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Official Report

of the

State Inspector of Oils

For the Biennial Period Ending November 30, 1916

Colorado



JAMES DUCE
Inspector

J. A. HUNTER
W. W. CAFKY
Deputies

DENVER, COLORADO
EAMES BROS., STATE PRINTERS
1916

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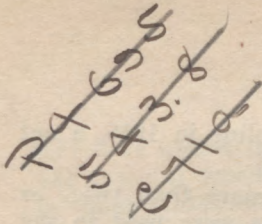
DENVER, COLORADO
EAMES BROS., STATE PRINTERS
1916

To His Excellency,
HON. JULIUS H. GUNTER,
Governor of the State of Colorado.

Dear Sir: In accordance with the Statutes I herewith attach report for the biennial period ending November 30, 1916.

Respectfully submitted,

JAMES DUCE,
State Oil Inspector.



Official Report

of the

State Inspector of Oils

FINANCIAL STATEMENT

From December 1, 1914, to November 30, 1916, there were inspected 33,412,124 gallons of gasoline and 11,512,723 gallons of refined oil, making a total of 44,924,847 gallons.

The inspection fees of one mill per gallon for the period amounted to \$44,924.85.

Of these fees, \$43,712.55 was collected and paid into the Treasurer.

A balance is thereby left owing to the state, on November 30, 1916, amounting to \$1,212.30.

During the period the following expenses were incurred and paid:

Salaries for Inspector and Deputies.....	\$ 9,199.92
Traveling expenses and incidentals, including printing and postage	2,093.81
Cost of Laboratory Building as provided in the Inspection Bill of 1915	4,000.00
Leaving a net cash balance to the State of.....	\$28,418.82

COMPARATIVE STATEMENT

Comparative statement of gasoline used in Colorado during the last two years, beginning December 1, 1914, and ending November 30, 1916:

	1915	1916	Increase gallons	Increase per cent
December	1,172,662	1,496,688	324,026	27
January	591,762	890,170	298,408	50
February	652,814	1,134,123	481,309	73
March	578,673	1,893,058	1,314,385	227
April	793,067	1,763,503	970,436	122
May	1,036,571	1,561,492	524,921	50
June	1,706,357	1,938,565	232,208	13
July	1,413,770	1,586,869	173,099	12
August	1,351,472	2,234,143	882,671	65
September	1,821,717	1,461,591	-360,126
October	1,844,698	1,757,064	-87,634
November	1,195,040	1,536,255	341,215	29
Totals	14,158,603	19,253,521	5,094,918	36

Colorado used 19,253,521 gallons of gasoline in 1916, a net increase of 36% over the previous year.

The gasoline consumption in 1916 was more than twice as large as that of 1914, when 9,575,446 gallons were used in the state.

There were 2,917 cars of gasoline used in Colorado in 1916 and 2,157 in 1915, an increase of 750 cars.

During 1916, 5,518,301 gallons of kerosene were used, as against 5,994,422 gallons in 1915—a decrease of 7%.

The same number of cars of kerosene, 1,079, were used in both years.

Colorado uses three and a half times as much gasoline as kerosene.

THE PRODUCTION OF CRUDE OIL IN COLORADO

Florence field	16,605,950 gallons
Boulder field	459,900 gallons

The production of the Florence field shows a slight increase, but with the more active development that is now taking place there, further and substantial increase can be looked for.

The Boulder field is at a practical standstill, the very limited output being taken up by the local gas works.

PROSPECTS OF FUTURE DEVELOPMENT

During the last eighteen months there has been considerable activity in the prospecting of the vast oil shale beds of the state, those of the northwest being among the largest and most valuable known in the world. There has been no attempt up to the present to treat these deposits in commercial quantities, but with the continued tremendous increase in the demand for all petroleum products, it is the opinion of many competent experts that that district is destined in the course of a few years to become one of the great oil-producing centers of the country.

