

# FOUR MILLION ACRES OF LAND IN NEW MEXICO ON WHICH CROPS CAN BE GROWN IN ABUNDANCE

Territorial Engineer C. D. Miller, in Paper on "New Mexico Resources Day" Program at Mountainair, Makes Ultraconservative Estimate of Lands Available in Territory for Development of Resources; Present Development Being Made Along Safe and Sure Lines.

## DRAINAGE QUESTION ALL IMPORTANT IN CENTRAL RIO GRANDE VALLEY ADJACENT TO ALBUQUERQUE

(Special Telegram to Evening Herald)  
(By D. R. Lane)

Mountainair, N. M., Aug. 5.—The feature of the morning session of "New Mexico Resources Day" at the Mountainair Ultraconservative assembly today was a general paper by C. D. Miller, territorial engineer, which covered in sweeping detail every aspect of the condition which confronts New Mexico to-day with reference to the development of her agricultural resources. Mr. Miller said that it is his belief, based on an ultra-conservative estimate, reached as the result of study of facts and figures, that New Mexico contains 4,000,000 acres as potential irrigated area. Mr. Miller, just to be as conservative as possible, moved beyond the shadow of a doubt that New Mexico has 2,550,000 acres of land from which crops can be grown in abundance and which await the settler who will get the crops therefrom and a livelihood for himself and family.

The territorial engineer in beginning the reading of his paper said that it was not his intention to explain how to use water in irrigation, but to outline the water supplies available for that purpose in the different sections of the territory. Proceeding, Mr. Miller took up first the history of irrigation, saying that it has been practiced in New Mexico since the memory of man recollects, to the contrary. He said among other things that it is evident that although irrigation has been practiced in the territory since an extremely early date, probably earlier than in any other portion of the United States, still no evil effect has been found from the long continued use of water upon the soils of the river valleys, owing to the replenishment of the soil with plant foods carried in suspension by the rivers in the form of silt. From the history of irrigation Mr. Miller went on to the diversion and storing of water and from that subject to that of pumping. Mr. Miller for the most part quoted people in various parts of the territory on the pumping proposition, giving it as his opinion that there are homes awaiting in New Mexico for thousands and thousands of people who will come to the territory and pump. Taking up the Mimbres valley, where pumping is flourishing, Mr. Miller quoted Ralph C. Ely of Durango to the effect that there is an area of approximately 50,000 acres with a variation either way of ten per cent, which can be irrigated by wells producing from 500 to 1,000 gallons per minute. Proceeding to the Portales valley, Mr. Miller said that pumping has already been inaugurated on a large scale in the Portales country by the installation of a central pumping plant in the town of Portales, which has a capacity for the rate of 11,000 acres, having been begun in August, 1910.

In the Alamogordo valley Mr. Miller gave an account of the experiments which are being carried on there, saying that there is undoubtedly sufficient water in the immediate vicinity of Alamogordo to irrigate by pumping and that it is estimated that eventually 50,000 acres or less will be irrigated therein. Taking up the Bernallito-Albuquerque-Belen valley, a subject of much interest to the Albuquerque men present, Mr. Miller said that it has been definitely ascertained that within a 20-mile radius of Albuquerque there is a territory of 100 square miles which can be irrigated by pumping at heads of from 10 to 200 feet. At such wells, small water supplies, drainage, power, capital, the quality of ground, local phases, relation of the

territory to irrigation with reference to stream gauging, state supplies of irrigation works, the clay art and direct irrigation, the value of development to the territory and many other matters of equal importance have been brought up. Mr. Miller dealt with each topic in an exhaustive manner which threw a world of light on present questions. The paper made a sufficient impression on the members present and Mr. Miller was applauded enthusiastically as he concluded. His speech in part follows:

**Introduction.**  
"The topic which has been assigned me, owing to its magnitude, the scope of the field and the intricacy of the questions involved, the value of development to the territory and many other matters of equal importance have been brought up. Mr. Miller dealt with each topic in an exhaustive manner which threw a world of light on present questions. The paper made a sufficient impression on the members present and Mr. Miller was applauded enthusiastically as he concluded. His speech in part follows:

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**Pumping.**  
"In outlining the pumping resources I wish to state that while we have some data on this subject, the figures given are principally from data supplied by people who have been connected with this work in the respective pumping sections. We consider the estimates a great deal too high, enough remaining, however, after making allowance for this to produce homes for thousands and thousands of people who will come to New Mexico and pump.

**Mimbres Valley.**  
"Estimates of the possibilities of this valley place the figures of irrigable area from wells producing from 500 to 1,000 and even 1,500 gallons of water per minute at 100,000 acres. To this area it is conservatively estimated that there may be added 100,000 acres irrigated from wells producing 500 gallons down to possibly 200 gallons of water per minute.

"The known shallowness and quantity of water in this valley will undoubtedly go to make it one of the greatest pumping districts in New Mexico.

