

YEAR 1926

March 1, 1927.

H. W. Clark,
Chairman, Board of Trustees,
The Union Pacific Coal Company,
10 Broadway, New York, N.Y.

Dear Sir:

The following resume of The Union Pacific Coal Company operations for the year 1926 is submitted for your information:

Mine Production and Costs:

Tons produced, average days worked during the year, mine cost and total cost for the five year period, 1922 to 1926, is set forth below:

Year	<u>Production Tons</u>	<u>Average Days Worked</u>	<u>Mine Cost</u>	<u>Total Cost</u>
1922	2,253,773.95	166.0	\$2.359	\$2.706
1923	3,241,104.85	198.8	2.397	2.548
1924	2,821,677.89	181.5	2.246	2.441
1925	2,779,064.54	174.4	2.078	2.292
1926	2,776,245.45	182.2	2.026	2.276

A slight reduction (2,819.09 tons) in total output occurred during the year; the mine cost was reduced \$.052 and total cost of all coal sold was reduced \$.016 per ton, indicating an increase in general expense of \$.036 per ton. The increase in taxes, Federal Income, state, county, and city taxes, totalled \$80,812.01, equal to \$.0291 per ton; other general expenses, including salaries, insurance, injuries to persons, employee liability insurance, etc., showed a net increase of \$ 0.287.00, equal to \$.0045 per ton.

The wage scale under which our Wyoming mines are working

took effect August 16, 1921, a strike occurring April 1st to August 16th, 1922. Since 1922 the cost of production has reduced progressively, the following comparison, with tons produced, total cost per ton, reduction from 1922 costs, and similar comparison with 1923 costs, for the three last years, shown herewith:

Comparison in Total Cost of Production for Five Year Period, 1922-23-24-25-26, with Reduction Per Ton and Amount

Year	Tonnage	Total Cost	Reduction from 1922		Reduction from 1923	
			Per Ton	Amount	Per Ton	Amount
1922	2,253,773.95	\$2.706				
1923	3,241,104.85	2.548	\$.158	\$ 512,094.56		
1924	2,821,677.80	2.441	.263	747,744.61	\$.107	\$302,919.62
1925	2,779,064.54	2.292	.414	1,150,532.72	.256	711,440.51
1926	2,776,245.45	2.276	.430	1,193,735.54	.272	755,133.76
Total				\$3,604,157.43		\$1,768,498.79
Less reduction in depletion cost 1925 and 1926 (\$.032 per ton)				178,879.55		178,879.55
Net reduction in cost of production				\$3,425,277.88		\$1,589,619.24

No changes in wages or conditions were made from the resumption of work in 1922 up to and including the close of 1926.

Mechanical Loaders:

During the year 1926 Mines No. 8 at Rock Springs and "B" at Superior were equipped with mechanical loaders. One Goodman, 3 drum, 125 H.P. hoist and scraper, four Vulcan, 2 drum, 125 H.P. hoists with scrapers, and two Eickhoff, 25 H.P. shaker conveyor units were installed in Mine No. 8, Rock Springs. Two Vulcan scraper units were installed in "B" Mine Superior, and five Eickhoff shaker conveyor units were likewise installed in "C" Mine, Superior, during the year. One Vulcan scraper

it, with a Link-Belt conveyor discharge attachment, was installed in Hanna Mine No. 4 late in the year. The total mechanical loading equipment in place at the close of the year, with original and depreciated value of same, shown below:

<u>Description</u>	<u>Original Cost</u>	<u>Depreciation Year 1926</u>	<u>Original Cost Less Accrued Depreciation</u>
<u>Rock Springs Mine No. 3</u>			
Goodman Scraper Unit	\$14,978.42	\$1,186.48	\$13,791.94
Vulcan Scraper Units	54,724.49	2,466.31	52,258.18
Hickhoff Shaker Units	9,682.98	1,138.71	8,544.27
Total Rock Springs	\$79,385.89	\$4,791.50	\$74,594.39
<u>" Mine Superior</u>			
Vulcan Scraper Units	\$23,953.43	\$1,240.76	\$22,712.67
<u>" Mine Superior</u>			
Hickhoff Shaker Units	\$21,143.62	\$2,581.33	\$18,562.29
<u>Hanna No. 4 Mine</u>			
Thew Electric Shovels	\$30,278.01	\$2,075.04	\$28,202.97
Joy 4BU Loaders	41,180.55	13,121.26	28,059.29
Vulcan Scraper Unit	10,187.20		10,187.20
Total Hanna	\$81,645.76	\$15,196.30	\$66,449.46
<u>Grand Total All Mines</u>	<u>\$206,128.70</u>	<u>\$23,809.89</u>	<u>\$182,318.81</u>

The results obtained from the use of mechanical loaders have been satisfactory, although much experimental work necessary to find the best detailed method of operation was done, all such included in machine loading cost, the results for all machines used, and covering cost of loading into mine cars, shown below:

<u>District</u>	<u>Tons Loaded</u>	<u>Mine Cost</u>	<u>Depreciation</u>	<u>Cost per Ton</u>
Rock Springs	198,904.40	\$152,117.47	\$4,781.50	\$.800
Superior	79,856.70	78,067.50	3,822.03	1.029
Anna	322,640.00	193,715.64	15,196.50	.647
All Districts	598,101.10	\$423,898.61	\$23,800.03	\$.748

The average cost per ton for labor and material, including maintenance, was \$.709; for depreciation, \$.039; total \$.748 per ton, and the quantity of all coal loaded mechanically during the year was 776,246.48 ÷ 598,101.10, or 21.5 per cent. It is estimated that the cost of producing that portion of the coal loaded mechanically was reduced \$.402 per ton, equivalent to \$240,474.66. It is significant that the mines located in Wyoming and equipped with mechanical loaders reduced 22 per cent of the state's total coal tonnage (1,454,828 tons) in 1926 without a fatal accident, 21 fatal accidents occurring within the mines loading by hand, which produced 5,048,172 tons, or but 240,246 tons to each fatal accident.

Wage Contracts:

No changes in the terms or conditions of wage contract, effective August 16, 1921, and extended from time to time and now running till March 31, 1927, have taken place.

The existing wage agreement, without material change, will doubtless be renewed for a period of two years from April 1, 1927, providing the necessity for the storage of large quantities of coal by the Railroad Company.

Safety Measures:

Our activities toward improved mine safety laid down in the latter part of 1923 and extended during 1924 and 1925, were further

simplified during the year 1926. A further strengthening of the Wyoming State Mining Law was also provided by the Legislature during February, 1927, and the Chief State Mine Inspector and two deputies provided by the amendments enacted in 1925 added very materially to the safe condition of all mines.

Throughout the year the shale dust pulverizing plant, located at Rock Springs, was operated continuously, the material therein made use of for rock dusting the various mines, the dust required for Hanna and Cumberland being shipped to these points in carloads.

During the year all previously arranged provisions for mine safety were continued, and the mine inspection force was reinforced by the employment of additional mine safety inspectors. The customary annual engineering inspection of all mines was made by Consulting Engineer J. P. Bayles, of Cincinnati, who commented very favorably on the conditions as found by him; withal the number of fatal accidents occurring during the year increased from 6 to 8. The 8 fatalities occurred singly and at recurring intervals between January 1st and July 24th, inclusive, hereafter no fatal accidents occurred during the remainder of the year, in fact not a single fatal accident has occurred from July 24, 1926, up to the present writing, March 1, 1927. Reference to fatal accidents suffered for a period of six years is set forth later in this report.

The principal accomplishments toward safety effected during the year were:

(1) The final elimination of all 500 volt D.C. electric trolley lines, the standard 250 volt current substituted; this change made necessary the rewinding of the motors in all 500 volt mining machines and locomotives, the work done in the Company's Rock Springs shops.

(2) The establishment throughout all old and used haulage

ways of the minimum clearance of 30 inches between outside of track rail and rib, as provided for in the Book of Standards adopted July 15, 1925. This task, extending over some 60 miles of haulage ways, involved an expenditure of \$22,534.19, two lives lost in 1925 through lack of clearance.

(3) The completion of the work of installing water lines in all mines for the allayment of coal dust, all mining machines now equipped with a water connection to cutter bar and provision made for the sprinkling of all dry and dusty working faces. This task involved the expenditure of \$26,867.30 in 1925 and \$36,979.90 in 1926.

(4) An exhaustive study of the type of rock dust barrier used in our mines was conducted by the U. S. Bureau of Mines at the Bruceton, Pennsylvania, Experimental Station, and the details of changes recommended are now being worked out with the aid of the Bureau.

(5) Various girls First Aid teams organized and trained from the ranks of the Girl Scouts organization participated in a contest held in Rock Springs May 22nd, the team from Hanna, Captain Leona Tate, awarded the prize, a trip to Denver, where an exhibition was staged by the team on the Capitol Grounds, Governor Morley of Colorado and staff witnessing the exercises, which were generously attended. During 1927 a similar contest will be conducted with Boy Scouts as participants, the winning team to be given a trip to Salt Lake City.

(6) On July 24th First Aid and Mine Rescue teams from all six districts participated in a contest managed by the Engineers of the U. S. Bureau of Mines, held at Rock Springs, the Cumberland team, Captain Lyman Fearn, awarded the first prize, participation in the International Meet and Contest, held in San Francisco September 2nd to 4th. A total of 45 teams entered the International Contest, Cumberland taking 8th place with a rating of 97.8 per cent.

(7) Temperature relays were attached to all mine fan and fan motor bearings for the purpose of cutting off the energy in the case of overheating of bearings, thus preventing the destruction of fans or motors. The conditions that attack to mine fan operation are well expressed in the fact that the per cent of continuity of operation of all mine fans (24 hours per day throughout the year) was 99.37 for the year, the principal measure of idle time occasioned by necessary repairs, very few accidental stoppages taking place. The work of each fan is determined from a graphic record taken from Bristol recording devices installed in 1923.

The practice established in 1923 of giving to the group of mines making the best showing in the matter of personal injuries a pennant, was carried on, Superior winning the pennants awarded June 30th and December 31st. The gift of 100 books to the Community Council located in the group of mines showing the highest percentage of improvement in the matter of reduced accidents to employees was likewise awarded to Superior Community Council on June 30th and December 31st.

Mines Nos. 2 and 4, Hanna, having passed the year without a fatal accident, were awarded a fine gold watch and chain. The watch was given to the mine worker receiving the highest number of votes from his fellow workers as having "contributed most to mine safety" during the year, the official staff excluded from the contest. Mr. Earl Erickson, shot firer at Mine No. 3, Hanna, was the successful contestant and the presentation was made on the evening of February 1, 1927, the entire mine force, their families and friends present.

During the years 1923, 1924, 1925 and 1926 substantial expenditures of labor and material were employed in safety work, the amount so expended set forth below:

Expenditures for Safety Charged to Mine Costs for
Four Year Period

	<u>Labor & Material</u>	<u>Tons Mined</u>	<u>Cost Per Ton</u>
1923	\$ 71,981.06	3,241,106	\$.022
1924	152,754.16	2,821,676	.054
1925	129,233.41	2,779,064	.046
1926	133,915.11	2,776,245	.055

While the number of fatal accidents, expressed in tons pro-

...ed, is in no wise governing, a comparison for six years, shown by
...al Company records, indicates not only a definite improvement, but
...ratio far superior to that of the country as a whole, figures for
...the six year period shown below:

Comparison of Fatal Accidents per Million Tons
Coal Mined, The Union Pacific Coal Company
and United States Compared, Six Yearly
Periods

Year	<u>Union Pacific Coal Company</u>		<u>All Mines United States</u>	
	<u>Fatal Accidents</u>	<u>Fatalities Per 1,000,000 Tons</u>	<u>Fatal Accidents</u>	<u>Fatalities Per 1,000,000 Tons</u>
1921	15	4.36	1907	3.92
1922	8	3.54	1979	4.15
1923	15	4.94	2458	3.74
1924	9	3.19	2396	4.17
1925	6	2.16	2234	3.84
1926	8	2.88	2610	3.78

It is quite apparent that the element of human psychology enters
very largely into the question of coal mine safety, and the giving of
prizes to individuals, with the attendant weight of public present-
ation, seems worthy of trial. During the year 1927 a watch will be
awarded to each group of mines producing 500,000 tons without a
fatal accident, and a watch will similarly be awarded to each group
during the year without fatal accident, regardless of tonnage mined;
besides a suitably engraved watch fob or medal will be given to the
foreman in charge of each mine going through the year without a
fatality. Discipline in the form of suspension without pay was admin-
istered to two foremen guilty of infractions of the safety rules during
the year, this action an innovation in mining practice.

