrying and smelting employees (14,529) were \$65,739,270. If all 14,529 employees received the same fringe

Population

According to	o the U.S.	Census,	the population	of Arizona was
as follows:	1010		204 254	
	1910		204 354	

1910	204,354
1920	334,162
1930	435,573
1940	499,261
1950	749,587

The population of the towns and cities of Arizona which are strong mining centers was as follows for the year 1950:

Douglas	9442
Morenci	6541
Globe	6419
Ajo	5817
Miami	4329
Superior	4300*
Bisbee	3801
R'av-Sonora	2700*
Warren	2610
Clarkdale	1609
Havden	1494
Jerome	1233
Lowell	1136
Tombstone	910
Patagonia	700
Winkolman	548
winkeinan	JTO

Total population of mining towns......53,589

*Not given in census report-estimated.

The following table is taken from page 68 of the Summary Edition, December, 1951, Report of Unemployment Insurance Costs in Arizona, Employment Security Commission of Arizona.

This distribution differs somewhat from the regular monthly bulletins issued by the Employment Security Commission, and used by this department .(Arizona Department of Mineral Resources) in its reports covering wages of covered employees in the various industries other than Agriculture. The table given below was based on U. S. Census reports, and not on Employment Securty Commission reports, and differs because of the classification methods employed by both Commissions. For example, in 1950, the Security Commission removed smelter employees from the mining industry and included them with the manufacturing industry. Other differences were due to similar changes in classification methods.

THE	SIZE AND	DISTRIBU By Indust	TION OF Ties for the	THE ARIZO	NA LABOR 10-1950	FORCE 1,	
Major					A D F S -		
Indústry				ל ר (5 7 7 0	Fiscal	
Groups		1910	1920	1930	1940	1950,	Estimated 2/
Agriculture		22,416	36,199	39,232	33,134	49,200	
Mining		15,568	15,437	13,982	12,994	13,900	
Manuracturing G		18 204	JA OFF	VUL VC	12,184	20,300	
Trans - Utilities		8,698	11 589	13,872	0,274 11 455	27,800	
Trade		6,230	11.314	19,809	27,893	51,200	
Financial				10012	200 0000000000000000000000000000000000	6,200	
Services		12,148	17,380	29,490	32,705	40,000	
Clerical		2,916	6,252	9,267		. 1	
Government		1,555	8,353	4,940	7.236	14,300	
Unclassified			•		(2,067)	/8	
Unemployed 4/		1	ſ	1	30,074	16,000	
TOTALS		87,825	130,579	165,296	180,247	251,800	
Source: U. S. Cen	sus Reports						
Footnotes:							
1/ Instead of labo	ir force, the	i term "gai	nfully emplo	oved" was u	sed prior to	the census	of 1940. The
two terms are the labor force	not exactly	the same,	particularly	in that the	unemployed	are stated	separately in
2/ Method of est	imating is a	available up	on request.				
3/ These 2,067 w	orkers were	e not classi	fied by occu	upation in 1	940 census.		
4/ Prior to 1940,	the totals o	of the gain	fully employ	ed included	most of the	unemploved	l since people

6

Prior to 1940, the totals of the gainfully employed included most of the unemployed since people were asked what their regular occupation was, rather than whether they had worked the preced-ing week.

mines have been located on federally owned land, and the product before its removal from the earth has been so much worthless rock which required the work of man to convert it into real wealth.

Summing up the tax picture as it bears on the part played by the mining industry in the State's economy, we find that in property valuation the mining industry was assessed in 1950 at 25.74% of the total state valuation, and paid 28.1% of the total taxes, including state, county, city, school and excise taxes.

MINING PAYROLLS AND FRINGE BENEFITS

A survey made of the copper mining industry in Arizona reveals that the large copper mines are paying an average of \$715.28 per employee in fringe benefits over and above regular and overtime wages.

Fringe benefits have become an increasingly important part of the annual wage paid to industrial employees. Some of these benefits are required by state and federal laws, others are part of the union contracts, but all are in addition to the regular cash wage paid to each employee, and add to the cost of production.

The larger copper companies, employing 9200 men out of the total of 10,800 engaged in Arizona copper mining, during the years 1951 and 1952, replied to questionaires asking for details of fringe benefits paid.

The following is a composite average of the fringe benefits paid during the years 1951-1952, as compiled from the reports of the six large copper-producing companies: (Some reported for the year 1951, others for the year 1952).

