

ANNUAL REPORT  
GWINN DISTRICT GENERAL  
YEAR 1946

1. GENERAL

Princeton Mine

The only active property at the beginning of the year, the Princeton Mine produced 28,438 tons of ore up to the labor strike on February 9, 1946. Continuance of the strike with no provision for maintenance of the property resulted in a complete loss of the underground ore production workings by crushing. The mine was abandoned on July 5, 1946 at which time the pumps were removed.

The property shipped a total of 87,747 tons of Cambridge ore during the 1946 season. The shovel crew was employed between ore loading intervals on dismantling of the stocking trestles, which material was immediately delivered to other Company properties for ore stocking use.

Townsite

The Gwinn Club property was deeded by the Company to the Forsyth Township School system on July 15, 1946. The facilities of the club house were offered to the community by the school system and were continued throughout the year by sale of memberships in the club.

House and Lot Sales

All Company houses, with the exception of three in the Gwinn Townsite, Superintendent's, Doctor's and Captain's, were sold during the year. The remaining five sides of the double houses were sold, also the house previously occupied by the Princeton Mine captain.

Details of Gwinn Townsite transactions are given below:

<u>Street</u>	<u>House No.</u>	<u>Lot</u>	<u>Block</u>	<u>Name of Purchaser</u>	<u>Amount</u>
Ash	216	22	26	Lempi Ruotsala	\$ 450.00
Maple	250	34	27	Anton Ekola	508.00
Ash	245	2	30	Albert J. Roman	432.00
Ash	234	27	26	" "	486.00
Ash	257	8	31	" "	464.40
Pine	88	10	12	George D. Gilbert	2750.00

During 1946 the following lots in Gwinn Townsite were sold:

Lot No. 21 of Block No. 25 to Hilma Asikainen	\$ 125.00
" " 5 of " " 27 to Edward Nordeen	100.00
" " 21 of " " 23 to Louis Tousignant	100.00
" " 19&20 of " " 7 to Craell J. Pepin	300.00
" " 20 of " " 24 to Fred Soyring	100.00
" " 1 & 2 of " " 16 to Erick Marjomaki	112.50
" " 14 of " " 10 to George M. Sharkey	87.50
" " 15 of " " 10 to " "	87.50
" " 16 of " " 10 to " "	100.00
" " 17 of " " 10 to " "	100.00
" " 18 of " " 10 to " "	87.50
" " 5 of " " 10 to Gustave Anderson	112.50
" " 14 of " " 14 to Melio Arrieri	100.00

All of the above sales were for cash, and amounts remitted to Land Department for execution of deed.

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1. GENERAL: (Continued)

a. Statement Showing Total Ore Produced in District by C.C.I. Co., 1903 to 1946 Incl.

YEAR	AUSTIN	PRINCETON	STEPHENSON	GWINN	FRANCIS	GARDNER		TOTAL
						MACKINAW		
Total to								
1946	1,589,018	2,382,172	3,835,157	988,665	504,667	1,289,118		10,588,797
1946 Product		28,438						28,438
To Date	1,589,018	2,410,610	3,835,157	988,665	504,667	1,289,118		10,617,235

b. Statement Showing Ore Shipments by C.C.I. Co., from 1905 to 1946

YEAR	AUSTIN	PRINCETON	STEPHENSON	GWINN	FRANCIS	GARDNER		TOTAL
						MACKINAW		
Total to								
1946	1,589,018	2,193,018	3,845,027	1,017,334*	502,131	1,326,439		10,472,967
1946		87,747						87,747
To Date	1,589,018	2,280,765	3,845,027	1,017,334*	502,131	1,326,439		10,560,714

\* Included in the shipments from Gwinn Mine is 29,009 tons of Foundry Stockpile ore purchased from the Clement Quinn Company and shipped by the Cleveland-Cliffs Iron Company in 1942.