The tremendous seriousness of the mine accident situation is brought out forcefully by the fact that our Wyoming mines have suffered 35 fatal accidents in the twenty-seven years beginning January 1, 1900, and ending December 31, 1926, an average of 22.04 per year.

Reliance No. 1 Mine Fire:

The fire that we have experienced along the upper measures of Reliance No. 1 Mine developed additional activity during the year, the expenditures required for 1926 exceedingly heavy, the amount expended and cost per ton, coal mined at Reliance, for six years shown below:

Cost of Controlling Reliance No. 1 Mine Fire

<u>Year</u>	<u>Amount</u>	<u>Cost per Ton</u>
1922	\$28,033.10	\$.108
1923	18,745.99	.062
1924	12,567.26	.043
1925	10,281.04	.035
1926	35,006.74	.125

The continuous rains that fell during the early portion of the year, and which entered the fire zone through surface cracks, accelerated the rate of combustion, necessitating a new line of barriers being made. The Examining Engineer, Mr. F. P. Bayles, made a careful study of the fire zone, and with his approval a third line of stoppings were established for the purpose of creating a zone which will impound carbon monoxide gas, a deterrent of combustion, the gas leaking down from the hot area into the lower zone provided for its retention. No special trouble is anticipated from this fire in 1927.

Mine Material and Supplies:

Progressive and substantial reductions in stocks of mine

material and supplies carried have been effected since December 31, 1923, shown by the following statement:

Union Pacific Coal Company and Southern Wyoming Electric Company, Material and Supplies on Hand December 31st, 1923, 1924, 1925 and 1926

Union Pacific Coal Company

Location	1923	1924	1925	1926
Black Springs	\$176,119.55	\$126,871.22	\$84,461.16	\$84,786.77
Albion	69,277.93	43,819.63	29,868.55	22,629.09
Alton	69,037.65	54,403.89	29,891.25	28,880.21
Superior	119,174.64	72,607.58	58,272.90	67,059.35
Alma	70,892.05	61,717.60	46,372.87	35,791.91
Cumberland	68,716.02	51,145.37	29,039.89	21,201.45
Cassant Valley	55.32	-	-	-
Miner's Dept.	1,338.66	1,621.69	1,276.73	1,166.06
W.L. Elec. Light				
Power Dept.	9,623.60	To S.W.E. Co.	To S.W.E. Co.	To S.W.E. Co.
Raw Material	1,303.77	559.23	390.89	102.86 Cr.
Stationery	5,235.06	5,965.65	6,343.76	5,642.57
Stage	200.19	84.82	46.23	100.73
Total	\$590,004.44	\$418,796.68	\$287,964.30	\$267,095.26
<u>Southern Wyoming Electric Company</u>		3,843.73	2,947.07	3,150.49
Grand Total	\$590,004.44	\$422,640.41	\$290,911.37	\$270,245.75
Reduction, amount		\$167,364.03	\$131,728.54	\$26,666.12
" per cent		39.4	31.2	7.1
" 1926 compared with 1923, amount -		\$319,758.69		
" 1926 compared with 1923, per cent -		54.2		

Further light reductions will be made due to the working out of the mines at Cumberland, but such will be offset by the additional pair stocks necessary to the use of the mechanical loaders which it will be found desirable to carry.

Merchandise Stores:

Our six merchandise stores, under the able management of Mr.

H. Jefferies, Manager of Stores, showed an excellent performance for the year 1926, sales, inventory value of stock, operating expenses and taxes, and net earnings for six years set forth below:

	<u>Total Sales</u>	<u>Inventory Value</u>	<u>Total Operating Expenses & Taxes</u>	<u>Net Earnings</u>
1921	\$1,116,606	\$351,748	\$177,993	\$43,801
1922	991,515	265,269	169,294	3,063 (Def.)
1923	1,193,975	240,249	194,372	56,314
1924	1,041,506	229,236	192,303	45,276
1925	946,226	214,144	163,764	61,522
1926	932,159	239,813	170,907	57,556
Decrease		\$25,669	\$7,145	
Decrease	\$14,067			\$3,936
Per Cent	1.5	11.9	4.3	6.5

It will be observed that the net earnings decreased in 1926, 1926, or 6.5 per cent, the total mine pay roll reduced \$123,141.03, reduction in mine pay rolls, together with the loss of the Company's store at Rock Springs by fire October 31, 1925, with the necessity of conducting the store at Rock Springs in limited space, responsible for reduction in net earnings.

Accounts Receivable, Merchandise Department

<u>Year</u>	<u>Amount</u>
1921	\$42,222.23
1922	65,507.14
1923	66,864.25
1924	62,737.39
1925	58,070.53
1926	56,419.15

The Accounts Receivable for 1926, totalling \$50,419, without material change from December 31, 1925, are quite as small as can be well maintained, much of the money to be collected from mine workers included therein representing furniture, stoves, washing machines, etc., sold under chattel mortgage on time payments, a material portion of the remainder representing explosives sold to miners, which is carried on the books as a pay roll deduction and paid to the Merchandise Department by the 15th of the following month.

The new store was opened for business on January 29, 1927, with a formal public reception, and it is anticipated that an excellent showing will be made at Rock Springs in 1927, although the decreasing number of mine employes, with reductions in total pay rolls, will further tend to restrict the total volume of sales made.

Pensioners:

On December 31st the following ex-employees were carried as

Pensioners:

<u>Name</u>	<u>Occupation</u>	<u>Date Pensioned</u>	<u>Present Age</u>	<u>Monthly Pension</u>
L. Ritter	Clerk & Salesman	4/1/17	77	\$40.00
Ms. A. Briggs	Wife of Hanna Supt.	1/1/20	Insane	50.00
	lost in explosion	5/1/24	63	108.42
B. Trent	Supt. of Stores	4/16/25	63	90.23
abt. Muir	Gen. Master Mechanic	5/1/26	73	35.00
Ms. Cook	Pumper	5/1/26	63	50.00
Mr. Clark, Sr.	Hoisting Engineer	5/1/26	63	50.00
Mr. Roam, Sr.	Night Watchman	8/1/26	73	45.00
Mr. McDonald, Sr.	Machinist	8/1/26	74	35.00
Mr. McFee, Sr.	Brattice Man	8/1/26	63	50.00
Strick Russell	Hoisting Engineer	9/1/26	72	40.00
Mr. Peterson	Miner			-----
				\$593.65

total

Mr. Thomas T. Edwards, laborer, Cumberland, pensioned May 1, 1926, rate \$35.00 per month, died July 18, 1926, total pension paid

\$150.00. The total sum paid to all pensioners in 1926 was \$8,503.80; the average age of the ten male pensioners is 69.5 years.

Wyoming Stockmen's Loan Company:

During the year 1921 The Union Pacific Coal Company entered into an agreement with certain other Wyoming interests to purchase a portion of the capital stock to be issued by a stockmen's loan company, the purpose of which was to serve as an intermediary between the cattle and sheep industry of Wyoming, then in a very bad financial condition as the result of the post-war liquidation which was taking place. Beginning with a payment of \$40,000, made January 11, 1922, further payments were made, until a total of \$250,000 was deposited with the Wyoming Stockmen's Loan Company, The Union Pacific Coal Company receiving capital stock in even amount in return for same.

During the year 1924 it was decided to partially liquidate the Loan Company, the livestock industry then moving toward solvency, and on March 11, 1925, one-fourth of the Coal Company's stock holdings were taken up by the Loan Company at par, and on July 6th, 1925, an additional one-fourth was similarly taken up, leaving the Coal Company with stock holdings of \$125,000 par value. Late in 1925 a further liquidation of one-fourth of the original stock issue was arranged for, and a third payment of \$62,500 was made to this company February 3, 1926. A further reduction of this company's holdings, amounting to \$31,250, was made January 10, 1927, leaving capital stock of a par value of \$31,250 in possession of this company.

The New Store and Office Building:

During the year a combination store and office building, costing \$130,000, was constructed at the corner of Pilot Butte Avenue

and "H" Street, Rock Springs. This building, of semi-fireproof construction, with ample fireproof vault space, was designed by Mr. James M. Libby, Assistant Chief Engineer, under the direction of Chief Engineer C. E. Swann.

The new building, constructed to care for the requirements of the Coal Company and Southern Wyoming Electric Company, as well as the Merchandising Department, is modern throughout. The design fronting on two business streets includes a full basement and two stories, convenient and attractive gasoline filling station nearby.

All departments are now for the first time in the same building, with adequate vault space, the merchandising facilities superior to any of our Rock Springs competitors. The store was occupied on January 29th, and the Southern Wyoming Electric Company and Union Pacific Coal Company forces were moved therein early in February, 1927.

The new building fills a want long experienced by the Operating, Accounting and Merchandising Staffs.

Military Improvements - Rock Springs:

The improvements made during the years 1925 and 1926 in the City of Rock Springs were far reaching in effect, the City now wearing entirely superior appearance. During the calendar year a total of lots and tracts of land located in the Original Town of Rock Springs in North, Brooks, Dunning and Clark Additions thereto, were sold at a total sales price of \$51,251.98, the major number of sales made to employees. The City Government contemplates paving one mile of streets at the expense of abutting property owners in 1927.

Sale of Reliance Pumping Station:

As of October 1, 1926, the wells and pumping station constructed by this company at Reliance Junction were turned over to the Green River Water Works Company; total consideration, including necessary surface land, \$34,338.31. The Water Company, after taking care of this company's requirements at Reliance, will pump the surplus water into Rock Springs, reinforcing the present City and Railroad Company supply.

Subsidiary Coal Land Companies:

The Union Pacific Coal Company, through stock ownership, controls the Imperial Coal & Coke Co., Ltd., which owns approximately 25,000 acres of undeveloped coal lands located in the Kootenay District of Eastern British Columbia. It is my understanding that these lands are subject to an annual rental charge of 15¢ per acre, plus a royalty of five cents per ton on all coal mined therefrom. As of December 31st the total sum spent on these properties was \$587,806.01, the cost of carrying the property for the year 1926 (exclusive of interest on money invested) \$23,697.02. An attempt will be made by the undersigned during the summer of 1927 to inspect the property, with the view of securing a reduction in the assessed taxable value.

The Illinois Union Coal Company, owning approximately 25,000 acres of coal rights in Macoupin County, Illinois, is likewise controlled through stock ownership by the Union Pacific Coal Company; the cost of carrying this property for the year 1926, \$8,689.39, the property carried on the books of the parent company at \$768,044.68 as of December 31st.

No immediate prospect for the creation of earning power on part of either the Imperial or Illinois Union Companies is in sight,

on the other hand their development as coal producers seems quite remote.

New Bath-houses:

Three new bath-houses were built during the year to meet the requirements of men working at Reliance, Winton and "D" Mine, Superior, supplementing the two bath-houses built for the employes of Superior Mines "B", "E" and "C" in 1925. The buildings will be self-sustaining, all employes working in the mines required to pay a fee of \$1.00 per month for the use of same.

Social Organizations:

During the year a Community Council was established by the company's employes at Rock Springs, completing the series at all mines. Employes' Bands were organized and trained at Reliance, Winton and Hanna, and the activities of the Employes' Band at Cumberland was continued, a total of four bands now existent, adding much to the life of the smaller mine villages.

Baseball, basketball and other organized sports are growing in favor, and the church and Sabbath School work has grown extensively at all points, Superior now enjoying an active church organization which was much in need.

The Girl and Boy Scout organizations have grown in numbers and influence, and the usual annual outing was conducted with the assistance of the mine staff.

The ownership of automobiles on the part of employes continues to expand, a total of 990 machines owned by 2,207 employes as of October 1, 1926, suggesting that 45 per cent of our workmen own cars.

Old Timers Organization:

On June 13, 1925, The Union Pacific Coal Company Old Timers' Association held its First Annual Meeting at Rock Springs, the requirement for membership fixed at a minimum of twenty years continuous service, the registration roll totalling 269 old timers.