Type of Payment	Per cent of Payroll	Cents per Payroll Hour	per year per Employee
Total fringe payments	15.67	28.68	715.28
1. Legally required payments (employer's share only)	3.16	5.78	144.11
a. Old-age and Survivors Insurance			58.10
and State)	•		27.53
c. Workmen's Compensation			58.48
 Pension and other agreed-upon pay ments (employer's share) 	- 3.00	5.49	137.16
a. Pension-plan premiums	A		95.38
b. Life insurance premiums, death bene fits, sickness, accident and med care insurance premiums, hosp	- 		
insurance premiums, etc.			34.30

of \$4.99 per \$100 valuation. The mining industry's proportion paid was \$9,714,557 on a mining property valuation of \$194,680,500. Adding the state mining income taxes of \$2,386,680 and the state production tax of \$2,155,165, we get The direct sales, or production tax, is actually a severance tax, wherein the producer pays the State for the privilege of remov-The indirect sales tax is usually passed on to the consumer ducers are not able to add the sales tax to the price they charge The production tax paid by the mining industry is called a sales tax and is in addition to the ordinary sales taxes which the to \$14,265,402, which is \$50,795,535 in taxes, paid income taxes and state mining production taxes, amounting to 14,265,402, which is 28.1% of the grand total of In 1950, the six mining counties (Greenlee, Gila, Pima, Pinal, Cochise and Yavapai) paid \$19,549,749 in state, county, city and school taxes on a valuation of \$399,844,084, or at a rate of \$4.99 per \$100 valuation. The mining industry's proportion ing a natural product from the earth, to reimburse the State for mines are competing with other producers, the Arizona pro-As the mining product is sold outside the state where Arizona's mining industry and its employees pay on purchases in Arizona. school districts. a total state, county, city and school property taxes, state mining 37.34% of the grand total state property, income, and production taxes of \$19,968,163. the total state property valuation of \$756,219,540. In the same year, the state mining property taxes were \$3,017,548, the pro-duction (or sales) taxes were \$2,155,165 and State mining in-come taxes were \$2,386,680 or a total of \$7,559,393, which was the depletion of its natural resources. **Barite Concentrator** to the state, counties, cities and To be sure, most of the

AVERAGE NUMBER OF COVERED EMPLOYEES, TOTAL WAGES, AVERAGE ANNUAL WAGE, AND AVERAGE WEEKLY WAGE

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Years 1942, 1947, 1951 and 1952

Source: Arizona Employment Security Commission

	Average No. of Employees	Total Wages 1942	Average Annual Wage	Average Weekly Wage	Average No. of Employees	Total Wages 1947	Annual Average Wage	Average Weekly Wage
Copper Mining Only	13,073	\$ 30,604,037	\$2,341	\$45.02	11,340	\$ 36,365,277	\$3,207	\$61.67
All Mining & Quarring Smelting*	15,233 1,735	34,302,289 3,469,384	2,252 2,000	43.31 38.47	12,724	40,186,847	3,158	60.73
All Min., Quar. & Smelting Manufacturing (Excl. Smelting) Construction Transp. & Utilities (Excl. RRs) Wholesale-Retail Trade Services & Misc. (Incl. Agri.)	16,968 9,597 18,599 6,592 23,419 12,745	37,771,673 17,552,133 44,737,133 10,413,396 32,296,135 17,947,402	2,226 1,829 2,405 1,580 1,379 1,408	42.81 35.17 46.25 30.38 26.52 27.08	14,100 12,563 10,747 9,953 35,568 18,152	44,438,161 34,522,325 31,977,603 25,867,424 85,883,308	3,152 2,748 2,975 2,599 2,415	60.62 52.85 57.21 49.98 46.44
Totals and Averages	87,087	\$160,717,872	\$1,830	\$35.19	101,083	\$262,771,693	\$2,208	42.46
<u></u>		1951			-	1952		<u> </u>
Copper Mining Only	10,754	\$ 47,825,698	\$4,447	\$85.52	11,365	\$ 54,950,235	\$4 835	\$07.08
All Mining & Quarrying Smelting*	12,600 1,500	54,504,083 6,600,000	4,326 4,400	83.19 84.62	13,302 1,600	62,734,456 7,640,000	4,716	90.69
All Min. Quar. & Smelting Manufacturing (Excl. Smelting) Construction Transp. & Utilities (Excl. RRs) Wholesale-Retail Trade Services & Misc. (Incl. Agri.)	14,100 16,542 12,775 11,698 41,316 24,937	61,104,083 57,891,802 51,789,225 40,417,858 118,864,726 72,021,402	4,334 3,500 4,054 3,455 2,877 2,888	83.35 67.31 77.96 66.44 55.33 55.54	14,902 18,487 14,582 13,088 45,094 28,018	70,374,456 81,532,939 63,907,790 47,386,245 138,263,559 87,990,852	4,722 4,410 4,383 3,621 3,066 3,141	90.81 84.81 84.29 69.64 58.96
Totals and Averages	121,368	\$402,089,096	\$3,313	\$63.71	134,171	\$489,455,841	\$3,648	\$70.15