THE OIL TRADE OF THE STATE

During the biennial period of 1915 and 1916, the new inspection bill that was passed by the last session of the legislature became operative, and the office has received every possible assistance from the members of the oil trade, in carrying out its provisions. The spirit that they have shown in this direction cannot be too highly commended, and it should be remembered that this has been done in the face of conditions that have been very trying to them. The enormous increase in the demand for gasoline has tended toward a lowering of Beaume gravity and a raising of the price; and this in its train caused many criticisms to the effect that the public was being unfairly dealt with. The provisions of the Colorado law prevented certain mixtures being

sold here unless under a label disclosing their actual contents. The price at which these mixtures have been put on the market in other states has been used as a comparison with the price charged for gasoline in this state, and unfair deductions have been drawn.

In the recent inquiries made by the Federal government, it was demonstrated that the Rocky Mountain states were favorably situated, both as to the price and the quality of the gasoline that they were being served with.

Many complaints have been made as to quality, and these have been investigated. While it cannot be said that all gasoline on the market in this state is by any means a perfect fuel, it is worthy of note that the complaints are being considerably reduced with the increasing knowledge that automobilists are getting of their machines. The tremendous change that was brought about by the introduction of automobile traction, covering, as it has, so comparatively short a period, has never been equalled in the world's history.

Gasoline up to quite a recent date was often destroyed to get it out of the way, there being little or no sale for it. Today it is the most valuable fraction of crude mineral oil.

The general public knew very little of internal combustion engines. That automobile manufacturers, oil refiners and the automobile owners have been able to adjust themselves to present conditions, with the comparatively little friction, is a wonderful tribute to their patience and ability to work out so great a problem.

The substitution of different brands of lubricating oils has been practically stopped under the provisions of the new law. The condition that caused this had in a great measure been the work of unscrupulous dealers from outside the state.

Circulars continue to flood the state, from time to time, offering "great bargains" in lubricating oils and roof paints. The general bait that these people hold out to catch the unwary is that "they have had a consignment of oil or paint left on their hands, and rather than lose the freight they are willing to make reductions in the prices." Occasionally these circulars come under our notice and attempts are made to trace these "consignments," but in no instance have the stranded consignments materialized. The checking of this undesirable method of obtaining the cash of the oil user is difficult, as in most instances which we have investigated the "victim" has been so thoroughly convinced that he has been swindled, and displays far more anxiety to prevent any one finding out his folly than willingness to give such information as would enable the office to deal with it. This matter has been taken up with the Post Office Department and there is reason to believe that action will be taken by that department to check this abuse of the United States mail.

IMPROVERS AND SUBSTITUTES

Under the provision contained in section 4 of the new inspection bill, the sale of these gasoline "improvers and substitutes" was prohibited, unless sold under a label approved by this office in writing. As they appeared on the market, samples were taken and were carefully examined by Professor Hunter at the laboratory and many practical tests were made. In no single instance was he able to find any merit in them. The advertisements issued by the manufacturers often contain statements that are grotesque in their absurdity; common moth balls have been sold "guaranteed to increase the power of the motor up to 50%," mixtures of kerosene and inferior lubricating oils sold guaranteed to increase the power of the engine, eliminate all the ills of the motor, save the gasoline bills, and bust all the oil trusts. Badly cracked distillates are also offered at from \$1.00 to \$1.50 per quart with the same guarantees.

No accurate statement can be made as to the extent these nostrums were being sold to the public, but some idea of the amount they were costing confiding citizens can be gathered from the fact that one firm claimed to have been selling \$2,160.00 per month wholesale, and another was selling amounts equal to \$500.00 per month. These transactions were either carried out through the mails or through men acting as agents. These latter were acting innocently and in good faith, and on their agreeing to quit the business no prosecutions were undertaken. The mail order fraternity are beyond the jurisdiction of the office and cannot be reached by any state law. The matter has, however, been taken under consideration by the post office officials, who are giving it considerable attention.