The Second Annual Meeting was held at Rock Springs on June 2, 1926, with a membership roll of 370 men who had served the company more than 20 years, the membership now including 26 men with more than 40 years service, one man, yet actively employed, with the company 52 years.

The 650 people in attendance at the Annual Dinner listened to addresses delivered by old time employees and others, the principal address made by Ex-Senator C. D. Clark, a former employee and a brother of the late Mr. D. C. Clark, who managed the properties for forty years. Thomas Le Marr was elected President for the year 1926-27.

During the evening a pageant depicting the development of the West, the Union Pacific Railroad and the Coal Industry of Wyoming was presented in the Rialto Theatre, the participants all employees of the company or members of their families.

The value of the Old Timers' Association as a medium for the establishment and cementation of friendly relations cannot be measured.

Employees' Magazine:

The publication and gratuitous distribution of the Employees' Magazine, approximating 3,000 copies monthly, was continued through the year, the Magazine a welcome visitor in the homes of all employees of the Union Pacific Coal Company, the Washington Union Coal Company, and the Southern Wyoming Electric Company; the net cost of publication for

the year \$6,908.81.

Measure and Cost of Welfare Work:

In addition to the expenditure of \$6,908.81 for the Employees' Magazine, a total of \$11,024.33 was expended for church contributions, contributions to National Red Cross, American Legion, Boy and Girl Scouts, the carrying on of the Old Timers' Association, together with Fourth of July, Labor Day, Christmas and miscellaneous contributions, making the total amount expended on social and betterment work \$17,932.84, or approximately 6.4 mills per ton of coal produced, this expenditure representing an investment well reflected in the improved character of service received from our employees. The total expenditure for the Employees' Magazine and welfare work done in 1925 was \$20,079.30, a reduction of \$2,146.46 shown in 1926.

Conclusion:

The maximum possible measure of co-operation has been afforded the company by the citizens of Rock Springs and Hanna, the clergy, regardless of sectarian status, working closely and intimately with our operating staff, this the result of the definitely expressed position taken that while it was the desire of the Coal Company to work with the clergy and other organizations in the matter of social betterment, leadership in civic matters should properly originate with other than those responsible for the administration of the Coal Company.

The measure of co-operation furnished by the mine official staff and employees has been of a most satisfactory character. That our mine employees have rendered a full measure of co-operation in the task of introducing mechanical coal loading machinery gives encouragement to the belief that considerate dealing with all employees is always

th while.

The Miners' Union Officials have lent their aid and support
ward better service and discipline. The labor turn-over has been
duced to a low figure, approximating but 8 per cent.

Respectfully submitted,

Original Signed
EUGENE MAULIFFE

YEAR 1925

February 10, 1926.

Mr. H. W. Clark,
Chairman, Board of Trustees,
The Union Pacific Coal Company,
120 Broadway, New York City.

Dear Sir:

The following resume of The Union Pacific Coal Company operations for the year 1925 is submitted for your information:

Mine Production and Costs:

Tons produced, average days worked during the year, mine cost and total cost for the five year period, 1921 to 1925, is set forth below:

<u>Year</u>	<u>Production Tons</u>	<u>Average Days Worked</u>	<u>Mine Cost</u>	<u>Total Cost</u>
1921	2,984,434.00	210.7	\$2.518	\$2.662
1922	2,253,773.95	166.0	2.339	2.706
1923	3,241,104.85	198.3	2.397	2.543
1924	2,821,677.80	181.5	2.246	2.441
1925	2,779,064.54	174.4	2.078	2.292

Production and time worked in 1925 were somewhat below 1924, the reduction in tonnage 42,613.26 tons, or 1.5%; the time worked decreasing 7.1 days, or 3.9%, this condition brought about by two things, the burning of 57,559 tons of storage coal in 1925, which was laid down in 1922 and 1923 as a protection against strike, and a substantial reduction in railroad unit consumption.

Beginning with January 1, 1925, the rate charged per ton for depletion of mineral reserves was reduced from 7.7619¢ to 3.4679¢ per ton, with the result that when allowance was made for tonnage mined

from leased land, on which no depletion is chargeable, the total net amount of reduction in depletion charges for the year amounted to \$90,039.70, or 3.2¢ per ton on all coal produced.

The reduction in total cost per ton on all coal sold for the year totalled \$414,080.62, or 14.9¢ per ton, making the net reduction attributable to lower operating costs \$324,040.92.

The wage scale under which our Wyoming mines are working took effect August 16, 1921, a strike occurring April 1st to August 16th, 1922. Since 1922 the cost of production has reduced progressively, the following comparison, with tons produced, total cost per ton, reduction from 1922 costs, and similar comparison with 1923 costs, for the two last years, shown herewith:

Comparison in Total Cost of Production for Four Year Period, 1922-23-24-25, with Reduction Per Ton and Amount

Year	Tonnage	Total Cost	Reduction from 1922		Reduction from 1923	
			Per Ton	Amount	Per Ton	Amount
1922	2,253,773.95	\$2.706				
1923	3,241,104.85	2.548	\$.158	512,094.56		
1924	2,821,677.80	2.441	.265	747,744.61	\$.107	\$301,919.52
1925	2,779,064.54	2.292	.414	1,150,532.72	.256	711,440.51
Total			\$.272	\$2,410,371.89	\$.1809	\$1,013,360.03
Less reduction in depletion				90,039.70		90,039.70
1925 (\$.032 per ton)						
Net reduction in cost of			.262	2,320,332.19	\$.1646	923,320.33
production						

Supplementing this report will be found a print, showing graphically reductions in cost made, as well as the effect of short running time on unit cost.

Mechanical Loaders:

Two additional Joy mechanical coal loading machines, Type MU, were purchased and put in service at Hanna No. 4 Mine in May, two additional in June, one in July and three in September, making a total of twelve Joys and four Thew electrically driven coal loading machines in service in this mine beginning with September, 1925, the mine thereafter maintained on a full mechanical loading basis, all tonnage rates to miners discontinued.

The results obtained from the use of mechanical loaders are shown below, the original capital investment in loading machines \$71,458.56, of which \$34,026.19 remains in Capital Account, the saving made for the year, after setting up depreciation and interest charges, equal to 76.8% of the original investment.

	<u>Thews</u>	<u>Joys</u>	<u>All Machines</u>
Tons loaded	116,259	128,415	244,674
Total operating cost	\$42,413.84	\$96,804.03	\$139,217.87
Depreciation	2,642.03	9,599.07	12,241.10
Interest at 6%	421.94	1,440.20	1,862.14
Total cost	\$45,477.81	\$107,843.30	\$153,321.11
Cost per ton, Operation	\$.365	\$.754	\$.569
" " " Depreciation	.023	.074	.050
" " " Interest	.003	.011	.007
Total cost per ton	\$.391	\$.839	\$.626
Less yardage absorbed by Joys (total tonnage)		.020	.020
Net cost per ton	\$.391	\$.819	\$.606
Cost per ton, hand loading drilling and shooting			.830
Net saving per ton			.224
Amount (244,674 tons X \$.224)			\$54,806.97

83% of the production of Hanna No. 4 Mine, totalling 293,609.6 tons, was loaded mechanically.

Early in the year an experimental scraper loading machine was assembled locally from material on hand, and experiments were conducted over a period of several months for the purpose of determining the practicability of mining in the Rock Springs district on a modified long wall instead of a room and pillar basis, the experiments proving wholly successful, with result that plans were made to translate Superior "B" Mine, producing 138,286.65 tons, and Rock Springs No. 8 Mine, producing 231,434.8 tons in 1925, from hand to mechanical loading during the calendar year 1926.

In addition a drag loader, with hoist and conveyors, will be installed in Hanna No. 4 Mine in a location where it is not practicable to use either the Joy or Thew type of loader, this further installation at Hanna No. 4 increasing potential capacity and likewise assisting in reducing cost, the new loading equipment, together with the cost of same, shown below:

Mechanical Loading Equipment to be Added to That
in Use at Hanna No. 4 Mine

	<u>Equipment</u>	<u>Delivery</u>	<u>Cost in Place</u>
Superior "B"	1 Bickhoff Conveyor unit	Nov. 1925	\$ 6,048
" "	2 " "	Mar. 1926	10,092
" "	2 Hoist, Scraper & Conveyor units	June "	24,000
Rock Springs No. 8	2 Hoist, Scraper & Conveyor units	" "	24,000
" "	1 Goodman Scraper unit	Feb. "	14,691
" "	2 Bickhoff Conveyor units	Mar. "	24,000
Hanna No. 4	1 Hoist, Scraper & Conveyor unit	June "	12,000
11 units			\$114,831

Wage Contract:

No changes in the terms or conditions of wage contract, effective August 16, 1921, and extended from time to time and now running until March 31, 1927, have taken place.

The anthracite strike, which took effect September 1, 1925, and which at the present writing is still on in full force, has assisted in composing the minds of the bituminous miners, the anthracite operators' resistance of determined character.

The Miners' Union has lost membership, power and influence continuously from the signing of the so-called Jacksonville agreement, effective April 1, 1924, thousands of Union mine workers accepting voluntary reductions in wages, a very material tonnage of bituminous coal formerly mined in Union fields now mined Non-Union, a careful estimate of the relative per cent of the Union and Non-Union mined bituminous coal as of January 1, 1926, indicating 72% Non-Union.

At the present time Kentucky, Alabama, Colorado, New Mexico, Utah and approximately 50% of Pennsylvania production is definitely Non-Union or working below the Jacksonville scale, a very limited Union production still maintained in Kansas, Arkansas and Oklahoma, the policy pursued by the Union's officers in the conduct of the anthracite strike not producing much favorable comment from representatives located in the bituminous fields.

Safety Measures:

Our activities toward improved mine safety laid down in the latter part of 1923, extended during 1924, were further amplified during the year 1925. A material strengthening of the Wyoming State Mining Law was secured, the previous State Mine Inspector looking after

matters in the Southern Wyoming field, and who was incapacitated from age, being succeeded by a Chief State Mine Inspector, reinforced by an Assistant State Mine Inspector, the Chief Mine Inspector's office transferred from Cheyenne to Rock Springs, the organization now consisting of three men, one assistant inspector located in the northern part of the state.

During the year mine examiners, bearing state certificates of competency, were installed in all mines of the Rock Springs district, bringing the examination made before the day shift enters the mine up to the standard heretofore maintained in the gaseous mines operated at Hanna and Cumberland, the certified mine examiners required to examine and report on the safety of all working places before the men are allowed to enter same.

During the year the shale dust pulverizing plant, located at Rock Springs, was operated continuously, the material therein made used for rock dusting the various mines, the dust required for Hanna and Cumberland being shipped in carloads.

Samples of road and rib dust were taken at various times throughout the year and analyzed for the purpose of determining ash content.

During the year approximately 60,000 linear feet of sprinkling lines were laid in the mines in the Rock Springs district, and at Hanna, and twenty mining machines are now so equipped as to admit of maintaining a spray of water on the cutter bars. The remainder of the equipment necessary to complete the arrangement will be provided during the year.

Approximately 1500 pounds of coal dust was shipped from

Manna mines to the Experimental Station of the U. S. Bureau of Mines, located at Bruceton, Pennsylvania, our Safety Engineer, Mr. J. A. Smith, assisting in conducting the tests therein made.

A system of sampling mine air, with subsequent analysis in a portable Orsat gas analysis apparatus, is being carried out by the Ventilation Engineer.

The elimination of electrical hazards, which was begun in 1924, was extended and augmented throughout the year 1925, high voltage lines having been removed from air courses at Winton No. 3, Superior "D" and Rock Springs Nos. 2 and 8 Mines. An old cambric covered 2300^{volt}/power line, located in the manway at Superior "B" Mine, was taken out and replaced with a modern armored cable.

The following mines were equipped with new air shafts, driven circular 12 ft. in diameter, together with adequate fan installation:

<u>Mine</u>	<u>Depth of Shaft</u>
Rock Springs No. 8	73 ft.
Winton No. 3	200 "
Superior "B" Mine	150 "
Superior "C"	354 "

Much work was done in the way of clearing old air courses and several hundred old stoppings were replastered, gunited and otherwise made air-tight.