**Portales Valley.**  
"An idea as to the area available for irrigation by pumping in this valley may be had by reference to the United States general land office map of April 1, 1911, showing lands in the said valley excluded from designation under the Enlarged Homestead Act. Such exclusion embraces about five townships, or an area of 112,200 acres approximately. To this must be added approximately 50,000 acres in Blackwater draw, paralleling Portales draw north and east, eight to ten miles, under which shallow water is to be found and which eventually will be irrigated by pumping. Combining these estimates, therefore, there are some 162,000 acres available for irrigation by pumping in the valley.

"In San Juan county the ruins of irrigation ditches used by the Aste Indians centuries ago are still visible. The accuracy with which those ditches were laid out and constructed by the Indians without the aid of any instruments whatever is evidenced by the fact that present ditches in San Juan county have often followed in a large measure the courses of the old. They have found that better arrangement cannot be secured than that laid down by the Indians.

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"It is evident, therefore, that irrigation was practiced in New Mexico at an extremely early date, probably earlier than in any other portion of the United States, but still no evil effect has been found from the long continued use of water upon the soils of the river valleys, owing to the replenishment of the soil with plant foods carried in suspension by the rivers in the form of silt.

"In estimating our irrigation resources we will first secure some idea as to the acreage claimed for this purpose. Taking the applications which have been filed for permits to appropriate water as a basis of ascertaining the area outlined for irrigation work, and while we have unlimited land, these amounts specified in applications are immediately adjusted to adaptability to the use of water from streams. Five hundred and eighty applications for permits to appropriate water have been filed in the office of the territorial engineer since April, 1897. Practically all of these applications are designed to be applied for purposes of irrigation, a small percentage, however, are for power purposes. Some of these applications, a very few, are duplicate. For instance, in case an applicant wishes to amend a filing previously made, he refiles and consequently the same acreage is mentioned twice. In compiling an estimate of the total area to be irrigated from the acreages stated on each of these applications, duplicate filings were not considered, and the said estimate, therefore, is practically a total of the area which the applications actually are designed to irrigate.

"Upon the above plan it is found that about 4,000,000 acres are estimated as being available for irrigation. To this sum should be added about 100,000 acres which can be irrigated from a project located on the Gila river in Grant county. Under the same plan of estimate it is found that the cost of the works under these applications will be \$32,000,000 or more. Of the above estimate of acreage, it is stated from the census returns, that less than 750,000 acres are already under irrigation, most of which has been irrigated for a number of years under small farms. With

"The highest point of woman's happiness is reached only through motherhood, in the clasping of her child within her arms. Yet the mother-to-be is often fearful of nature's ordeal and shrinks from the suffering incident to its consummation. But for nature's ills and discomforts nature provides remedies, and in Mother's Friend is to be found a medicine of great value to every expectant mother. It is an oil emulsion for external application, composed of ingredients which act with beneficial and soothing effect on those portions of the system involved. It is intended to prepare the system for the crisis, and thus relieve, in great part, the suffering through which the mother usually passes. The regular use of Mother's Friend will repay any mother in the comfort it affords before, and the helpful restoration to health and strength it brings about after baby comes. Mother's Friend is for sale at drug stores. Write for our free book for expectant mothers which contains much valuable information, and many suggestions of a helpful nature.

**Mother's Friend**  
BRADFIELD REGULATOR CO., Atlanta, Ga.

the said claim or merely conjecture. It has been shown, however, that in the immediate vicinity of Alamogordo there is water in sufficient quantities to irrigate by pumping, and it is estimated that eventually probably 50,000 acres or less will be so irrigated therein. Upon an examination of the valley has been made in detail it will be known, even approximately, how many acres may be irrigated therein.

**Bernalillo-Albuquerque-Belen Valley.**

"Pumping for irrigation in this valley is comparatively new, but it has been definitely ascertained that within a 20-mile radius of Albuquerque there is a territory of 100 square miles which can be irrigated by pumping at heads of from 10 to 200 feet. Outside that radius there is probably a territory of 50 square miles now likewise susceptible to irrigation, so that in all in this valley there is an area of approximately 100,000 acres available for irrigation by pumping.

"Extending south from this valley along the Rio Grande, and thence to a short distance south of Socorro, is a tract of land of probability 25,000 acres in extent which can be irrigated by pumping at heads of water similar to those just mentioned. Over all the Rio Grande valley, therefore, from the vicinity of Bernalillo to the northern end of the Elephant Butte reservoir, is conservatively estimated to contain an area of 125,000 acres for irrigation by pumping.

"Other wells have been reported in the territory, especially from points Galisteo and east, but few are used for irrigating purposes or are known to be within districts extensively available for irrigation.

"The subject of drainage is a very important one, one of two or three portions of the territory. What the area of "waterlogged" land is not known but there are many thousands of acres in the Pecos and Rio Grande valleys which must be drained before they will be worth anything as farming land. The land so drained will afford water supply to an additional large area now dormant from lack of water. In the Rio Grande valley, especially in the vicinity of Albuquerque, the drainage question is all important. The river, by its windings, has "subbed" the valley in large sections and in some places the water table is above the ground. The straightening of the river channel would be a most effective means of draining the land. I would estimate the area of land which needs draining and the increase thereto of new irrigated land to be 100,000 acres. Among other things we need drainage laws which will not allow one land owner to stand in the way of others who wish to lay drain tile to the river to recover and reclaim their land.