A letter was recently received by myself from the "Bureau of Mines" from which the following is a quotation:

"The Bureau of Mines has analyzed a number of these so-called gasoline substitutes and improvers without finding anything to justify the claims of the manufacturers."

In several states bills are being introduced to deal with this matter.

The absurdity of the claims of some of these people should have been sufficient warning in themselves to automobile owners. If some of them had been true the manufacturers had discovered a source of power undreamed of, and they would have rendered practically all present units of power obsolete. The advertising matter issued is generally accompanied by a string of testimonials. In one case a prominent business man in this state gave a testimonial to a worthless preparation without knowing anything at all about it, solely for the purpose of helping a young man who was selling it, as an agent. It is to be regretted that men whose opinions carry weight with the ordinary citizen, do not exercise more care than allow their names to be used as decoys for

such impositions. They certainly ought to bear a share of the responsibility for any wrong done by the fraud which has been made possible by the use of their names.

The usual claim of all like nostrums, that they contain some hitherto unknown chemical that it is impossible for any analytical chemist to discover, has been very much in evidence.

The following is a list of the preparations that have been examined:

Auto De Carboniser—Condens Scientific Laboratories, 2859 Lawrence street, Denver, Colorado.

Carbonvoid—Carbonvoid Chemical Works, Bradley Beach, N. J., Manufacturers.

Carbokil—Excello Agency, Dept. A, 39 E. 20th street, New York, N. Y.

Carbon Remover—F. H. Cass, Carbon Specialist, 219 E. Maple street, Denver, Colorado.

Carbocide—Miller—Industrial Chemist, Tampa, Florida.

Crimo—Crimo Co., Topeka, Kansas.

Culeoizer—Culmer Chemical Co., Independence, Kansas.

Elgin Motor Power—Elgin Motor Power Manufacturing Co., Cedar Rapids, Iowa.

Electro Gas—Agent—R. S. Green, 108 S. Main street, Lamar, Colorado.

EEE—Midland Publishing Co., 800-810 Pine street, St. Louis, Missouri.

Efficiency Gas—Gas Engine Efficiency Co., St. Louis, Missouri.

Funnel Vac—Funnel-Vac Manufacturing Co., Box 651, Denver, Colorado.

Guaranteed Gas Saver—Guaranteed Gas Saver Co., Benton Harbor, Michigan.

Gomor Oil—Gomor Oil Co., 910 Union Trust Bldg., Detroit, Michigan.

Gaso Tonic—White Manufacturing Co., Cincinnati, Ohio.

Gidz—F. M. Geddings, 63 E. Sommons street, Galesburg, Illinois.

Gasoline Improver—Capitol Manufacturing Co., Denver, Colorado.

Gastine—Gastine Co., Bridgeton, New Jersey.

Gas Saver—Gas Saver Co., 609 Wheat Bldg., Fort Worth, Texas.

Gas-car-etts—United Laboratories Co., Oklahoma City, Oklahoma.

Gas Tonic—Halbach Chemical Co., Linton, Indiana.

Gasoline Tonic—Standard Chemical Co., 504 Black Bldg., Los Angeles, California.

Gas Aid—Mac-O-Chee Mfg. Co., 1323 N. Dearborn, Chicago, Illinois.

Ideal Fuel Saver—Parker Sales Co., P. O. Box 57, Montpelier, Vermont.

Imp Carbon Chaser—Imp Carbon Chaser Corporation, 1465 Broadway, New York, N. Y.

Inajiffi—Inajiffi Fuel Co., Akron, Ohio.

Karbonoid—New England Karbonoid Co., 131 Columbus Avenue, Boston, Massachusetts.

Korine—Korine Carbon Remover Co., Boston, Massachusetts.

Lubri Gas—Lubri Gas Co., 1316 Broadway, Denver, Colorado.

Lenolite—Lenolite Manufacturing Co., 6 N. Clark street, Chicago, Illinois.

Motor Clean—The Haas Manufacturing Co., 107 E. C Street, Pueblo, Colorado.