New overcasts were established where required, and all electric driven fans were equipped with automatic restarters, restoring ventilation service automatically in the event of temporary

power interruptions occasioned by lightning, etc., without waiting for manual movement of switches.

Temperature relays have been ordered for the bearings of all fan motors and fans, and same will be installed as soon as received, this device cutting off energy in case of overheated bearings, preventing the destruction of fans or motors.

The Ventilation Engineer has given his entire time to ventilation studies and changes, maintaining ventilation maps brought up-to-date at frequent intervals at all mines.

A mine examiner found asleep inside one of the Hanna mines was taken before a justice of the peace and fined \$100.00 for violation of the state law subsequent to his discharge from the service.

A safety inspection of all mines is conducted quarterly in connection with two miners selected from each mine force, and recurring inspections are made by the State Mine Inspection forces.

In addition to what is in substance a triple inspection, the services of the engineers of the U. S. Bureau of Mines were secured through the courtesy of Dr. H. Foster Bain, then Director of the Bureau, the engineers resident at Salt Lake and Denver giving the mines the most thorough and complete inspection made over a period of many years, an attempt made to carry out each and every recommendation directed toward safety made by them.

The Winton Mines, purchased in 1921, were not equipped with mine rescue apparatus, and at Superior old apparatus of the Proto type was in use. New equipment of the Gibbs self-contained type has been purchased and installed at both points, fully equip-

ping all mining districts with modern mine rescue apparatus, arrangements made to train miners at each point throughout the year.

During August a First Aid contest and Mine Rescue demonstration was held at Rock Springs, teams from our several mining districts participating, the team from No. 2 Cumberland receiving first honors, and thereafter sent to Springfield, Illinois, to compete in the International First Aid and Mine Rescue contest held at that point. Fifty-nine teams from various parts of the United States and Canada entered the contest, Cumberland winning third place.

During the year a system of credits was established on a man-shift basis, that is substituting man-shifts worked per accident for tons produced per accident, with a provision for awarding the district showing the best accident record a safety pennant, two such pennants awarded during the year, both won by the men at Cumberland.

During the last half of the year arrangements were made to furnish the Community Council in the district showing the best ratio of accident improvement 100 volumes, including fiction travel, etc., Reliance winning this prize for the last half of 1925.

The outstanding safety achievement put into effect during the year was that of the completion and promulgation of the Union Pacific Coal Company Book of Standards to govern safety work, including construction and operation, this book prepared by a Standardization Engineer especially assigned to the work, the various standards submitted to the U. S. Bureau of Mines and operating officials of ten of the larger coal companies, the standards so

put out now being reproduced in "Coal Age," the leading coal trade publication, same receiving the commendation of all who have examined them.

During the years 1923, 1924 and 1925 substantial expenditures of labor and material were employed in safety work, the amount so expended set forth below:

Expenditures for Safety Charged to Mine Costs
for Three Year Period

<u>Year</u>	<u>Labor & Material</u>	<u>Tons Mined</u>	<u>Cost Per Ton</u>
1923	\$ 71,981.08	3,241,105	\$.022
1924	152,754.18	2,821,678	.054
1925	^{124,233.41} 148,472.31	2,779,064	^{.046} .053

Revised

While the number of fatal accidents, expressed in tons produced, is in no wise governing, a comparison for five years, shown by Coal Company records, indicates not only a definite improvement but a ratio far superior to that of the country as a whole, figures for the five year period shown below:

Comparison of Fatal Accidents per Million Tons
Coal Mined, The Union Pacific Coal Company
and United States Compared, Five Year
Period

<u>Year</u>	<u>Union Pacific Coal Company</u>		<u>All Mines United States</u>	
	<u>Fatal Accidents</u>	<u>Fatalities Per 1,000,000 Tons</u>	<u>Fatal Accidents</u>	<u>Fatalities Per 1,000,000 Tons</u>
1921	13	4.36	1987	3.92
1922	8	3.54	1979	4.15
1923	16	4.94	2458	3.74
1924	9	3.19	2396	4.17
1925	6	2.16	2140	3.68

It will be observed that six employees died in 1925, one, however, a hold-over from an accident sustained in 1922. During the calendar year six of our Wyoming employees were killed in automobile accidents, one was murdered and one committed suicide, the mine accidents equivalent to 75% of the violent deaths received outside.

The tremendous seriousness of the mine accident situation is brought out forcefully by the fact that our Wyoming mines have suffered 537 fatal accidents in the twenty-six years beginning January 1, 1900, and ending December 31, 1925, an average of 22.57 per year.

Branches of the Joseph A. Holmes Safety Association, a national organization, were instituted at various points during the year.

Reliance No. 1 Mine Fire:

The fire that we have experienced along the upper measures of the Reliance No. 1 Mine continued throughout the year, the expenditures made keeping same in control and cost per ton, coal mined at Reliance, shown below:

<u>Cost of Controlling Reliance No. 1 Mine Fire</u>		
<u>Year</u>	<u>Amount</u>	<u>Cost per Ton</u>
1922	\$28,033.10	\$.102
1923	18,745.99	.052
1924	12,567.26	.043
1925	10,281.04	.035

There is, however, no ventilation or gas explosion hazard connected with this fire.

Exhaustion of Cumberland Mines:

A further exhaustive study made of the Cumberland field, with a material expenditure for prospecting, failed to develop a workable showing of coal, and it will be necessary to vacate our Cumberland Mines with their exhaustion, which will occur in 1929.

We anticipate that through mechanicalization of the Rock Springs field, production costs can be brought sufficiently below the best obtainable Cumberland costs to offset the increase in rail haul and difference in thermal value of the coal.

Mine Material and Supplies:

Very substantial reductions in mine material and supplies have been effected since December 31, 1923, as shown by the following statement:

Union Pacific Coal Company and Southern Wyoming Electric Company, Material and Supplies on Hand December 31st, 1923, 1924 and 1925

The Union Pacific Coal Company

<u>Station</u>	<u>1923</u>	<u>1924</u>	<u>1925</u>
Rock Springs	\$176,119.35	\$126,871.22	\$84,461.16
Reliance	68,277.93	43,819.63	29,363.55
Winton	69,037.65	54,403.89	29,891.85
Superior	119,174.84	72,607.58	58,272.90
Hanna	70,892.05	61,717.60	48,372.87
Cumberland	68,716.02	51,145.37	29,039.89
Pleasant Valley	35.32	-	-
Engineering Department	1,558.66	1,621.69	1,276.78
Gen'l. Elec. Light & Power Dept.	9,623.60	To S.W.E.Co. 559.23	To S.W.E.Co. 390.89
Scrap Material	1,303.77	5,965.65	6,343.76
Stationery	5,285.06	84.82	46.25
Postage	200.19		
Total	\$590,004.44	\$418,796.68	\$287,964.80
<u>Southern Wyoming Electric Company</u>			
Grand Total	\$590,004.44	3,843.73	2,947.07
Reduction, amount		\$422,640.41	\$290,911.87
" per cent		167,364.03	131,728.54
" 1925 compared with 1923, amount -		28.4	31.1
" " " " " " " " " " " "		\$290,092.57	
" " " " " " " " " " " "		49.1	

The savings accruing from reduction of material stocks, including those of interest (\$18,000 annually), taxes, deterioration of mine timber, loss by waste, theft and obsolescence, can be safely estimated at \$30,000 per year. Under a vigorous educational policy our superintendents and foremen are now taking a substantial interest in the work of keeping the material stocks down to a conservative point.

Merchandise Stores:

Our six merchandise stores, under the able management of Mr. E. R. Jefferis, Manager of Stores, showed an excellent performance for the year 1925, sales, inventory value of stock, operating expenses and taxes, and net earnings set forth below:

<u>Year</u>	<u>Total Sales</u>	<u>Inventory Value</u>	<u>Total Operating Expenses & Taxes</u>	<u>Net Earnings</u>
1921	\$1,116,606	\$331,748	\$177,993	\$43,801
1922	991,315	283,269	169,294	5,063 (Def.)
1923	1,193,975	240,249	194,372	55,314
1924	1,041,506	229,236	182,308	43,276
1925	946,226	214,144	163,764	61,522
				18,246
Increase			18,544	
Decrease	95,280	15,092		42.2
Per Cent	9.1	6.6	10.1	

It will be observed that the net earnings increased last year \$18,246, or 42.2%, this in the face of a total mine pay roll reduction of \$562,181.91.

All old and uncollectible accounts have been, in substance, cleared up, the accounts receivable for five years as follows:

Accounts Receivable, Merchandise Department

<u>Year</u>	<u>Amount</u>
1921	\$42,222.23
1922	65,507.14
1923	86,864.25
1924	62,737.59
1925	58,070.53
Reduction, 1925	<u>-----</u> \$ 4,666.86

The Accounts Receivable for 1925, totalling \$58,070, are quite as small as can be well maintained, much of the money to be collected from mine workers included therein representing furniture, stoves, washing machines, etc., sold under chattel mortgage on time payments, a material portion of the remainder representing explosives sold to miners, which is carried on the books as a pay roll deduction and paid to the Merchandise Department by the 15th of the following month.

The reduction in sales resulted from decreased pay rolls and conservative salesmanship, no attempt made to sell merchandise to men who were not capable of paying for same.

On October 31st No. 4 Store at Rock Springs took fire from a cause unknown, resulting in the complete destruction of the store, warehouse, fixtures and merchandise, the loss totalling \$48,974.82, covered by self-insurance, provision made in the 1926 Budget for a combination store and office building on the North Side of Rock Springs.

Pensions:

On December 31st the following ex-employees were carried on the Pension Rolls:

<u>Name</u>	<u>Occupation</u>	<u>Present Age</u>	<u>Monthly Pension</u>
W. L. Ritter	Clerk & Salesman	76	\$40.00
Mrs. Alex Briggs	Wife of Supt. lost in Hanna explosion	(Insane)	50.00
E. B. Treat	Supt. of Stores	64	108.42
Robt. Muir	General Master Mechanic	67	90.23
Total			----- \$288.65

Mr. T. P. Honkell, former carpenter at Hanna, aged 82 years, died from an accidental gunshot wound October 24th, leaving three employees and the wife of Superintendent Briggs, killed in the Hanna mine disaster, on the pension list, total amount of pensions paid during the calendar year \$3,647.99, equivalent to 1.51 mills per ton of coal produced.

Catastrophe Insurance:

The Wyoming State Legislature enacted, early in 1925, provision for the purchase, by the Wyoming State Compensation Fund, catastrophe or excess coverage insurance to protect the fund in the event of major accidents occurring, such as happened to the Kemmerer Coal Company in 1923 and 1924.

Insurance protecting the Fund was purchased from the Security Mutual Company of Illinois, and any accidental loss sustained from a coal mine accident, or series of accidents of a common origin, will be absorbed by the insurance company up to a maximum of \$300,000 over the first \$25,000, which will be paid out of the Fund. The rate

of premium paid, 16¢ per \$100.00 of mine pay roll, represents a nominal cost for protection, eliminating the necessity for carrying the reserve that would otherwise be required.

Wyoming Stockmen's Loan Company:

During the year 1921 The Union Pacific Coal Company entered into an agreement with certain other Wyoming interests to purchase a portion of the capital stock to be issued by a stockmen's loan company, the purpose of which was to serve as an intermediary between the cattle and sheep industry of Wyoming, then in a very bad financial condition as the result of the post-war liquidation which was taking place. Beginning with a payment of \$40,000, made January 11, 1922, further payments were made, until a total of \$250,000 was deposited with the Wyoming Stockmen's Loan Company, The Union Pacific Coal Company receiving capital stock in even amount in return for same.

During the year 1924 it was decided to partially liquidate the Loan Company, the livestock industry then moving toward solvency, and on March 11, 1925, one-fourth of the Coal Company's stock holdings were taken up by the Loan Company at par, and on July 6th, 1925, an additional one-fourth was similarly taken up, leaving the Coal Company with stock holdings of \$125,000 par value. Late in 1925 a further liquidation of one-fourth of the original stock issue was arranged for, and a third payment of \$62,500 was made to this company February 3, 1926, leaving capital stock of a par value of \$62,500 in possession of this company.