c. Ore in Stock at Mines December 31, 1946

Princeton - 129,885 tons Cambridge Grade

10. TAXES

Forsyth Township Mineral Lands, Gwinn		1946		1945	
		Valuation	Taxes	Valuation	Taxes
SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 26-45-25	40 A.	\$ 100	\$ 2.58	\$ 100	\$ 2.52
NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 28-45-25	40 A.	100	2.58	100	2.52
N $\frac{1}{2}$ of NE $\frac{1}{4}$ of Sec. 34-45-25	80 A.	200	5.15	200	5.04
SE of NE $\frac{1}{4}$ of Sec. 34-45-25	40 A.	100	2.58	100	2.52
NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 34-45-25	38.05 A.	100	2.58	100	2.52
NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 34-45-25	36.3 A.	100	2.58	100	2.52
NW $\frac{1}{4}$ of Section 35-45-25	160 A.	400	10.30	400	10.08
Lots 1, 2 and 3 of Sec. 36-45-25	.53 A.	125	3.23	125	3.15
Lots 7, 8 and 9 of Sec. 36-45-25	98.92 A.	260	6.71	260	6.55
Lots 11 of Sec. 36-45-25	13.3 A.	25	.65	25	.63
Undg. $\frac{1}{2}$ of S $\frac{1}{2}$ of NE $\frac{1}{4}$ of Sec. 28-45-25	80 A.	150	3.86	150	3.78
Total		\$1,660	\$42.80	\$ 1,660	\$41.83
Collection Fee			.43		.42
Total Taxes			\$43.23		\$42.25

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10. TAXES (Continued)

		1946		1945	
		Valuation	Taxes	Valuation	Taxes
<u>Gwinn Townsite, Surface Only</u>					
Lot 2, Sec. 21-45-25	43.75 A	\$ 100	\$ 2.58	\$ 100	\$ 2.52
NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 21-45-25 included in plat	6 A	100	2.58	100	2.52
NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 21-45-25	17.54 A	150	3.86	150	3.78
S $\frac{1}{2}$ of NW $\frac{1}{4}$ of Sec. 21-45-25 not included in Plat of Gwinn	25.01 A	200	5.15	200	5.04
E $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 21-45-25	65.84 A	150	3.86	150	3.78
W $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 21-45-25	38.80 A	300	7.72	300	7.56
Gwinn Townsite Plat		15,410	396.91	20,280	511.13
Supts. Res. W $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 21	1.2 A	1,800	46.34	1,800	45.35
NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 21-45-25 except for five acres		100	2.58	100	2.52
S $\frac{1}{2}$ of NE $\frac{1}{4}$ of Sec. 21-45-25	50.88 A	300	7.72	300	7.56
Total		\$18,610	\$479.30	\$23,480	\$591.76
Collection Fee			4.80		5.92
Total Taxes			\$484.10		\$597.68
<u>Gwinn Townsite Group Divided by Accounts</u>					
From Tax Statement		\$18,610	\$484.10	\$23,480	\$597.68
Gwinn Club House, Lot 8, Blk. 17		-	-	500	12.60
Hospital, Lot 9, Blk. 25		1,000	25.74	1,000	25.19
Rented Buildings		3,550	86.23	6,620	166.84
Gwinn Townsite, Unsold Lots		14,060	372.13	15,360	393.01
Total Group as per Statement		\$18,610	\$484.10	\$23,480	\$597.68
<u>Gardner Mackinaw</u>					
N $\frac{1}{2}$ of NE $\frac{1}{4}$ of Sec. 35-45-25	87.35 A	\$ 500	\$ 12.88	\$ 500	\$ 12.60
Collection Fee			.13		.12
Total Taxes			\$ 13.01		\$ 12.72
Machinery in Warehouse		\$ 900	\$ 23.16	\$ 900	\$ 22.67
Central Water Plant NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 28-45-25					
Personal - District Office		500	13.01	500	12.73
District Crusher, N $\frac{1}{2}$ of NE $\frac{1}{4}$ of Sec. 27-45-25		1,000	26.00	1,000	25.44
Total		\$ 2,400	\$ 62.17	\$ 2,400	\$ 60.84
<u>Austin Location</u>					
Part of Lot 5, SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 20-45-25		\$ 50	\$ 1.29	\$ 50	\$ 1.26
NW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 20-45-25		200	5.15	200	5.04
NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 20-45-25		260	6.69	260	6.55
Total		\$ 510	\$ 13.13	\$ 510	\$ 12.85
Collection Fee			.13		.13
Total Taxes			\$ 13.26		\$ 12.98

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10. TAXES (Continued)