Motor Tone—E. C. Hopkins Co., Keene, New Hampshire.

Magic Motor Gas—Auto Remedy Co., Evans street, Cincinnati, Ohio.

Motor Tonic—Motor Tonic Co., St. Louis, Mo.

Mo-Mil—Howard Lindsey, Sacandaja, New Jersey.

Orolo Carbon Remover—Orolo Manufacturing Co., 8th and Jefferson streets, Louisville, Kentucky.

Opeco—American Oil Products Co.

Petrolife—Planes Oil Co., Railway Exchange Bldg., Chicago, Illinois.

Pep—Bulekley Refining Co., 1632 Race Street, Cincinnati, Ohio.

Pep-O-Gas—Aetna Safety Appliance Co., P. O. Box 1253, Hartford, Connecticut.

Power-O—Saries Manufacturing Co., Decatur, Illinois.

Tankii—Tankii Chemical Co., 244 High Avenue, Chicago.

Vigorite—Culmer Chemical Co., Independence, Kansas.

Wonder Oil—Desmond Hemenger Manufacturing Co., Detroit, Michigan.

Will Win—Will Win Co., Martin Street, Cambridge, Massachusetts.

Speedoline—Speedoline Co., 212 N. St. Paul Street, Dallas, Texas.

STANDARDIZATION OF OIL FUELS

The question of standardizing the grades of automobile fuel has been the subject of much discussion in the different conventions of the oil trade, and has been taken up by the U. S. Bureau of Standards. Owing to the great variety of crude oils and the still greater variety in the methods of refining and blending of petroleum products, there is bound to be considerable confusion until such standardization takes place. The products today that are sold as gasoline in several states show very wide differences, and these differences cannot be disclosed by the Beaume test alone. The wide range in which gasoline is used also presents many difficulties and render a single standard not only unwise, but practically impossible. The attempt to remedy this in individual states can never be really effective, and it is to be hoped that the Bureau of Standards will shortly call those interested together in convention, where the whole matter can be fully discussed from all angles. The public has an undoubted right to be able to know exactly what grade of gasoline they are purchasing, and to be able to know that they are getting the grade most suited to their needs, no matter in what state they are travelling.

Over and over again we hear it stated that the price of all oils is controlled by certain interests and that the law of supply and demand has nothing at all to do with the prices paid. In the Mid-Continent field, fully 62½% of the oil trade is in the hands of the independent refiners and the proportion is growing each year. In Colorado the number of independent dealers is increasing, and in every instance these independents are doing well.

If the price of other staples is compared with that of gasoline and kerosene, it will be seen that recent advances have been much greater in every other line than in the oil trade. When the cost of transportation, the loss in evaporation and the fire risks in handling are taken into consideration, it will be found that petroleum products are handled on a shorter margin of profit to the dealer in Colorado than other commodities.

The regulation of the automatic measuring oil pumps is slowly being attended to. There being at present only two inspectors in the state, and there being over 12,000 of these pumps, it has been physically impossible to give the time to them that ought to have been given. A great number of them we have caused to be repaired and properly adjusted.

LABORATORY REPORT

I beg leave to report as follows on the operation of the State Oil Laboratory for the year 1916; during this year we have made the following tests:

3,740 sample of gasoline,
870 samples of kerosene,
15 samples of paints,
20 samples of paint oils,
30 samples of lubricating oils,
14 samples of oil producing shales,
5 samples of crude paint pigments,
18 samples of flotation oils,
10 fractional distillations,
46 tests of gasoline improvers,
6 samples of crude oils,
5 samples of fuel oils.

I have no suggestions to offer, as the operation of the department has been very satisfactory. At times we have been slow in getting the work out, which can be accounted for by the large number of samples being submitted at one time. This, however, is beyond the control of the department.