Permission to dispose of the remaining stock at par or better has been requested, thereby taking this company out of the

Stockmen's Loan Company entirely. The purpose of the subscription was that of maintaining an important industry during an extremely trying financial period, and when compared with the results obtained from similar organizations in adjoining states the outcome has proved very satisfactory.

Schools:

A new school building at Superior was occupied late in 1924 and found a splendid addition to the educational facilities of that place.

During the year a new junior high school building was started at Reliance, same being built under the terms of a bond issue totalling \$75,000, put out by School District No. 7, the above sum covering, in addition to the construction of the building, the purchase of the school owned by The Union Pacific Coal Company at Winton and that owned by the Colony Coal Company at Dines, making all schools in District No. 7 the property of the School District.

Sanitary Improvements - Rock Springs:

During the calendar year the City of Rock Springs, through the medium of a bond issue, supplemented by improvement taxes, undertook the sanitation of Rock Springs, including:

- (a) The installation of a complete sanitary sewer system.
- (b) The diversion of the channel of Bitter Creek around the city, this channel being detoured from a point on Rainbow Avenue to a point west of Elk Street, where it again joins the original Bitter Creek Channel.
- (c) The extension of the storm sewer from the Elk Street Bridge west.
- (d) The further extension of what is known as the storm ditch, which formerly emptied into old

Bitter Creek in the vicinity of the coal chutes.

- (e) The filling of the old channel of Bitter Creek from the point where the diversion channel started to the Elk Street bridge.

The new Bitter Creek channel, 3,580 feet long, with 22.2 miles of sanitary sewer, etc., should lift Rock Springs above the hazard of a flood, putting the town on a sanitary basis, Rock Springs, with approximately 8,000 people, heretofore one of the largest unsewered cities in the United States.

Sale of Lots at Rock Springs:

Largely as a result of the improvements made by the City, above referred to, four new additions to Rock Springs were prepared by The Union Pacific Coal Company, viz., Clark, Brooks, Lowell and City Park Additions. During the year 172 business and dwelling lots, at an average price of \$424.48 each, total \$73,011.00, were sold to residents of Rock Springs, the major number of which were employees.

New Bath Houses:

Two new bathhouses were built to meet the requirements of men working in Mines "B", "E" and "C", Superior. These buildings will be self-sustaining, all employees working in the mines required to pay a fee of \$1.00 per man per month for the use of same.

Social Organizations:

During the year Community Councils, made up of representatives of various churches, etc., and other organizations, including miners' local unions, were established at Reliance, Winton, Superior and Hanna, the control of the organizations wholly in the hands of

non-employees, the Editoreess of the Magazine and the local Superintendent attending all meetings, but without the right to vote.

During the year monthly contributions, taken from club house rentals, totalling \$1,444.89 were paid to the four Community Councils, same representing 25% of the rentals received for club house concessions.

The activities of these councils are directed toward assisting Boy and Girl Scouts, organizing entertainments, taking care of local welfare work, etc., and in addition contributing to the moral atmosphere of the several communities.

During the year some 260 Boy and Girl Scouts were entertained at a camp located on Burnt Lake, about one hundred miles north of Rock Springs, the Hanna Boy and Girl Scouts taken care of adjacent to Elk Mountain, some sixteen miles from Hanna, this work, supervised by a committee of citizens, assisted by the Magazine Editoreess and our staff officials, the subject of much commendation.

Ownership of Automobiles:

With a material improvement in highways, including the opening of a usable road to Yellowstone Park, the purchase of automobiles by employees was materially increased, a total of 875 machines owned by 2,367 employees in December, 1925, suggesting that 32.74% of our workmen own cars.

Old Timers Organization:

On June 13th The Union Pacific Coal Company Old Timers Association held its first annual meeting at Rock Springs, the requirement for membership fixed at a minimum of twenty years continuous service, the registration roll totalling 269 old timers.

After an organization meeting held in the forenoon, with a parade and baseball game in the afternoon, the Old Timers with their wives and guests, totalling 425, attended a banquet given in the Elks Club assembly room.

The bringing together of men with many years service, twenty-three of whom have been continuously employed for forty or more years, these men presented with solid gold service buttons of a special design, was an eventful occasion, one man, Mr. James Moon, who was elected President of the Association, having more than fifty years continuous service to his credit, Mr. Moon's son and grandson working in the mines with him.

The banquet was the occasion of reminiscent speech-making, with songs and music furnished by The Union Pacific Coal Company Band of Cumberland, containing fifty-five pieces, one of the best organized and trained bands in the West, then less than a year old, made up of Union Pacific men and their families.

No step of whatever character could be taken that would so thoroughly cement friendly relations between the Company and its men as the organization of the Old Timers Association.

Return to China of Chinese Employees:

On November 11th nine worn-out Chinese employees and ex-employees left Rock Springs to return to their homes in southern China. The nine men averaged sixty-nine years of age, with a total of 307 years service, or an average of 34 years per man, one almost totally blind, five who were retained in our employ physically incompetent to work, five of these men the recipients of forty-year service buttons furnished on the occasion of the organization of the Old

Timers Association.

The men were outfitted with new clothes and furnished transportation via rail and steamship to Hong Kong, each man given an order on the Bank of Canton for a sum sufficient to maintain him, on the basis of Chinese living costs, approximately twelve years.

Before leaving Rock Springs the men were given a banquet by their fellow employes and leading citizens of the town, much sentiment evidenced by those who had known and worked with these faithful old fellows for many years.

On their arrival at San Francisco they were entertained by the Coal Company, assisted by the President of the Chinese Chamber of Commerce of San Francisco and the Chinese Consul General, much friendly publicity given the occasion.

The return of the nine worn-out Chinese laborers served as a fitting complement to the organization of the Old Timers Association, convincing even the most doubtful employes that the Coal Company had a definite interest in its employes.

New Church Buildings:

During the year there was completed in Rock Springs a new Eastern Orthodox Catholic Church building of ample proportions, with a resident clergyman, this church serving the Slavonic people.

The North Side Roman Catholic Church organization undertook the construction of a magnificent brick church building, just completed and dedicated in December, this building a credit to the non-English speaking Roman Catholics.

A small Roman Catholic chapel was provided by rearranging

a four-room miner's house at Winton, and the Community Church at Superior, which is occupied by the Episcopal and Mormon denominations, was improved by the addition of heating apparatus and community house facilities.

Employees Magazine:

The Employees' Magazine was carried through the year 1925, approximately 3,000 copies distributed to the employees of The Union Pacific Coal Company, Southern Wyoming Electric Company and Washington Union Coal Company, the net cost of publication to The Union Pacific Coal Company for the calendar year \$6,193.55.

Measure and cost of Welfare Work:

In addition to the expenditure of \$6,193.55 for the Employees' Magazine, a total of \$13,885.75 was expended for church contributions, contributions to National Red Cross, American Legion, Boy and Girl Scouts, organization of Old Timers Association, deporting and endowing nine old Chinese, together with Fourth of July, Labor Day, Christmas and miscellaneous contributions, making the total amount expended on social and betterment work \$20,079.30, or approximately 7.2 mills per ton of coal produced, this expenditure representing an investment well reflected in the improved character of service received from our employees.

Conclusion:

The maximum possible measure of co-operation has been afforded the company, not only by its employees but by the citizens of Rock Springs and Hanna, the clergy, regardless of sectarian status, working closely and intimately with our operating staff, this the result of the definitely expressed position taken that while it was

the desire of the Coal Company to work with the clergy and other organizations in the matter of social betterment, leadership in civic matters should properly originate with other than those responsible for the administration of the Coal Company.

The measure of co-operation furnished by the mine official staff and employes has been of a most satisfactory character.

Respectfully submitted,

Original Signed
EUGENE McAULIFFE

YEAR 1924

Mr. H. W. Clark,
Chairman, Board of Trustees,
The Union Pacific Coal Company,
120 Broadway, New York City.

March 1, 1925.

Dear Sir:

The following resume of The Union Pacific Coal Company operations for the year 1924 is submitted for your information:

Mine Production and Costs:

Tons produced, average mine days worked during the year, mine cost and total cost for the four year period, 1921 to 1924, is set forth below:

<u>Year</u>	<u>Production Tons</u>	<u>Average Days Worked</u>	<u>Mine Cost</u>	<u>Total Cost</u>
1921	2,934,434	210.7	2.518	\$2.662
1922	2,253,774	166.0	2.339	2.706
1923	3,241,105	198.8	2.397	2.543
1924	2,921,678	181.5	2.246	2.441

The Total Cost for 1922, \$2.706 per ton, does not include the expense of maintaining the mines during the strike of that year, which totalled \$606,095.43, or \$.266 per ton.

Production and time worked in 1924 were materially below 1923, the reduction in tonnage 419,427.05 tons, or 12.94%; the time worked decreasing 17.3 days, or approximately 9%, this condition brought about by two things; first, the burning of 168,436 tons of storage coal in 1924 which was laid down in the previous year, the System storage as of January 1, 1924, 400,734 tons, and as of December 31, 1924, 212,298 tons; second, a substantial reduction in railroad unit consumption, which, perhaps, the better quality of coal, due to more composed condition of mine labor, was, in a limited way at least, responsible for. No labor controversy of any character occurred during the year.

The Total Cost of production in 1924 was 10.7¢ below the Total Cost during the previous year, such representing an item of \$301,910.62. It is safe to assume that if equal running time were possible the net reduction in cost would approximate double the above sum.

Mechanical Loaders:

Two Joy mechanical coal loading machines, Type 4BU, were purchased and put in service at Reliance Mines in April last, same transferred to Hanna No. 4 Mine October 1st, the machines proving not well adapted to the pitching seam at Reliance, their transfer to Hanna No. 4 reinforcing the two Joy loaders purchased late in 1923 for that mine.

The net result of the installation of the four Joy loaders at Hanna was reflected in enabling the four Thew mechanical loaders to increase their capacity 7,682 tons, or 7.8%, although No. 4 Mine worked 25.5 fewer days (12%) in 1924 than in 1923, the unit saving expressed in better performance of the four Thew machines made possible through the use of the four Joy machines equal to 11.2¢ per ton, total \$12,157.32, the eight machines loading mechanically at Hanna No. 4 Mine in 1924 - 151,300 tons, with a net reduction in loading cost, after adding interest and depreciation, equal to 25.19¢ per ton, total \$38,112.47.

The Joy machines of the type that we purchased are no longer manufactured, yielding to a larger and heavier machine costing additional money. The four machines we now have, as shown above, have proved a wonderful aid to the four Thew machines in reducing mine costs.

With a view of expanding our mechanical loading program, authority for a further expenditure in coal loading machines, totalling \$50,000, was included in the 1925 Budget, and our General Superintendent, Mr. A. W. Dickinson is now writing a report of a study made by him in

January and February, covering a thirty day period spent in visiting mines using mechanical loaders in Missouri, Illinois, Indiana, Kentucky, West Virginia and Pennsylvania.

Daily Cost Sheet:

On November 1, 1923, the Daily Mine Cost Sheet, covering detailed cost of labor and material used in individual mines, was put into effect, the principle of a daily cost sheet accepted immediately by four of our six superintendents, two superintendents doubtful of the results.

The plan has now been in effect over a year, and the Mine Management expressed the definite opinion that the same makes a reduction in cost of \$4 per ton possible, all extra clerical labor demanded by the two superintendents referred to since taken off the pay roll, the reports coming out promptly and without difficulty.

1924 Wage Contract:

In February, 1924, the Central Competitive Field entered into a contract with the United Mine Workers of America to renew the then existing wage scale for a period of three years, April 1, 1924, to March 31, 1927, without change in terms or conditions, the Central Competitive Field, embracing Western Pennsylvania and the states of Ohio, Indiana and Illinois. Later the Executive Committee of the United Mine Workers Union instructed their state organizations outside of the Central Competitive Field to renew existing contracts on the same basis, the Wyoming agreement accordingly renewed for three years.