	1946		1945	
	<u>Valuation</u>	<u>Taxes</u>	<u>Valuation</u>	<u>Taxes</u>
<u>Summary</u>				
Machinery in Warehouse	900	23.39	900	22.90
Stephenson Mine				
Princeton Mine	377,450	9,813.36	422,450	10,749.28
Francis Mine				
Gardner Mackinaw Mine	2,500	64.35	2,500	63.61
Austin Location	510	13.26	510	12.98
Mineral Lands	1,660	43.23	1,660	42.25
Gwinn Townsite	18,610	479.30	23,480	497.68
Gardner Mackinaw Location	500	13.01	500	12.72
Central Water Plant				
Personal - District Office	500	13.01	500	12.73
District Crusher	1,000	26.00	1,000	25.44
Total C.C.I. Co.	403,630	10,488.91	453,500	11,539.59
Cliffs Power & Light Co.	148,150	3,851.91	148,150	3,769.71
Total Taxes (Including 1%)	551,780	14,340.82	601,650	15,309.30
Princeton - Personal Property	325,000	8,449.71	340,000	8,651.35
<u>Taxes Levied - Forsyth Township</u>				
Forsyth Township Valuation	1,091,675		1,123,860	
Rate per \$100 of Valuation	2.57417		2.51932	
<u>Amount of Tax Roll</u>				
School Sinking Fund Tax		5,458.38		5,619.30
County Tax		6,713.80		6,181.23
County Road		818.76		1,573.40
Township Tax		2,183.35		2,247.72
Township Debt Service		2,700.00		2,700.00
School		6,659.22		6,855.55
School Debt Service		3,568.00		3,136.41
Rejected Tax		84.83		78.32
Total		<u>28,186.34</u>		<u>28,391.93</u>
Amount Paid by C.C.I. Co.		10,488.91		11,539.59
Amount Paid by C.P. & L. CO.		<u>3,851.91</u>		<u>3,769.71</u>
Total		14,340.82		15,309.30
Percent Paid by C.C.I. Co. & C.P. & L. Co.		50.9%		53.9%

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16. WATER SUPPLY - GWINN DISTRICT

The new 500 G.P.M. Layne-Northwest pump has served efficiently as a water supply unit and, since its installation in May 1945, has materially reduced operating costs of the water supply. A decrease of \$1,140.00 was shown for 1945 over 1944, and a further reduction of \$1,576.00 in 1946 over 1945.

Following is a comparative cost statement for operating the Pump Station for the years 1946 and 1945:

	<u>1946</u>	<u>1945</u>	<u>Increase</u>	<u>Decrease</u>
General Expense	\$ 202.50	\$ 293.66		\$ 91.16
Maintenance	308.66	444.30		135.64
Operating	477.88	477.28	.60	
Electric Power Kidder Station	2,010.30	3,212.69		1,202.39
"    "    Booster    "	910.78	964.43		53.65
E&A Depreciation	<u>1,237.14</u>	<u>1,331.16</u>		<u>94.02</u>
Total Cost	\$5,147.26	\$6,723.52		\$1,576.26
Total Revenue Credit	<u>5,464.45</u>	<u>5,939.11</u>		
Gain	\$ 317.19			
Deficit		\$ 784.41		

Hydrants

Fire hydrant rental to Forsyth Township continued as in the past. A total of 40 hydrants were rented at a charge of \$35.00 per unit, or a total of \$1,400.00. Cost of upkeep of hydrants, including painting and repairs, and hydrant boxes, amounted to \$113.98 for the year.

16(a). SEWER SYSTEM

In addition to the water supply system, the Company has maintained the Gwinn Townsite sewer system. During the past eight years the yearly expenditure for this work was as follows:

1939	\$ 722.37
1940	710.69
1941	598.10
1942	336.40
1943	581.06
1944	610.10
1945	842.25
1946	2,024.60

Maintenance work on the sewer system is becoming increasingly more costly because of the fact that the roots of the large bordering trees are entering the lines, causing widespread constriction. A number of such willow trees were felled this past fall near the main sewer outfall to remove this choking threat to the mains.

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1. GENERAL

Production at the property was halted on February 8, 1946 because of a strike called by the C.I.O. Local #2833, bargaining agent for the employees of the Princeton Mine.

Maintenance of main level drifts, cross-cuts and scraper transfer drifts was continued for the early part of the strike until March 21st, when the introduction by the union of a foreign element to the District caused the Princeton crews to abandon the obviously vital underground maintenance work. As a consequence of the refusal on the part of the underground men to maintain the timber support of the underground workings, the openings very shortly crushed beyond any engineering hope of rehabilitation.