"In summarizing our irrigation resources I desire only at this time to prove an ultimate irrigated area of 1,000,000 acres, for which I believe there is ample water supply from the sources mentioned—diversion and storage or surface supply, drainage, pumping and artesian wells. The 100,000 acres possible of irrigation from small water supplies are not included in the following statement:

Access

Surface supply (actual measurement and run-off computations) 750,000

Estimated pumping areas 4,000,000

Artesian wells 640,000

Drainage 75,000

Totals 100,000

Dividing one-half of pumping estimate 520,000

Totals 524,500

For possible over-estimates on present irrigated area, artesian and drainage section

245,000

Allowing for lower water duty than given for the four million acres 1,000,000

4,000,000

I believe that the 4,000,000 acres possible irrigated area in New Mexico is to be ultra-conservative. It is enough that we have 3,250,000 acres of land from which crops can be grown in abundance and which await the settler who will get the crops therefrom and a livelihood for him and family."

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I have in my possession a prescription for nervous debility, lack of vigor, weakened manhood, failing memory and lame back, brought on by excesses, unnatural drains, or the follies of youth, that has cured as many worn and nervous men right in their own homes without any additional help or medicine—that I think every man who wishes to regain manly power and virility, quickly and quietly, should have a copy. So I have determined to send a copy of the prescription free of charge, in a plain, ordinary sealed envelope to any man who will write for it.

This prescription comes from a physician who has made a special study of men and I am convinced it is the surest-acting combination for the cure of deficient manhood and vigor failure ever put together.

I think I owe it to my fellow man to send them a copy in confidence so that any man anywhere who is weak and disengaged with repeated failures may stop dragging himself with harmful patent medicines, secure what I believe is the quickest-acting restorative, upbuilding SPOT-TOUCHING remedy ever devised, and to give himself at home quietly and quickly. Just drop me a line like this: Dr. A. E. Robinson, 4752 Luck Building, Detroit, Mich., and I will send you a copy of this splendid recipe in a plain ordinary envelope free of charge. A great many doctors would charge \$2.00 to \$5.00 for merely writing out a prescription like this—but I send it entirely free.

**Artesian Wells.**

The artesian belt must be included.

**HIS TROUBLE NOT OF HEART**

**Real Facts In Regard To F. R. Huffman's Illness. Relief Obtained By Curing His Stomach Ailments.**

Waynesville, N. C.—Mr. F. R. Huffman, of this city, says: "I suffered dreadfully with what I thought was heart trouble, and tried various medicines in vain.

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**Alamogordo Valley.**

There are those who go so far as to claim that this whole valley, 100 miles long and approximately 20 miles wide, is subject to irrigation by pumping.

Water has not yet been shown to exist for the same, however, and

in the irrigation resources, as it forms a portion of the irrigable area of this commonwealth. One of the well-known artesian belts existing in New Mexico is in the section about Roswell and down to Artesia. There are at the present time in that district about 700 wells, each well estimated to irrigate about 80 acres, or in all about 56,000 acres. It is thought that this district may be extended considerably by the addition of more wells, and it is safe to say that an area of 75,000 acres or more will eventually be supplied by wells in that section. Something must be done, however, to protect any future wells with proper casing, as some of the land is becoming ruined from water breaking out of the casing and "boiling" the land. This escape of artesian water in the earth is noticed by the increase in flow of rivers and streams passing through the artesian section.

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Other wells have been reported in the territory, especially from points Galisteo and east, but few are used for irrigating purposes or are known to be within districts extensively available for irrigation.

**CLEVER OPERATOR AT SAN MARCIAL ESCAPES FROM OFFICERS**

L. S. Stephens, Wanted for Alleged Forgery of Telegraph Money Order Disappears While Under Bond.

**WESTERN UNION WILL MAKE GOOD TO BANK**

**SPECIAL CORRESPONDENCE TO THE HERALD**

San Marcial, N. M., Aug. 5.—L. S. Stephens, thief and forger, escaped custody Wednesday and up to Thursday night nothing had been seen of him. When taken before Judge Bowden Wednesday morning he waived preliminary hearing and was bound over, it was thought, with sufficient bail to assure his whereabouts. The land so drained will afford water supply to an additional large area now dormant from lack of water. In the Rio Grande valley, especially in the vicinity of Albuquerque, the drainage question is all important. The river, by its windings, has "subbed" the valley in large sections and in some places the water table is above the ground. The straightening of the river channel would be a most effective means of draining the land. I would estimate the area of land which needs draining and the increase thereto of new irrigated land to be 100,000 acres. Among other things we need drainage laws which will not allow one land owner to stand in the way of others who wish to lay drain tile to the river to recover and reclaim their land.

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