Due to short running time suffered in union territory in 1924, this condition contributed to by the large amount of storage coal on hand April 1st, the working time of mines and miners in the union fields suffered a severe reduction, the mines in West Virginia and the non-union portions of

Pennsylvania and Kentucky showing increases in output, the Union losing much ground as a result of bad running time and low selling costs. At the present time there is not a single unionized mine in the state of Kentucky, Alabama is non-union, likewise Colorado, New Mexico and Utah, and many mines in non-union Pennsylvania, a few in Indiana and Illinois, and perhaps 50% of those said to be unionized in Kansas, Arkansas and Oklahoma are now working under various plans which result in an ultimate wage below the union scale, the co-operative plan, guaranteeing a maximum cost to the operator, and various other expedients employed.

There is a growing feeling that the union mine workers in the Central Competitive Field will, before long, suggest to their National Organization the matter of reviewing the wage scale situation in union territory.

Safety Measures:

One of the outstanding items to which specific attention has been given has been that of increased safety for mine employes, as well as the property. To this end rather sweeping measures were put into effect at all Union Pacific mines during 1924, the foundation for many of these changes laid in the latter part of 1923.

The unfortunate explosion of the Kemmerer Coal Company's No. 2 Mine in August, 1923, costing 99 lives, and the second explosion suffered by the same company in its No. 5 Mine in September, 1924, costing 39 lives, as well as the great Castle Gate, Utah, explosion on March 8, 1924, costing 173 lives, all lend broad justification to the application of the safety movement, our principal measures for the year outlined below:

1. The complete substitution of permissible explosives for black powder in the Union Pacific Wyoming mines.
2. The elimination of all open lights in our Wyoming mines, with the substitution of electric battery lamps instead.

3. The extension of the shale dusting program started in 1923, some ten miles of slopes and entries rock dusted, numerous batteries of rock dust barriers installed and plans for the installation of a shale dust plant to manufacture shale dust put into effect, this plant not yet accepted account necessity of improving the machinery and capacity, the dusting program, however, carried forward.
4. Major extensions to underground water lines for sprinkling were made during the year, and dry mines and loaded and empty pit cars are sprinkled before going on the main slope.
5. All shots are now fired by experienced shot-firers, employed by the Company, while the men are out of the mine, except at Cumberland where day shooting is necessary in pillar work, and where a shot inspector examines every shot for location, amount of explosives used, gas and dust conditions, etc., before authorizing the miner to shoot same, thereafter examining the place with a safety lamp before the miner is allowed to reenter same.
6. A system of life checks was installed at all mines and all men are now checked in and out and required to state that they are now in possession of matches or tobacco when entering mines.
7. All mine fans were equipped with pressure recording gauges, mine foremen required to examine record of fan performance before the men are allowed to enter the mine at the beginning of the day's work, and special patrolmen were put on at Hanna and Cumberland to make and record daily air measurements in all working places.

In addition to above, a special Ventilation Engineer, Mr. J. V. McClelland, was employed September 1st. Mr. McClelland in charge of ventilation maps, the matter of air measurements, gas analysis and ventilation work in general, giving his exclusive time to this work, reporting to the Safety Engineer.

The Union Pacific Coal Company is one of the few properties in the United States that maintains a Ventilation Engineer.

8. Careful examination of all electric wiring and installations underground was undertaken and numerous bad conditions rectified, this matter now given continuous special attention; likewise numerous underground installations carrying a fire

hazard were removed and standard fire-proof installations substituted therefor.

Perhaps the best measure of increased activity in safety work is that shown by money spent for labor and material, such items totalling in 1923 \$71,981.06, or 2.2¢ per ton; in 1924 there was spent \$152,754.18, or 5.4¢ per ton, this expenditure divided \$84,447.96 labor and \$68,306.22 material, all of which was charged to the cost of production, a material capital expenditure for outside equipment made in addition thereto.

Pursuant to instructions issued several years ago, all mines were examined for safety conditions by outside engineers during the year, Mr. Charles Gottschalk, Mining Engineer, Evansville, Indiana, and Arthur S. White, Mining Engineer, Chicago, completing the examination and report on the condition of the properties on September 8, 1924, numerous suggestions made by the examining engineers immediately put into effect.

Due to the death of Mr. E. S. Brooks, Vice President and General Manager, March 17, 1924, Mr. A. W. Dickinson, then employed as Safety Engineer, was promoted to the position of General Superintendent, and Mr. J. A. Smith, Engineer, with fourteen years experience in our Wyoming mines, was appointed Safety Engineer to succeed Mr. Dickinson.

Much has been done during the year outside of the major items referred to above to improve the safety of the mines, the last step taken that of arranging during December for a system of joint inspection on the part of mine employees and the Safety Engineer, the plan, in substance, that of the Mine Superintendent picking out a mine worker, to be paid by the Coal Company, the Local Union picking out another mine worker, to be paid by the Union, the two, together with the Safety Engineer, constituting an inspection committee who may return an agreed report or a majority-minority report, as

they elect; this arrangement, which is the law in the State of Washington, tending to tie the employee and their organization into the safety work.

Our First Aid work has likewise received a wonderful impetus, much stimulus resulting from the meeting of the Rocky Mountain Coal Mining Institute, the first one held in a mining town, which took place at Hook Springs in August last, the three days' session, including reading of papers, discussion and much field work, supervised by the representatives of the U. S. Bureau of Mines, definitely fixing safety and first aid work in the minds of the men, as well as our staff officials.

The number of fatal accidents, expressed in number for tons production, are not governing, the fact remains that while we had sixteen individual fatal accidents in 1923, the number of such were reduced in 1924 to a total of nine, including one man who was injured on March 3, 1922, and did not die until November 8, 1924, and one man who was injured June 1, 1923, and who lingered until July 3, 1924.

The comparison of fatal accidents per million tons for our mines and for the United States for the two years set forth below:

Year	<u>The Union Pacific Coal Company</u>		<u>United States</u>	
	<u>Fatal Accidents</u>	<u>Fatalities Per 1,000,000 Tons</u>	<u>Fatal Accidents</u>	<u>Fatalities Per 1,000,000 Tons</u>
1923	16	4.94	2,458	3.74
1924	9	3.19	2,361	4.27

It will be noted that while our ratio of fatalities exceeded that of the United States in 1923 by 24%, the results for 1924 were in our favor, being 34% below the results for the country as a whole.

Reliance Mine No. 1 Fires:

For some years Reliance Mine No. 1 has suffered a series of fires in worked out crop coal areas, the matter given special study in 1924

by a committee consisting of the Safety Engineer, the Chief Mine Engineer and Mine Superintendent, the committee, however, unable to develop any general theory of control, the measures employed confined to keeping the fire under complete control at the lowest cost, the efforts made in 1923 and 1924 toward reduction of cost well reflected in the following statement:

Cost of Controlling Reliance Mine No. 1 Fire

<u>Year</u>	<u>Amount</u>	<u>Cost Per Ton</u>
1922	\$23,033.10	\$.102
1923	16,745.99	.062
1924	12,867.20	.045

Wyoming coals are subject to spontaneous combustion in caved crop areas. However, there is no ventilation or gas explosion hazard connected with the Reliance fire situation.

Hanna Coal Crusher:

Much difficulty has been experienced in developing balanced working time at the Hanna mines, due to the railroad requiring during certain seasons large volumes of crushed locomotive stoker coal, this problem solved by the installation of a crusher and coal elevator at Hanna No. 4 Mine, costing \$14,883.65.

Exhaustion of Cumberland Mines:

During the winter of 1923-1924 the work of mapping all known prospecting work in the Cumberland field was completed, and arrangements were made with Mr. A. B. Schultz, Geologist, to examine the field, submitting recommendations for the location of further prospect drilling with a view of locating one or more new mines to take the place of mines 1, 2 and 3 South, which will be completely exhausted early in 1929, this work now under way.

The matter of finding a suitable location for mine development in the Cumberland Basin represents a serious problem, efforts made during the past fifteen years by The Union Pacific Coal Company, the Diamond Coal & Coke Company and the Hommerer Coal Company without substantial result.

There is, however, so much at stake, including our present camp, water reservoir and man power investment at Cumberland, several miles of railroad track and much mineral reserve held by the Railroad, that it is deemed advisable to exhaust our resources in the search for a further workable coal area.

The comparative cost of Cumberland and all coal for four years is set forth below:

<u>Year</u>	<u>Total Cost Cumberland</u>	<u>Total Cost all Mines</u>	<u>Excess Cost Cumberland</u>
1921	\$3,017	\$2,662	\$.355
1922	3,413	2,706	.707
1923	2,811	2,548	.263
1924	2,667	2,441	.226

Water Supply:

During the year extensive improvements in water supply and distribution systems were made at Reliance and Winton, the camps at Winton given an entirely new water supply system, the water taken from wells drilled in sand rock, this installation costing \$44,482.43. In addition thereto the camp was given a water distribution system, costing \$11,110.29, this investment furnishing every house, as well as all mine tipples and buildings adequate water for fire and current consumption purposes; water previously hauled in in railroad cars and distributed at great expense by teams.

Reliance Camp was likewise given a well installation, with pumping station and water mains, this installation costing \$37,817.75.

The plant was installed at the expense of the Coal Company and constructed for the joint service of the Union Pacific Coal Company and the Union Pacific Railroad Company, the Railroad Company now completing an engine tank at Reliance Junction, which will require approximately 100,000 gallons daily, it the ultimate plan, providing the supply of water proves sufficient, to conduct same into Rock Springs, relieving the present insufficient supply of water pumped from Green River.

An attempt is likewise under way to develop a proper water supply for the four Superior mines, the water used at present highly mineralized, causing great inconvenience to employes and their families.

Mine Material and Supplies:

On December 31, 1923, the total mine material and supplies on hand was \$590,004.44, a vigorous attempt to reduce same by decreasing purchases and using up old equipment made during the year, with the result that on December 31, 1924, the total material and supplies on hand was \$422,040.41, the reduction made during the year \$167,964.03, equal to 28.4%.

The various mine superintendents are taking a substantial interest in this item and expect to effect a further reduction in material stocks of \$100,000.00 during the year.

The loss suffered from excess stocks, including interest, deterioration of mine timber, loss by waste and theft, has been fixed conservatively at \$20,000 per year, much of which we hope to avoid.

Merchandise Stores:

The six merchandise stores operated by the company have proved a problem hard to get under control, Mr. E. B. Treat, Superintendent of Stores, then sixty-two years of age and physically disqualified, retired May 1, 1924, on a pension, the management of the stores put into the hands of Mr. E. R.

Jefferis, former employe of H. E. Smith & Company, Omaha, December 1, 1923. Mr. Jefferis has given his entire time in an attempt to improve the conditions surrounding the stores, suffering, however, the handicap of one of the dull-est years experienced for some time by the Wyoming mines.

The following statement shows the store situation for four years, the items of accounts charged off and earnings on miners' explosives for 1923 and 1924, with a comparison of results obtained after adjusting for the above factors, shown thereon:

<u>Year</u>	<u>Total Sales</u>	<u>Inventory Value</u>	<u>Total Operating Expenses & Taxes</u>	<u>Net Earnings</u>
1921	\$1,116,606	\$331,748	\$177,993	\$45,801
1922	991,315	263,269	169,254	3,083 (Deficit)
1923	1,193,975	240,249	194,872	55,314
1924	1,041,506	229,236	192,308	43,276
	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
Decrease 1924	\$ 152,469	\$11,013	\$12,064	\$12,088

	<u>1923</u>	<u>1924</u>	<u>Increase</u>	<u>Decrease</u>
Accounts charged off	\$842.64	\$10,267.88	\$9,424.74	
Earnings on miners' explosives fixed by wage contract	7,396.52	2,149.96		\$5,246.56
Net revenue after adjusting for above items	55,313.90	57,947.09	2,633.19	

Total sales fell off in 1924 \$152,469.53, or 12.6%, total operating expenses and taxes reduced \$12,064.03, or 6.2%.

Mr. Jefferis could have maintained the 1923 volume of sales if he had been disposed to extend the necessary credit given in that year, he attempting, however, to confine his sales to the ability of the men to pay their bills, a comparison of Accounts Receivable, Merchandise Department, for the two years set forth below:

Accounts Receivable, Merchandise Department

December 31, 1923	\$86,864.25
" 31, 1924	62,737.39
Reduction, amount	<u>24,126.86</u>
" per cent	27.7

In substance the new Manager of Stores has tried to reduce his credits, and at the same time has given much time and effort toward the collection of old and questionable accounts, compelled, however, to charge off during the year \$10,267.39 in bad accounts, some of which were two and three years old.