The bulk of the ore reserves lay in the No. 3 ore body area of the property where, because of the nature of the soft, heavy ore formation and equally weak arkose footwall, the crushing was most severe. It had been learned by operating experience that failure of a timber support in this area had a chain reaction on neighboring supports and during pre-strike operations, the timbering had been given sharp scrutiny and constant immediate attention. Consequently, when the Princeton men refused to engage in timbering work in these areas, the efforts of the small supervisory crew, five in number, although splendid in a proportionate sense, were pitifully inadequate to the whole task.

This overwhelmingly one-sided aspect of the maintenance soon necessitated the removal of mining equipment from areas in danger of imminent collapse. Dispersal of the small crew from retimbering to occasional equipment salvage further enhanced the lead in crushing over maintenance, and in April the work of the five man crew was devoted to salvaging what was still possible to recover. The bulk of the underground equipment was salvaged and hoisted to surface by July 5, 1946, at which time the small 500 G.P.M. pump, operating in the 7th Level pumphouse No. 2 Shaft, was brought to surface, suspending all underground pumping at the property.

These results of the refusal of the Princeton employees to maintain timber support of the underground workings were bitterly disappointing to the Princeton supervision, because of the fact that numerous expensive improvements had been completed at the property and others underway, all with an eye towards increasing production and efficiency for the balance of the life of the property. With the collapse of the workings and subsequent forced closing of the property, the benefits of the majority of these improvements, although paid for, were unrealized.

Included among these improvements were:

Underground:

- 1. A vastly improved method of removing skip pit accumulation which incurred a proved one-tenth expenditure as compared with the former method.

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1. GENERAL (Continued)

2. Completion of an underground repair station with facilities to repair underground equipment, which heretofore had to be slung below the skip through the hoisting shaft for surface repair; at the expense of removal plus interruption to ore hoisting.

3. A new main level drift had been started in the No. 3 area to serve as a future artery of supply and haulage. With permanency the predominant feature, the timber supports, all of heavy selected pieces, were placed on reinforced concrete footings. The costly stage of an enterprise of this type, working away from the haulage-way in current use, had been accomplished and an additional 30' of this improved style of drift completed up to the time of the strike.

Surface:

1. Improvement of the stocking area had been accomplished in late 1945 with the removal of a rock outcrop by blasting and bull-dozer work to provide additional stocking area. A new stocking trestle had been completed in January 1946 into this area which, in conjunction with another in the opposite side of the shaft, would have assured uninterrupted stocking regardless of shovel activity.

2. A coal dock had been erected to eliminate costly hand unloading methods in previous use.

3. Probably the most important and also costly improvement had been the constant attempt to intercept surface drainage water before it entered the caving area. Whenever men and equipment could be spared from production work, the drainage project was pushed and over the period of a year and a half the surface excavation had produced a ditch grading to a 20' depth with a 30' deep sump. At the 20' depth a seam of relatively unconsolidated ferruginous sandstone was encountered in January 1946 which carried a great deal of surface drainage water, indicating favorable probability of pumping operations to accomplish the drainage interception.

4. A heating plant was installed in the shops with insulated piping carried on trestle work to the No. 3 supply shaft to provide steam for ice thawing work in the shaft during cold weather. Icing conditions in the shaft had caused considerable delay in the past and this installation had been designed to combat the shaft hazard.

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2. PRODUCTION, SHIPMENTS & INVENTORIES

a. Production by Grades

	<u>PRINCETON</u>		<u>SEC. 19 LEASE</u>		<u>TOTAL</u>	
	<u>1946</u>	<u>1945</u>	<u>1946</u>	<u>1945</u>	<u>1946</u>	<u>1945</u>
Cambridge	19,277	245,355	9,161	23,686	28,438	269,041
Total	19,277	245,355	9,161	23,686	28,438	269,041

b. Shipments

	<u>1946</u>	<u>1945</u>	<u>Decrease</u>
Cambridge	87,747	235,009	147,262

c. Stockpile Inventories

	<u>1946</u>	<u>1945</u>
Cambridge Sec. 19	20,282	24,826
Cambridge Sec. 20	109,603	164,368
Total	129,885	189,194

f. Ore Statement

	<u>Sec. 19 Cambridge</u>	<u>Sec. 20 Cambridge</u>	<u>Total</u>
On Hand Jan. 1, 1946	24,826	164,368	189,194
Output for year	9,161	19,277	28,438
Transfers	13,705	13,705	-
Overrun	-	-	-
Total	20,282	197,350	217,632
Shipments	-	87,747	87,747
Balance on Hand Dec. 31, 1946	20,282	109,603	129,885