*The Security Commission includes "Smelting" under "Manufacturing". In this table it has been segregated to give the total employees in the Mining and Smelting Industry. It may be also noted that the number of employees under "Manufacturing" includes only "Covered" employees. There are many workers in the manufacturing Industry who are not "covered" by the Federal Security Program. Also in 1951 and 1952 the employees of the Grand Central Aircraft Co. in Tucson, were "covered" under "Services" and not under "Manufacturing".

Arizona Department of Mineral Resources.



A typical copper smelter in Arizona

Agriculture

The 1950 labor force in agriculture, shown on the above table, was estimated at 49,200 and included people in farming, ranching and logging. The figure of 49,200 is the estimated average monthly labor force. In the late fall and early winter months, the farm labor force is normally greatly increased by many migratory workers principally in picking cotton and harvesting truck crops.

Through the Salt River project, water is supplied to a rich agricultural area, the water being controlled by a series of dams on the Salt and Verde Rivers. A large amount of hydroelectric power is generated by the dams, and the sale of this by-product power makes possible the delivery of water to the valley at a cost that permits the raising of crops on a commercial basis on the valley's farms. If it were not for the power sales, the cost of water would be prohibitive and the mines provided the necessary revenue to permit the delivery of cheap water to the valley's farms. Needless to say, the mines also provide an important market for the state's agricultural products, as well as the products of the lumber industry.

Manufacturing

Prior to 1940, smelting was about the only really large type of manufacturing enterprise that could give the state any apclosing down of two large lead and zinc producers in the State, and nearly all the smaller properties. The best hope for restoration of the lead and zinc industry's health lies in favorable consideration by the Congress of a flexible tariff to protect the domestic mines from foreign competition. This country should not be permitted to lose any of its natural resources of raw materials, so essential for its defense. Mines that are closed down because of excessive importation of foreign metals, run a risk of being permanently abandoned, due to the enormous expense and possibly years of time required for restoration to full production.

Recalling the almost fatal effect of submarine destruction of metal shipments on the high seas, it is vitally necessary that this country keep its mines in operating condition at all times. This means that they must be kept producing, for in any possible emergency, time may be of the essence.

Asbestos and Manganese are getting encouragement from the federal government, and the year 1953 is showing a substantial production of these two minerals. After a survey of the asbestos and manganese properties in the state, buying stations have been established for the convenience of Arizona shippers. The depot at Wenden is receiving manganese shipments, and the one at Globe handles asbestos shipments.

Tungsten mining would likewise respond if given similar encouragement.

Taxation

In 1950, according to the State Tax Commission, the assessed net mining property valuation was \$194,680,500 or 25.74% of



A typical moderate sized Arizona zinc mining operation



Large mines were once small mines or prospects

ments are in process that promise to increase the annual production by 270 million pounds, which would be an increase of thirty-five percent over the 780 million pound average annual production of the last five years. This increase is made up from the planned 140 million annual production at San Manuel, 75 million at the Lavender Pit, 36 million at the Silver Bell, and 20 million at the Bagdad Mine. Miami's Copper Cities development will replace the Castle Dome production which has become exhausted. All of these properties will be in production by 1955 or 1956.

MINERALS OTHER THAN COPPER

Although copper constitutes the chief product of Arizona's mining industry, many other metals and non-metallics play an important part in the economy of the State. Lead production has increased from an average of 7,500 tons per year for the period 1911 to 1942 to 22,770 tons per year for the last ten years. Zinc production has increased from 3870 tons per year to 44,443 tons per year for the same periods. Manganese, molybdenum, asbestos, barite, lime, gypsum, and perlite have become substantial factors in Arizona's economy. Like the porphyry coppers, which were worthless rock until capital, science, and business acumen made them into mines, none of these products was of the bonanza type deposit, and much money and brains were required to convert them into profitable enterprises.