When due allowance is made for the credit situation, back collections, loss of revenue from the sale of explosives, a matter beyond the Store Manager's control, it is fair to say that a substantial improvement in store conditions has been brought about.

Public Utility Service:

In a separate memorandum I have given you a statement covering the activities of the Southern Wyoming Electric Company, which succeeded to the public utility service heretofore rendered by The Union Pacific Coal Company as of January 1, 1924. The only public service now rendered by the Coal Company is covered by a limited amount of energy sold to the Hanna Coal Company and a few small consumers at Hanna, the Coal Company no longer reporting to the Public Utilities Commission in public utility service matters.

Winton Government Lease-hold:

During the year the United States Department of the Interior agreed to amend Government lease Evanston Serial No. 07849, dated November 28, 1921, by substituting therefor Serial No. 09490, the net result that of

adding to the mineral previously leased at Winton some 374 acres of coal land immediately in front of our major development, the terms and conditions in the original lease carried through the revised lease, Serial No. 02400.

Pensions:

On May 1, 1924, Mr. E. B. Treat, Superintendent of Stores, then sixty-three years of age, was retired and granted a pension of \$103.42 per month, the present pension roll set forth below:

Present Pension Roll

<u>Name</u>	<u>Occupation</u>	<u>Present Age</u>	<u>Monthly Pension</u>
W. L. Ritter	Clerk & Salesman	75	\$40.00
Mrs. Alex Briggs	Wife of Superintendent	Insane	50.00
T. P. Henkel	Carpenter	61	50.00
E. B. Treat	Superintendent of Stores	63	103.42

The matter of pensioning Mr. Robert Muir, General Master Mechanic, who has been ill for several months, is now being given consideration, Mr. Muir having been employed by the Union Pacific Coal Company for some forty years, now some sixty-six years of age and able to render but limited service.

Schools:

Some three years ago new school buildings were projected for Superior and Reliance, construction postponed in 1923 on the recommendation of the Secretary of Commerce that all possible work of like character be postponed until labor and material was easier to obtain.

Our further study of the Superior question developed that the then existing school buildings, donated by The Union Pacific Coal Company, were being used by the children of employees of independent companies, who declined to contribute to the cost or maintenance of these buildings, with result that a bond issue of \$75,000 was made and sold and a new, modern building

built at the expense of all tax payers and turned over for occupancy in December.

Similar plans are under way to construct a joint public school building at Reliance, a bond issue totalling \$75,000 to include a sum sufficient to purchase the present school building owned by The Union Pacific Coal Company and the one owned by the Colony Coal Company at first cost less depreciation, putting the entire school building plant, with the exception of the school owned by The Union Pacific Coal Company at Winton, within District No. 7, Sweetwater County, Wyoming, in the hands of the tax payers, who will thereafter maintain same.

In view of the fact that mine officers direct and control school affairs in mining camps, insuring economical expenditures, the plan now employed represents a better and more economical one for The Union Pacific Coal Company than the previous one of building and maintaining school buildings for all camps.

Employee's Magazine:

On January 1, 1924, the Employee's Magazine, The Union Pacific Coal Company and Washington Union Coal Company, published monthly and distributed free to all employees, was undertaken, Mrs. Atlanta Hecker employed as Editor.

Mrs. Hecker died on April 4th and was succeeded by Miss Jessie McDiarmid on May 1st, some 3400 copies of the magazine now distributed monthly, Miss McDiarmid giving limited time to the magazine, the balance of her time devoted to social work, particularly in the camps, working closely with the wives, mothers and children.

The Magazine has been well received, and it is reported that now that the United Mine Workers Journal calls for paid subscriptions, our

Employer's Magazine represents the only printed matter in the English language entering 25% of the miners' homes.

Social Work:

An attempt has been made through the Editor of the Employer's Magazine to develop social activities in the several camps, particularly those at Hanna, Superior, Cumberland, Reliance and Winton, conditions at Rock Springs, a city of 6500, not requiring the assistance that obtains in the outside camps.

Miss McDiarmid, with the assistance of staff officials, succeeded in developing a Union Pacific Coal Company Base Ball League, which in 1924 created a great deal of interest, this league, enlarged, to continue through 1925.

Bands were organized at Cumberland and Superior, the expense of instruments, etc., absorbed by the men, and an attempt is now being made to revive a band formerly organized at Hanna.

During the summer Miss McDiarmid organized some sixty Girl Scouts, many of the girls never away from the camps before they were carried for a two weeks' outing to New Fork Lake, some one hundred miles north, where they were introduced to trees, grass, boating, swimming, evening prayer and other civilizing influences, the University of Wyoming sending three extension teachers to lecture the children on geology, botany, astronomy and other similar subjects; this work financed almost wholly by the employees, the Company furnishing a cook and the supervision of Miss McDiarmid, as well as the use of tents and trucks. The Girl Scout organization has now expanded to some 300 members, the work of taking care of them during 1925 representing a real problem, and one which we expect to through with.

Many of our outside camps had suffered a lack of Sunday School and church services, and an appeal was made to the united clergy of Rock Springs to hold afternoon services alternate Sundays for the various denominations in the outside camps, and that work has now been organized and is being carried on, Sunday School classes reestablished and put on an apparently firm foundation.

In Rock Springs and Hanna and other camps we have suffered annoyance from a large population of Greeks, Bulgarians and other similar nationalities, same rapidly becoming impossible from the standpoint of service and good citizenship. That situation is now promising a solution, certain leaders of the Greek community bringing in a Russian Greek Catholic clergyman, who has been promised full support by the people who should properly become members of that church, and already a class in citizenship of thirty-seven members is under way.

Community Councils to take care of amusement and improvement work in the several outside camps are at this moment being organized, the direction of the Councils under the control of representatives of all the lodges, women's clubs, etc. In substance, the women will control, and much good is expected from the Council activities.

With the assistance of Rev. Anton Schiffrer, a Slav Roman Catholic Priest at Rock Springs, backed by the Episcopal, Methodist, Mormon, Baptist and other clergymen, much social improvement work of a general nature is now being carried on, and I have the definite feeling that in two or three years the worst of our thirty-six mixed nationalities will become reconciled to some theory of restraint, with attendant advantage, one of Father Schiffrer's most valuable evidences of cooperation expressed in the assistance rendered in removing some thirty-five Slav

squatters, who were living on railroad lands in the creek bottom under conditions that at times were well nigh impossible.

The absence of sectarian prejudice and strife among clergymen representing extremes in religious beliefs is one of the most obvious signs.

Conclusion:

A separate report covering the Southern Wyoming Electric Company has been submitted, and a report covering the Washington Union Coal Company will be prepared and submitted in the near future, and the progress made possible by the splendid cooperation of our mine official staff will, without doubt, be carried through 1926, resulting in a further reduction in unit costs, with a marked improvement in safety conditions.

Respectfully submitted,

BC - Mr. Gray

Original Signed
EUGENE McAULIFFE

YEAR 1923

February 25, 1924.

Mr. C. E. Gray, President,
Union Pacific System,
Omaha, Nebraska.

Dear Sir:

The following resume of The Union Pacific Coal Company operations for the year 1923, is submitted for your information:

The tonnage produced, average mine days worked in year, mine cost and total cost for the three years 1921, 1922 and 1923 are set forth below:

<u>Year</u>	<u>Production</u>	<u>Average Days Worked</u>	<u>Mine Cost</u>	<u>Total Cost</u>
1921	3,994,434	(not available)	\$2.510	\$2.662
1922	2,253,774	166.0	2.539	2.703
1923	3,241,105	190.8	2.397	2.542

From April 1st to August 20th, inclusive, 1922, all mines were idle account strike, the strike expense so incurred totalling \$605,095.45, or \$.266 per ton, same not included in selling price of coal, but charged to Production and Operating Expense accounts.

Merchandise Stores:

The Company has for some years operated six general merchandise stores, with one additional store engaged in the sale of electrical supplies, the stores operated during the year 1922 at a net loss of \$3,062.96:

With a view of determining the conditions surrounding same, Mr. J. G. Donoho, General Store Manager of the Central Coal & Coke Company, operating stores in Kansas, Arkansas, Missouri and Louisiana, was employed in July and August to make an examination and report on the conditions, the major number of his recommendations put into effect. However, conditions continuing unsatisfactory, a

Manager of Stores was employed December 1, 1925, the previous Superintendent of stores, now 61 years of age and physically disqualified after thirty-six years in our service, retained in a subordinate position.

The new Manager has attacked the situation energetically, and although the net earnings for the stores for the calendar year 1923 totalled \$54,247.24, conditions in some respects are yet very discouraging, bills collectible for merchandise on December 31, 1922, totalling \$75,279.35, and on December 31, 1923, \$66,804.16. The Cumberland Store, with sales totalling \$155,393.52, lost \$12,813.43 during the year 1923, and as sufficient evidence of continuous theft over a long period was developed to justify a complete change in the store personnel, it is now thought this store will make a profit during the year 1924.

With respect to the old accounts, many of long standing: It can probably be said that gross incompetence and indifference toward the conduct of the situation is responsible for outstanding accounts being allowed to reach the proportions they have been carried at, for an extended period.

The results for a three year period are submitted for comparative purposes:

<u>Year</u>	<u>Total Sales</u>	<u>Inventory Value</u>	<u>Total Operating Expense & Taxes</u>	<u>Net Earnings</u>
1921	\$1,113,696.	\$351,748.	\$177,993.	\$43,801.
1922	991,315.	285,269.	169,294.	3,063. (Deficit)
1923	1,211,407.	245,959.	196,854.	54,247.
Increase 1923	220,092.		27,560.	57,310.
Decrease 1923		37,310.		

Public Utility Service:

As a result of criticism made by the Wyoming Public Service Com-

mission, relative to failure of The Union Pacific Coal Company to render complete detailed report of capital investment and earnings allocated to public service in the form of electric energy sold to neighboring mines and to the City of Rock Springs and the Town of South Superior, the mine management early in 1923 recommended the sale of the public service business, including transmission lines and other apparatus related thereto.

As this service was highly compensatory, yet sold at a price that was satisfactory to the Public Service Commission and the users, it was deemed desirable to retain same, meeting the requirements of the Public Service Commission by organizing a separate company, the Southern Wyoming Electric Company, with a capital of \$150,000, this company organized under a Certificate of Convenience and Necessity given by the State, securing, in addition, a franchise from the City of Rock Springs for the conduct of a public service business, the new company taking over the public service property and distribution of energy to the public, on January 1, 1924.

The sale of \$125,000. in capital stock at par to the Coal Company will prove sufficient (leaving \$25,000. capital stock unsold in the treasury) to take over the property employed in public service and provide working capital, the net earnings on which for the year 1923 were \$71,071.63. The energy sold by the new company will be purchased from The Union Pacific Coal Company at a fixed price per kilowatt hour, f.o.b. The Union Pacific Coal Company power plant and outside substations, the charge made by the Coal Company enabling the new company to make from six to eight per cent on the capital invested, this arrangement meeting the full approval of the public service commission.

Mechanical Loaders:

Barren No. 4 Mine has used for some years four Thew electric shovels for loading coal, the operation of these shovels showing substantial savings

compared with hand labor. With the view of gradually expanding the mechanical loading process, two Joy coal loading machines were purchased, at a cost of \$11,626.00, and put into operation in November, 1923, the new shovels giving equally satisfactory service, and it is hoped to expand our mechanical loading in a gradual manner.

Presentation to the United States Coal Commission:

On August 10, 1923, with the assistance of neighboring operators, members of the Southern Wyoming Coal Operators Association, and certain Montana operators, a presentation was made to the United States Coal Commission, which, in substance, urged on the United Mine Workers' organization, through the Commission, the principle of allowing the States of Wyoming and Montana to work out their wage contracts with the State organization and the workers, and in a measure independent of the negotiations heretofore conducted in the Central Competitive Field, the western Mine Workers prevented from making a local contract, however satisfactory to them, until the Central Competitive Field operators have been compelled to sign a contract with the Union, such usually made after an extended suspension period. In addition, the additional wage allowance granted to Wyoming mine workers, on the theory that living costs in Wyoming were higher than those governing in the Central Competitive Field, was protested, such averaging with this company 24.5¢ per man day, or approximately 2.5¢ per ton.