3. ANALYSIS

a. Stockpile Analysis as of December 31, 1946

<u>Grade</u>	<u>Tons</u>	<u>Iron</u>	<u>Phos.</u>	<u>Sil.</u>	<u>Mang.</u>	<u>Al.</u>	<u>Lime</u>	<u>Mag.</u>	<u>Sul.</u>	<u>Loss</u>	<u>Moist.</u>
Cambridge	129,885	59.55	.772	5.28	.93	1.10	2.61	.71	.012	1.57	14.03

b. Average Analysis - 1946 Shipments

<u>Grade</u>	<u>Tons</u>	<u>Iron</u>	<u>Phos.</u>	<u>Sil.</u>	<u>Mang.</u>	<u>Al.</u>	<u>Lime</u>	<u>Mag.</u>	<u>Sul.</u>	<u>Loss</u>
Cambridge	87,747	59.55	.762	5.30	.93	1.10	2.61	.71	.012	1.57



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4. ESTIMATE OF ORE RESERVES

d. Estimated Tonnage as Required by State Tax Commission

	Prince- port Sec. 20	Cambridge Sec. 20 #2 Shaft - #3 Shaft	Cambridge Sec. 20 Total	Cambridge Sec. 19	Total Tons
Above 5th Level (1921 est.)					
No. 2 Shaft	27,842	147,944	147,944		175,786
Above 6th Level			42,522	5,837	48,359
Between 6th & 7th Levels		28,102	370,699	47,448	446,249
Below 7th Level		7,971	153,562		161,533
Gross Total Nov. 30, 1945	27,842	184,017	566,783	53,285	831,927
Less December Production		1,101	11,205	7,043	19,349
Gross Total Dec. 31, 1945	27,842	182,916	555,578	46,242	812,578
Less 10% for Mining & Rock	2,784	18,402	56,678	5,329	83,193
Net Total Dec. 31, 1945	25,058	164,514	498,900	40,913	729,385
Less 1946 Production to February 8, 1946			19,277	9,161	28,438
	25,058	164,514	479,623	31,752	700,947

5. LABOR & WAGES

A detailed comparison of wages and product between the 32 days operated in 1946 and the total year 1945 would obviously provide information of no value, therefore, no comparative statement is included with this report.

19. GENERAL STATUS OF PROPERTY AS OF DECEMBER 31, 1946

Surface:

Concrete seals, properly reinforced by heavy rail sections imbedded in solid footing in the shaft walls were constructed at the mouths of all three shafts. The seal at the collar of No. 1 shaft was covered by soil bull-dozed into place and the protective fence re-wired. Heavy planking was installed at the collar of No. 2 shaft above the concrete seal until the shaft house is dismantled. No. 3 shaft wood headframe is dismantled and a heavy plank covering firmly placed over the permanent concrete seal. At both No. 2 and No. 3 shafts the concrete seal is approximately 12 feet below the collar, and this space will be back-filled at the earliest opportunity.

Because of the need for trestle material at other Company properties, all accessible trestle bents were dismantled at Princeton surface and material trucked where needed.

Similarly all equipment subject to damage by weather was dismantled and either shipped to other properties or properly stored in the Princeton surface buildings.

Hoisting equipment at No. 2 shaft is intact. At the No. 3 engine house, the converter and motor generator sets were put into service at other mines. The 400 H.P. motor from the No. 3 hoist is intended for use with the sinking equipment at Mather Mine "B" Shaft. One of the 50 H.P. motors from the No. 2 top tram set is being used by the Cliffs Power and Light Company. All of the equipment has been properly recorded and accurate bookkeeping made of disposition.

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19. GENERAL STATUS OF PROPERTY AS OF DECEMBER 31, 1946 (Continued)

Underground:

The bulk of the underground rail, with the exception of worn curve sections, was removed as was likewise all electrical installation, cable and trolley lines. All underground piping was similarly dealt with. Electrical equipment and metal pipe were included among the hard to get supplies during the year and quick disposition of these items were made to other mines.

All pipe columns and cable were removed from Nos. 2 and 3 shafts; cage and skips removed; head sheaves dismantled and ropes taken off and placed on reels.

Underground haulage cars were readily disposed of and most of the electric haulage locomotives have been removed for service elsewhere. All underground small tools and equipment, air hoists, and the bulk of electric scraper hoists were sent out.

In brief, it can be stated that practically nothing of value was left underground, and most of the equipment removed has been put into service at other Company properties.