In 1952 lead and zinc prices suffered a drop from 19 cents per pound to 14 cents for lead, and from 19.5 cents to 12.5 cents for zinc. Early in 1953 zinc dropped to 11 cents per pound and lead to 13½ cents per pound. The result has been the pearance of a factory economy. Since 1940, World War II brought to Arizona some relatively large manufacturing enterprises connected with aviation. In the spring of 1945, four large companies together employed more than 15,000 workers, a figure that exceeded the state's entire 1940 manufacturing labor force of 12,784. Large cutbacks in the government orders for aircraft after the war caused a decline in the manufacturing labor force. High freight rates have prevented Arizona Manufacturers from reaching distant markets on an economical basis. The total value of manufacturing production in Arizona (excluding smelter operations and non-taxable war-contracts) grew from 30 million dollars in 1940 to over 292 million dollars in 1952.

As stated before, manufactured products such as grinding balls and pump castings are used extensively in the mining industry. Air conditioning equipment is another manufactured product that the mining industry spends much money on. The larger mines buy enormous quantities of mining supplies in Arizona, and practically all of the small mines get their equipment and supplies inside the state.

Mining

It is to be noted in the table that mining was the one industry in Arizona which shows a decline in the size of its labor force.



Open pit mining operations in Arizona

This decline is not due to decrease in mineral output but rather is due to the increased mechanization of mining. About ninetenths of ali mining in Arizona is copper mining. At the present time most of the large copper mines are of the open-pit type which requires more machinery but fewer workmen than underground mining required. The ores now being worked do not have as high an average copper content as was the case in former years, but technological improvements in mining and metallurgy have managed to make possible the use of less rich ores. The following table may be of interest in showing how the metal content of Arizona copper ore has decreased in the past four decades. The wide fluctuations in metal prices, also shown, indicate one of the important hazards of the mining industry. Note the high grade ore necessary to be mined during the depression period 1932-1936, when the price of copper was below nine cents per pound.

Source: Mineral Yearbook, U.S.B.M.; also, Bul. No. 140, Ariz.

D		Copper			Copper
		Price			Price
Year	% Copper	Lb.	Year	% Coppe	er Lb.
1910	4.07	12.7c	1931	1.44	9.1c
1911	3.57	12.5	1932	2.09	6.3
1912	2.79	16.5	1933	6.36	6.4
1913	2.69	15.5	1937	2.78	83
1914	2.60	15.5	1936	1.63	9.2
1916	218	24.6	1937	1.38	12.1
1917	2.33	27.3	1938	1.49	9.8
1918	2.05	24.7	1939	1.39	10.4
1919	2.01	18.6	1940	1.29	11.5
1920	1.92	18.4	1941	1.27	121
1921	1.70	12.9	1943	1.06	13.0
1923	1.87	14.7	1944	.98	13.5
1924	1.73	13.1	1945	.89	13.5
1925	1.72	14.2	1946	.91	16.2
1926	1.63	14.0	1947	.94	21.0
1927	1.56	13.1	1940	.93	197
1928	1.59	17.6	1950	1.07	20.8
1930	1 43	13.0	1951	.97	24.3

In 1910, Arizona mines produced 3,914,969 tons of ore; in 1918, 19,038,486 tons; in 1,941, 25,491,794 tons; and in 1950, 42,709,272 tons. While increased mechanization represents a fundamental cause of the downward trend in Arizona mining labor force, war demand for copper exerts a powerful and different influence upon the mining industry.

The fact that only 6% of Arizona's labor force was engaged in mining understates the economic importance of the mining industry. In 1950, mining payrolls amounted to about 15% of the total wages in covered employment. In 1950, the value of the production of the five chief minerals in Arizona was \$201,034,000. This was almost as much as the value of farm crops and livestock in that year, although the agricultural labor force was more than three times as large.

Since a tariff on copper has a direct bearing on the domestic price of copper, changes in this tariff have a direct bearing on the labor force in copper mining and in the service industries of the mining communities.

The bill (H.R. 3336) suspending the 2-cent excise tax on copper from April 1, 1951, to February 15, 1953, or to the termination of the national emergency, whichever is first, was signed by the President on May 22, 1951. H. R. 568, signed in February, 1953, further extends the suspension until June 30, 1954. The law provides that the Tariff Commission must notify the President within 15 days after the end of any month in which the price drops below 24 cents a pound, delivered Conn. Valley, and within 20 days thereafter the President must revoke the suspension.

With copper in short supply and with no surplus to export, there is at the present time no need of the tariff, especially while the above guarantee is in force.

NEW COPPER DEVELOPMENTS

Although the production of copper in Arizona has remained more or less stationary during the last five years, new develop-



A large open pit copper mine