The presentation has borne substantial fruit, inasmuch as, acting on the advice of the Coal Commission, the Union National Officers recommended to their National Convention, held in January, 1924, that provision be made to allow districts outside the Central Competitive Field a reasonable measure of autonomy, the National Union delegating discretionary power in this matter to its Policy Committee. It is, therefore, safe to say that Wyoming mine workers

will not, for the time being, be compelled to stand idle while waiting settlement of a Central Competitive Field wage controversy.

With respect to the renewal of the "cost-of-living wage plus:" It is the Wyoming operators intention to ask for a commission to consider the propriety of maintaining or removing same, in connection with the making of the forthcoming contract.

The 1924 Wage Contract:

For the past several months representatives of the Southern Wyoming Operators Association have attempted to create a sentiment against recurring mine suspensions, and we have at this writing substantial evidence of the fact that continuity of operation in the Wyoming mines will be made possible this year, and without material change in the rates of pay or conditions.

Daily Cost Sheet:

Unlike the majority of well organized companies, The Union Pacific Coal Company maintained no provision for furnishing supervisory officers records of daily costs, the monthly figures not available until well along toward the last of the succeeding month, final figures not available until the first week of the second succeeding month. On recommendation of Consulting Engineer H. E. Smith, a daily cost sheet was put into effect on November 1st, and it is anticipated that a net return of 5¢ per ton in the form of reduced mine costs will result from same.

Pensions:

On July 25, 1922, authority was given to establish a pension system for old, disabled employes, same, however, not put into effect for the reason that the United Mine Workers have heretofore refused to co-operate with the employers in the operation of same. Until conditions change a general pension system would prove neither practical nor expedient.

On November 1, 1923, Mr. Theodore P. Henkell, age 70, who has been in the employ of The Union Pacific Coal Company and related companies for fifty-two years, was retired on a permanent pension of \$50.00 per month. Mr. Henkell's long service and high character as an employe and citizen amply justify this action.

There are other employes of the Company who, not only in working but in official positions, are rapidly approaching retirement. It is not advisable to maintain men past the active age period in full control of certain departments which call for the exercise of vigorous physical, as well as mental, effort, the case of the Chairman of the Bureau of Safety and Superintendent of Stores, herein mentioned, cases in point. Our Purchasing Agent, 66 years of age, General Master Mechanic, 65 years of age, are men who are also rapidly approaching a period of reduced activity. There are other men in lesser positions likewise situated, all of which should be taken care of in a manner befitting their long, faithful service, when same becomes necessary.

The Employes' Magazine and Social Work:

For some years the company tried to maintain a measure of contact with its employes through the medium of a special agent. An inspection of daily reports made showed same to be mere gossip, generally very harmless, to a limited extent of an incendiary character, his suggestions of expected trouble when followed leading nowhere, if not getting the mine staff into trouble.

This arrangement was discontinued on June 17, 1923, the cost for the preceding year \$3,465.88, and provision was made for the employment of Mrs. Atlanta E. Hecker, formerly of St. Louis, Missouri, and Pittsburg, Pennsylvania, to take charge of the work of organizing social activities, and in addition, to take charge of the work of preparing an employes magazine; Mrs. Hecker entering the service at a nominal salary on November 16th, the initial copy of the

Union Pacific Coal Company - Washington Union Coal Company Employees' monthly magazine published on January 1, 1924. The response to this effort has proved almost instantaneous, Mrs. Hecker having already organized several simple little social clubs for miners' wives and children, and in addition has organized and put on a self-supporting and sustaining basis, three Sunday Schools, in camps where no religious instruction whatever was given to children outside of that possibly received in their own homes.

The "Safety First" and "Engineering" sections of the magazine are being prepared by the official staff; special items conducive to better relations with the employees are likewise prepared and published, the first two issues of the magazine well received by our employees.

The Reliance Mine No. 1 Fire:

For a period of years this mine has suffered a series of fires in worked-out and crop coal areas, various expedients attempted toward extinguishing same, including walling off the fire areas to exclude air, flushing the more active areas from the surface, etc., all but one fire gone now well under control, these fires, however, costing \$28,033.10, or \$.102 per ton in 1922, and \$18,745.99, or \$.052 per ton in 1923, on the coal produced in this particular mine.

The efforts made toward control in the past two years have been centered in attempting to isolate the fire area by erecting a wall and sand pack. At the present time a commission, consisting of the Safety Engineer, Chief Mining Engineer, and the local Superintendent, is making a special study of the situation. As the fire zone is near the crop line with adequate ventilation, no gas hazard or danger of spreading to the working area being present, the proposition is solely one of added cost.

Exhaustion of Cumberland Mines:

The cost of producing coal at Cumberland Mines Nos. 1, 2 and 2 South,

during 1922, was so high as to attract special attention, the total cost for three years, with the average of all mines, shown below:

<u>Year</u>	<u>Total Cost Cumberland</u>	<u>Total Cost all Mines</u>	<u>Excess Cost Cumberland</u>
1921	\$3.017	\$2.662	\$.355
1922	3.413	2.706	.707
1923	2.611	2.546	.265

Investigation develops that Mines 1 and 2 were partially abandoned some ten years ago, since that time much underground prospecting and some drilling has been done in an effort to widen the workable area, a portion of the old abandoned area reopened for the recovery of pillar coal.

A ten days special study of the situation was undertaken in May last, neighboring representatives of the Diamond Coal and Coke Company and the Kemmerer Coal Company called in for advice, with the result that it was agreed that no additional area of workable coal was available to the present openings, and after drilling a prospect hole in the only suggested area without finding workable coal, definite plans were made to discontinue all underground exploration work, mining out the remaining pillar coal, together with a limited proven unmined area, the calculations evidencing a remaining reserve as of January 1, 1924, of 1,240,333 tons, which will admit of the following annual tonnages, predicated on 260 working days per year:

From January 1, 1924, to December 31, 1926, inclusive,
275,000 tons annually.

From January 1, 1926, to August 31, 1928, inclusive,
200,000 tons annually.

From September 1, 1928, to May 31, 1929, inclusive,
100,000 tons annually.

After a week's field work, carried on in August and September, an engineer was delegated to assemble and map all the prospect work done by the Company in the field during the past forty years, adding thereto the data

obtainable from the U. S. Geological Survey, the Diamond Coal & Coke Company, and the Kemmerer Coal Company, which will be used as the basis for further field study in 1924.

Safety Measures Taken:

Pursuant to the practice established some years ago, Consulting Mining Engineer Mr. H. E. Smith was employed in June to make an examination and report on the general safety and operating conditions in the several mines, Mr. Smith's report completed August 13th.

On August 14th No. 1 Mine of the Kemmerer Coal Company at Frontier, Wyoming, suffered a very serious explosion, causing the death of 97 men. As a result of the Kemmerer accident, all of the recommendations made by Engineer Smith, plus further and additional safeguards, were arranged for, included in which might be mentioned provision for more positive fan operation at No. 2 Hanna Mine, the extension of underground sprinkling activities, the preparation of ventilation maps, with provision for daily measurements and record of the volume of air passing through all gaseous mines, in lieu of the weekly measurements previously gathered.

In addition, pressure-recording gages were purchased and installed at all ventilating fans, and the mine foreman is now required to make personal examination of the chart produced before allowing the day shift to enter the mine, this chart showing clearly any irregularities in the movement of the ventilation current, whether occasioned by slowing down or stoppage of fan, falls in air courses, etc.

A gas analysis machine was purchased and the work of sampling and analysing gas in abandoned areas is being carried on at frequent intervals. The work of constructing rock dust barriers in several mines, as recommended by the United States Bureau of Mines after years of experience with same here

and abroad, was put under way, and substantial progress in this direction has been effected, the purpose of the dust barriers that of localizing any explosion that might occur.

Mine No. 2 Hanna was put on a closed light basis, and the use of matches and open lights was definitely prohibited, and with the arrival of necessary apparatus now overdue, the men in Mine No. 4 Hanna will be similarly equipped, with the result that all known gaseous mines operated by the company will then be on a closed light basis.

On October 1st Mr. A. W. Dickinson was employed as Safety Engineer, Mr. Dickinson a graduate mining engineer with several years experience as engineer, superintendent and general superintendent of mines; and the former Chairman of the Safety Bureau, now 62 years of age, has been assigned to the work of training men in First Aid and Mine Rescue work, including the use and handling of mine rescue apparatus. Much assistance was rendered the company during the year in this work by the United States Bureau of Mines, who assigned a car and engineering staff to the Company for training purposes for a sixty day period.

In addition to the major matters of safety above enumerated, special attention has been given to the removal of all combustible matter in the shape of lumber, etc., surrounding underground hoists and other electrical equipment, a special survey of the insulation of underground electric lines and wiring, with a view of fire and accident prevention, also made.

Additional Government Lease-hold:

With the purchase of the Winton Mines in May, 1921, from the Hogeath Coal Company, the advance work in No. 3 Winton Mine was driven up to the line of certain lands controlled by the United States Government and there stopped, this situation not only restricting the workable area of No. 3 Mine, but pre-

venting the Coal Company from reaching a material acreage of workable coal controlled by it and located in Section 33, Township 21 North, Range 104 West, west of its holdings.

In 1921 the Interior Department conceded to the Union Pacific Coal Company the right to secure and maintain two coal leases, with a maximum acreage of 2600 to each lease, one of these certain leases carrying but 640 acres, it necessary to convince the Interior Department, including their advisors, the Bureau of Mines and the Geological Survey, that the 374 acres additional territory petitioned for could be properly added to the lease covering the 640 acre tract, the acreage to be acquired to be added under the rule of contiguity, a gap, however, of eight miles separating the two tracts. This showing was made to the full satisfaction of all concerned and authority for the lease was granted and the preparation of same is now under way.

Temporary Closure of Mines under Development and Exhausted:

On March 31st Winton No. 1 Mine was temporarily closed, the development of this mine limited. Same will be maintained in a closed condition until necessity for additional tonnage develops.

On May 31st Superior "A" opening, under development, was closed down, and on December 7th North "A" Mine in No. 3 Seam at Superior was similarly closed, these mines under development for some two or three years, never brought to a productive basis.

On December 14th Rock Springs No. 10 Mine was definitely abandoned and all material removed therefrom, the production from this mine limited to a small amount of pillar coal, much of which was being hauled four miles, the cost of production abnormally high; the rock slope to No. 11 Seam adjoining No. 10 Tipple, which has been under development for some three years, was likewise stopped.

In my judgment it is not advisable to drag development work over an extended period, with loss of interest on non-productive capital invested. When it is necessary to develop these mines, same should be definitely planned and driven forward at top speed, bringing them to a productive and self-supporting point as quickly as possible.

The producing operations now number 17, with a combined potential daily output of 17,000 tons, average production 15,500 tons, equivalent to an annual production on basis of 250 working days of 3,875,000 tons.

The property has been well maintained throughout, a total of \$195,347.82 expended on new construction during the calendar year.

Conclusion:

The Operating Department and the undersigned believe that The Union Pacific Coal Company mines are now being maintained in as safe a condition as is humanly possible under the conditions that surround the mining of coal, particularly with employees of forty-six nationalities, many of whom do not speak the English language, it very difficult to police 3,000 men, located remote from the mine management and each other. The total number of fatal accidents occurring in 1928 was 16, each occurring separately. A special and extraordinary effort is being made through the medium of instruction, publication of blueprints, showing the nature of the accident, photographs of the place and conditions freely distributed, to the end that the number of such accidents be reduced.

With the gradual purchase of mechanical coal loading machines, the construction of additional houses for miners will be discontinued, and, providing mechanical loading can be sufficiently extended, certain property with a saleable value now held for tenement purposes, and operated at a loss, in the City of Rock Springs, can be gradually disposed of, the return received

from same offsetting the machine investment.

The production of 5,241,105 tons for the year 1923 represented not only the highest annual, but in two instances, the highest monthly production obtained by the Company. With the composure of the industry and the elimination of suspensions, a gradual concentration of operation can be developed, with material decreases in unit cost. Unless unusual and extraordinary contingencies occur, the cost of production per ton will be further reduced in 1924.

Respectfully,

Original Signed
EUGENE McAULIFFE