Respectfully submitted,

J. A. HUNTER.

The Inspection Bill of 1915 did not provide for any clerk in the office, and during the biennial period the work has increased to such an extent that it became necessary to make some arrangement for this. The work of inspection naturally kept the inspector away from the office the greater part of his time and there was no one to answer any calls that might come in. This caused a considerable amount of inconvenience and trouble. An arrangement was then made for the office to be moved to that of the Printing Commissioner, the Hon. Rollie W. Bradford, and it was with his assistance that we were able to get along until early in May, at which time the summer rush of oil begins. At that time a requisition was sent to the Auditing Board for authority to employ a clerk. This requisition was signed and a clerk employed, but owing to the decision upon the reading of the wording of the Act, we were unable to get the salary for the clerk until December 19, and during this time the money was advanced by Mr. Bradford and myself.

I wish to acknowledge the assistance I have received from the Printing Commissioner, who attended to the office and gave me every assistance in his power.

The assistance also given by the Hon. Wendell Stephens, Assistant Attorney General, has enabled us to settle the numerous

questions of the office upon gasoline improvers and other such matters without any trouble, and I am indebted to him for his able and painstaking assistance.

The deputy inspectors, Professor J. A. Hunter and W. W. Cafky, have in every instance performed their duties in an able and conscientious manner, and have been untiring in their efforts to fulfill the obligations of the inspection laws.

I wish to acknowledge the great assistance rendered to the office by the press, in warning the public against the use of worthless "improvers" and fake "Delayed in Transit" oil and paint circulars. Without this assistance it would have been a very difficult matter, if not an impossibility, to stop this very undesirable style of business.

OIL FIRES AND EXPLOSIONS

Twenty-two fires and accidents in the state have been investigated. In almost every instance these were caused by neglect of precautions which should be taken at all times when handling oils of all sorts.

OFFICE OF STATE OIL INSPECTOR

Department created by Legislature in 1899. Approved April 14, 1899. Went into effect July 15, 1899.

INSPECTOR

FRANK J. MEDINA

	Gallons	Fees Collected
July 15, 1899, to January 31, 1900.....	2,358,353	\$ 2,358.35
February 1, 1900, to January 31, 1901.....	3,364,787	3,364.79
February 1, 1901, to July 14, 1901.....	1,387,147	1,387.15
	7,110,287	\$ 7,110.29
Two years		

THOS. F. DILLON, JR.

July 15, 1901, to January 31, 1902.....	2,301,795	- \$ 2,301.29
February 1, 1902, to January 1, 1903.....	3,239,645	3,239.65
February 1, 1903, to July 14, 1903.....	No report	
Two years		

H. W. HANNUM

July 15, 1903, to January 31, 1904.....	2,249,296	\$ 2,249.29
February 1, 1904, to January 31, 1905.....	3,239,645	3,239.65
February 1, 1905, to July 14, 1905.....	1,148,275	1,148.28
	6,637,216	\$ 6,637.22
Two years		

J. L. RUSSELL

July 15, 1905, to January 31, 1906.....	1,971,541	\$ 1,971.54
February 1, 1906, to January 31, 1907.....	No report	
February 1, 1907, to January 31, 1908.....	4,744,543	4,744.54
February 1, 1908, to January 31, 1909.....	6,568,904	6,568.90
February 1, 1909, to July 14, 1909.....	No report	
Four years		

CLAUDE STREET

July 15, 1908, to December 31, 1909.....	4,235,710	\$ 4,235.71
January 1, 1910, to December 31, 1910.....	10,455,492	10,455.49
January 1, 1911, to December 31, 1911.....	11,108,281	11,108.28
January 1, 1912, to December 31, 1912.....	12,118,869	12,118.87
January 1, 1913, to April 20, 1913.....	3,896,886	3,896.89
	41,815,238	41,815.24
Four years		

JAMES DUCE

April 20, 1913, to December 31, 1913.....	9,660,910	\$ 9,660.91
January 1, 1914, to December 31, 1914.....	15,692,685	15,692.69
January 1, 1915, to December 31, 1915.....	20,457,383	20,457.38
January 1, 1916, to December 31, 1916.....	25,410,222	25,410.22

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